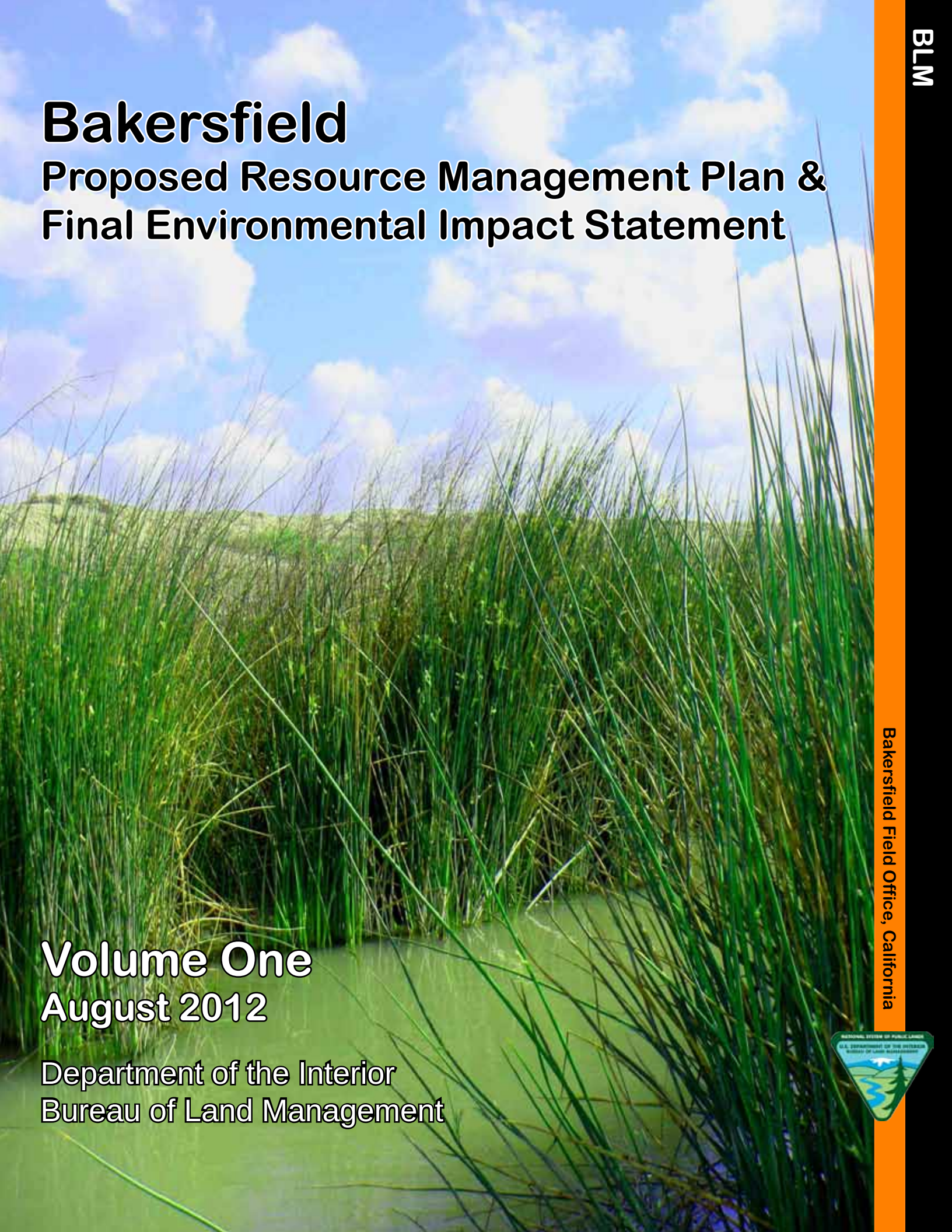

Bakersfield
Proposed Resource Management Plan & Final Environmental Impact Statement

Volume One
August 2012

Department of the Interior
Bureau of Land Management

BLM

Bakersfield Field Office, California

The BLM manages more land – 253 million acres – than any other federal agency. This land, known as the National System of Public Lands, is primarily located in 12 Western States, including Alaska. The Bureau, with a budget of about $1 billion, also administers 700 million acres of subsurface mineral estate throughout the nation. The BLM's multiple-use mission is to sustain the health and productivity of the public lands for the use and enjoyment of present and future generations. The Bureau accomplishes this by managing such activities as outdoor recreation, livestock grazing, mineral development, and energy production, and by conserving natural, historical, cultural, and other resources on public lands.

DOI Control Number: FES 12-32

BLM/CA-ES-2012-017+1793

Abstract

Lead Agency: U.S. Department of the Interior (DOI), Bureau of Land Management (BLM)

Type of Action: Administrative

Jurisdiction: Madera, San Luis Obispo, Santa Barbara, Ventura, Kings, Tulare, eastern Fresno, and western Kern counties, California

Abstract: The Proposed Resource Management Plan (RMP) and Final Environmental Impact Statement (EIS) describe and analyze alternatives for the planning and management of public lands and resources administered by the BLM, Bakersfield Field Office. The Planning Area is located in central California, and comprises approximately 17 million acres of land. Within the Decision Area, the BLM administers approximately 400,000 acres of surface estate and 1.2 million acres of federal mineral estate.

Through this RMP revision, the BLM is revising the existing plans (1997 Caliente and 1984 Hollister RMPs) to address the availability of new data and policies, emerging issues, and changing circumstances that have occurred during the 14 plus years since the Record of Decisions (RODs) for the existing plans were signed. As part of the RMP revision process, the BLM conducted scoping to solicit input from the public and interested agencies on the nature and extent of issues and impacts to be addressed in the Proposed RMP and Final EIS. Planning issues identified for this RMP revision focus on access to public, travel, recreation and visitor services, wildlife and special status species, livestock grazing, and energy and minerals management.

To assist the agency decision maker and the public in focusing on appropriate solutions to planning issues, the Final EIS considers five alternative RMPs.

Alternative A is a continuation of current management (No Action Alternative). Under this alternative, the BLM would continue to manage the use of public lands and resources under the existing RMPs, as amended. **Alternative B** is the BLM's Proposed Plan Alternative, which provides for a balance between resource protection and development and includes changes made to the Draft RMP based on public comment and internal review. This is not a final agency decision, but instead an indication of the agency's preliminary preference that considers the recommendations of cooperating agencies and BLM specialists and reflects the best combination of decisions to achieve BLM goals and policies, meet the purpose and need, and address the key planning issues. **Alternative C** emphasizes protection of physical, biological, and heritage resources, while providing for the smallest level of development, comparatively. **Alternative D** mimics the emphasis on protection in alternative C, however, presents a no grazing option to be analyzed. **Alternative E** emphasizes resource development, while limiting protective management of physical, biological, and heritage resources.

When completed, the ROD for the RMP will provide comprehensive long-range decisions for (1) managing resources in the Bakersfield Field Office and (2) identifying allowable uses on BLM-administered surface and mineral estate. Protests are accepted for 30 days following the date on which the U.S. Environmental Protection Agency publishes the Notice of Availability for this Proposed RMP and Final EIS in the *Federal Register*. Protests must be submitted in writing by mail to:

Regular Mail:
Director (210)
Attention: Brenda Williams
P.O. Box 71383
Washington, D.C. 20024-1383

Overnight Mail:
Director (210)
Attention: Brenda Williams
20 M Street SE, Room 2134LM
Washington, D.C. 20003-3503

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Proposed Resource Management Plan
And
Final Environmental Impact Statement
For the
Bakersfield Field Office

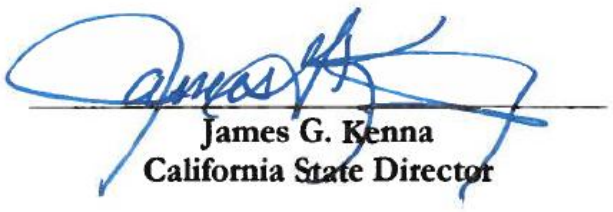
Volume One

Chapters One, Two, Three, & Four

Prepared by

U.S. Department of the Interior
Bureau of Land Management
Bakersfield Field Office
California

August 2012



James G. Kenna
California State Director

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United States Department of the Interior
BUREAU OF LAND MANAGEMENT

Bakersfield Field Office
3801 Pegasus Drive, Bakersfield, California 93308-6837

In reply refer to: 1610-5.G.1.4

August, 2012

Dear Reader:

Enclosed are the Proposed Resource Management Plan (PRMP) and Final Environmental Impact Statement (FEIS) for the Bakersfield Field Office. The Bureau of Land Management (BLM) prepared the PRMP/FEIS in consultation with cooperating agencies, taking into account public comments received during this planning effort. The PRMP provides a framework for the future management direction and appropriate use of the public lands located in central California, under the jurisdiction of the Bakersfield Field Office. The document contains both land use planning decisions and implementation decisions to guide the BLM's management of the Bakersfield Field Office.

This PRMP and FEIS have been developed in accordance with the National Environmental Policy Act of 1969, as amended, and the Federal Land Policy and Management Act of 1976, as amended. The PRMP is largely based on Alternative B, the preferred alternative in the Draft Resource Management Plan/Environmental Impact Statement (DRMP/DEIS), which was released on September 9th 2012. The PRMP/FEIS contains the Proposed Plan, a summary of changes made between the DRMP/DEIS and PRMP/FEIS, impacts of the Proposed Plan, a summary of the written and verbal comments received during the public review period for the DRMP/DEIS, and responses to the comments.

Pursuant to BLM's planning regulations at 43 CFR 1610.5-2, any person who participated in the planning process for this PRMP and has an interest which is or may be adversely affected by the planning decisions may protest approval of the planning decisions within 30 days from date the Environmental Protection Agency (EPA) publishes the Notice of Availability in the Federal Register. For further information on filing a protest, please see the accompanying protest regulations in the pages that follow (labeled as Attachment # 1). The regulations specify the required elements of your protest. Take care to document all relevant facts. As much as possible, reference or cite the planning documents or available planning records (e.g. meeting minutes or summaries, correspondence, etc.).

Emailed and faxed protests will not be accepted as valid protests unless the protesting party also provides the original letter by either regular or overnight mail postmarked by the close of the protest period. Under these conditions, the BLM will consider the emailed or faxed protest as an advance copy and will afford it full consideration. If you wish to provide the BLM with such advance notification, please direct faxed protests to the attention of Brenda Hudgens-Williams- BLM protest coordinator at 202-245-0028, and emailed protests to: Brenda_Hudgens-Williams@blm.gov.

All protests, including the follow-up letter to emails or faxes, must be in writing and mailed to one of the following addresses:

Regular Mail:
Director (210)
Attn: Brenda Hudgens-Williams
P.O. Box 71383
Washington, D.C. 20024-1383

Overnight Mail:
Director (210)
Attn: Brenda Hudgens-Williams
20 M Street SE, Room 2134LM
Washington, D.C. 20003

Before including your address, phone number, email address, or other personal identifying information in your protest, be advised that your entire protest – including your personal identifying information – may be made publicly available at any time. While you can ask us in your protest to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

The BLM Director will make every attempt to promptly render a decision on each protest. The decision will be in writing and will be sent to the protesting party by certified mail, return receipt requested. The decision of the BLM Director shall be the final decision of the Department of the Interior. Responses to protest issues will be complied and formalized in a Director's Protest Decision Report made available following issuance of the decisions.

Upon resolution of all land use plan protests, the BLM will issue an Approved RMP and Record of Decision (ROD). The Approved RMP and ROD will be mailed or made available electronically to all who participated in the planning process and will be available to all parties through the "Planning" page of the BLM national website (http://www.blm.gov/planning), or by mail upon request.

Unlike land use planning decisions, implementation decisions included in this PRMP/FEIS are not subject to protest under the BLM planning regulations, but are subject to an administrative review process, through appeals to the Office of Hearings and Appeals (OHA), Interior Board of Land Appeals (IBLA) pursuant to 43 CFR, Part 4 Subpart E. Implementation decisions generally constitute the BLM's final approval allowing on-the-ground actions to proceed. Where implementation decisions are made as part of the land use planning process, they are still subject to the appeals process or other administrative review as prescribed by specific resource program regulations once the BLM resolves the protests to land use planning decisions and issues an Approved RMP and ROD. The Approved RMP and ROD will therefore identify the implementation decisions made in the plan that may be appealed to the Office of Hearing and Appeals.

Sincerely,

Timothy Z. Smith
Field Manager, Bakersfield Field Office

Attachment 1

Protest Regulations

[CITE: 43CFR1610.5-2]

TITLE 43--PUBLIC LANDS: INTERIOR
CHAPTER II--BUREAU OF LAND MANAGEMENT, DEPARTMENT OF THE INTERIOR
PART 1600--PLANNING, PROGRAMMING, BUDGETING--Table of Contents
Subpart 1610--Resource Management Planning
Sec. 1610.5-2 Protest procedures.

(a) Any person who participated in the planning process and has an interest which is or may be adversely affected by the approval or amendment of a resource management plan may protest such approval or amendment. A protest may raise only those issues which were submitted for the record during the planning process.

(1) The protest shall be in writing and shall be filed with the Director. The protest shall be filed within 30 days of the date the Environmental Protection Agency published the notice of receipt of the final environmental impact statement containing the plan or amendment in the Federal Register. For an amendment not requiring the preparation of an environmental impact statement, the protest shall be filed within 30 days of the publication of the notice of its effective date.

(2) The protest shall contain:

(i) The name, mailing address, telephone number and interest of the person filing the protest;
(ii) A statement of the issue or issues being protested;
(iii) A statement of the part or parts of the plan or amendment being protested;
(iv) A copy of all documents addressing the issue or issues that were submitted during the planning process by the protesting party or an indication of the date the issue or issues were discussed for the record; and
(v) A concise statement explaining why the State Director's decision is believed to be wrong.

(3) The Director shall promptly render a decision on the protest.

(b) The decision shall be in writing and shall set forth the reasons for the decision. The decision shall be sent to the protesting party by certified mail, return receipt requested. The decision of the Director shall be the final decision of the Department of the Interior.

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Table of Contents

Executive Summary

Introduction

The Proposed Resource Management Plan (RMP) and Final Environmental Impact Statement (EIS) describes and analyzes alternatives for the future management of public lands and resources administered by the Bureau of Land Management (BLM), Bakersfield Field Office, located in southern-central California. The Planning Area encompasses about 17 million acres throughout Kings, San Luis Obispo, Santa Barbara, Tulare, Ventura, Madera, eastern Fresno, and western Kern Counties. Stretching from the coastal islands in the Pacific Ocean across the Central Valley to the crest of the Sierra Nevada Range, public lands are scattered across the Planning Area in numerous small parcels. With a variety of settings and landforms, this is a region of diverse topography and landscapes, and extraordinary biodiversity. Elevations range from sea level to more than 14,500 feet at Mount Whitney. The BLM Bakersfield FO is directly responsible for the management of approximately 400,000 acres of public land and 1.2 million acres of Federal mineral estate (i.e., the Decision Area).

Revising existing land use plans is a major federal action for the BLM. The National Environmental Policy Act of 1969 (NEPA), as amended, requires federal agencies to prepare an EIS for major federal actions; thus, this Proposed RMP and Final EIS is a combined document. The Final EIS analyzes the impacts of five alternative RMPs for the Decision Area, including the No Action Alternative (Alternative A) and the Proposed Plan Alternative (Alternative B). The No Action Alternative reflects current management under the existing land use plan. The analysis considers a range of alternatives that provide for various levels of physical, biological, and heritage resource protection as well as opportunities for motorized and non-motorized recreational activities, leasing and development of mineral resources, livestock grazing, and other land use activities.

Purpose and Need

The Federal Land Policy and Management Act (FLPMA), requires developing, maintaining, and, as appropriate, revising land use plans for public lands. BLM-administered lands within the Planning Area are currently managed according to the 1997 Caliente RMP and 1984 Hollister RMP. Since the Record of Decisions (RODs) for these existing plans, new data has become available and laws, regulations, and policies regarding management of these public lands have changed. In addition, decisions in the existing plan do not satisfactorily address all new and emerging issues and lands acquired after the completion of the previous plans. These changes and potential deficiencies created the need to revise the existing plan. The Bakersfield Field Office RMP revision is anticipated to be completed by September 2012.

The purpose, or goal, of the RMP is to ensure lands administered by the BLM are managed in accordance with the FLPMA and the principles of multiple use and sustained yield. The reason for revising the existing plan is to address the changes occurring in the Planning Area and to select a future management strategy that best achieves a combination of the following elements:

- Employ a community-based planning approach to collaborate with federal, state, and local agencies.

- Establish goals and objectives for managing resources and resource uses in the approximately 400,000 surface acres and 1.2 million acres of federal mineral estate in the Decision Area in accordance with the principles of multiple use and sustained yield.
- Identify land use plan decisions to guide future land-management actions and subsequent site-specific implementation decisions.
- Identify management actions and allowable uses anticipated to achieve the established goals and objectives and reach desired outcomes.
- Provide comprehensive management direction by making land use decisions for all appropriate resources and resource uses administered by the Bakersfield Field Office.
- Provide for compliance with applicable tribal, federal, and state laws, standards, and implementation plans, and BLM policies and regulations.
- Recognize the Nation's need for domestic sources of minerals and renewable energy, and incorporate requirements of the Energy Policy Act of 2005 (Public Law 109-58).
- Retain flexibility to adapt to new and emerging issues and opportunities and to provide for adjustments to decisions over time based on new information and monitoring.

Strive to be compatible with the plans and policies of adjacent local, state, tribal, and federal agencies and consistent with federal law, regulations, and BLM policy.

Public Involvement and Agency Cooperation

The intent of the scoping process is to provide an opportunity for the public, tribes, government agencies, and interest groups to participate in determining the scope and issues to be addressed by alternatives and analyses in the planning process and the EIS. In general, public involvement assists the agency by broadening the information base for decision making, disseminating information to the public about the RMP and EIS, and ensuring that public needs and viewpoints are brought to the attention of the BLM.

Although scoping comments were accepted and incorporated up until November 10, 2010, the formal scoping period was from March 4, 2008 to May 3, 2008. The BLM solicited written comments on the RMP revision process, issues, and impacts and held a series of seven public meetings in the Planning Area, additional meetings we're held in 2009 to update the public on the planning process and garner additional resource specific information. The BLM structured the meetings in an open house format, with resource specialists and other representatives of the BLM on hand to personally address questions and provide information to meeting participants.

Public participation was ongoing throughout the planning process. The Proposed RMP and Final EIS considered all substantive oral and written comments received during the 90-day public comment period for the Draft RMP and Draft EIS, which occurred between September 9, 2011 and December 9, 2011. Members of the public, with standing, have the opportunity to protest the land use planning level decisions made by the Proposed RMP and Final EIS during the specified 30-day protest period. In addition, the public will have the opportunity to appeal on implementation level decisions after the ROD has been issued. The ROD will be issued by the BLM after the release of the Proposed RMP and Final EIS, the Governor's Consistency Review, and protest resolution.

Issues Addressed

Planning issues identified through the scoping process and other public outreach efforts focus on the demands, concerns, conflicts, or problems associated with use or management of public lands and resources in the Decision Area. Key planning issues within the scope of the EIS are used to develop alternatives or are otherwise addressed in the EIS. The main issues described and analyzed in the EIS include the following:

Issue 1: *Adequately address the need for access to, and continued availability of, public lands for multiple recreational uses and open spaces.*

Issue 2: *Establish a balance between the extent of the travel network and the protection of natural and cultural resources including an appropriate allocation of routes to the various modes of transport*.

Issue 3: *Ensure appropriate protection for Threatened and Endangered species, critical habitat, other biological resources, and cultural and paleontological resources in a multiple-use environment.*

Issue 4: *Continue to appropriately manage livestock grazing to provide for economic benefit, rural lifestyles and vegetation management while protecting other resources*.

Issue 5: *Balance the demand for energy development (including oil and gas, wind, and solar energy) and other land use authorizations (such as road and transmission corridor rights-of-way) with other resource values.*

Issue 6: *Address the impacts of climate change on the management of public lands, including strategies that will reduce impacts and incorporate appropriate monitoring*.

Alternatives Considered in Detail

To comply with NEPA requirements in the development of alternatives for this RMP and EIS, the BLM sought public input and analyzed a reasonable range of alternatives, including a No Action Alternative (Alternative A). The BLM conducted a series of workshops with an Interdisciplinary Team comprised of BLM specialists and local, state, and federal agency representatives. The BLM formulated four additional alternatives (B thru E) that reflect a range of resource use and conservation. Following analysis all alternatives the Interdisciplinary Team provided recommendations for selecting the Proposed Plan Alternative (Alternative B). The Proposed Plan Alternative does not represent a final BLM decision and could change between publication of the Proposed RMP and Final EIS and Approved RMP and ROD based on any protests that may be received. The BLM will make its final decision after any protest resolution, and will document its decision in a ROD.

Including the No Action Alternative (Alternative A), the five alternatives analyzed in this Final EIS represent differing approaches to managing resources and resource uses in the Decision Area.

Each alternative comprises two categories of land use planning decisions: (1) desired outcomes (goals and objectives) and (2) allowable uses and management actions.

Goals and objectives direct BLM actions to most effectively meet legal mandates, regulations, and agency policy, as well as local and regional resource needs. Goals are broad statements of desired outcomes that are usually not quantifiable. Objectives identify more specific desired outcomes for

resources and might include a measurable component. Objectives are generally expected to achieve the stated goals. Allowable uses are a category of land use decisions that identify where specific land uses are allowed, restricted, or excluded on BLM-administered lands and federal mineral estate in the Decision Area. Management actions are proactive measures (for example, measures the BLM will implement to enhance watershed function and condition), or limitations intended to guide BLM activities. Allowable uses often contain a spatial component because the alternatives identify whether particular land uses are allowed, restricted, or excluded. Alternatives may include specific management actions to meet goals and objectives and may exclude certain land uses to protect resource values.

Alternative A continues current management practices as the No Action alternative required by NEPA. This alternative would continue current management under the existing 1997 Caliente RMP and 1984 Hollister RMP, as amended. Management of resources and sensitive habitats would remain at current levels but would not address emerging issues concerning public lands. This alternative also would not address the use of lands acquired after the signing of these RODs, including public lands at Atwell Island, Piedras Blancas Light Station, and portions of the San Joaquin River Gorge. When no specific management actions are described in the No Action alternative, management of lands and resources has been guided by BLM policy and interim management strategies.

Alternative B (Proposed Plan) balances resource conservation and ecosystem health with the production of commodities and public use of the land. This alternative provides opportunities to produce commodities from natural resources and to use the land for public purposes on a sustainable basis while maintaining important ecological, cultural, and recreational values. This alternative includes changes made as a result of public comment and internal review on the Draft RMP/Draft EIS.

Alternative C emphasizes conserving cultural and natural resources, maintaining functioning natural systems, and restoring natural systems that are degraded. Management would focus on protecting sensitive resources through greater limitation of resource uses.

Alternative D mimics Alternative C in all aspects except livestock grazing. This alternative eliminates livestock grazing from the public lands for the life of the plan where the Bakersfield RMP provides administrative direction for the livestock grazing program.

Alternative E emphasizes the production of natural resources commodities and public use opportunities. Resource uses such as recreation, livestock grazing, mining, and oil/gas leasing, consistent with BLM guidance and constraints, would be emphasized. Potential impacts on sensitive resources would be mitigated on a case-by-case basis.

Environmental Consequences

The purpose of the environmental consequences analysis is to determine the potential impacts of the federal action under each of the five alternatives on the human environment, while focusing on key planning issues identified by the BLM and established during the scoping process. The analysis of environmental consequences is arranged by the following program areas: Resources, Resource Uses, Special Designations and Social and Economic Considerations.

Resources

The analysis shows that all of the action alternatives result in reductions of PM_{10} emissions primarily in the San Joaquin Valley and East Kern Planning Areas; these reductions are consistent with the State Implementation Plans (SIP) and represent conformity. Ozone precursor emissions would increase slightly under all alternatives, but this increase represents less that 0.09% of the regional emissions inventory. Emissions of all pollutants of concern within the Planning Area have been demonstrated to be less than *de minimus* levels in the San Joaquin Valley for both ozone precursor emissions, all of the SIP requirements for the six federal nonattainment/maintenance areas are met by all alternatives.

Alternative A would be the least protective of natural and cultural resources allowing for the largest area available for surface disturbing activities and incompatible uses. Alternatives C and D would be the most restrictive of surface disturbing and incompatible uses; Alternative D would further eliminate the direct impacts of livestock grazing, however, implementation of this exclusion would have its own set of impacts resulting from the need to restrict livestock from public lands (e.g. fencing of private lands) to prevent unauthorized grazing. Alternative B would provide additional protection for approximately one-half of the federally listed species known or with potential to occur in the Decision Area and generally reduce the impacts of motorized routes on both biological and cultural resources.

Prescriptive management of lands identified as having wilderness characteristics in Alternative B would provide protection for 21% of the lands with wilderness characteristics outside of Wilderness and Wilderness Study Areas. Other compatible designations would protect an additional 24% of these lands. Wilderness characteristics would not receive any compatible management on the remaining areas and could potentially be subject to loss. Alternatives C and D would protect all lands with wilderness characteristics through prescriptive management. Whereas, Alternatives A and E would not provide for the protection of any lands with wilderness characteristics outside of Wilderness and Wilderness Study Areas.

The greatest protection for visual resources would be provided under Alternatives B, C, and D because the existing visual conditions are maintained or managed as a higher VRM Class. Alternative E would manage the largest area that allows for major modifications to the existing visual condition. Alternative A would not provide VRM guidance at the landscape level; relying on project specific interim management of visual resources, which could result in undesirable visual contrast with the existing landscape.

Resource Uses

There is little difference between the alternatives concerning the designation of OHV Closed Areas, however, travel opportunities and the potential for the travel network to increase would be most limited in Alternatives C and D. Route designations within the alternatives range from a sizeable increase in the amount of routes designated for motorized use in Alternatives A, B and E; whereas, Alternatives C and D would result in a notable decrease from the existing travel network.

Alternative A focuses on land disposal actions and would ultimately result in a net loss of public lands and federal mineral estate. Conversely, the action alternatives are retention oriented. The action alternatives would increase the areas either totally excluding ROWs or implementing additional restrictions to their siting. Alternatives C and D apply the greatest area limitations and, therefore, have the largest impact to land use authorizations, including utility scale renewable energy projects.

The allocation of currently unallocated lands would result in a marginal increase in livestock grazing opportunity in Alternatives B, C, and E. Alternative D would eliminate livestock grazing from public lands in the decision area for the life of the plan, however, the connected actions associated with the implementation of this alternative would be impracticable.

All alternatives continue fluid mineral development opportunities at or near current levels, especially given consideration of historic use patterns and the reasonably foreseeable development outside of producing oil fields. Under Alternatives C and D there would be a total elimination of solid leasable mineral development opportunity whilst the remaining alternatives continue to provide opportunity commensurate to the current condition. Overall there is marginal difference between the alternatives in their reduction of locatable development opportunities in areas with potential for these minerals. There is, however, a substantial reduction in opportunity for salable mineral developments in all action alternatives.

Alternative A would result in the least restrictions to specific recreational opportunities and the maintenance of existing access opportunities; however, it would not outline sufficient guidance for the adequate management of recreation. The action alternatives increase the level of opportunity specific restrictions including the largest areas of public closure under Alternatives C and D. Generally, there is little difference between the areas managed for recreation across the action alternatives (acres of SRMA/ERMA); however, the focus switches between intensive SRMA and moderate ERMA styles of management: most intensive management in Alternative E.

Special Designations

Alternatives C and D protect the largest area through designation as ACECs, primarily to maintain and enhance biological resource values. Relevant values would be at greatest risk from degradation under Alternative A, which would protect the smallest acreage and apply minimal special management to achieve ACEC objectives.

Alternatives B, C, and D eliminate the only Back Country Byway from the Decision Area. Alternatives A and E continue the designation of the Chimney Peak Byway with the latter providing guidance that would improve opportunities and experiences along the route.

Alternative B would find two segments of rivers suitable for inclusion in the National Wild and Scenic Rivers System. The remaining six rivers would no longer receive interim management; however, impacts to their outstandingly remarkable values would be unlikely because of overlapping special management provided by ACEC designations or area of ecological importance and SRMA prescriptive management. Alternatives C and D would find all eight river segments suitable and, therefore, continue protection. Alternatives A and E would find no segments suitable.

Social and Economic Considerations

None of the alternatives would be expected to reduce economic diversity (the number of economic sectors) or increase economic dependency, which occurs when the local economy is dominated by a limited number of industries. Shifts in emphasis could occur, but these would not result as a consequence of planning actions in this Proposed RMP/Final EIS. While the alternatives have the potential to affect local businesses and individuals, the relative contribution of BLM-related activities to the local economy and the relative differences between the alternatives would not be large enough to have any measurable effect on economic diversity or dependency.

All alternatives could result in increases in employment and labor income relative to current conditions over the next decade, from which minority and low income populations may benefit. As noted above, access for recreation and other uses would be accommodated under all the alternatives. In addition, access to traditional materials and cultural sites will continue to provide valuable resources to communities in the area; sustaining lifestyles, traditions, ceremonies and the heritage that remain an important part of community lifestyle, rural character and quality of life.

The Next Steps

BLM planning regulations provide for a formal protest of planning decisions contained in the Proposed RMP/Final EIS by those meeting certain criteria. Protests must be filed within 30 days of the date the notice of availability of this document published in the Federal Register, as outlined in 43 Code of Federal Regulations section 1610.5-2.

Upon resolution of all planning decision protests, the BLM will issue and sign an Approved Bakersfield RMP and Record of Decision. Once the RMP is approved, the Bakersfield Field Office will begin its implementation.

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Readers Guide to the Document

CHAPTER ONE – INTRODUCTION

This chapter introduces the Proposed Resource Management Plan and Final Environmental Impact Statement (PRMP/FEIS), describes the purpose and need to which the Bureau of Land Management (BLM) is responding, provides an overview of the BLM planning process, identifies planning issues and criteria, and identifies topics not addressed by this RMP revision.

CHAPTER TWO – ALTERNATIVES

This chapter describes how the five alternatives (A, B, C, D, and E) were developed, the components and content of each alternative. It also, discusses the alternatives considered but eliminated from further consideration. Finally it presents a comparative summary of impacts of each alternative.

Alternative A (no action) is listed as a complete alternative, whereas Alternatives B, C, D and E (the action alternatives) include some management decisions in common. For a complete understanding of these the individual decision within these alternatives must be combined with the management decisions detailed under *Management Common to All Action Alternatives*.

Maps referenced (as Map 2.X) for each alternative are located at the end of the first alternative referencing them (with the exception of Livestock Grazing and Route Designation maps – located in a separate oversized map packet available for download) , these maps are not repeated in the document if referenced later.

To further aid in organization, program discussions are organized into four main subgroups; Resources, Resource Uses, Special Designation and Social and Economic Considerations. Within these subgroups programs are listed alphabetically, as follows:

> **Resources:** Air and Atmospheric Values, Biological Resources, Cave and Karst Resource, Cultural Resources, Lands with Wilderness Characteristics, Paleontological Resources, Soil Resources, Water Resources, Wildland Fire Ecology and Management, and Visual Resources.
>
> **Resource Uses:** Comprehensive Trail and Travel Management, Lands and Realty, Livestock Grazing, Minerals Management, Recreation and Visitor Services (including Environmental Education and Interpretation).
>
> **Special Designations:** Areas of Critical Environmental Concern, Back Country Byways, National Trails, Outstanding Natural Areas, Wild and Scenic Rivers, and Wilderness and Wilderness Study Areas.
>
> **Social and Economic Considerations:** Public Safety and Health, Social and economic values and Tribal Interests.

Programs are organized in the same fashion throughout the remainder of the document.

CHAPTER THREE - AFFECTED ENVIRONMENT

This chapter describes the Bakersfield FO Planning and Decision Area and the existing environmental conditions that could be impacted by implementation of the alternatives.

CHAPTER FOUR - ENVIRONMENTAL CONSEQUENCES

This chapter forms the scientific and analytic basis of the environmental impacts of each alternative, including the No Action Alternative.

Impacts generally are described in terms of direct or indirect and short-term or long-term, when applicable. Potential cumulative and unavoidable impacts and irreversible and irretrievable commitments also are discussed in this chapter.

CHAPTER FIVE - PUBLIC INVOLVEMENT, CONSULTATION, AND COORDINATION

This chapter describes the public involvement process, as well as other key consultation and coordination activities undertaken to prepare the EIS in support of the RMP revision. This chapter also includes a list of preparers displaying the names and resource topics each individual was responsible for preparing.

CHAPTER SIX – REFERENCES

This chapter provides full citation information for all references cited within the document.

GLOSSARY

The Glossary defines selected terms used throughout this document.

APPENDICES

The appendices include documents that support existing resource conditions or situations, substantiate analyses, provide resource management guidance, explain processes, or provide information directly relevant or supporting conclusions in the Proposed RMP/Final EIS.

Changes to the Document between Draft and Proposed/Final

Substantive changes between the draft documents and the Proposed RMP/Final EIS are identified throughout the document though the use of "Styles". Substantive removals from the draft document are marked though the use of: ~~*Italicized, Underlined and Strike-Through*~~ text style, whereas addition to the document are identified by: *Italicized and Underlined* text style.

Acreage and Geographic Information System Calculations

The majority of acreage and miles in this document are calculated using Geographic Information Systems (GIS). The use of GIS spatial analysis can provide precise acreage calculations; however, for the ease of reading these values have been rounded. It should be noted that the acreage values are only as

accurate as the data that is entered. Various factors can affect the accuracy of data including data collection and entry, scale, and timeframe. Until these calculations are confirmed through field surveys using a Global Positioning System, all GIS calculations are for reference and comparative purposes only.

To ensure the RMP is as up-to-date as possible acreages and acreage calculations used in the proposed plan alternative reflect updated land/mineral estate ownership information that accounts for numerous minor mapping errors discovered in the process of developing the draft document and several land acquisitions that have occurred during the planning process.

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Acronyms and Abbreviations

<	less than
ACEC	Area of Critical Environmental Concern
AML	Abandoned Mine Land
APCD	Air Pollution Control District
APD	Application for Permit to Drill
ARPA	Archeological Resources Protection Act
ATV	All-Terrain Vehicle
AUM	animal unit month
BLM	US Department of the Interior, Bureau of Land Management
BMP	Best Management Practice
BOR	Bureau of Reclamation
CAA	Clean Air Act
CALIPC	California Invasive Plants Council
CAL FIRE	California Department of Forestry and Fire Protection
CARB	California Air Resources Board
CDFG	California Department of Fish and Game
CDOGGR	California Division of Oil, Gas, and Geothermal Resources
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CNPS	California Native Plant Society
CIAA	cumulative impacts assessment area
COA	Conditions of Approval
CPNM	Carrizo Plain National Monument
CSU	Controlled Surface Use
CTTM	comprehensive trails and travel management
CWA	Clean Water Act
CWCG	California Wildfire Coordinating Group
DOD	US Department of Defense
DRECP	Desert Renewable Energy Conservation Plan
EA	environmental assessment
EIS	environmental impact statement
EO	Executive Order
EPA	US Environmental Protection Agency
ERMA	extensive recreation management area
ESA	Endangered Species Act of 1973
ESR	emergency stabilization and rehabilitation
FLPMA	Federal Land Policy and Management Act
FMP	fire management plan
FMU	Fire Management Unit
FRCC	fire regime condition class
GIS	Geographic Information System
GPS	Global Positioning System
HCP	habitat conservation plan
KCAPCD	Kern County Air Pollution Control District

LWCF	Land and Water Conservation Fund
LUP	Land Use Plan
MIST	Minimum impact suppression tactics
MOA	Memorandum of Agreement
NAAQS	National Ambient Air Quality Standards
NCLWMA	National Cooperative Land and Wildlife Management Area
NEPA	National Environmental Policy Act of 1969
NHL	National Historic Landmark
NHPA	National Historic Preservation Act
NLCS	National Landscape Conservation System
NOA	Naturally Occurring Asbestos
NMFS	National Marine Fisheries Service
NPR	Naval Petroleum Reserve
NPS	US Department of the Interior, National Park Service
NRHP	National Register of Historic Places
NSO	No Surface Occupancy
NWSRS	National Wild and Scenic Rivers Systems
OHV	off-highway vehicle (previously ORV – Off-road vehicle)
ONA	Outstanding Natural Area
ORV	outstandingly remarkable value
PCNST	Pacific Crest National Scenic Trail
PFC	proper functioning condition
PFYC	Potential Fossil Yield Classification
PM2.5	particulate matter smaller than 2.5 microns in diameter
PM10	particulate matter smaller than 10 microns in diameter
RFD	reasonably foreseeable development
RMA	Recreation Management Area
RMIS	Recreation Management Information System
RMP	resource management plan
RMZ	recreation management zone
ROD	Record of Decision
ROW	right-of-way
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SJRG	San Joaquin River Gorge
SMA	Special Management Area
SOP	Standard Operating Procedure
SRMA	Special Recreation Management Area
SRP	special recreation permit
TCP	traditional cultural practice
T&E	Threatened and Endangered
US	United States
USC	United States Code
USDA	United States Department of Agriculture
USDI	United States Department of the Interior
USFS	United States Department of Agriculture, Forest Service
USFWS	US Department of the Interior, Fish and Wildlife Service
USGS	US Geological Survey

VRI	Visual Resource Inventory
VRM	visual resource management
WSA	wilderness study area
WSR	wild and scenic river
WUI	wildland urban interface

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1 Chapter One

1.1 Introduction

The US Department of the Interior, Bureau of Land Management (BLM), has prepared this proposed resource management plan (RMP) and final environmental impact statement (EIS). This RMP provides direction for managing public lands under the administrative jurisdiction of the BLM's Bakersfield Field Office (Bakersfield FO) in an eight-county region of central California; the EIS analyzes the environmental effects that could result from implementing the alternatives defined in this RMP. The regional area is referred to as the Planning Area.

Public lands within the Planning Area are currently being managed under the Caliente RMP (BLM, 1997a), the Hollister RMP (BLM, 1984a), and two RMPs covering public lands within the California Coastal National Monument (CCNM), (BLM 2005a) and the Carrizo Plain National Monument (CPNM), (BLM 2010b). The Caliente RMP, completed in 1997, covers public lands in San Luis Obispo, Santa Barbara, Ventura, Kings, Tulare, and western Kern Counties. The Hollister RMP, completed in 1985 by the Hollister Field Office, covers lands in Madera and eastern Fresno Counties, which were administratively transferred to the Bakersfield FO in October 2000. This document does not address public land management within the CCNM or the CPNM, except for livestock grazing management in a small portion of the CPNM. Within the Planning Area, public lands managed by BLM are referred to as the Decision Area.

The RMP is being prepared using BLM planning regulations and guidance issued under the authority of the Federal Land Policy and Management Act (FLPMA) of 1976 (43 US Code [USC], 1701 et seq.) and the BLM's Land Use Planning Handbook, H-1601-1 (BLM 2005b). An EIS is incorporated into this document to meet the requirements of the National Environmental Policy Act of 1969 (NEPA), Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 Code of Federal Regulations [CFR], 1500-1508) (CEQ 1978), and requirements of the BLM's NEPA Handbook, H-1790-1 (BLM 2008a).

1.2 Purpose and Need for the Plan

The purpose of this RMP is to review existing management and establish goals, objectives, and management actions for BLM public lands that address current issues, knowledge, and conditions.

The need for revision of the 1997 Caliente Resource Management Plan (RMP) and outstanding portion of the 1984 Hollister RMP stems from several factors including: a) the recent completion of RMPs for two areas (now known as the CCNM, and the CPNM) previously covered in the 1997 Caliente RMP, b) the transfer of some public lands from the Hollister Field Office to the Bakersfield Field Office that remained under management guidance provided by the 1984 Hollister RMP, c) the acquisition of new lands, and d) guidance provided in 43 CFR 1610.5-5 that recommends amending or revising an RMP to: (i) implement new and revised policies that change land use planning level decisions; (ii) respond to new, intensified or changed uses of public land; and (iii) consider significant new information from resource assessments, monitoring or scientific studies that change land use decisions. This revision effort is specifically needed to address the following major changes:

- In January 2000, President Clinton established and included the California Coastal National Monument (CCNM) in the BLM's National Landscape Conservation System (NLCS). The monument consists of more than 20,000 rocks and islands that are spread along the 1,100-mile California coastline; of which approximately 230 miles fall within the Bakersfield FO. In September 2005, a separate RMP was approved providing guidance and direction for the CCNM. As such, the CCNM RMP (as opposed to the Caliente RMP) now controls land use within the monument.
- In October 2000, the Bakersfield FO acquired management responsibility for the public lands in Madera and eastern Fresno Counties, which are managed under the 1985 Hollister RMP. The San Joaquin River Gorge was among the lands transferred.
- In January 2001, President Clinton designated the Carrizo Plain National Monument (CPNM) and included it in the BLM's NLCS. In April 2010, a separate RMP was approved, covering the approximately 206,000 acres of public lands within the CPNM. As such, the CPNM RMP (as opposed to the Caliente RMP) now controls land use within the monument.
- In March 2001, the BLM began to acquire several thousand acres of land in southwestern Tulare County and eastern Kings County, at Atwell Island. Acquired under the auspices of the Central Valley Project Improvement Act, there was no specific direction for these lands within the 1997 Caliente RMP.
- In May 2002, the US Coast Guard transferred the Piedras Blancas Light Station to the BLM. This action created an opportunity for public benefits that were unanticipated by the Caliente RMP. In May 2008, President George W. Bush signed a law designating Piedras Blancas Light Station as an Outstanding Natural Area and including it in the BLM's NLCS.
- In 2005, Congress transferred to the BLM most of the Naval Petroleum Reserve Number 2, consisting of 10,451 acres in southwestern Kern County. The Caliente RMP was immediately amended to provide for leasing oil and gas, but other management decisions were postponed until a future planning effort could be completed.

Like California as a whole, the Planning Area has undergone many changes since the completion of the Hollister and Caliente RMPs, resulting in a tremendous increase in the demand for, and the use of, public lands. The driving forces have been the rapid increase in California's population and the critical need for domestic energy production. While California's overall population increased by 9 percent, the last ten years of population growth in the Planning Area ranged from 2 percent in Santa Barbara County to 22 percent in Kern County (U.S. Census 2010). Increased population means increased demands for public lands for recreation and increased impacts to public lands from both authorized and unauthorized activities. People living in rural communities next to public lands have a desire to use public lands as fuel breaks and to preserve open space around their communities to help maintain the rural atmosphere. The national focus on increased domestic oil and gas production and the development of renewable energy has placed additional requests for use of public lands. These increased demands and uses of public lands present some complex management issues that can best be addressed by an updated land use plan.

The Bakersfield RMP provides an updated assessment of resources; a review of land uses, conditions, and trends; a forum for enhanced public collaboration and involvement; and a comprehensive impact analysis of reasonable management alternatives and resulting land use decisions.

1.3 Description of the Planning Area

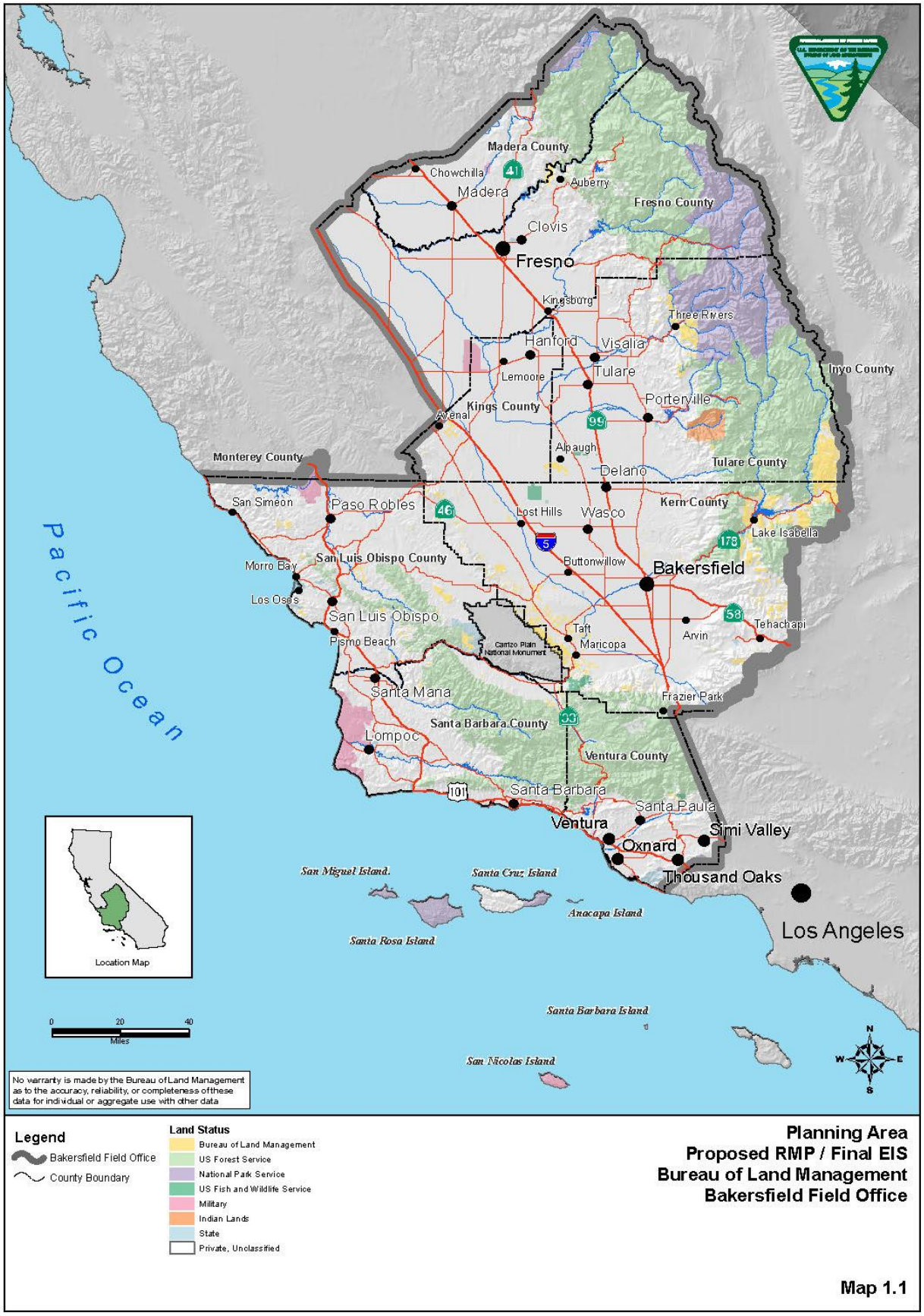
1.3.1 Planning Area

The Bakersfield FO administrative boundary defines the Planning Area assessed in this RMP revision. The Bakersfield FO Planning Area encompasses about 17 million acres throughout Kings, San Luis Obispo, Santa Barbara, Tulare, Ventura, Madera, eastern Fresno, and western Kern Counties and includes all lands within the administrative boundary regardless of jurisdiction or ownership (Map 1.1.). With a variety of settings and landforms, this is a region of diverse topography and landscapes, and extraordinary biodiversity. Elevations range from sea level to more than 14,500 feet at Mount Whitney. Table 1.1, presents land status within the Planning Area.

Table 1.1
Land Status (*surface only*) within the Planning Area

Land Status	Acres	Percentage of Planning Area
BLM	612,137	3.5
US Bureau of Reclamation	12,084	0.1
US Forest Service	4,084,317	23.6
US Fish and Wildlife Service	33,296	0.2
National Park Service	1,030,378	5.9
Bureau of Indian Affairs	59,830	0.3
Other Federal	2,052	0.01
State of California	108,989	0.6
Local Government	11,794	0.07
Military	181,993	1.1
Private	11,182,537	64.6
Total	17,319,347	100

Source: BLM 2010b


Madera County
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Madera
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Fresno
Kingsburg
Three Rivers
Hanford
Visalia
Inyo County
Lemoore
Tulare
Porterville
Kings County
Avenal
Alpaugh
Monterey County
Delano
Tulare County
San Simeon
Paso Robles
Lost Hills
Wasco
Kern County
Lake Isabella
Pacific Ocean
San Luis Obispo County
Buttonwillow
Bakersfield
Morro Bay
Los Osos
San Luis Obispo
Taft
Arvin
Tehachapi
Pismo Beach
Carrizo Plain National Monument
Maricopa
Santa Maria
Frazier Park
Santa Barbara County
Lompoc
Ventura County
Santa Barbara
Santa Paula
Ventura
Simi Valley
Oxnard
San Miguel Island
Santa Cruz Island
Thousand Oaks
Anacapa Island
Los Angeles
Santa Rosa Island
Santa Barbara Island
San Nicolas Island
Location Map
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Miles
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data
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Legend
Bakersfield Field Office
County Boundary
Land Status
Bureau of Land Management
US Forest Service
National Park Service
US Fish and Wildlife Service
Military
Indian Lands
State
Private, Unclassified
Planning Area
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 1.1

1.3.2 Decision Area

While the Planning Area encompasses the entire area within the boundaries of the Bakersfield FO regardless of jurisdiction or ownership, the Bakersfield FO Decision Area encompasses about 400,000 acres of public lands surface and minerals, and 750,000 acres of mineral estate only. Stretching from the coastal islands in the Pacific Ocean across the Central Valley to the crest of the Sierra Nevada, these public lands are scattered across the Planning Area in numerous parcels of various size. The larger blocks of public land lie adjacent to the CPNM, in the Three Rivers-Kaweah River region of Tulare County, and in the Lake Isabella-Chimney Peak-Walker Pass region of Kern and Tulare counties. The Bakersfield FO Decision Area does not include the CPNM[1] or the CCNM, which are managed by the Bakersfield FO under different, site-specific RMPs. The Decision Area also includes subsurface minerals on approximately 550,000 acres of "split estate" (areas where the BLM manages federal subsurface minerals but the surface is owned by a non-federal entity) as well as subsurface minerals on approximately 200,000 acres where the surface is managed by other Federal agencies. These combined areas (about 1.2 million acres) constitute the area for which the BLM has authority and makes decisions (i.e. the Decision Area) under this plan revision (Map 1.2). Table 1.2, summarizes the Decision Area.

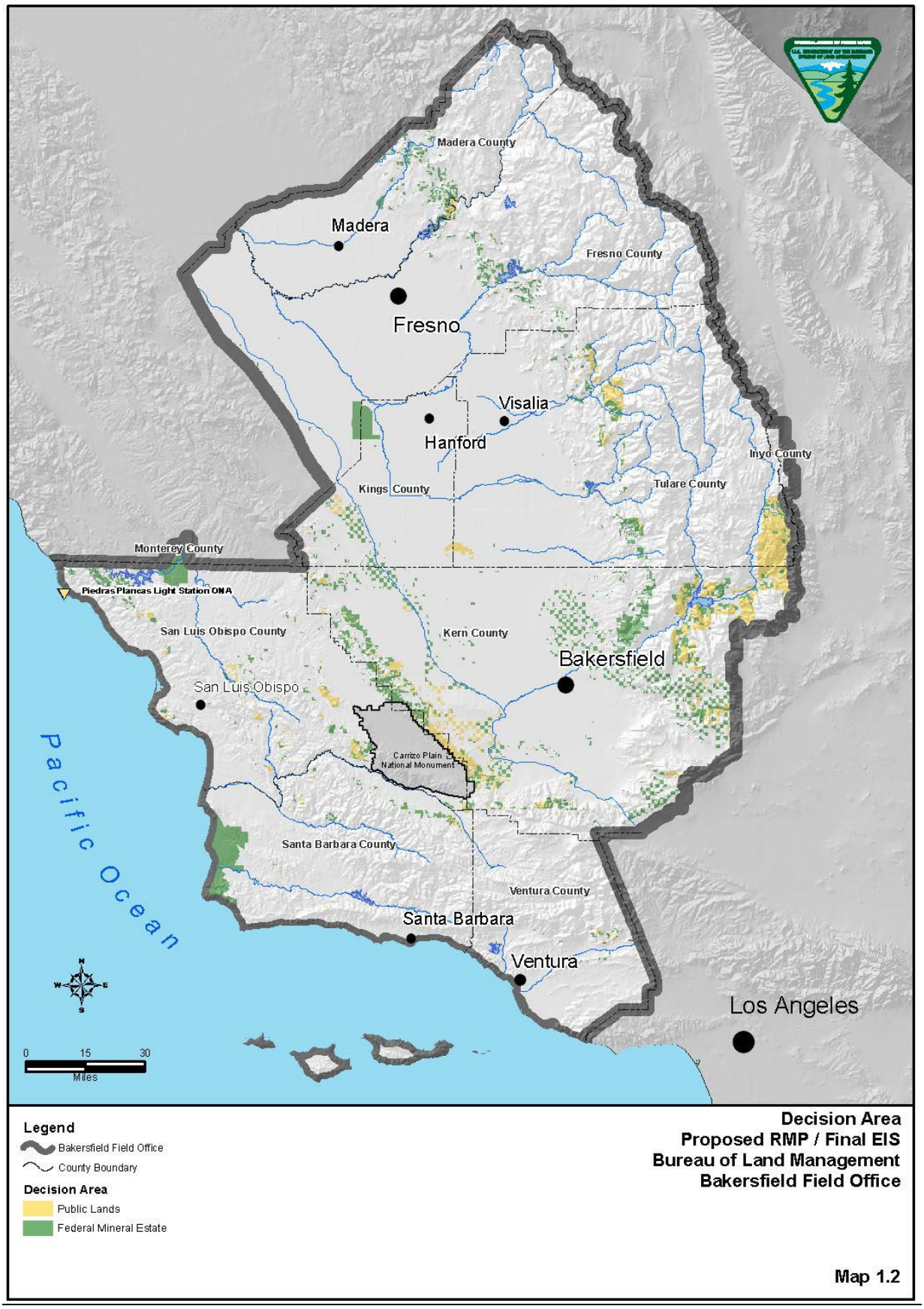
Table 1.2
Land Status within the Decision Area

Land Status	Acres[2]	Percentage of Decision Area
BLM *Managed*[3] Surface Only	~~8,194~~ 11,405	~~0.7~~ 0.9
BLM Surface and Mineral Estate	395,745 ~~393,179~~	~~33.8~~ 33.5
BLM Mineral Estate with Other Federal Surface	~~195,303~~ 219,778[4]	~~16.7~~ 18.7
Split Estate (BLM Mineral Estate with Non-Federal Surface)	~~571,162~~ 548,117	~~48.8~~ 46.7
Total BLM Surface	~~403,939~~ 404,319	-
Total BLM-Administered Mineral Estate	~~1,162,210~~ 1,161,075	-
Total Decision Area	~~1,170,404~~ 1,172,480	100

Source: BLM 2012a

The Decision Area does not include other private lands, state lands, tribal lands, federal lands not administered by the BLM, and public lands within the CCNM and CPNM, except for livestock grazing management in a small portion of the CPNM.

[1] Except a small portion of the CPNM for which this RMP provides direction for livestock grazing management.
[2] Acreages reflect 2012 data and include the correction of mapping errors and new acquisitions occurring since publication of the Draft RMP/Draft EIS.
[3] Includes 254 acres owned by BOR, but managed by BLM through an MOU.
[4] This acreage includes the mineral estate under DOD at San Nicholas Island which was not included in the Draft RMP/Draft EIS.


Madera County
Madera
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Fresno
Visalia
Hanford
Inyo County
Kings County
Tulare County
Monterey County
Piedras Plancas Light Station ONA
San Luis Obispo County
Kern County
Bakersfield
San Luis Obispo
Carrizo Plain National Monument
Pacific Ocean
Santa Barbara County
Ventura County
Santa Barbara
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Los Angeles
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Legend
Bakersfield Field Office
County Boundary
Decision Area
Public Lands
Federal Mineral Estate
Decision Area
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 1.2

The decisions generated by the RMP would only apply to BLM-administered surface and mineral estate. No decisions generated by the RMP would change existing rights or authority of private land owners or other surface management agencies. While the RMP decisions do not apply to lands not administered by the BLM, lands that are interspersed with BLM-managed public lands could be indirectly affected by BLM management actions. The planning effort recognizes that nearby lands, communities, resource values, and uses could all be affected by management of the Bakersfield FO Decision Area; in turn, their use and values affect BLM management of public lands. The plan includes recommendations for the BLM to work with entities that manage areas or programs that are not under its jurisdiction, but that directly affect BLM's management (such as county governments, tourism information groups, and hunting organizations). Final decisions however, regarding actions outside the Decision Area rest with the appropriate agency or community government, and are typically not decisions made by the BLM.

1.4 Scoping and Planning Issues

1.4.1 Scoping Process

A Notice of Intent (NOI) to develop the Bakersfield RMP and associated EIS was published in the *Federal Register* on March 4, 2008 (Volume 73, Number 43, pages 11661-11662). This initiated the public scoping period. A news release was also submitted to local and regional media and posted on BLM's Web site.

The Bakersfield FO hosted several public scoping meetings. Agencies and the public were encouraged to submit oral and/or written comments regarding management of public lands in the Planning Area. The formal scoping period ended on May 3, 2008 (approximately 60 days). Although the BLM accepts comments at any time during the planning process, comments received during the scoping period are particularly helpful in guiding the development of alternatives. All of the comments received by November 22, 2010[5] were compiled, reviewed, and analyzed. Issues were derived from these comments.

1.4.2 Issues Addressed

Public scoping analysis in combination with bureau policy, directives and guidance resulted in the identification of six planning issues that were addressed during development of alternatives. Planning issues are disputes or controversies about existing and potential land and resource allocations, levels of resource use, production, and related management practices. Usually, the causal relationship between the activity or use and undesirable results are well defined or can be documented, and the level of controversy is high enough to merit further analysis. Statement of the planning issues orients the planning process so that interdisciplinary thought, analysis, and documentation is directed toward resolving the planning issues during preparation of the RMP.

Issue 1: *Adequately address the need for access to and continued availability of, public lands for multiple recreational uses and open spaces.*

[5] Date last Travel Management comment was received that could be incorporated prior to beginning internal review process.

The enormous increase in population in the Planning Area has intensified the demand for open space and recreation opportunities on public land. Not only has demand increased, but the kinds of recreation taking place on public lands have also increased, and conflicts are developing including impacts from unauthorized activities. Coupled with this is the scattered nature of much of the public land parcels, many of which lack legal access.

Issue 2: *Establish a balance between the extent of the travel network and the protection of natural and cultural resources, including an appropriate allocation of routes to the various modes of transport*.

The BLM travel network is used by a wide range of users including commercial, domestic, and recreation users. There is some demand for new trail systems, especially from the OHV interest groups within the community (to increase opportunities for different skill levels and modes of travel); however, the ongoing proliferation of illegal routes has resulted in the damage to natural and cultural resources, and conflicts between the various user groups. BLM needs to coordinate with other managers of travel networks, such as private interests, the State, and other federal agencies and contribute toward a regional solution to the issue.

Issue 3: *Ensure appropriate protection for Threatened and Endangered species, critical habitat, other biological resources, and cultural and paleontological resources in a multiple-use environment.*

The diverse landscapes and the extraordinary biodiversity present within the Planning Area present a unique challenge in managing public lands and resources in a rapidly growing region with a diversity of public demands. Since the 1997 Caliente RMP was completed, the USFWS has listed as threatened or endangered at least an additional 11 plants and animals potentially found on public lands within the Bakersfield FO for a total of 86 federally listed species. Loss and degradation of natural habitat continues as California's population grows, increasing the importance of BLM lands for conservation goals. The balance between the conservation of biological, cultural, and paleontological resources with the demand for other land uses is an ongoing issue.

Issue 4: *Continue to appropriately manage livestock grazing to provide for economic benefit, rural lifestyles and vegetation management while protecting other resources*.

Livestock grazing plays an important role on the landscape in terms of rural lifestyles, local economies, and maintaining the legacy of the "West." Management of livestock grazing into the future needs to incorporate the best science and adaptive management methods to ensure protection of other resources. In addition, explore the utilization of livestock grazing as a vegetation management tool to meet resource objectives (such as wildlife habitat and fire management).

Issue 5: *Balance the demand for energy development (including oil and gas, wind, and solar energy) and other land use authorizations (such as road and transmission corridor rights-of-way) with other resource values.*

Implementing the multiple-use mandate from FLPMA includes balancing the economic use of public resources, while providing for appropriate stewardship of public lands and the protection of natural and cultural resources. The economic uses involve both renewable and nonrenewable resources and include energy development (primarily oil and gas, wind, and solar), other mineral extraction, and land use authorizations such as road and transmission corridor rights-of-way. With the increasing demand for sources of domestic energy from public lands, the ability to balance these immediate goals with the protection of public lands for the use and enjoyment of future generations becomes more challenging.

Issue 6: *Address the impacts of climate change on the management of public lands, including strategies that will reduce impacts and incorporate appropriate monitoring*.

The temperature of the planet's atmosphere is regulated by a balance of radiation received from the sun and the amount of that radiation absorbed by the earth and atmosphere. Greenhouse gases (e.g. carbon dioxide and methane), as well as water vapor and particulate matter in the atmosphere keep the planet's temperature warmer than it would be otherwise, allowing the planet to sustain life. While these gasses and particles have occurred naturally for millennia, there has been a marked increase in their atmospheric concentration since the start of the industrial age, contributing to the observed climatic variability beyond the historic norm. As appropriate, this plan describes (1) the effects that a changing climate may have on the resources in the Planning Area, and (2) how the reasonably foreseeable activities under each alternative would affect climate change (discussed as part of *Air and Atmospheric Values* in Chapters 3 and 4).

1.4.3 Issues Considered but Not Further Analyzed

During the public scoping process, several concerns/issues were raised by the public and identified by the IDT as outside the scope of the planning effort. Other comments represented questions on how the BLM would go about conducting the planning process and implementation of land use plan decisions. Comments on these items are valuable and appreciated, even though they are outside the scope of an RMP. These comments will be considered when decisions are made on implementation plans, proposed projects, or day-to-day management.

Three concerns were commonly expressed:

- The need for adequate law enforcement personnel and patrols throughout the Bakersfield Field Office – Some members of the public expressed the desire for a resident law enforcement ranger or park ranger in their local area. Staffing issues are not typically addressed in land use plans; they are more appropriately addressed administratively.
- Increasing the use of volunteers and partnerships to assist in managing public lands and resources – Recruitment and opportunities for volunteers and partnerships are ongoing BLM activities that are a means of implementing an RMP. The RMP, however, is not the appropriate mechanism to establish these opportunities.
- The adequacy of budget and staffing to ensure implementation of the RMP – The RMP alternatives will be based on an optimal but reasonable assessment of the level of management needed. However, the RMP is not a budget document and alternative development is not based on specific funding projections.

1.5 Planning Criteria and Legislative Constraints

1.5.1 Planning Criteria

Planning criteria are the standards, rules, and guidelines that help to guide the development of the RMP, to ensure it is tailored to the identified issues, and to deter unnecessary data collection and analysis. They also help guide the development of alternatives and the selection of the preferred alternative.

Planning criteria are based on applicable laws and regulations, agency guidance, and the result of consultation and coordination with the public, other federal, state, and local agencies, and Native American tribes.

Preliminary planning criteria were developed before public scoping meetings to set the focus for the Bakersfield RMP and to guide decision making by topic. These preliminary planning criteria were included in Notice of Intent, published in the *Federal Register*, and were posted on the project web site for public comment during the 60-day scoping period. The planning criteria presented during the scoping process are as follows;

- The plan will establish new guidance and identify existing guidance for the BLM in managing public lands within the Bakersfield FO;
- The plan will be completed in compliance with FLPMA and all other applicable laws;
- The planning process will include an environmental impact statement that will comply with NEPA;
- The RMP/EIS will incorporate by reference the Central California Standards for Rangeland Health and Guidelines for Livestock Grazing Management;
- The RMP/EIS will incorporate by reference all prior Wilderness designations and Wilderness Study Area findings that affect public lands in the Planning Area;
- The plan will provide determinations as required by special program and resource-specific guidance detailed in Appendix C of the BLM's Planning Handbook;
- Decisions in the plan will strive to be compatible with the existing plans and policies of adjacent local, state, tribal, and federal agencies, as long as the decisions are in conformance with BLM policies on management of public lands;
- The scope of analysis will be consistent with the level of analysis in approved plans and in accordance with BLM-wide standards and program guidance;
- Resource allocations must be reasonable and achievable within available technological and budgetary constraints;
- The lifestyles and concerns of area residents will be recognized in the plan;
- All lands within the CCNM and the CPNM—both of which are addressed under separate RMPs, will not be included in the Bakersfield RMP, except for livestock grazing management in a small portion of the CPNM;
- The plan will include Piedras Blancas Historic Light Station Outstanding Natural Area and identify goals, standards, and objectives for this area.
- Decisions and management actions within the existing plans will be evaluated; those that are determined to still be valid will be carried forward into this revised RMP; and
- Geospatial data within a geographic information system (GIS) will be used to facilitate discussions of the affected environment, alternative formulation, analysis of environmental consequences, and display of the results.

The public was encouraged to comment on and to suggest additions to these criteria at the meetings and through correspondence with the BLM. Although no specific criteria differing from those above were suggested by the public during scoping, many commenters supported the method provided by

these principles to evaluate the issues. The public encouraged the BLM to use criteria and standards for as many decisions as possible, making it easier to ~~*manage*~~ *predict potential decisions and outcomes resulting from* site-specific ~~*activities during implementation-level management phases*~~ *project planning*.

1.5.2 Legislative Constraints

The BLM administers public lands within a framework of numerous laws. The most comprehensive of these is the Federal Land Policy and Management Act of 1976 (FLPMA). All BLM policies, procedures, and management actions must be consistent with FLPMA and the other laws that govern use of the public lands. In FLPMA, Congress established the principle of "multiple-use" management; defined, in part, as "management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people."

In addition to the legislative and procedural agency guidance for the preparation of the RMP, many legislation constraints have contributed to the scope and management direction for this document and the planning criteria described previously. A few *of the most relevant* examples of such are provided below:

- Endangered Species Act of 1973, as amended;
- Mineral Leasing Act of 1920;
- National Historic Preservation Act of 1966, as amended;
- Taylor Grazing Act of 1934, as amended;
- Wilderness Act of 1964;

The list provided above is in no way exhaustive and many other legislative acts, laws and regulations are cited throughout the document as appropriate.

1.6 Planning Process

As provided by FLPMA, the BLM is responsible for planning for and managing public lands. The process for the development, approval, maintenance, and amendment or revision of RMPs was initiated under the authority of Section 202(f) of FLPMA and Section 202(c) of NEPA. BLM planning regulations in 43 CFR 1600, and the CEQ regulations in 40 CFR 1500, guide the planning and NEPA processes. Preparation of an RMP/EIS involves the following ten interrelated steps:

Step 1 – Planning Issues Identified: Issues and concerns are identified through a scoping process that includes the public, Native American tribes, other Federal agencies, and State and local governments.

Step 2 – Planning Criteria Development: Planning criteria are created to ensure that decisions are made to address the issues pertinent to the planning effort. Planning criteria are derived from a variety of sources, including applicable laws and regulations, existing management plans, coordination with other agencies' programs, and the results of public and agency scoping. As planning proceeds, planning criteria may be updated or changed.

Step 3 – Data and Information Collection: Based on planning criteria, data and information for the resources in the Bakersfield FO are collected.

Step 4 – Analyze the Management Situation: The collected data and information are assembled into the Analysis of the Management Situation (AMS) and described in Chapter 3 – Affected Environment of this document.

Step 5 – Alternatives Formulation: A range of reasonable management alternatives that address issues identified during scoping is developed.

Step 6 – Alternatives Assessment: The environmental effects of each alternative are estimated and analyzed.

Step 7 – Preferred Alternative Selection: The alternative that best resolves planning issues is identified as the Preferred Alternative.

Step 8 – Resource Management Plan Proposed: A Draft RMP/Draft EIS is issued and made available to the public for a review period of 90 calendar days. During the public review period, the BLM holds additional public meetings to further explain the Draft RMP/Draft EIS, address public questions, and accept comments in writing.

After comments to the draft document have been received and analyzed, the Draft RMP/Draft EIS is revised and modified, as necessary, and the Proposed RMP/Final EIS is published and made available for a 30 calendar day public protest period.

Step 9 – Decision: A ROD will be signed for the Approved Resource Management Plan after all protests have been resolved.

Step 10 – Implementation and Monitoring: Upon approval of the ROD, land use decisions outlined in the Approved Resource Management Plan would be effective immediately and would require no additional planning or NEPA analysis.

Consistent with BLM Land Use Planning Handbook H-1601-1, the BLM will monitor plan implementation and effectiveness, and will report periodically on:

- the management actions undertaken;
- the management actions remaining to be undertaken; and
- the effectiveness of those actions toward meeting goals and objectives.

Monitoring strategies would be developed that identify indicators of change, acceptable thresholds, methodologies, protocols, and timeframes that would be used to evaluate and determine whether desired outcomes are being achieved.

1.6.1 Public Comment Period

The Bakersfield Draft RMP/Draft EIS was released for public review on September 9th 2011. A *Federal Register* Notice initiated the formal 90 day public comment period which closed on December 9th 2011.

During the public comment period the BLM conducted seven public meetings to describe the plan and alternatives, and gave the public an opportunity to ask any questions concerning the plan or planning process. In addition to these meetings the BLM was invited to attend a number of stakeholder meetings to present the RMP and answer specific questions posed by the stakeholder groups.

As a result of the public comment period the BLM received 274 written comment letters. These letters were analyzed for substantive content. The individual substantive comments were studied by the Interdisciplinary Team and appropriate changes were made to the document. Responses to these substantive comments are included in Chapter 5, Section 5.5 – Response to Comments.

Substantive changes between the draft documents and the Proposed RMP/Final EIS are identified throughout the document though the use of "Styles". Substantive removals from the draft document are marked though the use of: ~~*Italicized, Underlined and Strike-Through*~~ text, whereas addition to the document are identified by: *Italicized and Underlined* text.

1.6.2 Relationship to BLM Policy, Plans and Programs

The BLM has three principal levels of land use planning decisions: 1) the RMP level; 2) the activity level; and 3) the site-specific level. This Proposed RMP/Final EIS focuses on establishing broad resource objectives and direction while, at the same time, providing some activity-level guidance and site-specific decisions. Site-specific decisions are usually tied to a specific location, resource, or activity and generally require their own NEPA. Where this RMP makes these site-specific decisions (e.g., route designations) this EIS fulfills the NEPA requirement.

Once approved, the Bakersfield RMP will replace ~~*the applicable*~~ portions of the 1985 Hollister RMP *and all of* the 1997 Caliente RMP~~*, and their amendments*~~. However, there are other associated BLM plans that have been considered in this plan revision as identified in Table 1.3.

Table 1.3
Associated BLM Management Plans

Document	Year
Bakersfield Field Office Fire Management Plan	2008
Carrizo Plain National Monument ROD/ARMP	2010
California Coastal National Monument ROD/ARMP	2005
Piedras Blancas Light Station ONA Interpretive Plan	2008
Piedras Blancas Light Station ONA Management Plan	2007
Southern Sierra (Westside) Management Plan [*Wilderness*]	1999

In addition to existing plans, a number of policies, national programmatic EISs, and program guidance documents (BLM Handbooks and Manual sections) were reviewed for consistency during the development of the RMP. These policies and guidance are referenced throughout the document.

Air Quality MOU: *Through the recent Memorandum of Understanding Among the U.S. Department of Agriculture, U.S. Department of the Interior, and U.S. Environmental Protection Agency, Regarding Air Quality Analyses and Mitigation For Federal Oil and Gas Decisions Through the National Environmental Policy Act Process (effective June 23, 2011), signatories commit to a clearly defined approach to compliance with NEPA regarding air quality in connection with oil and gas development on Federal lands. This MOU applies to all NEPA analyses commencing after the effective date, and all NEPA analyses begun after September 23, 2011. Since the Bakersfield Draft RMP/Draft EIS was made available for public comment on September 9, 2011, during the "grace period", provisions of the MOU are not directly applicable to this NEPA analysis. The BLM however, believes the Proposed RMP/Final EIS air quality analysis meets the intent of the MOU; air resource program management goals and objectives illustrate*

the Bakersfield FO's commitment to protect air quality, particularly as it relates to oil and gas development on Federal lands. In lieu of implementing the MOU at this stage, the BLM developed an Air Resources Management Plan (included as Appendix A-5) that identifies mitigation measures to address adverse impacts to air quality and outlines modeling requirements for proponents in the future. At the time of writing, the BLM and other participating agencies have developed a Joint Agency Implementation Team and are in the process of developing agency specific implementation plans and administering training to implement the MOU for future analyses that pertain to federal oil and gas development.

Desert Renewable Energy Conservation Plan (DRECP): *The DRECP, a joint planning process between the BLM, USFWS, California Energy Commission and CDFG, will address natural resources conservation and renewable energy development on both public and private lands within the California Desert, including a small portion (197,000 acres) of the Planning Area including approximately 22,000 acres of public lands. The plan, still in development, will identify appropriate locations for renewable energy development taking into account impacts to species and natural communities and provide for long-term conservation and management, other equivalent protection measures, for these species and natural communities, giving consideration to other resources and resources uses. The Bakersfield FO has, and will continue to, coordinate with the DRECP planning team to ensure resources within the Decision Area are adequately addressed in the DRECP. Although the Proposed RMP provides guidance for utility scale renewable energy development in a portion of the area being considered by the DRECP, this allocation is interim management direction pending the completion of the DRECP.*

1.7 Collaboration

The Bakersfield FO conducts many activities that require coordination with tribes, the State, other agencies, and interested public. Coordination has been ongoing throughout this planning effort. Coordination is accomplished as a matter of course when implementing land use plan decisions through project development and site-specific activities. Key coordination efforts include those described below. Additional details about the public and agency involvement process are presented in Chapter 5 – Consultation and Coordination.

1.7.1 Intergovernmental, Interagency and Tribal Relationships

The formal process by which the BLM engages other governmental entities (other federal agencies, state agencies and local governments) in the planning process is through Cooperating Agency status. Cooperating agency status provides a formal framework for governmental agencies to engage in active collaboration with a Federal agency to implement the requirements of the National Environmental Policy Act (NEPA, 42 U.S.C. 4321, et seq.). Federal and state agencies and local and tribal governments may qualify as cooperating agencies because of "jurisdiction by law or special expertise" (40 CFR 1501.6 and 1508.5).

The agencies in the following list were approached by the Bakersfield FO to participate in the RMP process. The California Department of Fish and Game accepted the invitation and designated a lead specialist to work directly with BLM. The remainder of the invitees wished to remain abreast of the planning process, but declined formal cooperating agency status:

- California Department of Fish and Game
- Fresno County
- Kern County
- Kings County
- Lemoore Naval Air Station
- Madera County

- National Park Service
- Naval Base Ventura County Point Mugu
- San Luis Obispo County
- Santa Barbara County
- Tulare County
- US Fish and Wildlife Service
- US Forest Service
- Ventura County
- Vandenberg Air Force Base

Native American tribes are formally engaged in the planning process, as with many other federal actions, through a process of consultation. Legislation, policy and guidance require the BLM to consult with federally recognized Native American tribes regarding any actions conducted by the agency which have the potential to affect places of traditional or religious importance to them. As such, the Bakersfield FO initiated contact on April 4, 2008 in conjunction with the public scoping process; with both federally and non-federally recognized tribes whose traditional territories are known to lie within the Planning Area.

The federally recognized Native American tribes listed below were contacted again via certified letter in April 2011 and invited to participate in government-to-government consultation prior to the release of the Draft RMP/Draft EIS. Upon the release of the Draft RMP/Draft EIS copies were sent to each federally recognized Native American tribes and several non-recognized Native American tribes, groups, and individuals along with a package of supplemental information and maps. Follow up letters, phone calls, and emails offered to schedule one-on-one presentations, and again, extended the invitation to initiate formal government-to-government consultation to the federally recognized tribes and informal coordination and consultation with the non-recognized tribes. Informational meetings and presentations were conducted with four of the federally recognized Native American tribes and six non-recognized Native American tribes and groups. Subsequent to the end of the public review and comment period on the Draft RMP/Draft EIS, one of these groups, the Tejon Indian Tribe, became federally recognized (January 1, 2012). Prior to their formal recognition, BLM coordinated with the Tejon Indian Tribe by providing them with information, maps and guidance regarding review of the Draft RMP/Draft EIS. In addition, a formal presentation was provided for the attending members at a Tribal Council meeting. None of the federally or non-federally recognized Native American tribes chose to conduct formal government-to-government or informal consultation.

- Big Sandy Rancheria
- Cold Springs Rancheria
- North Fork Rancheria of Mono Indians
- Picayune Rancheria of Chukchansi Indians
- Santa Ynez Band of Chumash Indians
- Table Mountain Rancheria
- Tachi Yokut Tribe of the Santa Rosa Rancheria
- Tejon Indian Tribe
- Tule River Reservation

Beyond formal cooperating agency status and tribal consultation, the BLM is required to maintain relationships with US Fish and Wildlife Service (USFWS) and the California State Historic Officer (SHPO). This consultation is required for compliance with Section 7 of the *Endangered Species Act (ESA),* and Section 106 of the *National Historic Preservation Act (NHPA)*.

In compliance with Section 7 of the ESA the BLM is currently operating under Biological Opinions (BOs) the USFWS has issued for management activities: the *March 31, 1997 Caliente RMP Biological Opinion 1-1-97-F-64*, which serves as a comprehensive BO for activities conducted under that RMP and the *2001*

Oil and Gas Programmatic Biological Opinion 1-1-01-F-0063, which outlines certain criteria oil and gas related projects within a specific geographic area must meet to be authorized without a separate consultation. These BOs were based on management in existing Land Use Planning documents and would be carried forward as the No Action Alternative. ~~*Regardless of which alternative is selected*~~ *Under any of the action alternatives*, new BOs will be sought from USFWS to adequately address new information regarding listed species.

The BLM notified the California SHPO *at the initiation* of the planning process. *The SHPO was invited to review and formally consult regarding the Bakersfield Draft RMP/Draft EIS. The SHPO declined to review, comment, or consult on the Draft RMP/Draft EIS. An additional opportunity for review and consultation* will *occur during the Governor's Consistency review of the Proposed RMP/Final EIS*.

1.7.2 Other Stakeholder Relationships

Throughout the planning process the Bakersfield FO continues to be engaged with numerous user groups, public land stakeholders, and interested individuals. These efforts include travel management oriented public meetings, recreation-focused listening sessions, Social and economic workshops, and various briefings, presentations, and personal communications. These stakeholder groups include representatives for environmental advocacy groups, commercial enterprises, community groups, and groups representing recreational users. In addition, regular briefings have been presented to the Central California Resource Advisory Council and updates provided to its various subcommittees.

1.8 Related Plans

Title II, Section 202 of the FLPMA provides, consistent with the public lands laws, that the BLM coordinate planning efforts with land use planning and management programs of Native American Indian tribes, other federal departments, and agencies of state and local governments. To accomplish this directive, the BLM, to the extent practicable, is instructed to keep informed of state, local, and tribal plans; assure that consideration is given to such plans; and to assist in resolving inconsistencies between such plans and federal planning. While the State is authorized to furnish advice regarding revision of land use plans for the public lands, the Secretary of the Interior is directed to develop land use plans consistent with State and local plans to the maximum extent found consistent with Federal law and the purposes of FLPMA. 43 U.S.C. 1712 (c)(9). The provisions of this section of the FLPMA are implemented through application of Section 1610.3 of BLM Resource Management Planning regulations.

1.8.1 Other Federal Agency Plans

Other federal agencies manage lands and resources in and next to the Bakersfield FO Planning Area. The Proposed RMP/Final EIS strives for consistency with plans pertaining to these lands, including the following:

- Final Environmental Impact Statement and Record of Decision for Oil and Gas Leasing, Los Padres National Forest, July 2005;
- Sequoia National Forest Motorized Travel Management Final Environmental Impact Statement and Record of Decision, December 2009;
- USFWS recovery plans for endangered species—Recovery Plan for the California condor (USFWS 1996), Recovery Plan for Upland Species for the San Joaquin Valley (USFWS 1998), Recovery Plan

for Vernal Pool Ecosystems of California and Southern Oregon (USFWS 2005); and the Recovery Plan for the Kern Primrose Sphinx Moth (USFWS 1984).

- National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR, 300) (1994, revised 2007);
- Forest Land and Resource Management Plans (Los Padres, Sequoia, Sierra National Forests).

1.8.2 State Agency Plans

A complex land ownership pattern within the Planning Area influences BLM coordination with agencies administering California State lands and resources. While several agreements exist between state agencies and the BLM, the RMP revision offers a unique opportunity to promote interagency cooperation to enhance natural resource management. For example, two large areas have been managed cooperatively with the CDFG as National Cooperative Land and Wildlife Management Areas (Temblor and Monache-Walker Pass) to benefit wildlife resources and recreation opportunities. The BLM and CDFG also coordinate in managing State ecological reserves within the Planning Area. The BLM and California State Parks coordinate management of their lands to ensure consistency for adjoining parcels.

1.8.3 County Plans

The BLM routinely coordinates management activities across its scattered land pattern within the eight counties in which there is BLM surface or mineral ownership. County supervisors, planners, fire personnel, and local law enforcement are the primary points of coordination. While specific planning efforts for the RMP and the county general plan provide an opportunity to evaluate consistency, the process of coordination and consistency review is ongoing. The general plan implementation dates for each of the eight counties with federal surface ownership are listed below:

- Fresno County General Plan (2000);
- Kern County General Plan (2007);
- Kings County General Plan (1998);
- Madera County General Plan (2004);
- San Luis Obispo County General Plan (2004);
- Santa Barbara County General Plan (2009);
- Tulare County General Plan (2005, revised 2010);
- Ventura County General Plan (2005);

1.9 Policy

This plan is consistent with and incorporates requirements identified in various laws, regulations and policies. These include Executive Orders, legislative designations, proclamations and court settlements/rulings. The policies and decisions that existed prior to this plan being written are outside the scope of the plan but have influenced the decisions, constrained the alternatives, and are needed to understand management of the area. The list of policies that have been reviewed, incorporated and otherwise contributed to the development of the alternatives is extensive. Examples of such policies include:

- Executive Orders 11988 and 11990 – for the management protection of floodplains and wetlands
- Executive Orders 13186 and 11514 – for the protection of biological resources and the environment
- Executive Orders 13175, 11593, 13007, 13287 and Secretarial Order 3206 - for the consultation and coordination with Tribal Governments and protection of cultural resources
- Executive Orders 11644 and 11989 – for the use of off-road vehicles on public lands
- Executive Order 12898 - to address Environmental Justice in minority and low-income populations
- Secretarial Orders 3283, 3285 and 3294 – addressing energy (renewable and traditional) development and management
- Secretarial Order 3289 – to address current and future impacts of climate change on America's land, water, wildlife, cultural-heritage and tribal resources

2 Chapter Two

Introduction

This chapter details the proposed management actions and alternatives for the Bakersfield RMP. It includes land use planning program direction for twenty-three program areas and management actions to address identified issues, management concerns, and current and projected future uses of the lands administered by the Bakersfield FO.

The alternatives comprises two categories of land use planning decisions − (1) goals and objectives (desired outcomes) and (2) allowable uses and management actions (i.e., those described under the "Decisions" subheading within the resource specific sections of each alternative).

Goals and objectives direct BLM actions to most effectively meet legal mandates, regulations, and agency policy, as well as local and regional resource needs. Goals are broad statements of desired outcomes that are usually not quantifiable. Objectives identify more specific desired outcomes for resources and might include a measurable component. Objectives are generally expected to achieve the stated goals. The management goals and objectives for each resource are described in the detailed alternative descriptions section of this chapter.

Allowable uses identify uses that are allowed, restricted, or excluded on BLM-administered surface lands and federal mineral estate. Management actions are proactive measures or limitations intended to guide BLM activities in the Planning Area. In many cases the decision to restrict or prohibit an activity on public lands results in the need to create a supplementary rule in order to make that decision enforceable (e.g., the decision to prohibit shooting sports from an ACEC requires that a supplementary rule and associated penalties and punishments be created to allow for enforcement of the decision). To aid in reading the specific language of the proposed supplementary rules is not included in Chapter 2, as the decision indicates the intent and desired outcome of the rules and, therefore, analysis of the decision serves as the analysis of the proposed supplementary rule. The proposed specific supplementary rule language are provided for Alternative B in Appendix N.

In addition to land use planning level decisions, the RMP contains "Key Implementation" level decisions (presented under a subheading labeled as such) that would be implementable based on the level of analysis contained within this EIS. Principally, these decisions relate to the concurrent Travel Management Plan included as part of the RMP; however, other implementation level decisions are noted under the "Key Implementation Decisions" heading for Biological Resources and Livestock Grazing. It should be noted that only plan level decisions may be protested to the Director of the BLM, whereas implementation level decisions are subject to appeal to the Interior Board of Land Appeals after the Record of Decision has been approved.

Implementation level decisions considered during the development of the alternatives to achieve identified goals and objectives but that require more site-specific design and analysis are not analyzed in this EIS.

It should be noted the decisions generated by the RMP only apply to BLM-administered surface and mineral estate. No decisions generated by the RMP would change existing rights or authority of private land owners or other surface management agencies.

General Description of Alternatives

The Proposed RMP/Final EIS presents a range of alternatives that reflect direction provided by numerous laws, mandates, policies, and plans. These include FLPMA, NEPA, and BLM planning regulations, criteria, and guidance. As a result, the alternatives analyzed in the Proposed RMP/Final EIS consist of different combinations of management actions and resource allocations or use. In addition to the alternatives discussed in detail, a number of alternatives were considered but not analyzed in detail as they are either impractical, do not adequately address the issues, or fail to meet the purpose and need. These alternatives are discussed in *Alternatives Considered but Not Analyzed in Detail* at the end of this chapter.

The five alternatives considered in detail in the Proposed RMP/Final EIS are as follows:

Alternative A (No Action) continues current management practices as the No Action alternative required by NEPA. This alternative would continue current management under the existing 1997 Caliente RMP and 1984 Hollister RMP, as amended. Management of resources and sensitive habitats would remain at current levels but would not address emerging issues concerning public lands. This alternative also would not address the use of lands acquired after the signing of these RODs, including public lands at Atwell Island, Piedras Blancas Light Station, and portions of the San Joaquin River Gorge. When no specific management actions are described in the No Action alternative, management of lands and resources has been guided by BLM policy and interim management strategies.

Alternative B (Proposed Plan) balances resource conservation and ecosystem health with the production of commodities and public use of the land. This alternative provides opportunities to produce commodities from natural resources and to use the land for public purposes on a sustainable basis while maintaining important ecological, cultural, and recreational values. This alternative reflects changes made after the publication of the Draft RMP/Draft EIS as a result of public comment and internal analysis.

Alternative C emphasizes conserving cultural and natural resources, maintaining functioning natural systems, and restoring natural systems that are degraded. Management would focus on protecting sensitive resources through greater limitation of resource uses in sensitive areas.

Alternative D mimics[6] Alternative C in all aspects except livestock grazing. This alternative eliminates livestock grazing for the life of the plan from the public lands where Bakersfield RMP provides administrative direction for the livestock grazing program.

Alternative E emphasizes the production of natural resources commodities and public use opportunities. Resource uses such as recreation, livestock grazing, mining, and oil/gas leasing, consistent with BLM guidance and constraints, would be emphasized. Potential impacts on sensitive resources would be mitigated on a case-by-case basis.

[6] i.e., repeats objectives and management actions made in Alternative C including specific acreage allocation and designations.

2.1 Alternative A (No Action)

The following section summarizes the No Action Alternative; this alternative brings forward the existing management as described in the Caliente and Hollister RMPs including applicable amendments, as they apply to the Bakersfield Decision Area. Only those Land Use Plan (LUP) level decisions described in these plans are presented and summarized. In the absence of specific resource decisions management has occurred based on federal law, regulation, and BLM policy and guidance; in these cases no decisions are described in this alternative.

Both the Caliente and Hollister RMPs divided their decision areas into Management Areas (MAs). The Caliente RMP divided the Planning Area into three MAs: Coast, Valley, and South Sierra. The Hollister RMP divided the Planning Area into 16 MAs, two of which are incorporated into this plan: Central San Joaquin and Squaw Leap (now known as San Joaquin River Gorge). Decisions made for specific MAs are only brought forward and applied to those areas; as such each decision source is identified and, if applicable, the area to which it applies.

In some places the original text of the LUP level decision from the Caliente and Hollister RMPs has been updated and/or paraphrased to reflect current terminology and aid in understanding of the decision.

Each of the prior RMPs handled explanation of the area-wide, management area, and resource-specific goals and objectives differently. The Hollister RMP identified resource-specific goals and objectives that are presented with each resource, where appropriate. The Caliente RMP did not establish resource specific goals. The Caliente RMP area-wide and MA goals and objectives are presented below:

> Manage public lands to provide healthy, sustainable, biologically diverse ecosystems contributing goods, services and other social and cultural needs for local communities, the region and nation.
>
> Manage public lands to meet the following minimum Standards of [Rangeland] Health *(Caliente RMP as amended)*:
>
> - Soils exhibit functional biological and physical characteristics that are appropriate to soil type, climate, and land form.
> - Healthy, productive and diverse populations of native species, including special status species (Federal T&E, Federal proposed, BLM sensitive, or Calif. State T&E) are maintained or enhanced where appropriate.
> - Riparian/wetland vegetation, structure and diversity and stream channels and floodplains are functioning properly and achieving advanced ecological status.
> - Surface and groundwater quality complies with [approved] California or other appropriate water quality standards.
>
> Coast MA: Increase management levels to enhance awareness of resource conditions and values in a landscape setting. Focus management on natural resource condition and health, particularly unique vegetative communities, riparian resources, landmark and coastal values.
>
> Coast MA: Integrate management objectives with those of local county governments, coastal commission, state agencies and other federal agencies to contribute to regional conservation efforts.

Coast MA: Increase cooperation with management partners to integrate the isolated parcels with other natural resource and open space management programs.

Coast MA: Reposition properties that do not fit into an active Bureau or cooperator resource management program for lands in areas that do. Rely on county government land use controls to determine future use of those parcels transferred to private ownership.

Valley MA: Provide a leadership role in developing and implementing regional conservation strategies. Dedicate or reposition public lands to meet San Joaquin Valley conservation goals.

Valley MA: Integrate management objectives with and assist local county governments, private organizations, and state agencies in the development and implementation of local management plans (e.g. Habitat Conservation Plans, mitigation banks, county general plans, air and water quality plans).

Valley MA: Collaborate with the oil and gas and livestock industries in meeting mutually beneficial management objectives.

South Sierra MA: Assist in the maintenance of rural lifestyles and economies of local communities by providing for livestock grazing, community infrastructure needs and a range of dispersed recreational opportunities.

South Sierra MA: Maintain an increasingly active management presence to resolve private/public land use issues and respond to fire suppression needs that threaten private property.

South Sierra MA: Integrate management objectives with those of other Federal and State agencies and local and county governments.

South Sierra MA: Actively participate in regional conservation plans and proactively manage for the conservation of rare species and habitats, cultural resources, and Native American traditional values.

Resources

2.1.1 Air and Atmospheric Values

Not addressed in existing plans (1997 Caliente & 1984 Hollister RMPs) through the establishment of resource specific land use planning level objectives or management decisions.

2.1.2 Biological Resources

Goals

Protect and/or improve habitat necessary to recover populations of sensitive, rare, threatened or endangered species (*Hollister RMP)*.

Provide sufficient habitat for wildlife species and give emphasis to maintaining or improving certain key habitats (*Hollister RMP)*.

Objectives

San Joaquin River Gorge MA: Protect/maintain habitat condition in the area *(Hollister RMP)*.

Decisions

Unless otherwise closed elsewhere in this plan, threatened and endangered species range would be open to leasing of oil, gas, and geothermal resources with the Controlled Surface Use - Protected Species stipulation *(Caliente RMP)*.

Unless otherwise closed elsewhere in this plan, known locations of federal candidate species, State threatened and endangered species, and Bureau Sensitive species habitat would be open to leasing of oil, gas, and geothermal resources with the Controlled Surface Use - Sensitive Species stipulation *(Caliente RMP)*.

Critical condor habitat and lands near Hopper Mountain National Wildlife Refuge would be open to leasing of oil, gas, and geothermal resources with the Controlled Surface Use - Protected Species stipulation. Lands within the Blue Ridge Critical Condor Area would be closed to leasing of oil, gas, and geothermal resources *(Caliente RMP)*.

Lands acquired through Compensation activities would be managed to benefit the species identified in the applicable U.S. Fish and Wildlife Service (USFWS) or California Department of Fish and Game (CDFG) biological opinion, agreement, or other document. Acquisition of lands with compensation funds will target areas approved by the USFWS and CDFG. Management of these areas would be to promote recovery of the target species. Special management terms and condition for these areas include *(Caliente RMP[7])*:

- These lands may only be repositioned or transferred to a party with concurrence from the USFWS and CDFG.
- ROW authorizations, land use permits, geophysical explorations, recreation permits and public uses and livestock grazing will be managed to be compatible with objectives for the area.
- These lands would be proposed for withdrawal from entry under the mining laws if surface lands are acquired over federal mineral estate.
- The area would be open to leasing of oil, gas, and geothermal resources with the Controlled Surface Use - Protected Species stipulation.

Essential and critical condor habitat would only be repositioned with concurrence from the USFWS *(Caliente RMP)*.

Woodcutting permits will be considered on a case-by-case basis. Commercial woodcutting may be considered to meet special management needs (*Hollister RMP)*.

Coast MA: Approximately 3,979 acres federal surface and subsurface and 4,435 acres subsurface in five areas would be identified for Special Management Area designation. *(Caliente RMP)*.

[7] The BLM will manage these lands consistent with the applicable compensation document, in conformance with underlying statutory authorities, and to promote recovery of the target species.

Frog Pond Mountain (53 acres surface and subsurface) would be managed for the protection of riparian resources and the California Bay Forest.

- Open for the leasing of oil, gas and geothermal resources subject to CSU-[Priority Species, Plant Community and Habitats] stipulation.
- Proposed for withdrawal from entry under the mining laws.
- Unavailable for livestock grazing.
- Travel in the riparian zone is limited to pedestrians.
- Terminate the Public Water Reserve and manage water resources for the benefit of the riparian system.
- Collection of vegetative materials within the SMA requires authorization.

Irish Hills (1,104 acres surface and subsurface and 560 acres subsurface only) would be managed to protect diverse and coastal plant communities.

- Open for the leasing of oil, gas and geothermal resources subject to CSU -[Priority Species, Plant Communities and Habitats] stipulation.
- Unavailable for livestock grazing.

Rusty Peak (797 acres surface and subsurface and 635 acres subsurface only) would be managed to protect serpentine chaparral, coastal live oak woodland, perennial grassland, and sensitive plant species.

- Open for the leasing of oil, gas and geothermal resources subject to CSU – [Priority Species, Plant Communities and Habitats] stipulation.
- Unavailable for livestock grazing.

Hopper Mountain (2,025 acres surface and subsurface and 3,240 acres subsurface only) would be managed to support the California Condor Recovery Program and to complement management of the adjacent Sespe Condor Sanctuary, Hopper Mountain National Wildlife Refuge and Sespe-Piru Critical Condor Habitat Area.

- Open to the leasing of oil, gas and geothermal resources subject to the CSU - Protected Species stipulation.
- Proposed for withdrawal from entry under the mining laws.
- Portions of the SMA are available for livestock grazing if grazing operations complement management objectives, and portions are unavailable for livestock grazing.

Valley MA: Public lands identified by the USFWS and CDFG as important for the recovery of Federally listed species would be managed as conserved lands. These areas would be managed in a manner consistent with the direction established by the USFWS and CDFG through the Kern Valley Floor HCP and any pertinent recovery plans, and would complement local conservation plans *(Caliente RMP)*.

Valley MA: Approximately 114,960 acres of federal surface and subsurface and 4,840 acres of subsurface would be identified as Special Management Areas *(Caliente RMP)*.

The existing Temblor Mountain and Caliente National Cooperative Land and Wildlife Management Areas (NCLWMA) would be continued with the adoption of the following objectives. Public land within the existing Temblor NCLWMA would be managed for improved wildlife habitat and recreation opportunities as well as soil stabilization. Public land within the existing Caliente NCLWMA would be managed for improved vegetative communities and recreational opportunities.

- Open for the leasing of oil, gas and geothermal resources subject to CSU - Protected Species stipulation.
- These lands are withdrawn from application under the non-mineral public land laws and from disposition under the homestead, desert land entry and script selection laws.
- Available for livestock grazing.

Public land within the Bitter Creek National Wildlife Refuge, encompassing 960 acres of Federal surface and subsurface and 4,840 acres of subsurface only, would be managed to serve as conserved lands. Management as a Special Management Area would provide the special attention required for management of the Bureau administered surface and subsurface to be compatible with the U.S. Fish and Wildlife Service's management of the surrounding Bitter Creek National Wildlife Refuge.

- Closed to the leasing of oil, gas and geothermal resources.
- Available for livestock grazing. Seasonal restrictions and limits on access may be required to prevent disturbance to condors.

South Sierra MA: Approximately 148,870 acres in eight areas would be identified for Special Management Area designation.

Erskine Creek (2,960 acres surface and subsurface and 480 acres subsurface only) would be managed to protect limestone caves, riparian areas, and sensitive vegetation.

- Closed to the leasing of oil, gas and geothermal resources. About half of the southwestern portion of the SMA is within the Piute Cypress Wilderness Study Area (WSA) where no new oil, gas, and geothermal leases may be issued.
- N1/2 Sec. 22 and SE1/4SW1/4 Sec. 15, T. 27 S., R. 33 E., MDB&M, shall be proposed for withdrawal from entry under the mining laws.
- A portion of the SMA is available for livestock grazing if riparian resource concerns can be met. A portion of the SMA is unavailable for livestock grazing.

The North Fork of the Kaweah (4,870 acres surface and subsurface) would be managed for riparian resources, cultural resources, and sensitive vegetation, while improving recreational opportunities.

- Available for livestock grazing.
- Portions of the area may be managed as day use. Maximum lengths for stays for visitors may be shortened to accommodate more visitors and reduce visitor conflicts.

The Monache-Walker Pass National Cooperative Land and Wildlife Management Area (140,000 acres) would be managed to improve and maintain a diverse assemblage of vegetative communities to benefit wildlife resources and recreational opportunities.

- These lands are withdrawn from application under the non-mineral public land laws and from disposition under the homestead, desert land entry and script selection laws.
- Available for livestock grazing.

Deer Spring (320 acres surface and subsurface) would be managed to protect riparian resources, cultural resources, and to improve wildlife habitat.

- Closed to the leasing of oil, gas and geothermal resources
- Available for livestock grazing. The spring exclosure is unavailable for livestock grazing.

San Joaquin River Gorge MA: Continue wildlife habitat management in accordance with the Squaw Leap Habitat Management Plan. Emphasis will be on project maintenance and evaluation (including mitigation projects associated with the Habitat Plan for the Kerckhoff 2 Project) (*Hollister RMP)*.

2.1.3 Caves and Karst Resource

Not addressed in existing plans (1997 Caliente & 1984 Hollister RMPs) through the establishment of resource specific land use planning level objectives or management decisions.

2.1.4 Cultural Resources

Objectives

Ensure that cultural resources of high scientific, interpretive, or socio-cultural significance are not destroyed by other land uses *(Hollister RMP).*

Central San Joaquin MA: Protect significant cultural resources that exist in the area *(Hollister RMP).*

Decisions

Coast MA: Approximately 1,005 acres federal surface and subsurface would be identified for Special Management Area designation. *(Caliente RMP)*.

Huasna Peak (1,005 acres surface and subsurface) would be managed for the protection of Native American traditional [cultural practices].

- Open for the leasing of oil, gas and geothermal resources subject to NSO stipulation.
- Unavailable for livestock grazing.

South Sierra MA: Approximately 7,335 acres in three areas would be identified for Special Management Area designation.

Keyesville (7,133 acres surface and subsurface and 220 acres subsurface only) would be managed for the enhancement of compatible low impact recreational opportunities and natural resources.

- Disposals of mineral materials may be authorized outside of or away from riparian zones, sensitive plants, and cultural resources.
- Shooting of firearms, except for the legal taking of game, is prohibited.
- Open for the leasing of oil, gas and geothermal resources subject to CSU - Sensitive Species stipulation.
- Continued closure to the mining laws in the Keyesville area (Sec. 25 SE¼, and Sec. 36 N½NE¼, SE¼, T. 26 S., R. 32 E., MDB&M). Expand closure to include Sec. 25 S½SW¼, Sec 35 NE¼NE¼, and Sec 36 S½NE¼, N½NW¼.
- Portions limited to day-use only.
- Routes of travel for OHVs and bicycles shall be designated in the Keyesville SMA.
- Available for livestock grazing.
- Recreational mining may be allowed within areas near Keyesville that are withdrawn from the general mining laws, subject to permit.

The [South Lake Cultural Area] (160 acres federal surface and subsurface) would be managed for the protection of its cultural resources values and characteristics which qualified the property for listing on the National Register of Historic Places.

- Open for the leasing of oil, gas and geothermal resources subject to NSO stipulation.
- Unavailable for livestock grazing.

The Granite Cave cultural site (5 acres federal surface and subsurface) would be managed for the protection of its cultural resource and Native American traditional [cultural practices], and the cave's microclimate and natural environs.

- Open for the leasing of oil, gas and geothermal resources subject to NSO stipulation.

The Walker Pass National Historic Landmark (approximately 37 acres Federal surface and subsurface) would be managed for the protection of its historic property, natural landscape, and viewshed values.

- Open for the leasing of oil, gas and geothermal resources subject to NSO stipulation.
- Available for livestock grazing.

2.1.5 Lands with Wilderness Characteristics

Not addressed in existing plans (1997 Caliente & 1984 Hollister RMPs) through the establishment of resource specific land use planning level objectives or management decisions.

2.1.6 Paleontological Resources

Not addressed in existing plans (1997 Caliente & 1984 Hollister RMPs) through the establishment of resource specific land use planning level objectives or management decisions.

2.1.7 Soil Resources

Objectives

Manage public lands to meet the minimum Standards for Rangeland Health such that soils exhibit functional biological and physical characteristics that are appropriate to soil type, climate, and land form *(RMPs as amended by the Rangeland Health Standards and Guidelines for California and Northwestern Nevada Final EIS)*.

2.1.8 Visual Resources

Objectives

Maintain and/or enhance the scenic quality of the public lands *(Hollister RMP).*

Decisions

Visual Resource Management (VRM) Class 4 standards will apply to all MAs unless otherwise stated *(Hollister RMP).*

San Joaquin River Gorge MA: All actions must conform to VRM Class 3 standards for the area *(Hollister RMP).*

2.1.9 Water Resources

Objectives

Manage public lands to meet the minimum Standards for Rangeland Health such that: (i) surface and ground water quality complies with objectives of the Clean Water Act and other applicable water quality requirements, including the California State standards and (ii) riparian/wetland vegetation structure and diversity, stream channels and floodplains are functioning properly and meeting regional and local management objectives *(RMPs as amended by the Rangeland Health Standards and Guidelines for California and Northwestern Nevada Final EIS)*.

2.1.10 Wildland Fire Ecology and Management

Objectives

Establish guidelines for fire management in order to meet resource objectives (*Hollister RMP*).

Establish a fire management program which is cost-efficient and commensurate with threats to life, property, public safety, and resources (*Hollister RMP*).

Decisions

Prescribed burning may increase livestock forage (base AUMs) within one to three years depending on success of the burn. Livestock use will be dependent upon yearly monitoring and residual mulch requirements and upon available forage each year after burning. Increases in livestock use will not be granted in areas where burning for wildlife habitat improvement is the primary objective (*Hollister RMP*).

Prescribed burning during the spring (April through June) will be kept to a minimum (*Hollister RMP*).

Brush crushing "high-blading" and/or fire line construction (mechanical pre-burn site preparations) will be performed when soil and fuel moisture levels are low enough to prevent undue surface (soil) disturbance and to maximize pretreatment objectives (*Hollister RMP*).

San Joaquin River Gorge MA: Allow prescribed burning on a case-by-case basis for improvement of livestock forage and fuels reduction in accordance with the Fresno/Monterey County Burn Plan *(Hollister RMP)*.

San Joaquin River Gorge MA: Develop a fire management Plan with emphasis on Fire prevention and action modification in cooperation with the State Department of Forestry *(Hollister RMP)*

Resource Uses

2.1.11 Comprehensive Trail and Travel management

Decisions

The areas which are closed to all vehicular travel include wilderness (even if an old pathway appears passable), Point Sal, Blue Ridge, and The Pacific Crest National Scenic Trail (PCNST) *(Caliente RMP)*.

Except for areas closed to all vehicles, the use of mountain bicycles is allowed on all roads and trails available to pedestrians. Bicycles are not allowed to travel off road *(Caliente RMP)*.

Except as otherwise noted, travel is allowed on existing roads and trails which appear on BLM Surface Management maps, aerial photographs, and USGS topographical maps at the time this plan is approved. Routes are considered to be open unless indicated as closed on the ground by signs, barricades, or other physical considerations which appropriately direct the user. All authorized public land users that hold a special authorization (i.e. grazing permittees, rights-of-way holders, mining claimants, etc.) may drive off road if their authorization allows. Emergency services and/or law enforcement activities are exceptions to these policies. Administrative access may be granted by the authorized officer to individuals requiring such access for official business *(Caliente RMP)*.

Central San Joaquin MA: Vehicle Use is limited to designated routes *(Hollister RMP)*.

San Joaquin River Gorge MA: Vehicle Use is limited to designated routes (vehicle use on Madera county side further restricted to administrative use and special project maintenance) *(Hollister RMP)*.

2.1.12 Lands and Realty

2.1.12.1 Land Tenure

Objectives

Coast MA: Reposition properties that do not fit into an active Bureau or cooperator resource management program for lands in areas that do. Rely on county government land use controls to determine future use of those parcels transferred to private ownership *(Caliente RMP)*.

Central San Joaquin MA: Provide for increased management efficiency through land tenure adjustments to meet various management needs in the area *(Hollister RMP)*.

Decisions

All mineral estate lands (split estate lands) under BLM jurisdiction would be considered potentially suitable for disposal through exchange under Section 206 of FLPMA or sale under Section 209 of FLPMA. Any such disposal shall require a site-specific evaluation under the applicable regulations, prior to any final decision on such action *(Caliente RMP)*.

Coast MA: All BLM lands would be identified as suitable for either new managers or repositioning [disposal] *(Caliente RMP)*.

Valley MA: Approximately 80,000 acres (250 parcels) would be identified for local repositioning through land exchanges to consolidate natural resource values *(Caliente RMP)*.

Valley MA: Approximately 7,000 acres would be identified as suitable for new managers where lands would be transferred to other [federal] parties *(Caliente RMP)*.

South Sierra MA: Approximately 113,500 acres (160 parcels) would be identified for local repositioning through land exchanges to consolidate natural resource values *(Caliente RMP)*

Naval Petroleum Reserve 2: A limited number of parcels near the communities of Taft and Ford City will be considered for potential disposal. These parcels aggregate approximately 161 acres. Oil and gas rights will be retained on the above parcels, but without the right of surface entry *(NPR2 Amendment).*

Central San Joaquin MA: Dispose of lands identified for sale (1,917 acres) *(Hollister RMP).*

2.1.12.2 Utility Corridors and Communication Sites

Decisions

All existing or occupied utility corridors delineated in the Western Regional Corridor Study of 1986 are designated as utility corridors. These right-of-way corridors are one mile wide and follow existing routes. Uses of these corridors include routes for: larger electric transmission facilities, major pipelines, communication sites and associated pathways, and communication lines for interstate use *(Caliente RMP)*.

2.1.12.3 Withdrawals

Decisions

Due to low productivity and/or conflicts with endangered species habitat, all BLM lands within the [Decision Area] are considered unsuitable for entry under the Desert Land Entry Act of March 3, 1877 (43 USC 321) and Indian Allotment Act of February 8, 1887 (25 USC 334) *(Caliente RMP)*.

Coast MA: Approximately 5,800 acres in five areas are [recommended for proposal] for withdrawal from entry under the mining law. These areas would include the Pt. Sal, Tierra Redonda, and Salinas River (riparian portions) ACECs and the Frog Pond and Hopper Mountain SMAs *(Caliente RMP)*.

Valley MA: Approximately 7,900 acres are [recommended for proposal] for withdrawal from entry under the mining law in four areas. These areas would include the Alkali Sink, Carrizo Plain Natural Area (Soda Lake only), Chico Martinez and Goose Lake ACECs *(Caliente RMP)*.

South Sierra MA: Approximately 6,300 acres are [recommended for proposal] for withdrawal from entry under the mining law in four areas. These areas would include portions of the Blue Ridge and Case Mountain ACECs and Erskine Creek and Keyesville SMAs *(Caliente RMP)*.

2.1.13 Livestock Grazing

Objectives

Manage public lands to meet the minimum Standards for Rangeland Health (RMPs as amended by the Rangeland Health Standards and Guidelines for California and Northwestern Nevada Final EIS).

Provide a sustained yield for forage to meet demand while maintaining the productivity of the land *(Hollister RMP).*

Increase forage productivity on lands producing below their potential through improved management and cost efficient development *(Hollister RMP).*

Decisions

Coast MA: Approximately 6,100 of the 20,400 acres of the public land would be available for livestock grazing. The remainder of the MA, approximately 14,300 acres, would be classified as unavailable for livestock grazing *(Caliente RMP)*.

Coast MA: Livestock grazing would continue to be authorized on about 4,000 acres of public land in seven allotments at levels [and under guidelines, Appendix F-2] described in the RMP [an area wide total of 491 Animal Unit Months (AUMs)] *(Caliente RMP)*.

Valley MA: Approximately 275,000 acres of the public land would be available for livestock grazing [a large portion of which occurs within the CPNM]. The remainder of the public lands in the MA, approximately 18,000 acres, would be classified as unavailable for livestock grazing *(Caliente RMP)*.

Valley MA: Livestock grazing would continue to be authorized on 270,200 acres of public land in 54 allotments at levels [and under guidelines, Appendix F-2] described in the RMP [an area wide total of 40,323 AUMs, including the CPNM] *(Caliente RMP)*.

South Sierra MA: Approximately 220,800 acres of the public land would be available for livestock grazing. The remainder of the MA, approximately 55,200 acres, would be classified as unavailable for livestock grazing *(Caliente RMP).*

South Sierra MA: Livestock grazing would continue to be authorized on 188,400 acres of public land in 53 allotments at levels [and under guidelines, Appendix F-2] described in the RMP [an area wide total of 13,652 AUMs] *(Caliente RMP)*.

Central San Joaquin MA: Manage 5 allotments (total 1,109 acres and 122 AUMs) on a custodial basis *(Hollister RMP).*

San Joaquin River Gorge MA: Manage 4 allotments (total 4,160 acres and 985 AUMs) intensively under existing management agreements with emphasis on protection of wildlife and recreation values *(Hollister RMP).*

2.1.14 Minerals Management

2.1.14.1 Leasable Minerals

Goals

Central San Joaquin MA: Oil, gas, and mineral resources will be managed to meet the demand for increased energy and mineral production while protecting other resource values *(Hollister RMP)*.

Objectives

Valley MA: Collaborate with the oil and gas and livestock industries in meeting mutually beneficial management objectives *(Caliente RMP)*.

Decisions

Coast MA: Public acreage that is currently leased will not be subject to additional stipulations; however, if leases expire, and new leasing occurs [or renewal leases are renewed], special stipulations may be applied *(Caliente RMP)*.

Coast MA: Approximately 42,800 acres are proposed to be open to oil and gas leasing under standard terms and conditions; of that total 2,800 acres are currently leased *(Caliente RMP).*

Coast MA: Approximately 22,700 acres are proposed to be open to oil and gas leasing subject to a Controlled Surface Use (CSU) stipulation *(Caliente RMP)*. Special categories of the CSU stipulations include:

- 16,500 acres open subject to the CSU - Protected Species stipulation.
- 6,000 acres open subject to the CSU - Sensitive Species stipulation.
- 4,300 acres open subject to the CSU - [Priority Species, Plant Communities and Habitats] stipulation.

Coast MA: Both the CSU-Protected Species and the CSU-Sensitive Species stipulations would apply to one township and range (25S, 10E) immediately southwest of Camp Roberts in an area with limited oil exploration potential *(Caliente RMP)*

Coast MA: The 69,700 acres of mineral estate under the administration of the Department of Defense (DOD) would be open subject to the CSU- Defense stipulation *(Caliente RMP)*.

Coast MA: Approximately 1,500 acres are proposed to open with a No Surface Occupancy stipulation *(Caliente RMP)*.

Coast MA: Approximately 100 acres are proposed to be closed to leasing *(Caliente RMP)*.

Coast MA: Approximately 1,900 acres are proposed to be closed to leasing within designated Wilderness *(Caliente RMP)*.

Valley MA: Public acreage that is currently leased will not be subject to additional stipulations; however, if leases expire, and new leasing occurs, special stipulations may be applied *(Caliente RMP)*.

Valley MA: Approximately 5,800 BLM acres at Bitter Creek SMA would be closed to oil and gas leasing *(Caliente RMP)*.

Valley MA: Approximately 500 BLM acres in Goose Lake and Alkali Sink ACEC would be open to oil and gas leasing with a No Surface Occupancy Stipulation (NSO). Approximately 300 acres are currently leased *(Caliente RMP)*.

Valley MA: Approximately 18,000 acres would be open to oil and gas leasing under standard terms and conditions *(Caliente RMP)*.

Valley MA: Approximately 348,300 acres would be open to oil and gas leasing with a Controlled Surface Use (CSU) stipulation; of that total, approximately 136,000 acres are currently under lease *(Caliente RMP)*. Special categories of the CSU stipulations include:

- 212,300 acres would be subject to the CSU- Protected Species stipulation.
- 300 acres would be subject to the CSU- Critical Habitat stipulation.
- 126,500 acres would be subject to the CSU- Sensitive Species stipulation.
- 113,100 acres would be subject to the CSU- Raptor stipulation.

Valley MA: Areas within the Valley [MA] that would be subject to more than one category of the CSU stipulations include: the Carrizo Plain Natural Area ACEC where protected species, sensitive species and raptor stipulations apply; Lokern ACEC, where both protected species and sensitive species stipulations apply; and Kettleman Hills where protected species and raptor stipulations apply *(Caliente RMP)*.

Valley MA: The 16,600 acres of Federal mineral estate under the administration of the Department of Defense (DOD at Lemoore Naval Air Station) would be open to oil and gas leasing subject to the CSU - Defense stipulation *(Caliente RMP)*.

South Sierra MA: Approximately 10,100 BLM acres would be closed to oil and gas leasing, and an additional 18,500 acres would be closed to geothermal development *(Caliente RMP)*.

South Sierra MA: Approximately 3,000 acres would be open to oil and gas leasing with a No Surface Occupancy (NSO) Stipulation *(Caliente RMP)*.

South Sierra MA: Approximately 234,700 BLM acres would be open to oil and gas leasing under standard terms and conditions *(Caliente RMP)*.

South Sierra MA: Approximately 95,600 acres would be open to oil and gas leasing under a Controlled Surface Use (CSU) stipulation *(Caliente RMP)*. Special categories of the CSU stipulation will be applied as follows:

- 34,400 acres are subject to the CSU- Protected Species stipulation
- 22,300 acres are subject to the CSU- Critical Habitat stipulation
- 27,400 acres are subject to the CSU- Sensitive Species stipulation
- 18,500 acres are subject to the CSU- Raptor stipulation

2.1.14.2 Locatable Minerals

Decisions

Coast MA: Approximately 1,900 acres are in existing withdrawals from entry under the general mining laws within Wilderness Areas. Approximately 5,800 acres, in five areas are [recommended for proposal] for withdrawal from entry under the mining law. These areas would include the Pt. Sal, Tierra Redonda, and Salinas River (10 acres within riparian portions) ACECs and the Frog Pond and Hopper Mountain SMAs *(Caliente RMP)*.

Valley MA: Approximately 7,900 acres are [recommended for proposal] for withdrawal from entry under the mining law in four areas. These areas would include the Alkali Sink, Carrizo Plain Natural Area (Soda Lake only), Chico Martinez and Goose Lake ACECs *(Caliente RMP)*.

South Sierra MA: Existing land use allocations for Wilderness Areas have closed 109,000 acres to entry under the general mining law of 1872. Approximately 6,300 acres are [recommended for proposal] for withdrawal from entry under the mining law in four areas; these areas would include portions of the Blue Ridge and Case Mountain ACECs and Erskine Creek and Keyesville SMAs *(Caliente RMP)*.

2.1.14.3 Salable Minerals

Decisions

Coast MA: The remaining 63,100 acres within the Coast [MA] would remain open to solid and mineral material exploration. Management objectives and guidelines would be utilized to evaluate applications for development of the solid mineral and mineral material resources *(Caliente RMP)*.

Valley MA: The remaining 389,400 acres within the Valley [MA] would remain open to solid mineral and mineral material exploration and development under existing laws and regulations. Management objectives and guidelines would be utilized to evaluate applications for development of the solid mineral and mineral material resources *(Caliente RMP)*.

South Sierra MA: The remaining 356,700 acres within the South Sierra [MA] would remain open to exploration and development under existing laws and regulations. Management objectives and guidelines would be utilized to evaluate applications for development of the solid mineral and mineral material resources *(Caliente RMP)*.

2.1.15 Recreation and Visitor Services

Objectives

Central San Joaquin MA: Provide/maintain recreation opportunities in the area while protecting other resources, and minimizing conflicts with other users and adjacent landowners *(Hollister RMP)*.

San Joaquin River Gorge MA: Provide/maintain recreational opportunities in the area while protecting other resources and minimizing conflicts with other users and adjacent landowners *(Hollister RMP)*.

Decisions

Camping up to 14 days per person within any 30-day period and up to 28 days in a one-year period is allowed in any location not specifically closed to camping. Dispersed camping is not permitted within 100 feet of any freshwater source *(Caliente RMP)*.

Personal property left unattended on public land for more than 72 hours would be treated as abandoned *(Caliente RMP)*.

Shooting is not allowed within ¼ mile of developed recreational sites, visitor facilities, livestock water improvements, guzzlers, the Poso Creek area (E½NE¼, Sec. 32, T. 27 S., R. 27 E., MDB&M) and all authorized facilities belonging to lessees or permittees of the Federal government, as well as buildings and residences on adjacent private lands. These areas are still available for the lawful taking of game. The restrictions do not apply to federal, state, and local law enforcement officers who are engaged in their official duties *(Caliente RMP)*.

Central San Joaquin MA: Manage recreation use on a custodial basis *(Hollister RMP).*

San Joaquin River Gorge MA: Continue to manage the area as an SRMA; to provide hunting, hiking, horseback riding, camping, fishing and picnicking opportunities *(Hollister RMP).*

2.1.16 Interpretation and Environmental Education

Not addressed in existing plans (1997 Caliente & 1984 Hollister RMPs) through the establishment of resource specific land use planning level objectives or management decisions.

Special Designations

2.1.17 Areas of Critical Environmental Concern

Decisions

Coast MA: Approximately 2,487 acres of Federal surface and subsurface and 915 acres of subsurface, in 5 areas would be identified for Area of Critical Environmental Concern designation *(Caliente RMP)*.

The existing Pt. Sal ACEC, encompassing 77 acres surface and subsurface, would also retain its ACEC designation and would be managed to provide protection to unique visual, cultural, geologic, and wildlife resources, as well as, rare, threatened, and endangered plant and animal species.

- Closed to oil, gas, and geothermal leasing.
- Manage as a Day Use Area
- All public lands within the ACEC are [recommended for proposal] for withdrawal from the mining laws.
- Unavailable for livestock grazing.
- Designated as closed to OHV use.
- Access is limited to pedestrian travel on designated trails within the ACEC.

Cypress Mountain ACEC (1,090 acres surface and subsurface) would be managed to protect the rare and unique plant communities of serpentine chaparral and Northern Interior Cypress Forest, which is dominated by Sargent cypress.

- Open for leasing of oil, gas, and geothermal resources subject to CSU - Priority Species, Plant Communities and Habitats] stipulation.

- Unavailable for livestock grazing.

Salinas River ACEC (946 acres surface and subsurface and 658 acres subsurface only) would be managed to protect diverse vegetative communities and the exemplary riparian area.

- Manage the riparian zone as a Day Use area.
- Horse travel is limited to designated routes in the riparian zone.
- Withdraw riparian zone (c. 10 acres) from mining laws.
- Unavailable for livestock grazing.

Tierra Redonda ACEC (331 acres surface and subsurface and 81 acres subsurface only) would be managed to protect the paleontological resources, the unique sand dune formation, coast live oak woodland, and scenic and geologic values.

- Open to leasing of oil, gas, and geothermal resources subject to NSO stipulation.
- [Recommend for proposal] for withdrawal from entry under the mining law.
- Unavailable for livestock grazing.
- Sand dunes are limited to pedestrian access only.

Valley MA: Approximately 156,800 acres of federal surface and subsurface, 55,700 acres of surface only and 19,300 acres of subsurface in six areas would be identified for Areas of Critical Environmental Concern designation *(Caliente RMP)*.

Lokern ACEC (3,002 acres surface and subsurface and 3,630 acres subsurface only) would be managed for the protection of listed plant and animal species and oil and gas production.

- Open for leasing of oil, gas, and geothermal resources subject to the following stipulations: CSU - Protected Species, CSU - Sensitive Species.
- If a suitable mineral materials site cannot be found outside of the ACEC, sales of mineral materials may be authorized at the site of the old Elk Hill[s] Community pit.
- Unavailable for livestock grazing, unless research shows grazing is necessary to meet management objectives.

Alkali Sink ACEC (402 acres surface and subsurface) would be managed to protect the rare alkali sink plant community and habitat for state and federally listed plants and animals.

- Open for the leasing of oil, gas, and geothermal resources subject to NSO stipulation.
- [Recommend for proposal] for withdrawal from entry under the mining laws.
- Manage as a Day Use area
- Access off designated routes of travel is restricted to pedestrian travel.
- Water diversions are prohibited.
- Collection of vegetative materials within the ACEC requires authorization.
- Unavailable for livestock grazing.

Goose Lake ACEC (40 acres Federal surface and subsurface) is an existing ACEC, and it would be continue to be managed for the protection of the rare alkali sink vegetation, habitat for numerous shorebirds and raptors, and cultural resource values.

- Open for leasing of oil, gas, and geothermal resources subject to NSO stipulation.
- [Recommend for proposal] for withdrawal from entry under mining laws.
- Manage as a Day Use area
- Access off designated routes of travel is limited to pedestrian travel.
- Collection of vegetative materials within the ACEC requires authorization.
- Unavailable for livestock grazing.

Kettleman Hills ACEC (6,727 acres Federal surface and subsurface and 3,067 acres subsurface only) would be managed to protect significant paleontological values and wildlife habitat for federally listed species and oil and gas production.

- Open for the leasing of oil, gas, and geothermal resources subject to the following stipulations: CSU - Protected Species and CSU – Raptors stipulation.
- Available for livestock grazing and is currently allotted and grazing will continue to be authorized.

Carrizo Plain Natural Area ACEC, encompassing [the remaining 122 acres not addressed by the Carrizo Plain National Monument RMP (BLM 2010a)] would be managed for the protection of sensitive plant, animal, cultural, Native American traditional [cultural practices], and geologic resource values.

- Open for the leasing of oil, gas, and geothermal resources subject to the following special stipulations: CSU - Protected Species, CSU - Sensitive Species and CSU - Raptors.
- Implement the Carrizo Plain Natural Area Management Plan.
- Camping is restricted to designated locations.
- Portions are available for livestock grazing and portions are unavailable.

Chico Martinez ACEC (3,234 acres surface and subsurface and 1,373 acres subsurface only) encompasses and replaces the existing Reef Ridge ACEC. It would be managed to protect significant paleontological resources, as well as geologic type formations.

- Open for the leasing of oil, gas, and geothermal resources subject to the CSU - Protected Species stipulation.
- Access off designated routes of travel is limited to pedestrian and equestrian travel.
- Available for livestock grazing.

Southern Sierra MA: Approximately 24,120 Acres in 4 areas would be identified for Area of Critical Environmental Concern designation *(Caliente RMP)*.

The existing Piute Cypress ACEC, encompassing 930 acres surface and subsurface and 174 acres subsurface only, would retain its designation and be slightly expanded. It would be managed to protect the Piute Cypress grove and other associated sensitive plant species.

- Closed to oil, gas, and geothermal leasing.
- Available for livestock grazing.
- Collection of vegetative materials within the ACEC requires authorization.
- Access off designated routes of travel is restricted to pedestrian travel.
- Manage as a Day Use area.

The existing Blue Ridge ACEC, encompassing 3,177 acres surface and subsurface and ~~*1,581*~~ *2,104*[8] acres subsurface only, would also retain its ACEC designation and would be managed for the protection of designated critical condor habitat.

- Closed to oil, gas and geothermal leasing.
- The area is [recommended for proposal] for withdrawal from entry under the mining laws.
- Unavailable for livestock use unless grazing is deemed necessary by the USFWS to assist in condor recovery.
- Designated as closed to OHV's.
- Public access may be restricted during condor use periods.

Case Mountain ACEC (26,468 acres) would be managed to protect the giant sequoia groves, sensitive plant/animal species, cultural resources, and riparian values.

- Open for the leasing of oil and gas resources subject to the CSU - Raptor stipulation.
- Closed to the leasing of geothermal resources.
- Lands within sequoia groves, approximately 250 acres, shall be withdrawn from the mining laws.
- The two access routes, Salt Creek Road and Oak Grove Road off Mineral King, are open to mountain biking but closed to other public vehicular travel until a management plan is written for the area. Off road public access is limited to pedestrians and equestrians only. Travel within the sequoia groves is limited to pedestrians.
- Available for livestock grazing. Grazing operations shall be adjusted or terminated within the sequoia community if studies show they have a negative effect upon the plant community.

Horse Canyon ACEC (1,530 acres federal surface and subsurface and 1,330 acres subsurface only) would be managed to enhance protection of significant cultural resource and paleontological resource values, and Native American traditional [cultural practices].

- Open for leasing of oil, gas, and geothermal resources subject to NSO stipulation.
- Unavailable for livestock grazing.

2.1.18 Outstanding Natural Areas

Not addressed in existing plans (1997 Caliente & 1984 Hollister RMPs) through the establishment of resource specific land use planning level objectives or management decisions.

[8] This acreage change reflects a correction due to a mapping error in the Draft RMP/EIS.

2.1.19 Back Country Byways

Decisions

South Sierra MA: The Canebrake/Long Valley Loop Road would be managed as a Scenic Back Country Byway *(Caliente RMP)*.

2.1.20 National Trails

Decisions

South Sierra MA: The Pacific Crest [National Scenic] Trail (116 miles) would be identified for Special Management Area designation *(Caliente RMP)*.

- Continue closure of trail to vehicles, including bicycles.
- Manage the Lamont Peak spur trail to the PCNST as a hiking and equestrian trail, keeping it closed to motorized and mechanized vehicles.
- Spur trails will be established where possible and an equestrian trailhead will be pursued near Tehachapi.

2.1.21 Wild and Scenic Rivers

Not addressed in existing plans (1997 Caliente & 1984 Hollister RMPs) through the establishment of resource specific land use planning level objectives or management decisions.

2.1.22 Wilderness Study Areas

Not addressed in existing plans (1997 Caliente & 1984 Hollister RMPs) through the establishment of resource specific land use planning level objectives or management decisions.

2.2 Proposed Plan (Alternative B)

The following section describes management that would be established under Alternative B (Proposed Plan). This alternative is a modified version of the Preferred Alternative presented in the Draft RMP/Draft EIS. The modifications to the alternative are a result of public comment and internal review as described in Chapter 5.

In addition to the LUP level decisions presented throughout the action alternatives, key implementation level decisions are also described under a separate heading in each resource, as applicable. These implementation decisions are specifically analyzed in the RMP to allow implementation with the signing of the ROD. Although these decisions are presented in the RMP they cannot be protested in the same fashion as LUP level decisions; instead the implementation level decisions would be subject to appeal after signature of the ROD in accordance with Department of Interior appeal regulations (43 CFR Part 4).

It should be noted the decisions generated in the proposed plan only apply to BLM-administered surface and mineral estate. No decisions generated by the RMP would change existing rights or authority of private land owners or other surface management agencies.

Resources

2.2.1 Air and Atmospheric Values

Goal

Contribute to the achievement of good air quality.

Objectives

Contribute to the attainment of National Ambient Air Quality Standards (NAAQS).

Reduce emissions and the particulate level impacts from BLM management activities and BLM authorized actions in accordance with State Implementation Plans (SIPs).

Decisions

Design BLM program and management activities and authorize projects to meet air quality standards in conformance with State Implementation Plans. Reduce emissions resulting from such actions by implementing BMPs (Appendix A) and other control measures.

Prevent BLM actions from degrading Federal Class I areas including Domelands Wilderness, San Raphael Wilderness, and Sequoia and Kings Canyon National Parks.

2.2.2 Biological Resources

Goals

Contribute to maintaining the biotic diversity within the Planning Area. Ensure public lands provide for a diversity of native species, ecosystems, and ecosystem processes.

~~*Woodland and forest ecosystems are healthy, being resistant to and resilient from stand-replacing fire and/or catastrophic insect/disease infestations.*~~

Promote the recovery of state and federally listed species. Promote conservation of other plant and animal species to prevent future listings.

Promote the success of recovery plans, conservation plans, wildlife management plans, vegetation and weed management plans, and other regional conservation strategies.

Objectives

Maintain or improve the quality and diversity of biological resources through the maintenance, enhancement, and restoration of habitats. Manage public lands to meet or exceed the Standards for Rangeland Health (see Appendix F-1).

Meet or exceed proper functioning condition of wetland or riparian habitats, maintain the hydrologic regime of vernal pools, and provide for riparian-dependent native species through habitat maintenance, restoration and enhancement.

~~*Promote active vegetative management and treatments on our forested landscapes to manage toward healthy woodland ecosystems.*~~

Restore, as appropriate, native plants and animals whose populations have been depleted or extirpated from the local area.

Conserve and recover state and federally listed species through the maintenance, enhancement and restoration of their habitats.

~~*Minimize impacts on biological resources and the effectiveness of regional conservation strategies, including essential habitat linkages, from BLM actions and authorizations.*~~

Design BLM actions and authorization to minimize impacts on biological resources, regional conservation strategies and essential habitat linkages.

Reduce the impact that the urban interface, recreation activities, and other public uses have on listed species recovery, natural community and species conservation by coordination and collaboration with other agencies, local communities, and user groups.

Protect additional ecologically important areas, important linkages, and scarce limited habitats through land tenure adjustments and partnerships with other agencies and organizations.

Retain in public ownership lands that are important for species recovery or conservation, that contain ecologically important areas or scarce limited habitats, or contribute to regional conservation strategies *or habitat linkages*.

Manage lands, interest in lands or funds acquired through compensation *consistent with* ~~*to benefit the species identified in*~~ the applicable *compensation* ~~*USFWS or CDFG biological opinion, agreement, or other*~~ document *(such as a USFWS biological opinion or CDFG agreement) and* to promote recovery of the target species.

Control, decrease, or eradicate known populations of invasive nonnative plants and prevent new populations from becoming established. Control the spread of noxious weeds as identified by the California Department of Food and Agriculture and the California Invasive Plants Council (Cal-IPC, 2009).

Address at a landscape level, widespread nonnative species that displace and compete with the native flora through collaboration with weed management area members, state agencies, federal agencies, conservation organizations, and other interested parties.

Reduce the impacts, including disease transmissions, harassment, and competition, and limit the spread of nonnative animals.

Decisions

Prohibit the release of ~~*un-retrieved*~~ *un-retrievable* nonnative animals, except for the use of approved biocontrol agents, authorized livestock, ~~*and*~~ *or* the augmentation of naturalized species in ~~*accordance*~~ *collaboration and coordination* with a CDFG ~~*permit or plan*~~.

Allow removal of dead and downed woody materials from public lands only with administrative approval. *Except on developed recreation sites and areas, or where prohibited and posted (43 CFR 8365.1-5),* collection of fire wood from dead and down woody material for on-site campfires is permissible provided woody material is less than four inches in diameter.

Identify split estate with surface managed as compensation for biological resources as open to fluid mineral leasing subject to major constraint (CSU – Compensation Lands).

Identify the Compensation Lands ACEC as open to fluid mineral leasing subject to major constraints (NSO – Compensation Lands ACEC), if *leasing is* consistent with the ~~*USFWS, CDFG, or other compensation document or agreement*~~ *document that established the compensation land*.

Identify public lands with mineral estate adjacent to or within the boundary of the State of California's Chimineas Unit of the Carrizo Plain Ecological Reserve as open to fluid mineral leasing subject to major constraint (CSU-Chimineas Ranch).

Identify split estate with federal mineral estate within the boundary of the State of California's Chimineas Unit of the Carrizo Plain Ecological Reserve as open to fluid mineral leasing subject to major constraint (CSU-Existing Surface Use/Management).

~~*Recommend proposal for withdrawal from appropriation and entry under the General Mining Law federal mineral estate underlying compensation lands regardless of surface ownership.*~~

Complete land tenure adjustments (disposal) of designated critical habitat and essential habitat only with concurrence from USFWS or NMFS.

~~*Require*~~ *Complete* land tenure adjustments (repositioning) of compensation lands ~~*to have*~~ *only after collaboration and consultation with* ~~*concurrence from both*~~ USFWS and *coordination with* CDFG.

Manage lands acquired[9] specifically for the protection of biological resources in a manner consistent with the terms of acquisition.

Allow transplants, augmentation, and reestablishment of native species populations ~~*that have been approved by*~~ *in coordination and collaboration with* CDFG or USFWS.

[9] Acquisition is subject to conformance with underlying statutory authority and DOJ title standards.

Control and eliminate, when necessary and possible, nonnative animals, such as bullfrogs, feral cats, wild pigs, and wild honeybees that have negative impacts on habitats or native species.

Eliminate, relocate, or redesign uses, after site specific NEPA analysis, that may result or have resulted in unacceptable impacts on important biological resources, through actions such as, making seasonal closures, modifying grazing prescriptions, installing bat compatible closures, restricting equestrian access, relocating camping areas, and closing or realigning travel routes.

Apply SOPs, as appropriate to new BLM actions and authorizations (see Appendix L).

Implement a variety of measures (such as controlling weeds, seeding native species, performing prescribed burns, *applying mechanical and chemical vegetation treatments,* improving water availability, prescribed grazing, reducing raven nesting structures and the installing artificial dens or structures) to enhance or restore habitat conditions.

Implement actions and recommendations from recovery plans for ESA listed species, including those to reduce mortality, provide information and education, and restore habitat to maintain, enhance and restore listed species habitats.

Seek and accept acquisition of biologically important lands and interest in lands, including compensation lands.

Propose all existing ~~*and future*~~ parcels of compensation land (including lands not specifically used for or credited as compensation acres within the parcel) for inclusion in the Compensation Lands ACEC (see *ACEC* Section of this chapter).

Recommend any future parcels of compensation land (including lands not specifically used for or credited as compensation acres within the parcel) for ACEC consideration if there is evidence that the lands meet the relevance and importance criteria. Upon completion of NEPA, public review, and a plan amendment, such lands would become part of the Compensation Lands ACEC and be provided special management attention.

Prevent the issuance of an opening order to locatable mineral exploration and development in compensation lands where both surface and mineral estate are acquired.

Implement a variety of measures (such as fencing, planting native riparian vegetation to stabilize channels, installing in-stream structures, removing or redesigning spring alterations, removing weeds and seeding or planting appropriate native species) to restore degraded riparian areas and protect healthy riparian areas.

Manage naturally occurring waters on public lands, including public water reserves, to maintain, improve, or benefit hydrologic processes, such as in-stream flow requirements, needed for riparian systems.

Implement a variety of measures (such as removal, restriction, exclusion and education) if pets from public land users or private lands are causing wildlife depredation or other ecological damage.

Identify lands within the range of federally proposed and listed species as open to fluid mineral leasing unless otherwise closed, subject to major constraints including project relocation or exclusion, seasonal

activity restriction, and extended application processing time as described in the Controlled Surface Use- Protected Species stipulation (Appendix G);

Identify lands within the range of federal candidate, state listed or bureau sensitive species as open to fluid mineral leasing unless otherwise closed, subject to moderate constraints as described in the Controlled Surface Use- Sensitive Species stipulation (Appendix G);

Identify designated or proposed critical habitat as open to fluid mineral leasing unless otherwise closed, subject to major constraints as described in the Controlled Surface Use- Critical Habitat stipulation (Appendix G);

Identify important foraging, wintering or nesting habitat for raptors as open to fluid mineral leasing unless otherwise closed, subject to major constraints as described in the Controlled Surface Use- Raptor stipulation (Appendix G), such areas include, but are not limited to: Hopper Mountain, Kaweah, San Joaquin River Gorge, Kettleman Hills, Chico Martinez, and the Temblor and Caliente NCLWMAs.

Designate the following species as priority species for management and protection:

- Special Status Species;
- species of interest to CDFG, USFWS and NMFS (such as game species, furbearers, migratory birds, marine mammals, raptors);
- species that are rare;
- species with declining populations or with limited distributions; or
- species with high ecological importance (such as keystone, pollinator or host species)

Designate as priority plant communities and habitats *(Desired Plant Communities)*; examples of which include alkali sink, Bishop pine forest, California bay forest, central maritime chaparral, coastal scrub, cypress woodlands, giant sequoia forest, oak woodland, riparian communities, serpentine chaparral, wetland and vernal pool communities, based on the following criteria:

- designated critical habitat;
- rarity,
- limited geographic distribution;
- high ecological importance;
- unique species assemblages; or
- at risk from climate change, pathogens, or other factors.

Implement the following specific management as appropriate in areas of ecological importance, ACECs, and where priority communities, habitats and species occur;

- Closure to mineral material disposal;
- Limitations on modes of travel and travel routes;
- Restrictions on fluid mineral leasing (CSU, NSO, Closure);
- Restrictions on livestock grazing;
- Restrictions on recreational opportunities (camping, campfires, hunting, shooting sports, seasonal closures);
- Recommend proposal for withdrawal from all or a portion of the mining laws; and/or
- Prohibition of the casual collection of plants or their parts without prior BLM authorization.

Identify and manage the following ~~*areas*~~ *administrative delineations* as areas of ecological importance *(Map 3.2.1)*:

Atwell Island: for protection of sensitive biological resources and to restore retired farmlands to native habitat, including wetlands.

- Identify as available for livestock grazing but only for the purpose of vegetation management to meet resource objectives other than the production of livestock forage;
- Prohibit campfires;
- Prohibit overnight camping and use except for; future specific areas identified for nocturnal visitation for wildlife viewing and stargazing;
- Prohibit cross country equestrian travel;
- Seasonally prohibit access to wetland areas, as needed to support restoration objectives;
- Coordinate with CDFG to prohibit hunting except as allowed by Special Recreation Permit and/or specially organized hunt activity; ~~*furthermore prohibit the discharge of firearms for shooting sport activities;*~~
- *Prohibit air-soft and paintball activities, including organized games and casual use of these types of equipment unless authorized through a Special Recreation Permit;*
- Prohibit pets and other domesticated animals (not including authorized livestock) from wetland areas;
- Require all pets and domestic animals (not including authorized livestock) to be on a leash. Special Recreation Permits may be issued for activities allowing off-leash activity, such as, dog trial events; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Conserved Lands: for protection and recovery of federally listed species on public lands identified as reserves or corridors ~~*by*~~ in *collaboration and coordination with* the USFWS and CDFG (see Appendix B, *Conservation Strategy*).

- Manage public lands within reserves or corridors as conserved land consistent with the direction established by the USFWS and CDFG through the *Recovery Plan for Upland Species of the San Joaquin Valley* and other pertinent recovery or conservation plans, subject to the underlying statutory authority (FLPMA).
- Manage reserves to restrict surface disturbance on public lands in reserves to not exceed 10 percent of any 640-acre section, aliquot section, or aggregate of adjacent aliquot sections.
- Manage corridors to restrict surface disturbance on public lands in corridors to not exceed 25 percent of any 640-acre section, aliquot section, or aggregate of adjacent aliquot sections.
- Allow certain areas of high intensity oil and gas development within reserves and corridors to be identified and managed separately from the reserve and corridor system. These areas will not be subject to the 10 percent and 25 percent surface disturbance limit.

- Include certain areas outside the reserve and corridor system to be managed as corridors including the application of corridor disturbance restrictions.

Deer Spring: for protection of riparian resources and deer habitat.

- Identify as closed to fluid mineral leasing;
- ~~*Recommend proposal of the riparian zone (approximately 10 acres) for withdrawal from appropriation and entry under the General Mining Law;*~~ *Establish, in accordance with 43 CFR 3809.31, the area of ecological importance as an area requiring a 15 day notification be given to the BLM prior to beginning any activity under the mining laws including; Casual Use, to allow the BLM to determine whether a notice or plan of operations must be submitted.*
- Identify as unavailable for livestock grazing.

Caliente Creek: for protection of the riparian ecosystem and conservation of habitat for Tehachapi slender salamander, Yellow-blotched salamander, and Bakersfield cactus.

- *Identify as available for Livestock Grazing. Livestock grazing authorizations may have specific livestock management guidelines applied to ensure grazing use is compatible with the objectives for special status species and riparian resources.*
- *Seek to* acquire within the Caliente Creek area of ecological importance, lands with Tehachapi slender salamander and Bakersfield cactus.
- *Allow for the expansion of the Caliente Creek area of ecological importance to include additional public lands containing newly discovered populations of Tehachapi slender salamander, Yellow-blotched salamander or Bakersfield cactus.*

Frog Pond: for protection of riparian ecosystems including California bay forest.

- Identify as open for fluid mineral leasing, subject to major constraints (CSU-Priority Species, Plant Communities and Habitats stipulations);
- ~~*Recommend proposal of the riparian zone (approximately 10 acres) for withdrawal from appropriation and entry under the General Mining Law;*~~ *Establish, in accordance with 43 CFR 3809.31, Frog Pond as a special area requiring a 15 day notification be given to the BLM prior to beginning any activity under the mining laws including; Casual Use, to allow the BLM to determine whether a notice or plan of operations must be submitted.*
- Identify as closed to mineral materials disposals;
- Identify as unavailable for livestock grazing;
- Prohibit campfires and overnight camping;
- Prohibit equestrian use;
- Prohibit the casual collection of plants or their parts without BLM authorization; and
- Manage water resources to ~~*for the benefit of*~~ *maintain, improve, or benefit hydrologic processes, such as in-stream flow requirements, needed for* the riparian ecosystem.

Irish Hills: for protection of diverse coastal plant communities, including Bishop pine forest, rare plant habitat, and notably large oaks and manzanita.

- Identify as open to fluid mineral leasing, subject to moderate constraints (CSU – Priority Species, Plant Communities and Habitats stipulation);
- Identify as unavailable for livestock grazing;
- Prohibit campfires;
- Prohibit overnight camping, except in any future developed recreation sites developed in partnership with *California Department of Parks and Recreation or other* adjacent land owners;
- ~~*Prohibit the discharge of firearms and coordinate with CDFG to prohibit hunting;*~~
- Prohibit cross country equestrian travel; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

NCLWMA(s) (Caliente/Monache/Temblor): for improvement and maintenance of diverse assemblage of vegetative communities to benefit wildlife species, including raptors and game species, such as, deer, quail and chukar.

- Continue the withdrawal from application under the non-mineral public land laws and from disposition under the homestead, desert land entry, and script selection laws.
- Identify as open for fluid mineral leasing, subject to moderate constraints (CSU-Raptor stipulations)

Rusty Peak: for protection of serpentine chaparral, coastal live oak woodland, perennial grassland, San Luis serpentine dudleya, and other sensitive plant species.

- Identify as open for fluid mineral leasing, subject to moderate constraints (CSU- Priority Species, Plant Communities and Habitats stipulation);
- Identify as unavailable for livestock grazing; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Salinas River: for protection of diverse vegetation communities and the exemplary riparian area.

- Identify as open for fluid mineral leasing, subject to moderate constraints (CSU- Priority Species, Plant Communities and Habitats stipulations);
- ~~*Recommend proposal of the riparian zone (approximately 10 acres) for withdrawal from appropriation and entry under the General Mining Law;*~~ *Establish, in accordance with 43 CFR 3809.31, the Salinas River as a special area requiring a 15 day notification be given to the BLM prior to beginning any activity under the mining laws including; Casual Use, to allow the BLM to determine whether a notice or plan of operations must be submitted.*
- Identify as unavailable for livestock grazing;
- Prohibit campfires and overnight camping;
- Prohibit cross country equestrian travel; and
- ~~*Prohibit the discharge of firearms, except the legal taking of game species.*~~

South Fork of the Kern River: for protection of the riparian forest and critical habitat for the southwestern willow flycatcher; promote nesting habitat for both the southwestern willow flycatcher and the California yellow-billed cuckoo.

- Identify southwestern willow flycatcher critical habitat as unavailable for livestock grazing.

Table Mountain and Kennedy Table: for protection of vernal pools, listed vernal pool species and critical habitat for vernal pool species.

Tehachapi Linkage: for the preservation of the ecological connection between the southern Sierra Nevada Mountains and foothills, and the transverse ranges.

- *Identify as an avoidance area for utility scale renewable energy rights-of-way; and*
- *Retain all lands and interests in lands in federal ownership unless it is deemed that the lands do not contribute to a regional conservation strategy or linkage.*

Recommend the following areas as Areas of Critical Environmental Concern (ACECs) based on their significant biological resource values; Ancient Lakeshores ACEC; Bitter Creek ACEC, Blue Ridge ACEC; Chico Martinez ACEC; Compensation Lands ACEC; Cypress Mountain ACEC; Cyrus Canyon ACEC; Erskine Creek ACEC; Hopper Mountain ACEC; Kaweah ACEC; Kettleman Hills ACEC; Lokern-Buena Vista ACEC; Los Osos ACEC; Piute Cypress ACEC; Pt. Sal ACEC; Tierra Redonda ACEC; and Upper Cuyama Valley ACEC.

Key Implementation Decisions

Partner with other agencies, institutions, organizations, and individuals to improve knowledge of the species within the Bakersfield FO and their understanding of the natural and ecological processes that influence local ecosystems. With partner agencies, coordinate monitoring of special status species for changes in population size, distribution, habitat use, and potential and existing threats.

Inventory species that are not well studied or understood, such as insects and other invertebrates, fungi, lichens, and bryophytes (such as, mosses and liverworts). Continue to improve inventories of other species.

Support inventories, monitoring, and research that identifies and defines factors that influence species population trends, especially listed and special status species. Support other research on the biology of species found in the Bakersfield FO.

Control and eliminate weeds through collaboration with weed management area members, state agencies, federal agencies, conservation organizations, and other interested parties.

Treat weed populations following integrated pest management principles (BLM 1992). Monitor to determine effectiveness of control measures and to ensure that known target weed populations are stable or diminishing.

Eliminate founder invasive nonnative weed populations before they can spread *subject to site-specific NEPA*. Survey to detect new nonnative populations and begin treatment of newly discovered populations within five years of discovery.

Minimize the introduction and spread of weeds by BLM employees and public land users. For example, promote weed education, monitor corrals, promote or require weed-free hay, wash vehicles and equipment coming from other areas, and prohibit livestock and horse trailers from being cleaned on public lands.

~~*Acquire within the Upper Cuyama Valley area of ecological importance, lands with California jewelflower or Kern primrose sphinx moth.*~~

Establish partnerships and collaborate with adjacent landowners, interested publics, stakeholders, conservation organizations, and other agencies to coordinate management and protect areas of ecological importance, *habitat linkages,* and ACECs.

2.2.3 Caves and Karst Resource

Goal

To secure, protect, and preserve significant caves and their associated cave resources on public lands for the perpetual use, enjoyment, and benefit of all people and to foster increased cooperation and exchange of information between the Bakersfield Field Office and those who utilize caves for scientific, education, or recreational purposes, in accordance with the Federal Cave Resources Protection Act of 1988.

Objectives

Through a designation of significance by the authorized officer and determination within the RMP, protect those known caves that possess significant cave resources, in accordance with 43 CFR 37.11(c).

Provide a management framework to protect significant cave and karst resources, in accordance with BLM policy and guidelines.

Decisions

All newly discovered caves or sections of caves within the RMP decision area will be studied and inventoried for significant values. On determination of significance, the cave will be classified as Class I (open), Class II (restricted) or Class III (closed), described below. Interim management *(until the determination of significance is made)* shall be as Class II to protect cave resources and may be restricted to permitted/authorized users.

> **Class I**: These caves possess few or no sensitive features, their locations are generally widely known, and interpretive information may be available. These caves require no permit or notice to enter, but entry is recommended only for skilled and experienced cave users.
>
> **Class II**: These caves may possess sensitive features, including cultural resources, pristine examples of geological formations, and sensitive biological resources. Restricted caves may be closed or further restricted to permitted and approved entry for a variety of reasons, including but not limited to: seasonal closures for the protection of sensitive biological resources, closures during periods of extreme public safety concerns (e.g., flooding), or restriction to permitted/authorized users only for scientific study, educational purpose and/or organized recreational experiences.
>
> **Class III**: These caves are closed to protect sensitive cave resources. Entry requires specific authorization and may be provided only for scientific research or education.

Designate Granite Cave as a significant cave, based on its important and significant cave resources, which include both cultural and biotic resources, that are within and dependent on the cave. This cave

will be managed as Class III to fully protect the cultural integrity of the area and its associated cave resources.

Designate Millerton Cave as a significant cave, based on its important and significant cave resources, including geological formations, resources of known cultural importance, biotic resources, and the potential for resource-based recreation. This cave will be managed as Class I to allow ~~*occasional*~~ *casual* recreational use; but it shall not be interpreted or otherwise advertised, other than through general area and/or geological interpretation.

All caves within ACECs whose importance and significance speaks directly to the protection of known or potential cave and karst resources shall be determined significant, in accordance with 43 CFR 37.11(e). The ACECs whose designation relates to cave and karst resources are Erskine Creek and Kaweah. Further investigation and study of these cave and karst resources may be required to assign management objectives and prescriptions. Interim management shall be as Class II to protect cave resources.

2.2.4 Cultural Resources

Goals

Identify, preserve, and protect significant cultural resources and ensure that they are available for appropriate uses by present and future generations (FLPMA, Section 103 (c), 201(a) and (c); National Historic Preservation Act, Section 110(a); Archaeological Resources Protection Act, Section 14(a).

Seek to reduce imminent threats and resolve potential conflicts from natural or human-caused deterioration, or potential conflict with other resource uses (FLPMA Sec. 103(c), NHPA 106, 110 (a) (2)) by ensuring that all authorizations for land use and resource use will comply with the NHPA Section 106.

Continue to provide Native Americans' ~~*have*~~ access to public lands to conduct traditional cultural and religious practices.

Objectives

Manage evaluated cultural resources and those projected to occur within the decision area within one of six cultural use allocations: scientific use; conserve for future use; traditional use; public use; experimental use; or discharged from use, ~~*as described in*~~ *according to current* BLM guidance *(e.g., regulations, BLM policy, Manual sections 8100, and National and State Agreements)*.

Design BLM actions and authorizations to minimize impacts on cultural resources including places of traditional cultural and religious importance to Native Americans.

Identify places of religious and cultural importance to Native Americans and facilitate access to these locations for traditional use.

Decisions

Allocate evaluated cultural resources within the decision area as "scientific use" for study, determination of eligibility and appropriate recordation, pending assignment to another use category, with the exception of the following:

- Allocate the Huasna Peak as "traditional use".

- Allocate the Keyesville historic sites of Walker Cabin, Keyes Mine, and Keyes Cemetery as "conserve for future use", until such time as stabilization and restoration work allows for public use.
- Allocate the Piedras Blancas Light Station ONA as "public use".
- Allocate all rock art sites, known and projected to occur, as "conserve for future use".
- Allocate the Walker Pass NHL as "public use".

Eliminate, relocate, or redesign uses following site specific NEPA that may result or have resulted in impacts on significant cultural resources including places of traditional cultural and religious importance to Native Americans.

Restore or stabilize cultural resources when they are damaged or deteriorating *to the extent possible*.

Identify lands containing significant cultural resources as open to fluid mineral leasing unless otherwise closed, subject to major constraints as described in the Controlled Surface Use (CSU) - Cultural Resources stipulation (Appendix G).

Establish, in accordance with 43 CFR 3809.31, the following Cultural Resource sites (1,170 acres) as special areas requiring a 15 day notification be given to the BLM prior to beginning any activity under the mining laws including; Casual Use, to allow the BLM to determine whether a notice or plan of operations must be submitted; Granite Cave, Huasna Peak, and South Lake Cultural Area.

2.2.5 Lands with Wilderness Characteristics

Goal

Ensure that adequate consideration and protection, where appropriate, is given to lands with wilderness characteristics outside of designated Wilderness and Wilderness Study Areas and that these areas are managed so as not to impair these characteristics.

Objective

Provide a management framework to protect wilderness characteristics as an integral component of multiple use management of Planning Area BLM lands when it is consistent with other goals and objectives of the RMP.

Decisions

Manage the following areas (3,470 acres as shown on Map 2.2.1) for the protection of wilderness characteristics: Bear Mountain, Big Pine Meadow, Chappell D Parcel, Edgar Ranch West, Lamont Meadow Parcels, and Roszewska Property.

Establish prescriptive management for the protection of wilderness characteristics as follows:

- Identify as closed to mineral leasing;
- Identify as closed to mineral material sales;
- Identify as Rights-of Way avoidance areas *for all ROWs*;
- Designate as OHV Closed areas;
- Designate as VRM Class II, unless a more stringent overlapping designation (e.g., WSR or PCNST Corridor) exists.

- Livestock grazing and the activities and facilities that support a grazing program may be permitted to continue at the same level and degree after initial authorization;
- Prohibit new structures unrelated to preserving wilderness characteristics; and
- Retain in Federal ownership.

2.2.6 Paleontological Resources

Goal

Identify, manage, and protect paleontological resources for scientific research, educational purposes, and public use.

Objective

Identify, manage, and protect important paleontological ~~*sites*~~ *resources*.

Foster public awareness and appreciation of paleontological resources through educational outreach programs.

Decisions

Implement measures to protect paleontological resources ~~*including, but not be limited to*~~ *from inadvertent damage or destruction through*:

- Avoidance,
- Fencing,
- Stabilization,
- ~~*Data recovery through*~~ Collection or excavation and deposit in a museum repository,
- Interpretation, or
- Administrative closure.

Identify areas at risk of damage from illegal activities and implement management to discourage those activities.

~~*Eliminate, relocate, or redesign uses following*~~ *Ensure that* site-specific NEPA (which may include a field inventory and ~~*data*~~ *fossil specimen* recovery) *implements the PFYC as a standard part of review for all surface-disturbing projects throughout the Decision Area* ~~*that may result or have resulted in impacts on fossil-bearing geologic units identified as Potential Fossil Yield Class (PFYC) 4 or 5*~~.

Minimize or prevent human-caused damage to paleontological resources through educational and interpretive outreach programs focusing use on ~~*less significant*~~ *common invertebrate and plant fossils* ~~*paleontological resources*~~.

Accommodate permit requests for scientific research by qualified individuals or institutions.

2.2.7 Soil Resources

Goal

Soils exhibit functional biological and physical characteristics that are appropriate to soil type, climate, and land form.

Objective

Manage soils to meet or exceed the Soil Standard of Rangeland Health (Appendix F-1), as indicated by ground or plant cover, diversity of plant species, minimal evidence of accelerated wind and water erosion and the presence of the biological soil crusts where appropriate.

Decisions

Design BLM programs and management activities and authorize projects to minimize impacts on soil productivity by implementing BMPs (Appendix L). Specifically minimize disturbance of the following soils types:

- Serpentine Soils;
- Soils supporting "Biological Crusts" – hosting communities of cyanobacteria, mosses, lichens and liverworts;
- Soils highly susceptible to erosion or compaction; and
- Soils hosting high levels of Valley Fever spores.

2.2.8 Visual Resources

Goal

Public lands demonstrate a range of visual resource values that allow for development and provide opportunities for scenic appreciation.

Objective

Utilize visual resource management classes for all public lands within the decision area to preserve and enhance scenic quality for present and future generations.

Ensure ~~*approval of*~~ *that* projects outside the CPNM boundary but within its viewshed comply with the visual resource management objectives as described in the CPNM RMP (BLM 2010b).

Decisions

Designate VRM classes for the Decision area as shown on Map 2.2.2 and summarized by the following;

- Class I: ~~*144,730*~~ *175,340* acres
- Class II: ~~*207,790*~~ *208,650* acres
- Class III: ~~*525,860*~~ *542,220* acres
- Class IV: ~~*271,380*~~ *238,840* acres

2.2.9 Water Resources

Goal

Surface and groundwater comply with the objective of the Clean Water Act and all other applicable water quality requirements.

Objectives

Manage water resources to meet or exceed the Standards for Rangeland Health (Appendix F-1) by maintaining the existing quality and beneficial uses of water, protecting them where they are threatened, and restoring them where they are currently degraded.

Manage riparian/wetland vegetation, structure, and diversity and stream channels and floodplains so that they are functional and achieving physical and biological objectives.

Decisions

Design BLM program and management activities and authorize projects to meet water quality standards and maintain beneficial uses by implementing *such measures as* State approved BMPs (Management Measures for Polluted Runoff, see Appendix L) within the Central Coast, South Coast and Tulare basins.

Implement management actions to reduce non-point source pollution contributing to impaired water quality in any basin or segment listed as impaired in accordance with Section 303(d) of the Clean Water Act (e.g., a segment of Salinas River).

Implement BMPs for riparian/wetland health for maintenance of vegetation cover and diversity, and the physical stability of stream banks (Appendix L).

Applications for water developments or diversions on public lands would be approved only if resource objectives including wildlife, riparian, and livestock grazing needs, have been met.

Complete State water rights reporting requirements to maintain existing licenses and continue water diversion and use authorizations. Apply for new licenses and use authorizations as appropriate.

2.2.10 Wildland Fire Ecology and Management

Goals

Firefighter and public safety is the single, overriding priority in every fire management activity.

Minimize suppression costs while considering firefighter and public safety, benefits, and human and resource values to be protected.

Recognize fire as an essential ecological process and use wildland fire (both planned and unplanned ignitions) to restore or sustain ecosystem health, where appropriate.

Objectives

Maintain areas in all Fire Management Units (FMUs) that are currently in Fire Regime Condition Class 1 and manage to improve conditions in Class 2 and Class 3 areas.

Prevent, to the extent possible, the movement of wildfires from the wildlands into the Wildland Urban Interface (WUI) area, and out the WUI area into the wildlands.

Decisions

Conduct fire management planning, preparedness, prevention, suppression, fire use, restoration and rehabilitation, monitoring and education on an interagency basis with the involvement of cooperators and partners.

Identify the following three geographic areas as suitable for the use of wildland fire for resource benefit (see Map 2.2.3):

- South Sierra Fire Management Unit
- Domeland Fire Management Unit
- Portion of the Three Rivers Fire Management Unit protected by the National Park Service

Take suppression actions in the remainder of the Decision Area, commensurate with human and natural resource values at risk. Where possible, use existing natural and human-made fire control barriers, such as roads, trails, fuelbreaks and rock outcroppings rather than constructing new firelines.

Use a decision support process to analyze and document fire suppression strategies and tactics. Suppression actions may not necessarily be limited to those that result in the fewest number of acres burned, after consideration of firefighter and public safety, values at risk, resource protection needs and current and expected conditions at the time of the fire.

Use Minimum Impact Suppression Tactics (MIST) or other modified suppression techniques when suppressing fires in sensitive areas, including but not limited to: Wilderness, Wilderness Study Areas, lands managed for wilderness characteristics, culturally significant areas and ACECs. Fire managers will consult a resource advisor or archaeologist to ensure resource protection needs are addressed.

Assess all wildland fire areas for post-fire Emergency Stabilization and Rehabilitation (ESR) needs and submit ESR plans for funding. Implement approved activities in a timely manner.

Participate in local Fire Safe Councils or other community organizations to develop and implement collaborative fire mitigation and prevention strategies with communities at risk, and coordinate on the preparation of Community Wildfire Protection Plans.

Implement, as appropriate, the full range of wildland fire and fuels management practices, including prescribed fire, mechanical, chemical, biological, and cultural treatments that will support hazardous fuels reduction in coordination with vegetation and habitat management objectives and resource protection needs.

Resource Uses

2.2.11 Comprehensive Trail and Travel Management

Goal

Improve access *to,* and recreational opportunities *on, public lands* that complement the character of each geographic zone and the surrounding regions.

Objectives

Provide reasonable, safe, and environmentally sound access to visitors, local residents, licensed and permitted activities, and property owners through coordination and collaboration on travel systems with other agencies, state and local governments and interested stakeholders.

Reduce or halt proliferation of motorized and non-motorized routes.

Maintain an accurate route inventory for management purposes, and for the production of both general and recreation specific Transportation Management Network maps.

Manage OHV use to protect environmental resources, promote public safety, and provide OHV use opportunities where appropriate. Administratively designate the specific areas on public lands on which the use of OHVs is, and is not permitted.

Decisions

Delineate Travel Management Areas (TMAs) and associated modes of access and travel, as follows;

Primitive TMA (approximately 135,800 acres): Primarily recreational traffic, access essentially cross country, with few designated and maintained trails. Area entirely restricted to non-motorized and non-mechanized modes of transport. Aircraft take-off and landing, except emergency, would be prohibited.

Keyesville TMA (approximately 10,810 acres): Primarily recreational traffic, no area-wide mode of transport restrictions, motorized and mechanized use limited to designated routes for these uses. Over time specific routes may be redesignated to limit to specific modes of transport in order to maintain recreational opportunity and experience.

Temblor TMA (approximately 20,860 acres): Primarily recreational traffic, no area-wide mode of transport restrictions, motorized and mechanized use limited to designated routes for these uses. Permits for motorized and mechanized competitive events would not be issued. Over time specific routes may be redesignated to limit to specific modes of transport in order to maintain recreational opportunity and experience.

Intensive TMA (approximately 40,150 acres): Primarily industrial/commercial traffic, all travel on designated routes. No area-wide mode of transport restrictions. Implement a program of route reduction addressing route construction, use, and abandonment (including restoration) based on a balance between industrial needs and environmental concerns.

Extensive TMA (approximately 196,360 acres): General traffic from multiple uses, motorized and mechanized use limited to routes designated for these uses. No area-wide mode of transport restrictions.

Designate in accordance with 43 CFR 8342 as defined in 43 CFR 8340.05(f), (g), and (h) the following OHV areas:

- Open: 0 acres
- Closed: 142,940 acres
- Limited: 261,140 acres

Close areas where off-highway vehicles are causing or will cause unacceptable adverse effects upon soil, vegetation, wildlife, wildlife habitat, cultural resources, historical resources, threatened or endangered species, wilderness suitability, other authorized uses, or other resources to the type(s) of vehicle causing the adverse effect until the adverse effects are eliminated and measures implemented to prevent recurrence.

Define *primary* route designations and limitations as follows:

Motorized: a route allowing all modes of transport, motorized vehicles including, standard (street legal) passenger vehicles and OHVs (motorcycles, ATVs, jeeps, and specialized vehicles etc.). *All other modes of transport may use these routes unless restricted by a secondary designation.*

Non-motorized: a route allowing modes of transport that are not motor driven (regardless of motor type e.g., gas, diesel, electric). Allowable modes of transport include, moving by foot, stock or pack animal, non-motorized boat (kayak, raft etc.), or mechanical vehicle such as a bicycle.

Non-mechanized: a route allowing only travel by natural means, such as by foot or horseback, except for approved, non-motorized access devices covered under the Americans with Disabilities Act.

~~***Authorized:*** *a route restricted to use by authorized user including, permittees, lessees and any other form of authorization from the BLM, for a specific route. Mode of travel restrictions may be applied in the specific BLM authorization.*~~

Closed: a route prohibiting all types and modes of transport (including all public, authorized and administrative uses); Closed routes can be restored.

Apply *and document the application of* the following criteria in route designation including the criteria defined in 43 CFR 8342.1;

- [Designated] trails shall be located in a manner to minimize impacts to physical resources (soils, watershed, vegetation, air, and other resources) and to prevent impairment of wilderness suitability;
- [Designated] trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention will be given to protect endangered or threatened species and their habitats; and
- [Designated] trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreation uses.
- [Designated] areas and trails shall not be located in officially designated wilderness areas or primitive areas. Areas and trails shall be located in natural areas only if the authorized officer determines that off-road vehicle use in such locations will not adversely affect their natural, aesthetic, scenic or other values for which the areas are established.

Consider, *and document the application of*, in addition to the previously identified criteria the following in all route designations (including re-designations);

- Environmental conditions, such as: soil stability, important wildlife habitat, special status species habitat, proximity to riparian areas or 303(d) streams, and visual resources.
- User conflicts, such as: motorized versus non-motorized and motorized or mechanized versus non-mechanized. *Such conflicts must be actual conflicts, rather than perceived conflicts, and appropriately documented.*
- Administrative purposes, such as: wildland fire suppression activities, safety, and resource management and permitted activities.
- Public purposes, such as: accessing public or private land, destinations for specific activities, and types of desired use (motorized, mechanized, non-motorized/ or non-mechanized).
- Route, mode-of-transport and size limitations, such as: > 50-inch wheel base (full size vehicles), < 50-inch wheel base (all-terrain vehicles), single-track vehicles (motorcycles or mountain bikes), and equestrian or pedestrian only trails.

Apply *and document the application of* the following principles when making route designation modifications:

- ~~*Encourage*~~ *Require the opportunity for* public involvement ~~*in*~~ *throughout* the travel management process ~~*at all times*~~;
- Coordinate route designations with individual stakeholders, user groups, tribes, agencies and local governments;
- Document and record route designation changes appropriately; and
- Provide opportunity for public review and comment on route designation changes.

Implement the following guidelines for management and maintenance of the travel network:

- Designate routes within newly acquired properties, rights-of-way, and easements at the time of, and in conjunction with the acquisition;
- Provide designations for newly constructed, modified, or realigned routes and routes missed by the 2009 Digital Inventory.
- Designate routes associated with new authorizations in conjunction with the normal application process and approval. As existing authorizations are renewed, their designation may be altered accordingly. These redesignations would be documented in the associated NEPA documentation, and amended in the route database and GIS. Information on new and redesignations would be available to the public;
- Address route redesignations as physical route conditions changes (erosion, washout etc.);
- *Allow for the redesignation of routes as a result of specific requests, subject to site specific analysis (NEPA) and appropriate public involvement;* and
- *Encourage authorized users to evaluate their transportation network needs and submit a transportation plan to address those needs at an appropriate scale (e.g. Oil Field, lease, portion of lease, etc.)*

Establish protocols to effectively monitor and gather data on route usage, route condition, and noncompliance with designations. These protocols would include:

- Identification of high traffic routes and areas;
- Annual monitoring of a random selection of routes to gauge effectiveness of travel management decisions and identify resource conflicts; and
- Annual review of a minimum of 10% of designated routes, and appropriate updates to the existing route inventory.

Key Implementation Decisions

Define secondary route designations as the following (note additional secondary route designations may be implemented by various activity level plans and site specific actions):

> ***Motorized - Authorized**: a route restricted to use by authorized user including, permittees, lessees and any other form of authorization from the BLM, for a specific route. Mode of travel restrictions may be applied in the specific BLM authorization.*
>
> ***Motorized – Street Legal Only**: a route restricted to use by vehicles licensed (by any state) for use on any highway.*

***Non-Mechanized – Pedestrian Only**: a route restricted to use by pedestrians (walking/hiking) only.*

Designate roads and/or trails as identified on Travel Management Network Maps B1-B9 *and described in the Route Designation Table (Appendix E)*, *as* summarized by the following mileages:

- Motorized: ~~770~~ *1,429* miles
- *Motorized - Street Legal Only: >1 mile*
- ~~*Authorized*~~ Motorized – Authorized: ~~783~~ *160* miles
- Non-motorized: ~~31~~ *27* miles
- Non-mechanized: ~~45~~ *41* miles
- *Non-Mechanized- Pedestrian Only: 4 miles*
- Closed: ~~308~~ *293* miles

Ensure existing use of public lands in the Temblor area does not result from inappropriate travel across private property through the acquisition of legal public access routes to the Temblor area. *These routes should be numerous enough to allow for reasonable access from the local communities while still facilitating management of visitors though a few key access points. Furthermore, access routes should give consideration to both licensed and "green sticker" vehicles.*

Coordinate current and future route designations/re-designations within the Temblor area with the Carrizo Plain National Monument to ensure appropriate connectivity across the monument boundary to Temblor Ridge Road.

Strive to acquire legal public access across private property for Rocky Gorge and Tombstone Ridge trails within the Keyesville SRMA.

2.2.12 Lands and Realty

Goal

Provide lands, interests in land, and authorizations for public and private uses while maintaining and improving resource values and public land administration.

Objectives

Meet other resource objectives through retention and/or land tenure adjustments.

Meet public, private, and Federal agency needs for realty-related land use authorizations and land withdrawals, including those authorizations necessary for wind, solar, biomass, and other forms of renewable energy development

Increase public access to public lands when consistent with other resource objectives.

Resolve unauthorized uses or occupancy to assure consistency with RMP goals and objectives.

2.2.12.1 Land Tenure

Decisions

Disposal of the following areas is not deemed to serve national interest; components of the NLCS; lands managed for wilderness characteristics; Land and Water Conservation Fund (LWCF) acquisitions; leased fluid mineral estate; mineral estate with significant fluid mineral potential[10]; and SRMAs.

Retain all lands and interest in lands in federal ownership unless disposal is deemed to serve national interest. Disposal is deemed to serve national interest if the following criteria are determined to be met through site specific investigation and, therefore, would be considered available for disposal:

- Disposal of lands would promote effective administration;
- Lands do not contain important cultural, biological, recreational, or other resource values, the loss of which cannot be adequately mitigated;
- Lands do not contribute to a regional conservation strategy *or habitat linkage*;
- Lands do not have overriding public values or interests; and
- Lands do not represent substantial public investments.

Lands considered available for disposal that meet the following criteria as described in section 203(a) of FLPMA may be sold under direct, competitive, or modified sale:

- such tract because of its location or other characteristics is difficult and uneconomic to manage as part of the public lands, and is not suitable for management by another department or agency; or
- such tract was acquired for specific purpose and the tract is no longer required for that or any other purpose; or
- disposal of such tract will serve important public objectives, including but not limited to, expansion of communities and economic development, which cannot be achieved prudently or feasibly on land other than public land and which outweigh other public objectives and values, including, but not limited to, recreation and scenic values, which would be served by maintaining such tract in federal ownership.

Seek acquisition of lands and interest in lands meeting the following criteria from willing grantors;

- Demonstrate high cultural, biological or other natural resource values, important recreational opportunities or mineral potential;
- Located within specially designated areas (e.g., ACECs, Components of the NLCS, SRMAs);
- Provide access to existing parcels of public lands; and
- Promote effective administration.

Determine the public lands (61,440 acres) and federal mineral estate (337,440 acres) shown on Map 2.2.4 as available for consideration of a disposal action (sale, exchange, or other means) in so much that these lands meet the "isolated, difficult or expensive to manage, or are needed for community expansion" disposal criteria contained in FLPMA Section 203(a). However, site-specific investigation to ascertain whether a specific parcel meets the disposal criteria outlined in this RMP would still be required prior to any disposal action being taken.

[10] Retention of mineral estate does not preclude disposal of public lands surface.

Manage newly acquired land[11] to meet the same goals and objectives, and under the same allocations and management decisions, as surrounding public lands or in a manner consistent with the terms of acquisition.

2.2.12.2 Land Use Authorizations

Decisions

Continue the designation of existing and potential utility corridors delineated in the Western Regional Utility Corridor Study of 1993 as right-of-way corridors.

~~*Identify Wilderness and lands within the PCNST corridor as exclusion areas for all types of rights-of-way.*~~

~~*Identify all ACECs and the Piedras Blancas ONA as Right-of-way avoidance areas, except for rights-of-way related to utility scale renewable energy projects.*~~

~~*Identify the Piedras Blancas ONA, SRMAs, and VRM Class I and II areas as exclusion areas for utility scale renewable energy Rights-of-way. Identify WSAs as rights-of-way avoidance areas in accordance with H 8550-1 (IMP).*~~

~~*Identify lands with wilderness characteristics and suitable Wild and Scenic River Corridors as rights-of-way avoidance areas.*~~

Identify 142,630 acres as available for utility scale renewable energy rights-of-way. In addition, 285,460 acres would be available for all types if rights-of-way.

Identify 261,690 acres as exclusion areas for utility scale renewable energy rights-of-way: all ACECs, the Piedras Blancas ONA, SRMAs, VRM Class I and II, designated Wilderness areas and the PCNST corridor. Of this acreage, identify 118,860 acres as exclusion areas for all other types of rights-of-way: Wilderness and the PCNST corridor.

Identify 102,550 acres as avoidance areas for all types of rights-of-way, except where a specific type of right-of-way is excluded (as described above): all ACECs, WSAs, lands managed for wilderness characteristics, the Piedras Blancas ONA, and suitable Wild and Scenic River corridors.

Identify a total of 31,300 acres as avoidance areas for utility scale renewable energy rights-of-way portions (i.e., those areas which do not overlap exclusion areas listed above) of: Tehachapi Linkage area of ecological importance (27,290 acres), WSAs (1,860 acres), and lands managed for wilderness characteristics (2,150 acres).

~~*Resolve unauthorized uses or occupancy to assure consistency with RMP goals and objectives.*~~

Apply resource specific, Best Management Practices (such as BMPs for VRM, air, soil, water, biological resources, etc., see Appendix L) as terms and conditions to ROW authorizations *based on site-specific NEPA analysis* to minimize environmental impacts.

[11] Acquisition is subject to conformance with underlying statutory authority and DOJ title standards.

Key Implementation Decisions

Commercial filming permits that are routine in nature (such as less that 14 days in duration and less than 50 people, use designated routes or previously disturbed areas, effect no present traditional cultural values) would be issued pursuant to FLPMA, where no surface disturbance is proposed, and where there will be minimal to no impacts on resources.

2.2.12.3 Withdrawals

Decisions

Continue the existing withdrawal from application under the non-mineral public land laws and from disposition under the homestead, desert land entry and script selection laws for the Caliente, Monache-Walker Pass and Temblor National Cooperative Land and Wildlife Management Areas (NCLWMAs) (183,620 acres)(Public Land Order 2460).

Continue the existing withdrawal from settlement, sale, location, or entry under the general land laws, including the United States mining laws, 30 U.S.C. Ch. 2 (1994), mineral leasing laws, 30 U.S.C. 181 *et seq.* (1994) and mineral material sale laws 30 U.S.C. 601-604 (1994), of Piedras Blancas Light Station (20 acres) (Public Land Order 7501).

Continue the existing withdrawal from all forms of appropriation under the public land laws, including the mining laws, 30 U.S.C. Ch. 2, but not from leasing under the mineral leasing laws, of the Piute Cypress Natural Area (760 acres) (Public Land Order 3510).

~~*Recommend the amendment of*~~ Continue the existing withdrawal from location under the General Mining Law, 30 U.S.C. Ch. 2, of the Keyesville (390 acres) and San Joaquin River Gorge (3,070 acres) areas~~ *to include the conditioning of entry to exclude such mining operations that require a Notice or Plan of Operations*~~.

~~*Recommend proposal for withdrawal all or certain types of mining operations under the mining laws 29,050 acres, in 19 areas.*~~

2.2.13 Livestock Grazing

Goal

Manage livestock grazing authorizations in a manner that meets or exceeds the Standards for Rangeland Health (Appendix F-1) and is consistent with other RMP goals.

Objective

Manage grazing authorizations to meet or exceed the Standards doe Rangeland Health.

Provide for livestock grazing opportunities on lands in the grazing decision area in a manner that limits impacts on other resources and meets RMP goals.

Decisions

Allocate public lands for livestock grazing based on the following acreages (Map LG-B, in separate map packet):

- *Available: 328,900 acres*
- *Unavailable: 66,100 acres*

Identify 7,800 acres (Atwell Island) of those acres allocated as Available for livestock grazing only for the purpose of vegetation management objectives other than producing livestock forage.

Allocate newly acquired lands to match allocations given to the surrounding or adjacent lands, except where land is unsuitable for livestock grazing or the purpose for which the land was acquired is incompatible with livestock grazing ~~*including*~~ *based on resource conditions or in accordance with use* restrictions ~~*placed on future use through*~~ *contained in* acquisition documents[12].

Manage livestock grazing on individual pastures of allotments or entire allotments which lie primarily within the Bakersfield FO Planning Area in conformance with this RMP's goals and objectives. Allow management of livestock grazing on individual pastures of allotments or entire allotments which lie primarily within other Field Office or BLM jurisdictional boundaries in conformance with the goals and objectives applicable to the managing office's land use plan (Map, LG-B, in separate map packet).

Apply the appropriate Central California ~~*grazing management*~~ Guidelines *for Livestock Grazing Management* (Appendix F-1) to the applicable grazing authorizations as needed to meet the Standards for Rangeland Health.

~~*Allocate 328,700 acres of public land as available for livestock grazing; of which 7,800 acres (Atwell Island) would be available only for the purpose of vegetation management objectives other than producing livestock forage.*~~

~~*Allocate the remaining 66,200 acres as unavailable for livestock grazing, including all or a portion of some ACECs (see Section 2.2.17), the Deer Spring, Frog Pond, South Fork of the Kern River, Irish Hills, Rusty Peak and the Salinas River areas of ecological importance and Big Pine Meadow and Rosewska Meadow (Map LG-B, in separate map packet).*~~

Apply the appropriate Bakersfield FO-specific guidelines for livestock grazing management (Appendix F-2) to the applicable grazing authorizations within the grazing decision area as follows:

For Allotments within San Joaquin Valley listed species habitat;

- Mulch Readiness *(level required for livestock turnout)* at 500 lbs/acre and 2" green growth, or 700 lbs/acre without green growth
- Mulch Threshold *(level requiring livestock removal regardless of date)* at 500 lbs/acre
- with Saltbush Scrub; Dec.1-May 31 season of use or meet form class, foliage density, and reproductive uniformity criteria

For Riparian areas in;

- Poor-Fair Condition; Nov.1-May 31 season of use and apply the *appropriate* Central CA Guidelines for Livestock Grazing Management*, as needed to meet the Standards for Rangeland Health (Appendix F-1)*.
- Good-Excellent Condition - Maintain current season of use and apply the *appropriate* Central CA Guidelines for Livestock Grazing Management as needed*, as needed to meet the Standards for Rangeland Health*.

[12] Acquisition is subject to conformance with underlying statutory authority and DOJ title standards.

For known occupied habitats and/or known populations of *the following species apply the following guidelines for livestock grazing management. In addition, on a case-by-case basis, depending of the specific needs of the species, extend these guidelines to adjacent areas that are determined to have similar habitat and are likely to contain these species and/or areas directly affecting habitat containing the species of concern*;

- California jewelflower - No grazing unless ~~*in*~~ *for a USFWS*-approved study or *completed* research shows grazing to be beneficial.
- San Joaquin woolly threads - Apply the *appropriate* Central CA Guidelines for Livestock Grazing Management*, as needed to meet the Standards for Rangeland Health*.
- Kern mallow - No grazing unless ~~*in*~~ for a *USFWS*-approved study or *completed* research shows grazing to be beneficial.
- Hoover's woolly Star - Apply the *appropriate* Central CA Guidelines for Livestock Grazing Management*, as needed to meet the Standards for Rangeland Health*.
- Kelso Creek monkeyflower - No grazing.
- Kern primrose sphinx moth - No grazing.
- Tehachapi slender salamander - Apply the *appropriate* Central CA Guidelines for Livestock Grazing Management*, as needed to meet the Standards for Rangeland Health*.
- Other *special status* species ~~*that become listed*~~ - ~~*Prescription*~~ *Apply the appropriate Central CA Guidelines for Livestock Grazing Management as needed to meet the Standards for Rangeland Health and/or develop a management guideline* that takes into account specific species requirements.

~~Key Implementation Decisions~~

Authorize livestock grazing at the initial implementation levels (Appendix F-5). Based on existing authorizations, projected new authorizations and application of the Central California and Bakersfield FO Specific ~~*livestock grazing management guidelines*~~ *Guidelines for Livestock Grazing Management*, forage authorized for livestock grazing within the Decision Area would total approximately ~~*40,000*~~ *40,200* AUMs.

2.2.14 Minerals Management

Goal

Support development of mineral resources on public lands in an environmentally sound manner.

2.2.14.1 Leasable Minerals

Objective

Facilitate reasonable, economical, and environmentally sound exploration and development of leasable minerals while minimizing impacts to resources.

2.2.14.1.1 Fluid Minerals

Decisions

Identify 0 acres as open to fluid mineral leasing, subject to existing regulations and formal orders; and the terms and conditions of the standard lease form.

Identify 0 acres as open to fluid mineral leasing, subject to moderate constraints.

Identify 149,600 acres as closed to fluid mineral leasing:

- Non-discretionary closures – Wilderness, WSAs, Piedras Blancas ONA, and the PCNST
- Discretionary closures – some ACECs (Bitter Creek ACEC, Blue Ridge, Erskine Creek, Piute Cypress, and Point Sal) lands with wilderness characteristics, suitable segments of WSR and Deer Spring area of ecological importance.

Identify 26,440 acres, in addition to that closed to all fluid mineral leasing as closed only to geothermal leasing:

- Discretionary closures – Kaweah ACEC.

Identify approximately ~~*999,950*~~ *1,011,470* acres as open to fluid mineral leasing, subject to major constraints (both CSU – Protected Species and CSU – Sensitive Species). Of this at least 3,880 acres would also be subject to a No Surface Occupancy stipulation. Additional CSU stipulations may be applied to all new leases in conjunction with the lease sale as determined appropriate and in conformance with the RMP. *Additional information regarding the application, review process, and coordination requirements of the stipulations is included in Appendix G.*

Establish the major constraint of "NSO – Compensation Lands ACEC" that prohibits surface disturbance on the entire lease for the purpose of minimizing or eliminating adverse effects associated with fluid mineral development on lands acquired as compensation lands with the following stipulation language:

> *All or a portion of this lease occurs within the boundaries of the Compensation Lands ACEC. These lands may have a governing document that prohibits certain activities. No new surface disturbing activity is allowed on the lease. Furthermore, access to federal minerals within the lease will only be allowed from off-site sources not considered to be compensation lands (e.g., compensation land in private ownership). This stipulation shall not be waived, however may be granted exception or modified as follows:*
>
> ***Exception:*** *The Authorized Officer may grant an exception if, after coordination with appropriate agency (e.g., CDFG and USFWS), an environmental review determines the action as proposed or conditioned would not impair the values present and is consistent with the document that established the compensation land.*
>
> ***Modification:*** *The Authorized Officer may modify this stipulation to allow surface use on a portion or the entire lease if, after coordination with appropriate agency (e.g., CDFG and USFWS), an environmental review determines the action as proposed or conditioned would not impair the values present and is consistent with the document that established the compensation land.*

Establish the major constraint of "CSU – Compensation Lands" for the purpose of minimizing or eliminating adverse effects associated with fluid mineral development on lands managed as compensation land with the following stipulation language:

> *All or a portion of this lease underlies lands managed as compensation land by the BLM or an entity other than the BLM that may have a governing document that prohibits certain activities. To allow only a compatible amount of disturbance to unique or significant biological values, no*

more than ten (10) percent of the surface within any parcel may be disturbed on the surface reserve lands overlaying the lease. Furthermore, access to federal minerals within the lease will not disturb more than ten (10) percent of the surface within any parcel from off-site sources that are compensation lands (e.g., compensation land in private ownership). This stipulation may be granted exception, modified, or waived as follows:

Exception: *The Authorized Officer may grant an exception if, after coordination with appropriate agency (e.g., CDFG and USFWS), an environmental review determines the action as proposed or conditioned would not impair the values present and is consistent with the document that established the compensation land.*

Modification: *The Authorized Officer may modify this stipulation if, after coordination with appropriate agency (e.g., CDFG and USFWS), an environmental review determines the action as proposed or conditioned would not impair the values present and is consistent with the document that established the compensation land.*

Waiver: *The Authorized Officer may grant a waiver to the stipulation if the lease parcel no longer considered as compensation land by the appropriate agency (e.g., BLM, CDFG and USFWS).*

Establish the major constraint of "CSU – Chimineas Ranch" for the purpose of preventing or reducing disturbance to unique or significant natural resources from fluid mineral development with the following stipulation language:

This lease is within the boundaries of, or adjacent to, the State of California's Chimineas Unit of the Carrizo Plain Ecological Reserve, an area that contains unique or significant natural or cultural values. Prior to the authorization of any surface disturbing activities, a preliminary environmental review will be conducted to identify the potential presence of natural or cultural values. Authorizations may be delayed until completion of the necessary surveys during the appropriate time period for these resources. Surface disturbing activities may be prohibited on portions or the entire lease, and some activities may be prohibited during seasonal time periods. This stipulation shall not be waived, however may be granted exception or modified as follows:

Exception: *The Authorized Officer may grant an exception if, after coordination with CDFG, an environmental review determines that the activity, as proposed or conditioned, would not impair the values present and is consistent with the management of the ecological reserve.*

Modification: *The Authorized Officer may modify this stipulation to further restrict surface use on a portion of or the entire lease if a more stringent requirement is deemed necessary to protect resource values following an environmental review.*

Establish the major constraint "CSU - Protected Species" for the purpose of minimizing or eliminating adverse effects associated with fluid mineral development on federally proposed and listed species with the following stipulation language:

All or a portion of the lease occurs within the range of one or more plant or animal species that are either listed or proposed for listing as threatened or endangered by the USFWS. A list of such species will be provided at the time of leasing and updated as necessary over the term of the lease. To determine whether species on this list or their habitat are present, a preliminary

environmental review will be conducted for all surface disturbing activities. Presence of habitat or species may result in the proposed action being moved, modified, or delayed to mitigate project effects. Offsite compensation that would satisfactorily offset the loss of habitat may be required. Prohibition of all surface disturbing activities on the lease will only occur as needed to avoid jeopardizing the continued existence of a listed or proposed species, or when the proposed action is inconsistent with the recovery needs of a species as identified in an approved USFWS Recovery Plan through consultation with USFWS. Furthermore, processing times for proposed actions may be delayed beyond established standards to accommodate species surveys, and consultation or conferencing with the USFWS. This stipulation shall not be waived; however, it may be modified or an exception may be granted as follows:

Exception: *The Authorized Officer may grant an exception if an environmental review determines the action as proposed or conditioned would have no effect on listed or proposed species.*

Modification*: The Authorized Officer may modify this stipulation to reflect new information with regard to the range of listed or proposed species through the expansion or reduction of lands subject to this stipulation for a specific species.*

Establish the major constraint "CSU - Sensitive Species" for the purpose of minimizing or eliminating adverse effects associated with fluid mineral development on federal candidate, State listed and BLM sensitive species with the following stipulation language:

All or a portion of this lease is within the range of one or more plant or animal species that are either federal candidates for listing as threatened or endangered (federal candidate), are listed by the State of California as threatened or endangered (state listed), or are designated by the BLM as sensitive (BLM sensitive). A list of species will be provided at the time of leasing and updated as necessary over the term of the lease. To determine whether species on this list or their habitat are present, a preliminary environmental review will be conducted for all surface disturbing activities. Presence of habitat or species may result in the proposed action being moved more than 200 meters (656 feet) but not more than a quarter-mile or off of the lease and prohibition of activities during seasonal use period. Furthermore, processing times for proposed actions may be delayed beyond established standards to accommodate species surveys, and coordination with the USFWS and California Department of Fish and Game. This stipulation shall not be waived; however, it may be granted exception or modified as follows:

Exception*: The Authorized Officer may grant an exception if an environmental review determines the action as proposed or conditioned would have no effect on federal candidate, state listed, and BLM sensitive species.*

Modification*: The Authorized Officer may modify the stipulation to reflect new information with regard to federal candidate, state listed or BLM sensitive species lists. Furthermore, the authorized officer may modify the maximum distance that a potential location could be moved to extend farther than the stated quarter-mile to maintain the sensitive species protection goals.*

Establish the major constraint "CSU - Raptor" for the purpose of minimizing or eliminating adverse effects associated with fluid mineral development on sensitive raptor foraging areas, winter roosting areas, or nest sites with the following stipulation language:

All or a portion of this lease has been identified as an important raptor foraging, wintering, or nesting area. Any proposed surface disturbing activity will be reviewed to determine if the activity would affect raptor foraging, wintering, or nesting habitat. Determination of effects to raptor foraging, wintering, or nesting habitat may result in the proposed action being moved more than 200 meters (656 feet) but not more than a half-mile and prohibition of activities during seasonal use period. This stipulation may be granted exception, modified, or waived as follows:

Exception: *The Authorized Officer may grant an exception if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.*

Modification: *The Authorized Officer may modify the distance and other provisions of this stipulation based on new information and increasing or decreasing levels of the impacts anticipated from fluid mineral development.*

Waiver*: The Authorized Officer may waive the stipulation should new information show the area no longer contains sensitive raptor habitat for foraging, winter roosting, or nesting.*

Establish the major constraint "CSU – Critical Habitat" for the purpose of minimizing or eliminating adverse effects associated with fluid mineral development on habitat designated as critical, or is proposed for designation as critical habitat by the USFWS with the following stipulation language:

All or a portion of this lease lies within an area that is designated as critical habitat, or is proposed for designation as critical habitat by the USFWS. A list of these areas affecting this lease will be provided at the time of leasing and will be updated as necessary over the term of the lease. Any proposed surface disturbing activity occurring on the affected portions of this lease will be reviewed to determine if the activity would affect designated or proposed critical habitat. Determination of effects to designated or proposed critical habitat may result in the proposed action being moved, modified, seasonally restricted, or delayed. Consultation or conference with the USFWS is required if designated or proposed critical habitat may be affected. Off-site compensation that would satisfactorily offset the loss of habitat may be required. Prohibition of all surface disturbing activities on the lease will only occur as needed to avoid destroying or adversely modifying critical habitat or proposed critical habitat, or when the proposed action is inconsistent with the recovery needs identified in an approved USFWS Recovery Plan based on consultation with USFWS. Furthermore, processing times for proposed actions may be delayed beyond established standards to accommodate species surveys, and consultation or conferencing with the USFWS. This stipulation shall not be waived; however, it may be granted exception or modified as follows:

Exception: *The Authorized Officer may grant an exception if an environmental review determines the action as proposed or conditioned would have no effect on critical habitat or proposed critical habitat.*

Modification*: The Authorized Officer may modify this stipulation to reflect new information with regard to the critical habitat or proposed critical habitat through the expansion or reduction of lands subject to this stipulation for a specific species.*

Establish the major constraint "CSU – Priority Species, Plant Communities and Habitats" for the purpose of minimizing or eliminating adverse effects associated with fluid mineral development on rare and/or endemic vegetation, plants, and communities, including riparian and serpentine endemics, with the following stipulation language:

> *All or a portion of the lease has been identified by the current RMP (i.e., ACECs and areas of ecological importance with this stipulation prescribed) as containing priority species, plant communities, or habitat that may be adversely affected by fluid mineral development. A list of affected parcels or portions of the lease will be provided at the time of leasing. To identify the possibility of adverse impact resulting from fluid mineral development, a preliminary environmental review will be conducted for all surface disturbing activities. Identification of adverse impacts may result in the proposed action being moved, modified, seasonally delayed, or prohibited from all or a portion of this lease. Furthermore, processing times for proposed actions may be delayed beyond established standards to accommodate species surveys. This stipulation shall not be waived, but may be granted exception or modified as follows:*
>
> ***Exception:*** *The Authorized Officer may grant an exception if an environmental review determines the action as proposed or conditioned would have no effect on priority species, plant communities, or habitats.*
>
> ***Modification****: The Authorized Officer may modify the stipulation to reflect new information with regard to the presence of priority species, plant communities, or habitat through the expansion or reduction of lands subject to this stipulation.*

Establish the major constraint "CSU – Cultural Resources" for the purpose of minimizing or eliminating adverse effects associated with fluid mineral development on National Register-listed or eligible cultural properties with the following stipulation language:

> *All or a portion of the lease contains National Register-listed or potentially eligible cultural properties that may be adversely affected by fluid mineral development. A list of affected parcels or portions of the lease will be provided at the time of leasing. To identify the possibility of adverse impacts resulting from fluid mineral development, a preliminary cultural resource review/survey will be conducted for all surface disturbing activities. Identification of adverse impacts may result in the proposed action being moved or modified. Surface-disturbing activities would be prohibited on the portion of the lease where National Register-listed properties or properties potentially eligible for listing on the National Register occur. This stipulation may be modified, waived, or granted exception as follows:*
>
> ***Exception:*** *The Authorized Officer may grant an exception, with concurrence from the California State Historic Preservation Office and Native American tribes, if a subsequent formal eligibility evaluation indicates the cultural property is ineligible.*
>
> ***Modification:*** *The Authorized Officer may modify the stipulation to reflect new information from formal eligibility evaluations for cultural properties through the expansion or reduction of land where surface disturbing activities would be prohibited.*
>
> ***Waiver:*** *The Authorized Officer may grant a waiver to the stipulation should the results of formal eligibility evaluation determine all cultural properties ineligible for listing on the National Register.*

Establish the major constraint "CSU – Defense" for the purpose of minimizing or eliminating conflict between fluid mineral development and military base operations with the following stipulation language:

> *All or a portion of this lease contains federal mineral estate under the surface administration of the Department of Defense. Surface disturbing activities may be moved, modified, or prohibited at the discretion of the Base Commander(s) to ensure these activities do not interfere with military activity on the base and to ensure personnel safety. Furthermore, processing times for proposed actions may be delayed beyond established standards to accommodate review and coordination with the Base Commander(s). This stipulation shall not be modified or granted exception; however, it may be waived as follows:*
>
> ***Waiver:** The Authorized Officer may grant a waiver to this stipulation if the surface administration changes from the Department of Defense to another entity.*

Establish the major constraint "CSU – Existing Surface Use/Management" for the purpose of minimizing or eliminating conflict between fluid mineral development and existing surface use on both public lands and split estate overlying federal minerals, including risk to public health and safety, and social and economic impacts (noise, aesthetics, etc.) with the following stipulation language:

> *All or a portion of the lease contains federal mineral estate underlying surface with an established use or management that may be incompatible with fluid mineral development. A preliminary environmental review will be conducted for all surface disturbing activities to identify possible conflict between surface use and fluid mineral development. Surface disturbing activities may be moved, modified, or prohibited to accommodate the existing surface use should the Authorized Officer determine the incompatibility of these uses. Specifically, fluid mineral development shall not occur:*
>
> *(1) Closer to any development (e.g., public highway, institution, place of public assembly, <u>or occupied dwelling</u>) than allowed by the county/city regulation or statue applicable to the area in which the proposed action occurs (including those exceptions where closer spacing is allowed);*
>
> *(2) ~~<u>Within 200 feet of an occupied dwelling;</u>~~*
>
> *(3) In a manner that significantly and adversely impacts natural and/or cultural resources of which the surface owner/administrator is charged with the management and protection; or*
>
> *(4) In a manner that significantly and adversely impacts existing recreation opportunity of which the surface owner/administrator is charged with the management and protection.*
>
> *Furthermore, processing times for proposed actions may be delayed beyond established standards to accommodate review and coordination with the surface owner/administrator. This stipulation shall not be waived, but may be granted exception or modified as follows:*
>
> ***Exception**: The Authorized Officer may grant an exception where a surface use agreement exists between the lessee and surface owner/administrator that allows for the proposed fluid mineral*

development. Furthermore, exception may be granted where the proposed action is deemed, following an environmental review, to have discountable or insignificant impacts on the existing surface use.

***Modification**: The Authorized Officer may modify this stipulation to further restrict surface use for mineral development on a portion of or all the lease if a more stringent requirement with regard to the location of facilities is deemed necessary following an environmental review (e.g., greater than county/city restrictions on fluid mineral development).*

Establish the major constraint of "NSO – General" that prohibits surface disturbance on the entire lease for the purpose of minimizing or eliminating adverse effects on unique or significant natural and cultural resources that are incompatible with fluid mineral development with the following stipulation language:

All or a portion of this lease has been identified by the current RMP (e.g., ACECs and areas of ecological importance with this stipulation prescribed) as containing unique or significant natural or cultural values. No new surface disturbing activity is allowed on the lease. This stipulation may be granted exception, modified, or waived as follows:

***Exception:** The Authorized Officer may grant an exception if, after coordination with appropriate agency (e.g., CDFG, SHPO, and USFWS), an environmental review determines the action as proposed or conditioned would not impair the values present because of temporary conditions.*

***Modification:** The Authorized Officer may modify this stipulation to allow surface use on a portion or even all of the lease if an environmental review determines the action as proposed or conditioned would not impair the values present.*

***Waiver:** The Authorized Officer may grant a waiver if an environmental review determines the values for which the NSO was applied no longer exist.*

These stipulations and decisions do not apply to geophysical exploration conducted *outside the rights granted by a Federal oil and gas lease*. *Stipulations governing geophysical exploration would be established in site specific NEPA documentation and incorporate appropriate protective measures (Appendix L).*

2.2.14.1.2 Solid (Non-Energy) Leasable Minerals

Objective

Provide opportunities for reasonable, economical, and environmentally sound exploration and development of Solid (Non-Energy) leasable minerals while minimizing impacts to resources.

Decisions

Identify all ACECs, lands managed for wilderness characteristics and suitable segments of WSRs as closed to Solid (Non-Energy) leasable mineral development.

Identify ~~*818,330*~~ *908,510* acres as open to solid (non-energy) mineral leasing and development.

2.2.14.2 Locatable Minerals

Objective

Facilitate reasonable, economical, and environmentally sound exploration and development of locatable minerals, while ensuring compatibility with other resources and uses including public health and safety.

Decisions

~~*Determine and designate the ACECs (as described in ACEC management); suitable WSR corridors; lands managed for wilderness characteristics; Frog Pond and Deer Spring areas of ecological importance; Huasna Peak and South Lake Cultural Area; and developed campgrounds as unsuitable for Casual Use, Notice, and Plan of Operation levels mining operations (43 CFR 3809.10). Segregate these areas and recommend proposal for its withdrawal from appropriation and all forms of mineral entry under the General Mining Law.*~~

~~*Determine and designate the following areas as unsuitable for Notice and Plan of Operation levels mining operations: Granite Cave and The Dam, Wallow Rock, and Gold Fever RMZs. Segregate these areas and recommend proposal for their withdrawal from location under the General Mining Law and condition mineral entry to permit only Casual Use operations (43 CFR 3809.5).*~~

Establish, in accordance with 43 CFR 3809.31, the following ACECs, areas of ecological importance, cultural resource sites and RMZs (53,810 acres) as an areas requiring a 15 day notification be given to the BLM prior to beginning any activity under the mining laws including; Casual Use, to allow the BLM to determine whether a notice or plan of operations must be submitted. Furthermore, in evaluating mining Notices or Plans of Operation undue and unnecessary degradation will consider the values, resources and objectives for which these areas have been designated or identified in the RMP; Ancient Lakeshores ACEC, Blue Ridge ACEC, Chico Martinez ACEC, Cypress Mountain ACEC, Erskine Creek ACEC, Hopper Mountain ACEC, Horse Canyon ACEC, Kaweah ACEC, Point Sal ACEC, Terra Redonda ACEC, Deer Springs, Frog Pond, Salinas River, Granite Cave, Huasna Peak, South Lake Cultural Area, Gold Fever RMZ, The Dam RMZ, Wallow Rock RMZ.

Interpret the definition of Casual Use provided in 43 CFR 3809.5 for the Decision Area to include the following stipulations, any operations not meeting these would require the filing of a notice or plan of operations;

- *Casual Use does not include the disturbance to trees (DBH 4" and greater) and shrubs (taller or wider than 3'); including their root areas (i.e., removal or undermining of these vegetation types will require at a minimum a Notice);*
- *Casual Use does not include any operations on or within 30ft of the centerline of designated routes and trails;*
- *Casual Use does not include any activity that pumps water from water courses for any purpose, except in association with Suction Dredging;*
- *Casual Use does not include the removal of more than one cubic yard of material from the site for offsite processing;*
- *Casual Use does not include activity that creates high walls in excess of 3ft or undermines earthen banks, large rocks, or boulders.*

- *Casual Use does not include any high-banking, hydraulic mining, and ground sluicing;*
- *Casual Use does not include any sluices, riffle boxes, and dry washers with collecting surfaces of greater than ten square feet;*
- *Casual use does not include any disturbance that would result in an adverse effect, as described by Section 106 of the NHPA, to listed, eligible, and those sites or historic districts being treated as eligible until formal eligibility evaluations have been completed; and*
- *Casual Use will abide by the discovery clause; whereby all activity will cease upon discovery of any subsurface archaeological, historical, or paleontological remains. The discovery must be left intact and reported to the BLM immediately. Operations may only resume on clearance by the BLM and may require the filing of a Notice or Plan of Operations.*

2.2.14.3 Salable Minerals

Objectives

Provide salable minerals needed for community and economic purposes and facilitate their reasonable, economical, and environmentally sound development where available and compatible with resource objectives.

Decisions

Identify all ACECs, lands managed for wilderness characteristics and suitable segments of WSRs as closed to mineral material disposal, unless otherwise noted for administrative purposes only.

Identify ~~*818,090*~~ *908.510* acres as open to mineral material disposal.

2.2.15 Recreation and Visitor Services

Goal

Support growing demand for recreation access to public lands and maintain a diversity of recreation opportunities promoting a multiple use philosophy.

Objective

Coordinate recreation management activities through an ecosystem-based management style that considers the landscape setting and patterns of land ownership to fully realize program goals.

Decisions

Identify 191,520 acres as lands not designated within a Recreation Management Area (Map 2.2.5). Close ~~*10,965*~~ *4,110*[13] of these acres (Map 3.24.1) to public access located within producing oilfields, with well densities averaging higher than 20 wells per 40 acres (or 0.5 wells per acre).

Designate 22,550 acres (Map 2.2.5) as the Atwell Island Extensive Recreation Management Area with the following recreation objective, management actions and allowable use decisions;

> Within the life of the RMP the Atwell Island ERMA will offer recreation opportunities in a front country setting (restored wetland from abandoned farmland), that focus on wildlife viewing and appreciation, through the non-motorized/non-mechanized exploration of the restored area(s).

[13] This change results for correction of an error that included split estate in this closure.

- Prohibit overnight camping and use except for; future specific areas identified for nocturnal visitation for wildlife viewing and stargazing.
- Coordinate with CDFG to prohibit hunting except as allowed by Special Recreation Permit and/or specially organized hunt activity; ~~*furthermore prohibit the discharge of firearms for shooting sport activities;*~~
- *Prohibit air-soft and paintball activities, including organized games and casual use of these types of equipment unless authorized through a Special Recreation Permit;*
- Seasonally prohibit access to wetland areas, as needed to support restoration objectives.
- Prohibit pets and other domesticated animals (not including authorized livestock grazing) from wetland areas.
- Require all pets and domestic animals (not including authorized livestock grazing) to be on a leash. Special Recreation Permits may be issued for activities allowing off-leash activity, such as, dog trial events.

Designate 21,160 acres (Map 2.2.5) as the Case Mountain Extensive Recreation Management Area with the following recreation objective, management actions and allowable use decisions;

Within the life of the RMP the Case Mountain ERMA will offer recreation opportunities in an unchanged middle country setting, which facilitates the visitors' freedom to participate in non-motorized activities that includes; mountain bicycling, camping, ~~*and*~~ hunting, *wildlife and nature observation, photography, and picnicking.*

- ~~*Prohibit the discharge of firearms, except the legal taking of game species*~~; *Prohibit air-soft and paintball activities, including organized games and casual use of these types of equipment unless authorized through a Special Recreation Permit;*
- Acquire legal public access to suitable parking/staging area.
- Develop suitable facilities to support use at parking/staging areas~~*; establishing standard amenity fees for use of such facilities*~~.
- Manage and maintain connected trails for mountain bicycling experiences.
- Limit available commercial Special Recreation Permits for guide and outfitting services to no more than five (5). Special Recreation Permits for competitive events would not be issued.

Designate 123,450 acres (Map 2.2.5) as the Chimney Peak Extensive Recreation Management Area with the following recreation objective, management actions and allowable use decisions;

Throughout the life of the RMP the Chimney Peak Extensive Recreation Management Area will offer recreation opportunities, in an unchanged backcountry/primitive physical recreation setting, that facilitate the visitors' freedom to participate in primitive unconfined recreation types through easy access to designated Wilderness including camping grounds, trailheads and trails.

- Maintain and improve designated camping areas at Chimney Creek, Long-Valley and Walker Pass.
- ~~*Establish standard amenity fees for overnight camping at designated camping areas.*~~

Designate 160 acres (T 7 S, R 20 E, Section 2; Map 2.2.5) as the Fresno River Extensive Recreation Management Area with the following recreation objective, management actions and allowable use decisions;

Within the life of the RMP the Fresno River ERMA will offer limited recreation opportunities in a rural setting, facilitating various interpretative and educational opportunities.

- Prohibit overnight camping.
- ~~*Prohibit the discharge of firearms and coordinate with CDFG to prohibit hunting.*~~
- Require an authorization or mining notice for casual use prospecting activity, other than gold panning.

Designate 10,860 acres (Maps 2.2.5 and 2.2.6) as the Keyesville Special Recreation Management Area, established with a "destination" market strategy for southern and central California, including the population centers of Bakersfield, Los Angeles, Riverside and San Bernardino, along with nearby rural communities. The SRMA is subdivided into four (4) Recreational Management Zones, each with the following recreation objectives, management actions and allowable use decisions (see Appendix H for a complete description of each RMZs targeted activities, experiences, benefits, and Natural Resource Recreation Settings):

Gold Fever RMZ: In visitor assessments, 65% of respondents who participated in targeted activities report the ability to realize the targeted experiences and benefits.

Targeted Activities: Cultural/historical discovery; trail use (motorized, mechanized and non-mechanized uses); and recreational gold prospecting

Targeted Experiences: Savoring the total sensory experience of a natural landscape; escaping everyday responsibilities for a while; feeling good about the way shared cultural heritage is being protected; learning about things; just knowing this attraction is in or near the community

Targeted Benefits: *Personal:* Greater respect for shared cultural heritage; closer relationship with the natural world. *Community:* Greater understanding of the community's cultural identity; greater community involvement in recreation and other land use decisions. *Economic:* Improved local economic stability; maintenance of community's distinctive recreation tourism market. *Environmental:* Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails.

- Provide extensive opportunities for interpretation and education~~*, establishing expanded amenity fees for some of these experiences*~~.
- *Establish, in accordance with 43 CFR 3809.31, the RMZ as an area requiring a 15 day notification be given to the BLM prior to beginning any activity under the mining laws including; Casual Use, to allow the BLM to determine whether a notice or plan of operations must be submitted. Furthermore, in evaluating mining Notices or Plans of Operation undue and unnecessary degradation will consider unmitigatable (43 CFR 3809.5) impacts to the targeted activities, experiences and benefits established for the RMZ.*

- ~~*Establish a permit system and fee for recreational gold prospecting.*~~ *Manage areas Withdrawn from the General Mining Law to accommodate the collection of non-renewable resources under 46 CFR 8365.1-5(c) for sale to commercial dealers through the establishment of a permit system for such collection. All public lands users wishing to collect non-renewable resources, such as mineral specimens (e.g., Gold), would be required to complete the permit process.*
- Stabilize and maintain historic buildings and facilities to support public use.
- Establish visitor contact station to originate interpretive and educational activities from.
- Prohibit the discharge of firearms, except the legal taking of game species.

French Gulch RMZ: In visitor assessments, 50% of respondents who participated in targeted activities report the ability to realize the targeted experiences and benefits.

Targeted Activities: Trail use (motorized, mechanized and non-mechanized uses); dispersed camping; and recreational gold prospecting

Targeted Experiences: Developing skills and abilities; testing personal endurance; gaining a greater sense of self-confidence; telling others about the trip; enjoying risk-taking adventure; and discussing equipment with others

Targeted Benefits: *Personal:* Improved mental well-being; greater self-reliance; improved skills for outdoor enjoyment. *Community:* Heightened sense of satisfaction with the community. *Economic:* Improved local economic stability; maintenance of community's distinctive recreation tourism market. *Environmental:* Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails.

- Create a versatile trail system supporting a variety of uses, skill levels and experiences through collaboration with user groups and partners.
- Support competitive and commercial activities through the Special Recreation Permit process including maintaining the designated "Keyesville Classic" race course.
- Allow specialized vehicle recreation (motorcycle and mountain bicycle trials experiences) at a number of sites identified for the purpose.
- *Establish, in accordance with 43 CFR 3809.31, the RMZ as an area requiring a 15 day notification be given to the BLM prior to beginning any activity under the mining laws including; Casual Use, to allow the BLM to determine whether a notice or plan of operations must be submitted. Furthermore, in evaluating mining Notices or Plans of Operation undue and unnecessary degradation will consider unmitigatable impacts to the targeted activities, experiences and benefits established for the RMZ.*
- ~~*Establish a permit system and fee for recreational gold prospecting.*~~ *Manage areas Withdrawn from the General Mining Law to accommodate the collection of non-renewable resources under 46 CFR 8365.1-5(c) for sale to commercial dealers through the establishment of a permit system for such collection. All public lands users wishing to collect non-renewable resources, such as mineral specimens (e.g., Gold), would be required to complete the permit process.*

The Dam RMZ: In visitor assessments, 50% of respondents who participated in targeted activities report the ability to realize the targeted experiences and benefits.

Targeted Activities: White-water boating; water-play; and fishing

Targeted Experiences: High adventure; personal challenge; self-discovery; appreciation for the power of the natural world

Targeted Benefits: *Personal:* Increase self-respect; sense of achievement. *Community:* Bonding through shared experiences. *Economic:* Increased draw to destination; promotion of local business (outfitters); improved local economic stability; maintenance of community's distinctive recreation tourism market. *Environmental:* Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails.

- Manage Special Recreation Permitting for white-water boating in collaboration and through interagency agreement with the US Forest Service.
- Maintain existing white-water boating facilities at "Slippery Rock" and "BLM South" for use by both commercial and private boaters. Limit use of "Granite Launch" to authorized Special Recreation Permit holders. Prohibit use of the "Low-water Launch" by boaters upon completion of Granite Launch.
- Prohibit overnight camping and use of campfires *except for limited designated camping areas on Sandy Flat*.
- Prohibit the discharge of firearms and coordinate with CDFG to prohibit hunting.
- *Establish, in accordance with 43 CFR 3809.31, the RMZ as an area requiring a 15 day notification be given to the BLM prior to beginning any activity under the mining laws including; Casual Use, to allow the BLM to determine whether a notice or plan of operations must be submitted. Furthermore, in evaluating mining Notices or Plans of Operation undue and unnecessary degradation will consider unmitigatable impacts to the targeted activities, experiences and benefits established for the RMZ.*
- ~~*Establish a permit system and fee for recreational gold prospecting.*~~ *Manage areas Withdrawn from the General Mining Law to accommodate the collection of non-renewable resources under 46 CFR 8365.1-5(c) for sale to commercial dealers through the establishment of a permit system for such collection. All public lands users wishing to collect non-renewable resources, such as mineral specimens (e.g., Gold), would be required to complete the permit process.*
- Cables, ropes, or tethers shall not cross the river and must not create hazards for boaters or other river users.

Wallow Rock RMZ: In visitor assessments, 75% of respondents who participated in targeted activities report the ability to realize the targeted experiences and benefits.

Targeted Activities: Camping/Group Camping

Targeted Experiences: Enjoying the closeness of friends and family; relishing group affiliation and togetherness; enjoying meeting new people with similar interests

Targeted Benefits: *Personal:* Stronger ties with family and friends; restore mind from unwanted stress. *Community:* Greater interaction with visitors from different cultures. *Economic:* Improved local economic stability; maintenance of community's distinctive recreation tourism market. *Environmental:* Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails.

- Identify group and individual campsites within a developed campground~~*, establishing standard amenity fees for use of facilities*~~.
- Prohibit the discharge of firearms and coordinate with CDFG to prohibit hunting.
- ~~*Prohibit recreational gold prospecting.*~~
- *Establish, in accordance with 43 CFR 3809.31, the RMZ as an area requiring a 15 day notification be given to the BLM prior to beginning any activity under the mining laws including; Casual Use, to allow the BLM to determine whether a notice or plan of operations must be submitted. Furthermore, in evaluating mining Notices or Plans of Operation undue and unnecessary degradation will consider unmitigatable impacts to the developed infrastructure and consequently the targeted activities, experiences and benefits established for the RMZ.-*
- *Establish, in accordance with 43 CFR 8365.1-5(b)(2), the RMZ as a developed recreation area, where the collection of nonrenewable resources, such as rocks, mineral specimens, comment invertebrate fossils and semi-precious gem stones is prohibited.*

Designate 6,490 acres (Maps 2.2.5 and 2.2.7) as the San Joaquin River Gorge Special Recreation Management Area, established with a "community" market strategy for local communities, nearby rural areas and the population centers of Fresno-Clovis and Madera. The SRMA is subdivided into three (3) Recreational Management Zones, each with the following recreation objectives, management actions and allowable use decisions (see Appendix H for a complete description of each RMZs targeted activities, experiences, benefits, and Natural Resource Recreation Settings);

Pa'San RMZ: In visitor assessments, 50% of respondents who participated in targeted activities report the ability to realize the targeted experiences and benefits.

Targeted Activities: Hiking; mountain biking; and horseback riding

Targeted Experiences: Developing skills and abilities; testing personal endurance; savoring the total sensory experience of a natural landscape; escaping everyday responsibilities for awhile

Targeted Benefits: *Personal:* Greater self-reliance; improved skills for outdoor enjoyment; closer relationship with the natural world. *Community:* Greater freedom from urban living. *Economic:* More positive contributions to local and regional economies. *Environmental:* Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails.

- Maintain, improve and expand a network of recreational trails.

Tahoot RMZ: In visitor assessments, 75% of respondents who participated in targeted activities report the ability to realize the targeted experiences and benefits.

Targeted Activities: Interpretation; environmental education; and camping

Targeted Experiences: Enjoying easy access to natural landscapes; enjoying access to hands-on environmental learning; enjoying needed physical exercise

Targeted Benefits: *Personal:* Better-informed and more responsible visitor; enhanced awareness and understanding of nature; increased appreciation of the area's cultural history. *Community:* Greater community valuation of its ethnic diversity; greater protection of the area's historic and archaeological sites. *Economic:* More positive contributions to local and regional economies. *Environmental:* Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails.

- Maintain, improve and expand a network of recreational facilities including trails, campgrounds, parking areas, visitor contact location and outdoor classrooms; establishing standard and expanded amenity fees as appropriate.
- Ensure that management balances the preservation of natural and cultural resources with the opportunity to provide for public recreation, interpretation and education about the natural and cultural heritage of the area.
- Provide nature-based educational opportunities locally and regionally to include outdoor classrooms and interpretation of natural and cultural resources.

Wu Ki'Oh RMZ: In visitor assessments, 50% of respondents who participated in targeted activities report the ability to realize the targeted experiences and benefits.

Targeted Activities: Fishing; water play; gold panning; and kayaking

Targeted Experiences: Developing skills and abilities; testing personal endurance; enjoying risk-taking adventure; savoring the total sensory experience of a natural landscape; escaping everyday responsibilities for awhile

Targeted Benefits: *Personal:* Greater self-reliance; improved skills for outdoor enjoyment; closer relationship with the natural world. *Community:* Greater freedom from urban living. *Economic:* More positive contributions to local and regional economies. *Environmental:* Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails.

- Restrict recreational gold prospecting activities to gold panning and sluicing only in addition to the following;
- All mining and prospecting activity must be confined to within 25 feet of the current water level.
- Prohibit disturbance of the river bank vegetation.
- Prohibit dry ~~*sluicing*~~ *washing*.

Designate 24,250 acres (Maps 2.2.5 and 2.2.8) as the Temblor Range Special Recreation Management Area, established with a "community" market strategy (Appendix H) for local communities (Taft), nearby rural areas and the population center of Bakersfield. The SRMA is subdivided into two Recreational Management Zones, each with the following recreation objectives, management actions and allowable use decisions (Appendix H contains a complete description of each RMZs targeted activities, experiences, benefits, and Natural Resource Recreation Settings);

Temblor North RMZ: In visitor assessments, 50% of respondents who participated in targeted activities report the ability to realize the targeted experiences and benefits.

Targeted Activities: OHV trail riding; hunting; target shooting

Targeted Experiences: Developing skills and abilities; testing personal endurance; enjoying risk-taking adventure; savoring the total sensory experience of a natural landscape; escaping everyday responsibilities for awhile

Targeted Benefits: *Personal:* Greater self-reliance; improved skills for outdoor enjoyment; Closer relationship with the natural world. *Community:* Providing a place near but outside the community to recreate; removing unwanted use from industrial areas; addressing health and safety concerns. *Economic:* Improved local economic stability; maintenance of community's distinctive recreation tourism market. *Environmental:* Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails.

- Develop high quality trail system, including maintenance of many existing trail, creating additional recreation trails and closure of inappropriate routes in partnership with user groups and adjacent land owners.
- Limit commercial Special Recreation Permits available within the SRMA to no more than three (3) active permits. Special Recreation Permits for competitive events would not be issued.
- ~~*Establish appropriate "Special Area" fees for OHV activity within the SRMA.*~~

Urban Interface RMZ: In visitor assessments, 65% of respondents who participated in targeted activities report the ability to realize the targeted experiences and benefits.

Targeted Activities: OHV trail riding; driving for pleasure; dispersed camping

Targeted Experiences: Developing skills and abilities; testing personal endurance; enjoying risk-taking adventure; savoring the total sensory experience of a natural landscape; escaping everyday responsibilities for awhile

Targeted Benefits: *Personal:* Greater self-reliance; improved skills for outdoor enjoyment; closer relationship with the natural world. *Community:* Providing a place near but outside the community to recreate; removing unwanted use from industrial areas; addressing health and safety concerns. *Economic:* Improved local economic stability; maintenance of community's distinctive recreation tourism market. *Environmental:* Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails.

- Acquire legal public access from the community of Taft.

- Establish parking/staging area in cooperation with adjacent land owners.
- Develop high quality trail system, including maintenance of many existing trails, creating additional recreation trails and closure of inappropriate routes in partnership with user groups and adjacent land owners.
- Limit commercial Special Recreation Permits available within the SRMA to no more than three (3) active permits. Special Recreation Permits for competitive events would not be issued.
- ~~*Establish appropriate "Special Area" fees for OHV activity within the SRMA.*~~

Limit dispersed camping within the Decision Area; unless otherwise noted, to 14 days within a 90 day period. After the 14th day, campers must move beyond a 25-mile radius of their previous camp. In addition:

- Prohibit dispersed camping within 100ft of any fresh water source
- Prohibit dispersed camping within 300ft of any suitable or designated WSR categorized as wild or scenic.
- Prohibit dispersed camping within 100ft of any suitable or designated WSR categorized as recreational.

Limit parking for dispersed camping (including cars, trucks, recreation vehicles, and trailers ["fifth wheels"]) to one vehicle width from the edge of the designated route.

Limit Specialized Vehicle Recreation to those areas, trails, and routes designated for that purpose within the Decision Area. Through a Special Recreation Permit, this activity could be allowed on a case-by-case basis, pending the NEPA process on each application.

Establish and identify (3,125 acres), in accordance with 43 CFR 8365.1-5(b)(2), the Wallow Rock RMZ and Horse Canyon ACEC as areas where the collection of nonrenewable resources, such as rocks, mineral specimens, comment invertebrate fossils and semi-precious gem stones is prohibited.

~~*Identify and support the establishment of recreation gold prospecting and mining areas within the Decision Area. Recreational mining and prospecting (casual use as defined in 43 CFR 3809.5) would be restricted by the following and may be further restricted in specific areas:*~~

- ~~*Prohibit explosives, mercury, and other hazardous chemicals;*~~
- ~~*Prohibited motorized equipment, including pumps (except dredges), chainsaws, and mechanized earth-moving equipment (such as backhoes and bulldozers);*~~
- ~~*Prohibit any removal of material (dirt) for recreational mining and prospecting from site;*~~
- ~~*Require suction dredging activities to be in compliance with California Department of Fish and Game regulations, including holding a valid permit for operation;*~~
- ~~*Prohibit pumping of water from water courses for any purpose;*~~
- ~~*Prohibit high-banking, hydraulic mining, and ground sluicing;*~~
- ~~*Restrict sluices, riffle boxes, and dry washers to collecting surfaces of no greater than six square feet;*~~

- ~~*Prohibit disturbance to trees and shrubs; including their root areas, as a result of recreational mining and prospecting;*~~
- ~~*Rectify any surface disturbance upon completion of activities;*~~
- ~~*Prohibit recreational mining and prospecting on or within 30ft of the centerline of designated routes and trails; and*~~
- ~~*Require any subsurface archaeological, historical, or paleontological remains discovered during mining to be left intact; all work in the area should stop, and BLM should be notified immediately; work may resume on clearance by the BLM.*~~

Key Implementation Decisions

Establish Special Rules (Appendix N) to implement and enforce allocations, management restrictions, and decisions within the RMP.

Establishment of fees for various recreation sites including; Case Mountain and Chimney Peak ERMAs, and Urban Interface, Temblor North, Wallow Rock and Gold Fever RMZs will be fully addressed in area specific activity level plans and in accordance with the current regulation guiding the establishment of recreational use fees.

2.2.16 Interpretation and Environmental Education

Goal

Instill a public stewardship ethic of natural and cultural resources, and foster an appreciation of multiple-use public lands.

Establish an emotional connection to the landscape and its natural and cultural resources.

Objectives

Incorporate “Tread Lightly” and “Leave No Trace”, into BLM interpretive and education programs and visitor information media.

Provide interpretive and educational opportunities to allow all visitors to explore public lands and learn about the natural and cultural environment and reduce their impacts on biological and cultural resources.

Educate public land users and affected communities on the role of wildland fire in ecosystems, its risk to public health and safety, and the safe use of fire in the recreational environment.

Decisions

Identify San Joaquin River Gorge, Piedras Blancas Light Station, and Keyesville Historic Mining District as important cultural and historic resources available for interpretation and educational programs.

Identify Atwell Island and Piedras Blancas Light Station as important biological resource areas available for interpretation and educational programs.

Identify wildland fire as important resource requiring interpretation and education programs.

Identify SRMAs as suitable locations to conduct and promote "Take It Outside" and "Hands on the Land" interpretive and education programs.

Accommodate permit requests for, scientific research by qualified individuals or institutions and educational uses of public lands by academic entities. Authorization may be given for any resource program and provide for appropriate access.

Special Designations

2.2.17 Areas of Critical Environmental Concern

Goals

Ancient Lakeshores ACEC: Protect and preserve important cultural resources, natural systems and processes, and habitat for listed species.

Bitter Creek ACEC: Provide suitable habitat for federally listed species

Blue Ridge ACEC: Provide suitable habitat for federally listed species.

Chico Martinez ACEC: Protect cultural resources, geologic formations, and various natural processes.

Compensation Lands ACEC: Provide suitable habitat for listed species, and protection for various natural systems.

Cypress Mountain ACEC: Protect and preserve natural systems and processes.

Cyrus Canyon ACEC: Provide suitable habitat for sensitive species and protection for natural systems.

Erskine Creek ACEC: Provide suitable habitat for sensitive species and protection for various natural processes and geologic formations.

Hopper Mountain ACEC: Provide suitable habitat for federally listed species.

Horse Canyon ACEC: Protect cultural resources, and various natural processes.

Kaweah ACEC: Provide suitable habitat for sensitive species and protection for various natural processes, geologic formations, and cultural resources.

Kettleman Hills ACEC: Provide suitable habitat for federal and state listed species and protection for natural systems and processes.

Lokern-Buena Vista ACEC: Provide suitable habitat for federal and state listed species and protection for natural systems and processes.

Los Osos ACEC: Protect and preserve important cultural resources, natural systems and processes, and habitat for listed species.

Piute Cypress ACEC: Provide suitable habitat for sensitive species and protection for natural systems.

Pt. Sal ACEC: Protect and preserve important cultural resources, natural systems and processes, and habitat for listed species.

Tierra Redonda ACEC: Protect geologic formations, and various natural processes.

Upper Cuyama Valley ACEC: Provide suitable habitat for sensitive and listed species and protection for natural systems.

Objectives

Ancient Lakeshores ACEC: Protect significant cultural resources from degradation. Maintain rare alkali sink plant communities and ensure no net loss of associated habitat for state and federally listed plants and animals.

Bitter Creek ACEC: Provide suitable foraging and roosting habitat for California condor in support of the California Condor Recovery Program and Bitter Creek National Wildlife Refuge.

Blue Ridge ACEC: Provide suitable roosting habitat for California condor.

Chico Martinez ACEC: Protect important cultural, paleontological resources, and the Zemorrian stage geologic formations. Provide habitat for the San Joaquin Suite of listed species.

Compensation Lands ACEC: Manage habitat for the benefit the species identified in the applicable compensation document (e.g., USFWS biological opinion or CDFG agreement) to promote recovery of the target species.

Cypress Mountain ACEC: Preserve unique plant communities of serpentine chaparral and northern interior cypress forest dominated by Sargent cypress.

Cyrus Canyon ACEC: Protect sensitive biological resources including Kelso Creek monkeyflower and riparian values.

Erskine Creek ACEC: Protect the limestone caves, riparian areas, manage habitat to support populations of Kern County larkspur and Piute Mountain jewelflower.

Hopper Mountain ACEC: Provide suitable roosting and nesting habitat for California condor in support of the California Condor Recovery Program.

Horse Canyon ACEC: Protect significant cultural sites, including traditional cultural properties associated with Native American values and important paleontological resources.

Kaweah ACEC: Protect the Case Mountain giant sequoia groves, limestone caves and other karst features, riparian areas, and cultural resources. Manage habitat to support populations of California spotted owl, Pacific fisher, and Kaweah monkey flower.

Kettleman Hills ACEC: Protect significant paleontological resources and provide habitat for the suite of San Joaquin Valley listed species including ecologically functioning valley upland habitats.

Lokern-Buena Vista ACEC: Provide habitat for the suite of San Joaquin Valley listed species including ecologically functioning valley upland habitats.

Los Osos ACEC: Protect significant cultural resources from damage and degradation. Maintain rare and endemic plant communities including coastal dune scrub, central maritime chaparral, and pygmy oak forest. Ensure no net loss of associated habitat for special status plants and animals.

Piute Cypress ACEC: Ensure no net loss of Piute Cypress groves and associated habitat for special status plants.

Pt. Sal ACEC: Preserve significant cultural resources and maintain habitat for sensitive and listed species and unique plant species assemblages.

Tierra Redonda ACEC: Preserve significant paleontological resources, unique sand dune formation and coast live oak woodland.

Upper Cuyama Valley ACEC: Protect habitat for blunt-nosed leopard lizard and its hybrid zone, Kern primrose sphinx moth, and California jewelflower. Maintain the link between the Sierra Madre and the San Emigdio Mountains.

Decisions

Ancient Lakeshores ACEC: Recommend for designation 1,985 acres of public lands; within a boundary of 2,041 acres (encompassing the existing Alkali Sink and Goose Lake ACECs with the expansion to include the Sand Ridge portion of Atwell Island), as the Ancient Lakeshores ACEC (Map 2.2.9) administered with the following special management:

- Identify as open to fluid mineral leasing subject to major constraints (NSO);
- ~~*Recommend proposal for withdrawal from appropriation and entry under the General Mining Law;*~~ *Establish, in accordance with 43 CFR 3809.31, the ACEC as a special area requiring a 15 day notification be given to the BLM prior to beginning any activity under the mining laws including; Casual Use, to allow the BLM to determine whether a plan of operations must be submitted.*
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects (i.e., those producing electricity for the national grid);
- Identify as unavailable for livestock grazing, except for the Sand Ridge unit which is identified as available for livestock grazing but only for the purpose of vegetation management to meet resource objectives other than the production of livestock forage;
- Prohibit campfires and overnight camping;
- Prohibit cross country equestrian travel; and
- ~~*Prohibit the discharge of firearms, except the legal taking of game species.*~~ *Prohibit air-soft and paintball activities, including organized games and casual use of these types of equipment.*

Bitter Creek ACEC: Recommend for designation 1,026 acres of public lands and 5,095 acres of federal mineral estate; within a boundary of ~~*20,914*~~ *6,121* acres, as the Bitter Creek ACEC (Map 2.2.9 *and Map 2.2.10*) administered with the following special management:

- Identify as closed to fluid mineral leasing;

- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects (i.e., those producing electricity for the national grid);
- Prohibit public access to lands adjacent to USFWS surface (434 acres);
- Prohibit campfires and overnight camping; and
- Prohibit the discharge of firearms *for shooting sports activities*; ~~*and coordinate with CDFG to prohibit hunting*~~ *except for the legal taking of game species.*

Blue Ridge ACEC: Recommend to continue the designation of 3,177 acres of public lands and ~~*1,572*~~ *2,104 acres* of federal mineral estate; within a boundary of ~~*9,250*~~ *11,051* acres[14], as the Blue Ridge ACEC (Map 2.2.9 and Map 3.17.1.1) administered with the following special management:

- Identify as closed to fluid mineral leasing;
- ~~*Recommend proposal for withdrawal from appropriation and entry under the General Mining Law;*~~ *Establish, in accordance with 43 CFR 3809.31, the ACEC as a special area requiring a 15 day notification be given to the BLM prior to beginning any activity under the mining laws including; Casual Use, to allow the BLM to determine whether a plan of operations must be submitted.*
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects (i.e., those producing electricity for the national grid); and
- Restrict public access through temporary emergency closure or in coordination with adjacent land managers, as needed for Condor protection.
- Prohibit the discharge of firearms *for shooting sports activities*; ~~*and coordinate with CDFG to prohibit hunting*~~ *except for the legal taking of game species.*

Chico Martinez ACEC: Recommend to continue the designation of 3,234 acres of public lands and 1,374 acres of federal mineral estate; within a boundary of 4,608 acres, as the Chico Martinez ACEC (Map 2.2.9 and Map 2.2.11) administered with the following special management:

- *Identify as open for fluid mineral leasing, subject to moderate constraints (CSU-Protected Species, CSU-Sensitive Species and CSU-Raptor stipulations);*
- *Establish, in accordance with 43 CFR 3809.31, the ACEC as a special area requiring a 15 day notification be given to the BLM prior to beginning any activity under the mining laws including; Casual Use, to allow the BLM to determine whether a plan of operations must be submitted.*
- *Identify as closed to mineral materials disposals, except for administrative purposes; and*
- *Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects.*

Compensation Lands ACEC: Recommend for designation 283 acres of public lands and any future parcels of compensation land as the Compensation Lands ACEC (Map 2.2.9) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to major constraints (NSO);
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- ~~*Manage all existing and future parcels of compensation land (including lands not specifically labeled as "compensation" within the parcel) as part of the Compensation Lands ACEC*~~;

[14] This acreage change reflects a correction due to a mapping error in the Draft RMP/EIS.

- *Recommend any future parcels of compensation land, including any non-habitat acres that may be included in the acquisition, for ACEC consideration if there is evidence that the lands meet the relevance and importance criteria. Upon completion of NEPA, public review, and a plan amendment, such lands would become part of the Compensation Lands ACEC;*
- ~~*Recommend proposal for withdrawal from appropriation and entry under the General Mining Law if necessary, otherwise lands and minerals would remain unopened to entry under the mining laws;*~~
- Prohibit campfires and overnight camping;
- Prohibit cross country equestrian travel in areas that are not grazed by livestock;
- ~~*Prohibit the discharge of firearms, except the legal taking of game species;*~~ *Prohibit air-soft and paintball activities, including organized games and casual use of these types of equipment;* and
- Require all pets to be leashed (maximum eight-foot length) at all times. Require removal of pet fecal matter by owners or handlers.

Cypress Mountain ACEC: Recommend to continue the designation of 1,080 acres of public lands; within a boundary of 3,035 acres, as the Cypress Mountain ACEC (Map 2.2.9) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to moderate constraints (CSU- Priority Species, Plant Communities and Habitats stipulations);
- ~~*Recommend proposal for withdrawal from appropriation and entry under the General Mining Law;*~~ *Establish, in accordance with 43 CFR 3809.31, the ACEC as a special area requiring a 15 day notification be given to the BLM prior to beginning any activity under the mining laws including; Casual Use, to allow the BLM to determine whether a plan of operations must be submitted.*
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify as unavailable for livestock grazing;
- Prohibit campfires and overnight camping;
- Prohibit cross county equestrian travel;
- ~~*Prohibit the discharge of firearms, except the legal taking of game species;*~~ and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Cyrus Canyon ACEC: Recommend for designation ~~*5,373*~~ *3,757* acres of public lands and ~~*1*~~ *542* acres of federal mineral estate; within a boundary of ~~*5,374*~~ *4,418* acres, as the Cyrus Canyon ACEC (Map 2.2.9 *and Map 2.2.12*) administered with the following special management:

- Identify as closed to mineral materials disposals, except for administrative purposes;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify the *Cyrus Canyon Kelso Creek Monkeyflower Unit (Map 2.2.12)* as unavailable for livestock grazing;
- Prohibit campfires and overnight camping;
- Prohibit equestrian use;
- ~~*Prohibit the discharge of firearms, except the legal taking of game species;*~~ *Prohibit air-soft and paintball activities, including organized games and casual use of these types of equipment;*
- Prohibit the casual collection of plants or their parts without BLM authorization; and

- No new apiary permits will be authorized. The existing apiary permit may be renewed but not transferred. The existing apiary site will be retired when the current holder does not renew the permit.

Erskine Creek ACEC: Recommend for designation 3,015 acres of public lands and 1,004 acres of federal mineral estate; within a boundary of 4,141 acres, as the Erskine Creek ACEC (Map 2.2.9) administered with the following special management:

- Identify as closed to fluid mineral leasing;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects (i.e., those producing electricity for the national grid);
- Identify as unavailable for livestock grazing;
- ~~*Prohibit the discharge of firearms, except the legal taking of game species;*~~ and
- ~~*Recommend proposal for withdrawal from appropriation and entry under the General Mining Law approximately 320 acres in E ½, SE ¼, Section 8; E ,SW ¼, W ½, SE ¼, Section 15; and NE ¼, NW ¼, NW ¼, NE ¼, Section 22, T. 27, S., R. 33 E., MDB&M. If additional caves are discovered within the ACEC, these would also be recommended for proposal for withdrawal from appropriation and entry under the General Mining Law.~~ *Establish, in accordance with 43 CFR 3809.31, the ACEC as a special area requiring a 15 day notification be given to the BLM prior to beginning any activity under the mining laws including; Casual Use, to allow the BLM to determine whether a plan of operations must be submitted.*

Hopper Mountain ACEC: Recommend for designation 2,027 acres of public lands and 2,947 acres of federal mineral estate; within a boundary of 4,978 acres, as the Hopper Mountain ACEC (Map 2.2.9) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to major constraints (CSU-Protected Species and CSU-Raptor stipulations)
- ~~*Recommend proposal for withdrawal from appropriation and entry under the General Mining Law;*~~ *Establish, in accordance with 43 CFR 3809.31, the ACEC as a special area requiring a 15 day notification be given to the BLM prior to beginning any activity under the mining laws including; Casual Use, to allow the BLM to determine whether a plan of operations must be submitted;*
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify portions as unavailable for livestock grazing;
- Restrict public access through temporary emergency closure or in coordination with adjacent land managers, as needed for Condor protection;
- Implement Best Management Practices to minimize impacts on condors from public use and oil field activities; and
- Prohibit campfires and overnight camping.
- Prohibit the discharge of firearms *for shooting sports activities*; ~~*and coordinate with CDFG to prohibit hunting*~~ *except for the legal taking of game species.*~~.~~

Horse Canyon ACEC: Recommend to continue the designation of 1,491 acres of public lands and 1,339 acres of federal mineral estate; within a boundary of 6,897 acres, as the Horse Canyon ACEC (Map 2.2.9) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to major constraints (NSO);
- ~~*Recommend proposal for withdrawal from appropriation and entry under the General Mining Law;*~~ *Establish, in accordance with 43 CFR 3809.31, the ACEC as a special area requiring a 15 day notification be given to the BLM prior to beginning any activity under the mining laws including; Casual Use, to allow the BLM to determine whether a plan of operations must be submitted.*
- *Identify, in accordance with 43 CFR 8365.1-5(b)(2), the ACEC as an area where the collection of nonrenewable resources, such as rocks, mineral specimens, comment invertebrate fossils and semi-precious gem stones is prohibited.*
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify as unavailable for livestock grazing;
- ~~*Prohibit the discharge of firearms, except the legal taking of game species;*~~ and
- ~~*Prohibit rock hounding, including the casual collection of fossils, mineral agates, and semi-precious stones.*~~

Kaweah ACEC: Recommend for designation 26,891 acres of public lands and 150 acres of federal mineral estate; within a boundary of 33,559 acres (expanding the existing Case Mountain ACEC), as the Kaweah ACEC (Map 2.2.9) administered with the following special management:

- Identify as open for leasing oil and gas resources, subject to moderate constraints (CSU-Raptor stipulations);
- Identify as closed to geothermal leasing;
- ~~*Recommend proposal of cave and karst resources and the giant sequoia groves for withdrawal from appropriation and entry under the General Mining Law;*~~ *Establish, in accordance with 43 CFR 3809.31, the ACEC as a special area requiring a 15 day notification be given to the BLM prior to beginning any activity under the mining laws including; Casual Use, to allow the BLM to determine whether a plan of operations must be submitted.*
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify the giant sequoia groves as unavailable for livestock grazing;
- *Prohibit public access to recreation sites along the North Fork of the Kaweah River.*
- ~~*Prohibit the discharge of firearms, except the legal taking of game species;*~~ *Prohibit air-soft and paintball activities, including organized games and casual use of these types of equipment unless authorized through a Special Recreation Permit;*
- Prohibit the casual collection of plants or their parts without BLM authorization; and
- Protect the giant sequoia groves and mixed conifer forest through implementation of fuels reduction techniques including prescribed burning and vegetation thinning, and removal of ladder fuels.

Kettleman Hills ACEC: Recommend to continue the designation of 6,726 acres of public lands and 6,969 acres of federal mineral estate; within a boundary of 28,874 acres (expanding the existing 9,794-acre ACEC), as the Kettleman Hills ACEC (Map 2.2.9) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to major constraints (CSU-Protected Species, CSU-Sensitive Species, and CSU-Raptor stipulations);
- Identify as closed to mineral materials disposals, except for administrative purposes;

- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects; and
- Prohibit campfires.

Lokern-Buena Vista ACEC: Recommend to continue the designation of 11,352 acres of public lands and 4,113 acres of federal mineral estate; within a boundary of 69,474 acres (combining the existing Lokern ACEC with the expansion to include the Buena Vista Hills and Valley), as the Lokern-Buena Vista ACEC (Map 2.2.9) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to major constraints (CSU-Protected Species and CSU-Sensitive Species stipulations;
- Identify as closed to mineral materials disposals, except for administrative purposes;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects; and
- Prohibit campfires.

Los Osos ACEC: Recommend for designation 5 acres of public lands; within a boundary of 32 acres, as the Los Osos ACEC (Map 2.2.9) administered with the following special management:

- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify as unavailable for livestock grazing;
- Prohibit campfires and overnight camping;
- Designate as OHV Closed area;
- Prohibit mechanized use, equestrian use, and cross-country travel by pedestrians;
- Require all pets to be leashed (maximum eight-foot length) at all times. Require removal of pet fecal matter by owners or handlers;
- ~~*Prohibit the discharge of firearms, except the legal taking of game species;*~~
- *Prohibit air-soft and paintball activities, including organized games and casual use the these types of equipment;* and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Piute Cypress ACEC: Recommend to continue the designation of 2,305 acres of public lands and 212 acres of federal mineral estate; within a boundary of 2,544 acres (expanding the existing 1,104-acre ACEC), as the Piute Cypress ACEC (Map 2.2.9) administered with the following special management:

- Identify as closed to fluid mineral leasing;
- Identify as closed to mineral materials disposals, except for administrative purposes;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Protect Piute cypress communities from livestock grazing if deemed necessary through appropriate studies;
- Prohibit campfires; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Pt. Sal ACEC: Recommend to continue the designation of 77 acres of public lands; within a boundary of 77 acres, as the Pt. Sal ACEC (Map 2.2.9) administered with the following special management:

- *Collaborate with adjacent land owners (California State Parks and Santa Barbara County) for cohesive management of the region;*
- Identify as closed to fluid mineral leasing;
- ~~*Recommend proposal for withdrawal from appropriation and entry under the General Mining Law;*~~ *Establish, in accordance with 43 CFR 3809.31, the ACEC as a special area requiring a 15 day notification be given to the BLM prior to beginning any activity under the mining laws including; Casual Use, to allow the BLM to determine whether a plan of operations must be submitted.*
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify as unavailable for livestock grazing;
- Prohibit campfires and overnight camping;
- Prohibit all cross-country travel;
- Designate as OHV Closed area;
- Prohibit mechanized and equestrian use;
- ~~*Prohibit the discharge of firearms and coordinate with CDFG to prohibit hunting;*~~ and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Tierra Redonda ACEC: Recommend to continue the designation of 331 acres of public lands and 81 acres of federal mineral estate; within a boundary of 1,311 acres, as the Tierra Redonda ACEC (Map 2.2.9) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to major constraints (NSO);
- ~~*Recommend proposal for withdrawal from appropriation and entry under the General Mining Law;*~~ *Establish, in accordance with 43 CFR 3809.31, the ACEC as a special area requiring a 15 day notification be given to the BLM prior to beginning any activity under the mining laws including; Casual Use, to allow the BLM to determine whether a plan of operations must be submitted.*
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify as unavailable for livestock grazing;
- Prohibit campfires and overnight camping;
- Prohibit cross country equestrian travel;
- ~~*Prohibit the discharge of firearms, except the legal taking of game species*~~; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Upper Cuyama Valley ACEC: Recommend for designation 6,351 acres of public lands and 2,584 acres of federal mineral estate; within a boundary of 15,247 acres, as the Upper Cuyama Valley ACEC (Map 2.2.9 *and Map 2.2.13*) administered with the following special management:

- Identify as open for fluid mineral leasing subject to major constraints (CSU-Protected Species and CSU-Sensitive Species) stipulations;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify as unavailable for livestock grazing habitat containing California jewelflower or Kern primrose sphinx moth;

- Prohibit equestrian use in habitat containing California jewelflower or Kern primrose sphinx moth;
- Prohibit cross country equestrian travel outside of livestock grazing allotments; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

2.2.18 Outstanding Natural Areas

Goal

Protect, conserve, and enhance, for the benefit and enjoyment of present and future generations, the Piedras Blancas Light Station Outstanding Natural Area for its unique and nationally important historical, natural, cultural, scientific, educational, scenic, and recreational values.

Objective

Reconstruct, preserve and interpret the Piedras Blancas Light Station to during the period of its greatest historic significance (1875 and 1940), while providing for resource protection and managed use by the visiting public.

Provide support for international research of coastal ecosystems surrounding the Piedras Blancas Light Station.

Protect and coordinate the interpretation of the important archaeological sites with the affected Native American communities.

Coordinate and collaborate management of the Piedras Blancas Light Station with California Department of Parks and Recreation, San Luis Obispo County, local communities, and other interested entities.

Decisions

The following features and structures would be restored or reconstructed to provide an accurate representation of what Piedras Blancas looked like in its early years:

- Lighthouse
- Fog Signal Building
- Fuel/Oil House
- Tank Storage Building
- Fuel and Storage Building
- Laundry
- Watchroom
- Keeper's Triplex
- Head Keeper's Residence
- Barn
- Historic Landscape

Close, prohibit, or otherwise make unavailable the Piedras Blancas Light Station to the following:

- All forms of entry, appropriation, or disposal under the public land laws;
- Operation of the mineral leasing and geothermal leasing laws and the mineral materials laws;
- Livestock grazing;
- Public access except for BLM tours, permits, and other specific authorizations;
- Equestrian use;
- ~~*Discharge of firearms and hunting;*~~ and
- Authorization of commercial communications transmission equipment.

Continue the withdrawal of the Piedras Blancas Light Station ONA from location, entry, and patent under the public land mining laws beyond the legislatively provided 20-year withdrawal to extend for the life of this RMP.

Manage the Piedras Blancas Outstanding Natural Area as VRM Class I, in accordance with its special designation, with special consideration of the importance of the cultural modifications and to restoring the historic lighthouse and facilities. This VRM Class I is adjusted to consider these cultural artifacts as an important facet of the visual landscape and to allow for the maintenance, repair, and continued restoration to preserve the outstanding visual landscape of the area.

Provide access to Native Americans for traditional cultural and religious purposes. The site may be closed to the general public to protect the privacy of traditional cultural and religious activities in such areas by the Native American religious community.

Acquire water supply conveyance rights on a corridor between the Light Station boundary and a nearby spring or water source and acquire an appropriative water right from the State of California for all water use.

Acquire access rights on a corridor between the Light Station boundary and the nearest public road. Add and administer as part of the Outstanding Natural Area any additional lands or interest in lands next to the Outstanding Natural Area acquired by the United States.

2.2.19 Back Country Byways

Goal

Where appropriate and feasible, highlight the spectacular nature of the western landscapes through education and interpretation along linear travel routes which provide recreational driving opportunities that allow for the experiences of solitude and isolation.

Objectives

Provide an appropriate level of driving opportunity commensurate with route conditions.

Decision

Revoke the Back Country Byway designation of Canebrake and Long Valley Loop Roads as the Chimney Peak Back Country Byway.

2.2.20 National Trails

Goal

Provide continued protection and support for national trails, to preserve, improve and restore the character for which they we designated.

Objectives

Coordinate and collaboration on the management of the PCNST to maintain its integrity, continue maintenance, and enforce allowable uses, while providing appropriate access and facilities for users and maintaining the scenic character and quality of the trail.

Provide for the ever-increasing outdoor recreation needs of an expanding population, promoting the preservation of, public access to, travel within, and enjoyment of the outdoor areas through the support of National Recreation Trails.

Decisions

~~*Support and incorporate management of the PCNST Dove Springs and Cache Peak segments by the BLM Ridgecrest Field Office where the trail crosses into the Bakersfield Decision area.*~~

Acknowledge the BLM Ridgecrest Field Office managing role on the PCNST Dove Springs and Cache Peak segments where the trail crosses in the Decision area. Support management on these segments of the trail in accordance with the management prescriptions in effect for the trail on adjacent lands within the California Desert District.

Establish a 0.25-mile wide corridor along the PCNST (Owens Peak segment) to apply specific management incorporating and amended by the comprehensive PCNST Management Plan (Pacific Crest Trail Management Options Plan, BLM 1980), as follows:

- Close to fluid mineral and geothermal leasing;
- Close to the mineral material disposal;
- Designate as VRM Class I;
- Identify the corridor as a ROW exclusion area; and
- Identify the corridor as lands to be retained.

Continue designation and management of the Wu Ki' Oh Trail (formerly named the Squaw Leap Trail) as a National Recreation Trail.

Recommend for designation the San Joaquin River Trail as a National Recreation Trail in coordination with other affected entities.

2.2.21 Wild and Scenic Rivers

Goal

River segments suitable for inclusion in the National Wild and Scenic Rivers System (NWSRS) would be free-flowing in nature, meet water quality standards, and continue to possess outstandingly remarkable values (ORVs) that make them eligible.

Objectives

Determine suitable river segments for inclusion in the National Wild and Scenic Rivers System (NWSRS). Manage those suitable river segments so to maintain their free-flowing nature, water quality, ORVs, and tentative classification, pending congressional action or for the duration of the RMP.

Decisions

Determine as suitable and recommended for congressional designation in the NWSRS for the classifications identified the ***Lower Kern (Recreational), Chimney Creek (Wild/Recreational),*** North Fork of the Kaweah (Scenic~~*/Recreational*~~) and San Joaquin River Segment 1 (Wild/Scenic).

Establish a corridor extending 0.25 miles from each edge suitable river segment, in which the following interim protective management guidelines would apply:

- Approve no actions altering the free-flowing nature of the suitable segment through impoundments, diversions, channeling, or riprapping;
- Approve no actions that would measurably diminish the stream segment's identified outstandingly remarkable value(s); and
- Approve no actions that would modify the setting or level of development of the suitable river segment to a degree that would change its identified classification.

2.2.22 Wilderness Study Areas

Goal

WSAs would continue to be suitable for future designation as wilderness until such time that congress either designates as wilderness or releases the area.

Objective

Manage WSAs in a manner that does not impair the suitability of the area for the future designation as wilderness until such time that Congress releases them from study status.

If released by Congress from study status, maintain wilderness character, where present, within WSAs.

Decision

Manage WSAs in accordance with BLM Interim Management Policy for Lands under Wilderness Review (IMP) (BLM Handbook H-8550-1 [BLM 1995])

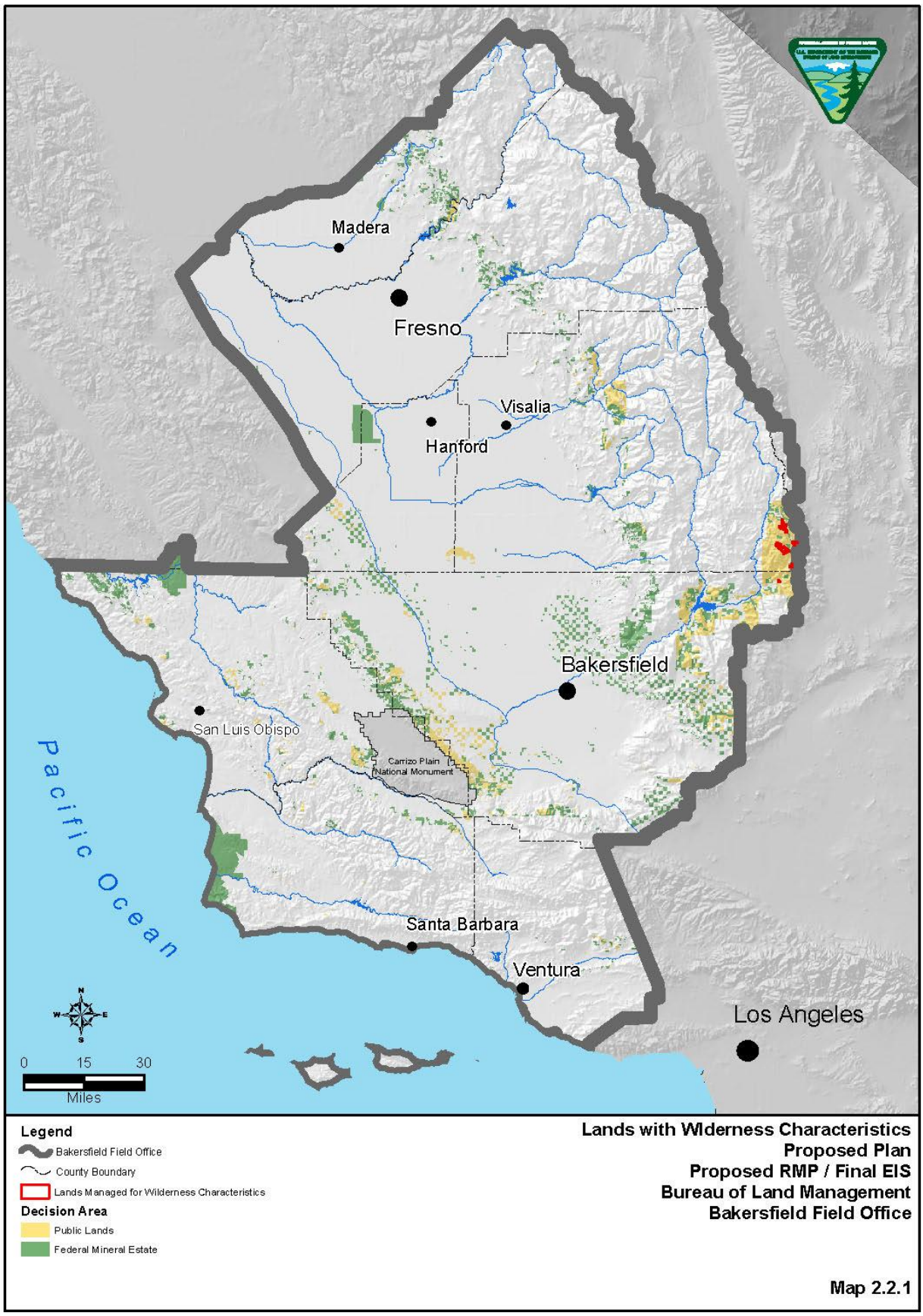
Manage for wilderness characteristics the following WSAs if released from study status by Congress, unless congressional release language provides other specific management guidance;

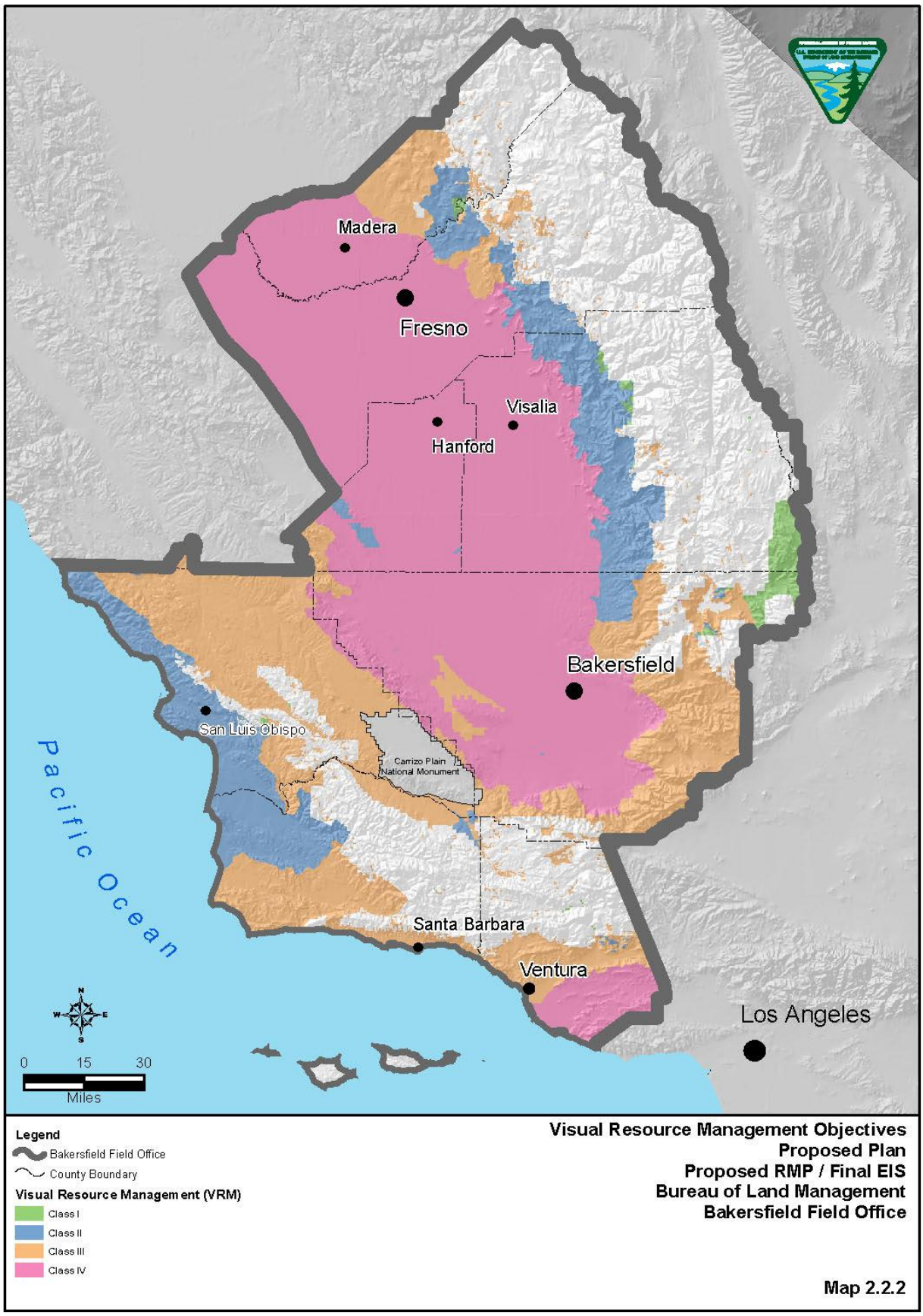
- Machesna WSA (adjacent to USFS Machesna Mountain Wilderness);
- Owens Peak WSA;
- Rockhouse WSA;
- Sacatar Meadows WSA;
- Scodie WSA; and
- Garcia Mountain WSA (adjacent to USFS Garcia Mountain Wilderness).

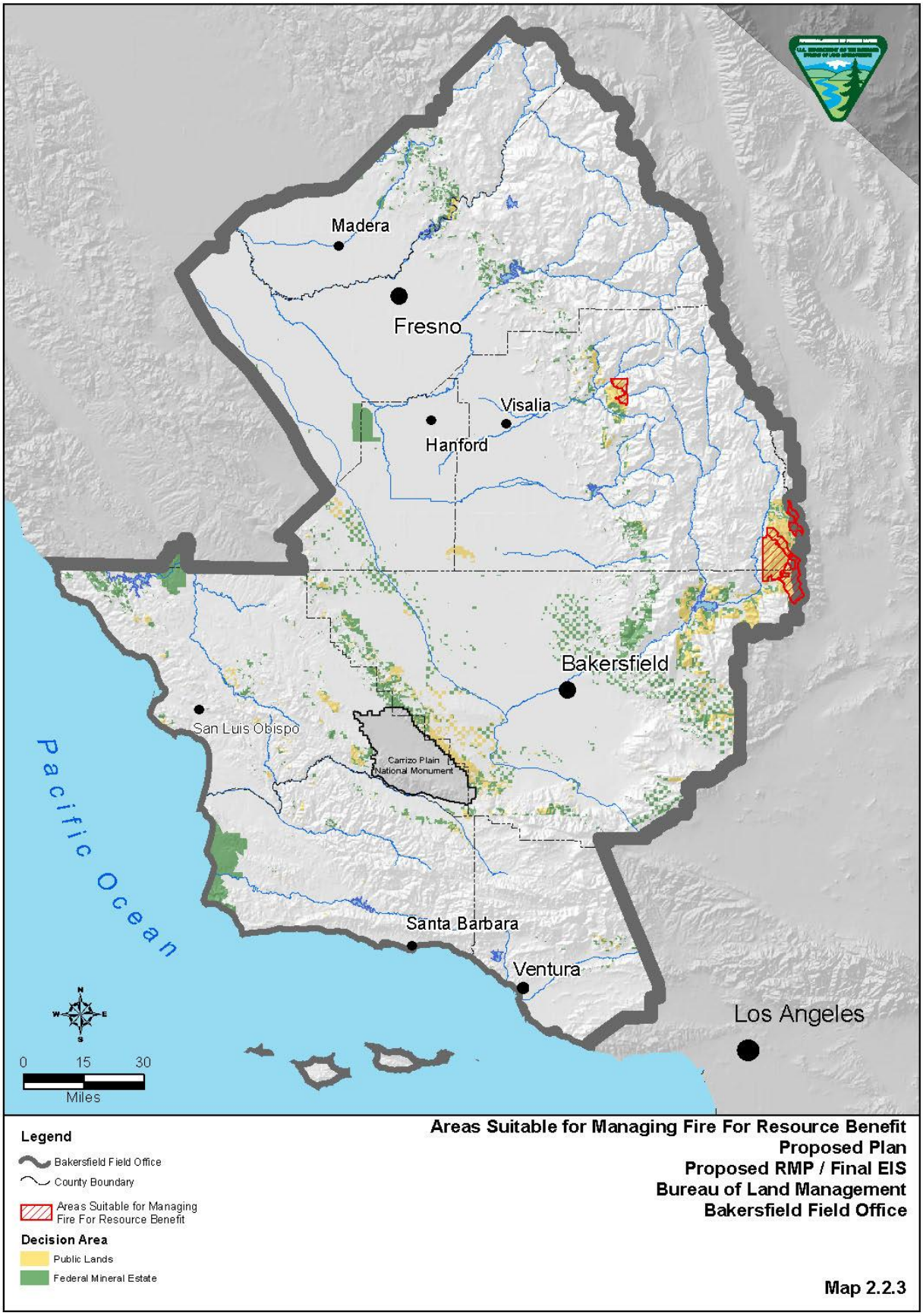
Manage the Milk Ranch/Case Mountain WSA and Sheep Ridge WSA if released from study status by Congress, in accordance with the Kaweah ACEC, unless congressional release language provides other specific management guidance

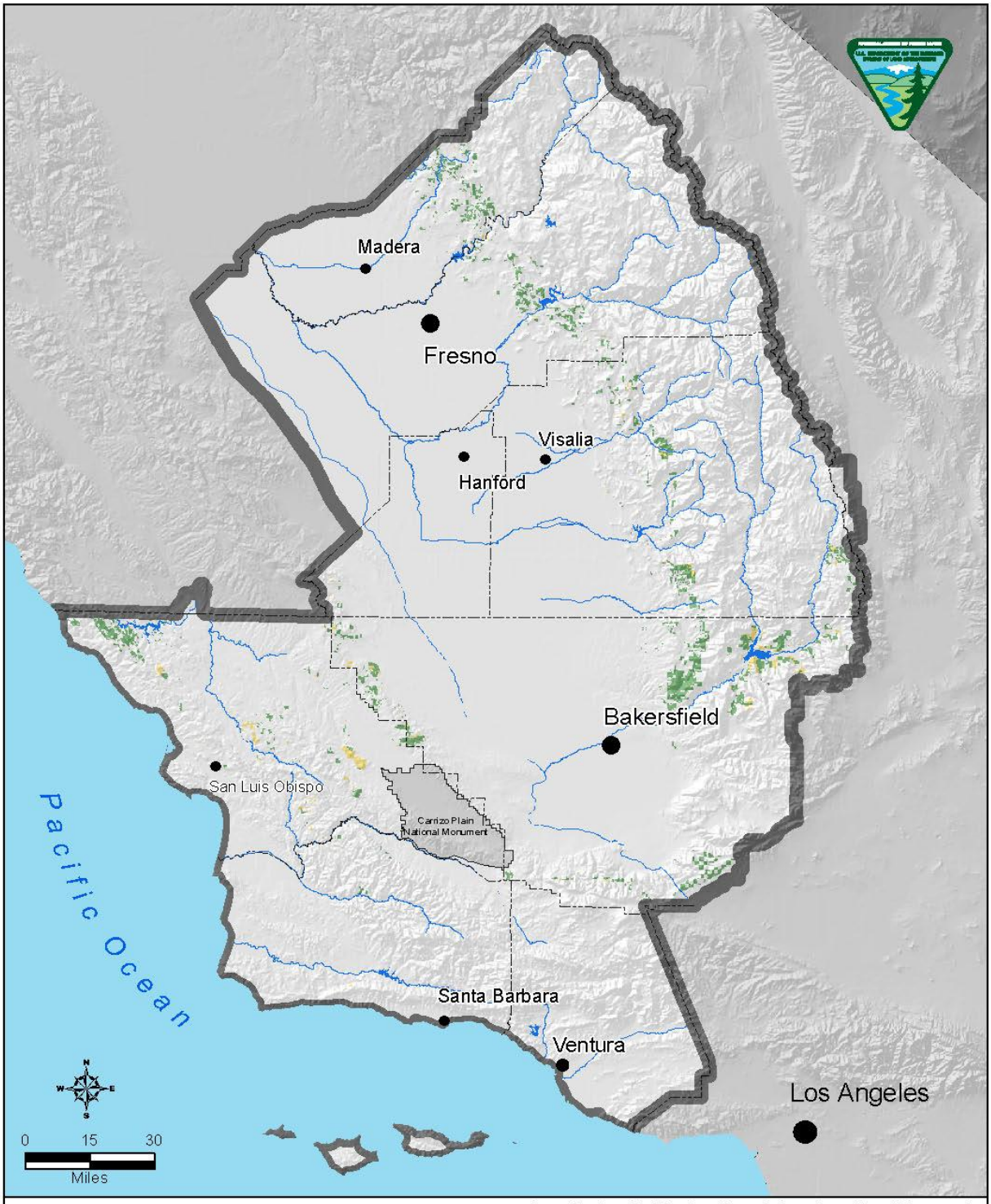
Manage portions of the Piute Cypress WSA in accordance with both the Erskine Creek ACEC and Piute Cypress ACEC if released from study status by Congress, unless congressional release language provides other specific management guidance. The portion not within either ACEC would be managed as multiple-use dispersed public lands.

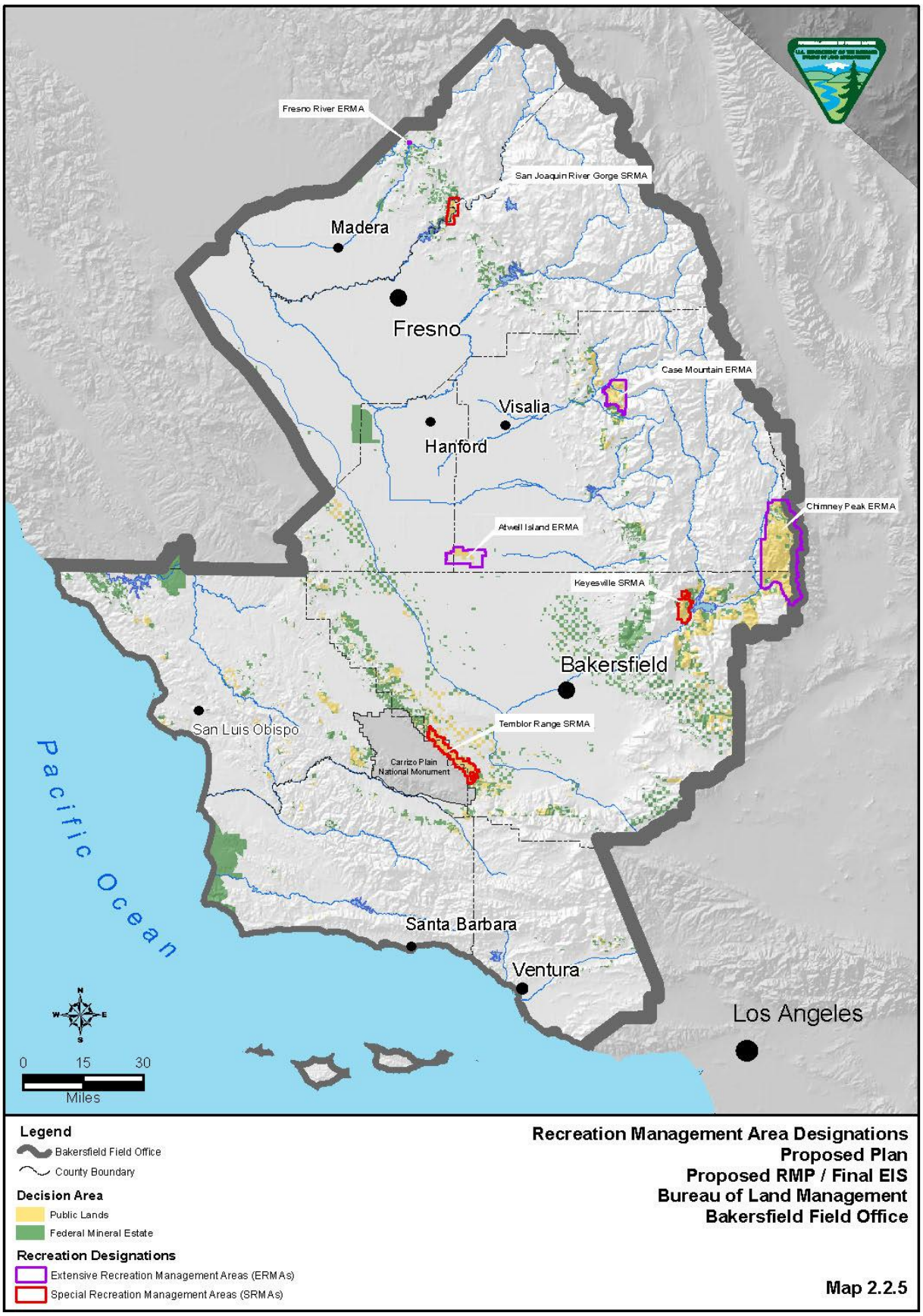
Manage the Black Mountain WSA and Moses WSA multiple-use dispersed public lands.

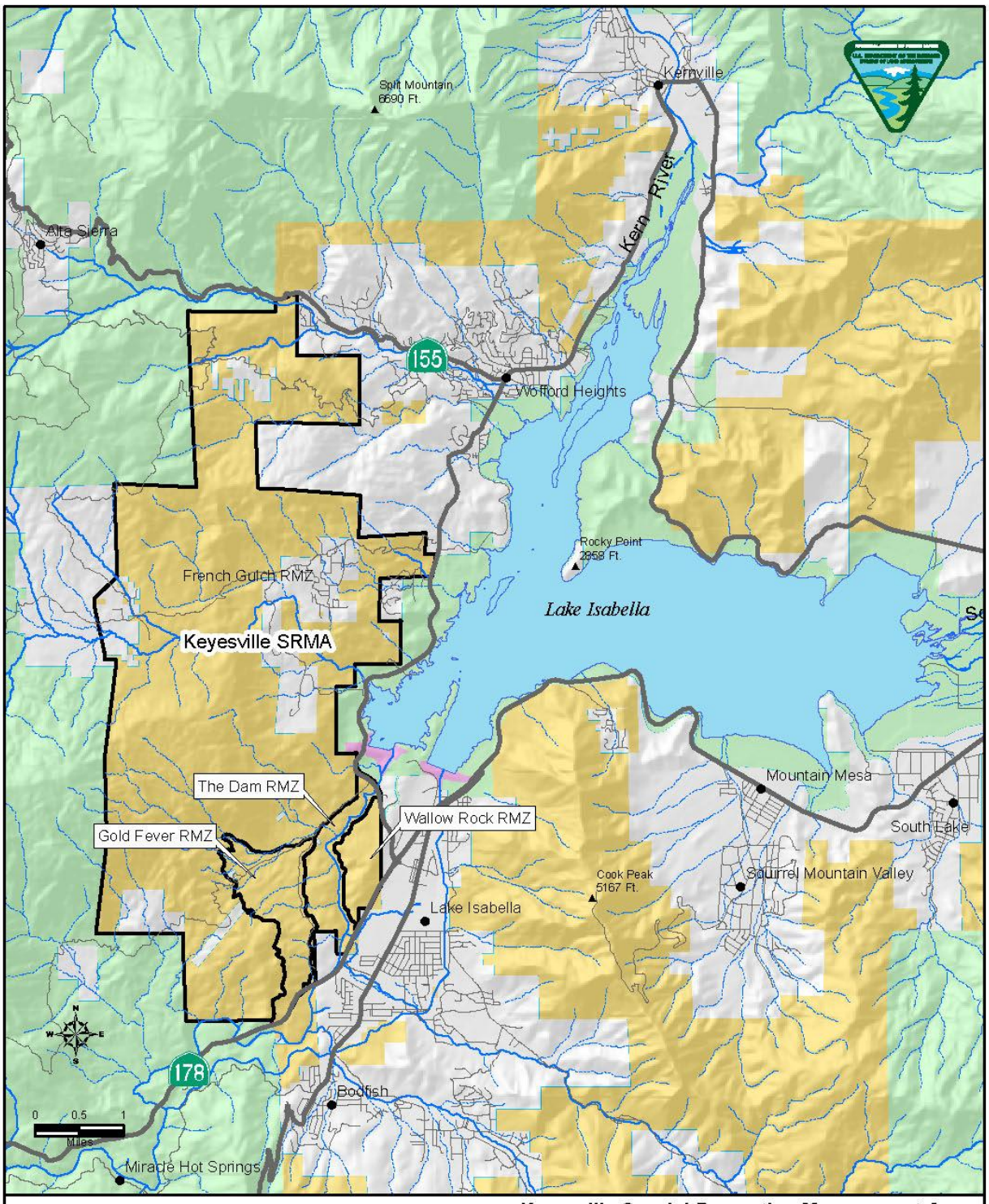

Madera
Fresno
Visalia
Hanford
Bakersfield
San Luis Obispo
Carrizo Plain National Monument
Pacific Ocean
Santa Barbara
Ventura
Los Angeles
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
Lands Managed for Wilderness Characteristics
Decision Area
Public Lands
Federal Mineral Estate
Lands with Wilderness Characteristics
Proposed Plan
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 2.2.1

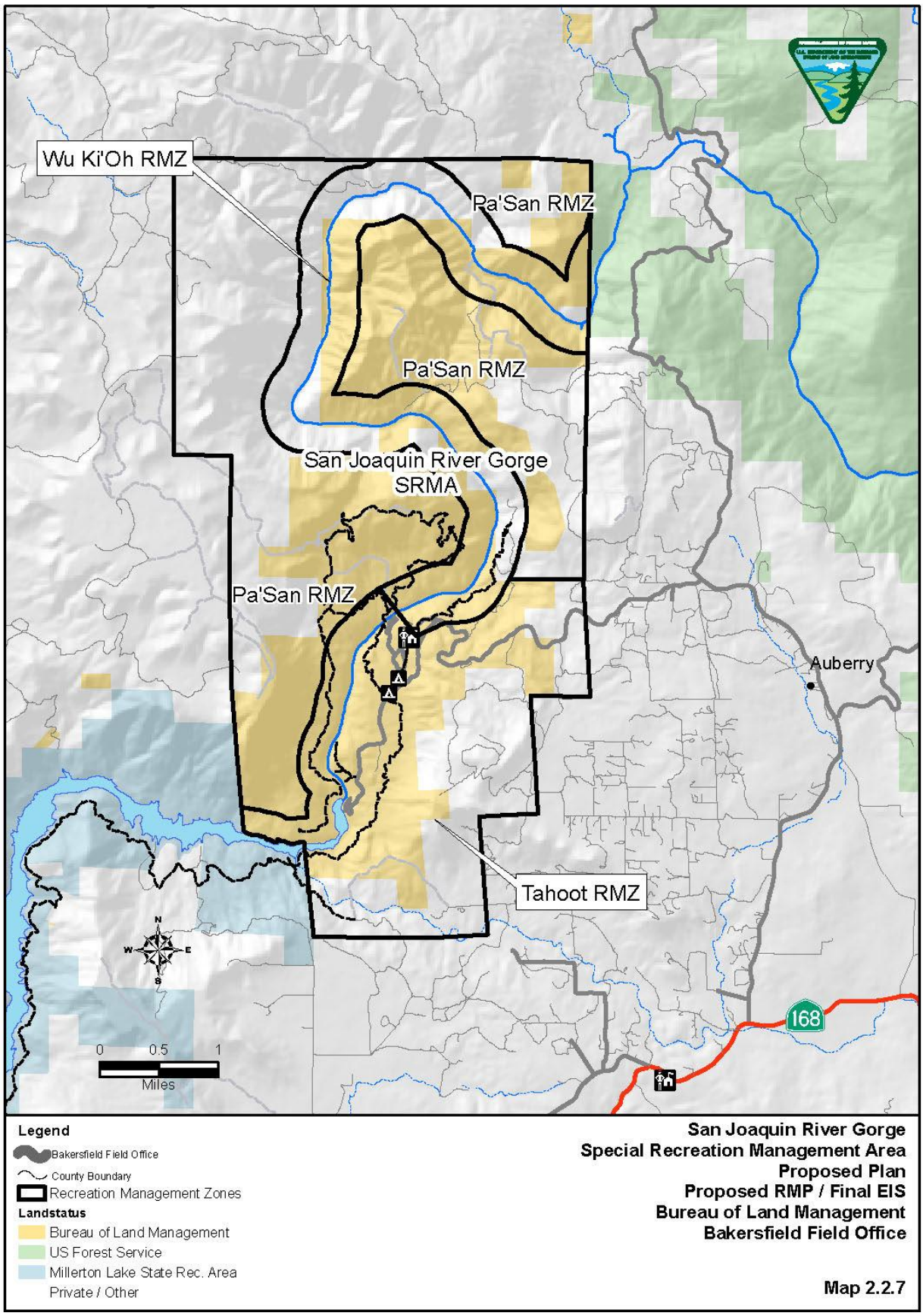

Madera
Fresno
Visalia
Hanford
Bakersfield
San Luis Obispo
Carrizo Plain National Monument
Pacific Ocean
Santa Barbara
Ventura
Los Angeles
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
Visual Resource Management (VRM)
Class I
Class II
Class III
Class IV
Visual Resource Management Objectives
Proposed Plan
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 2.2.2

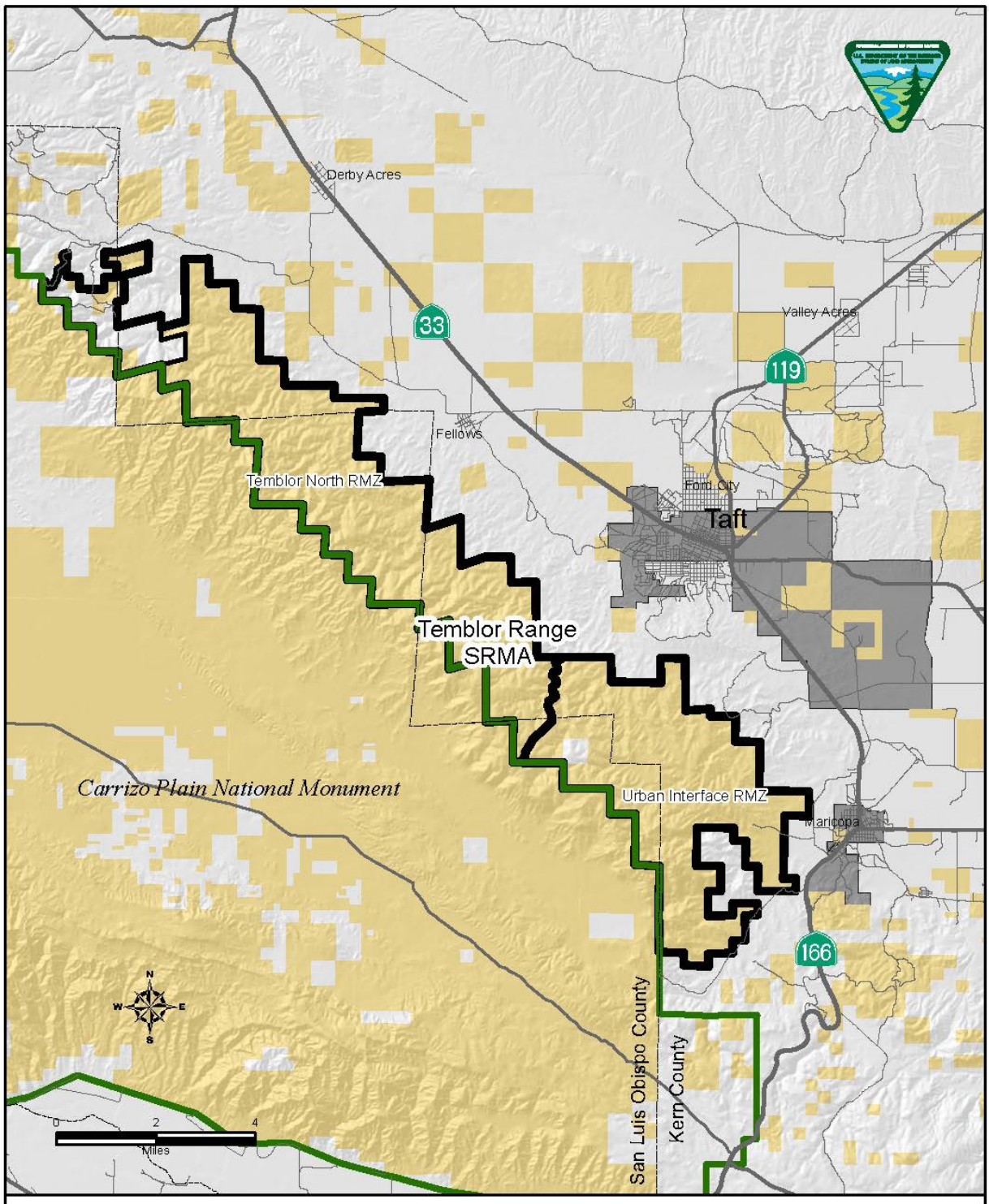

Madera
Fresno
Visalia
Hanford
Bakersfield
San Luis Obispo
Carrizo Plain National Monument
Pacific Ocean
Santa Barbara
Ventura
Los Angeles
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
Areas Suitable for Managing Fire For Resource Benefit
Decision Area
Public Lands
Federal Mineral Estate
Areas Suitable for Managing Fire For Resource Benefit
Proposed Plan
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 2.2.3

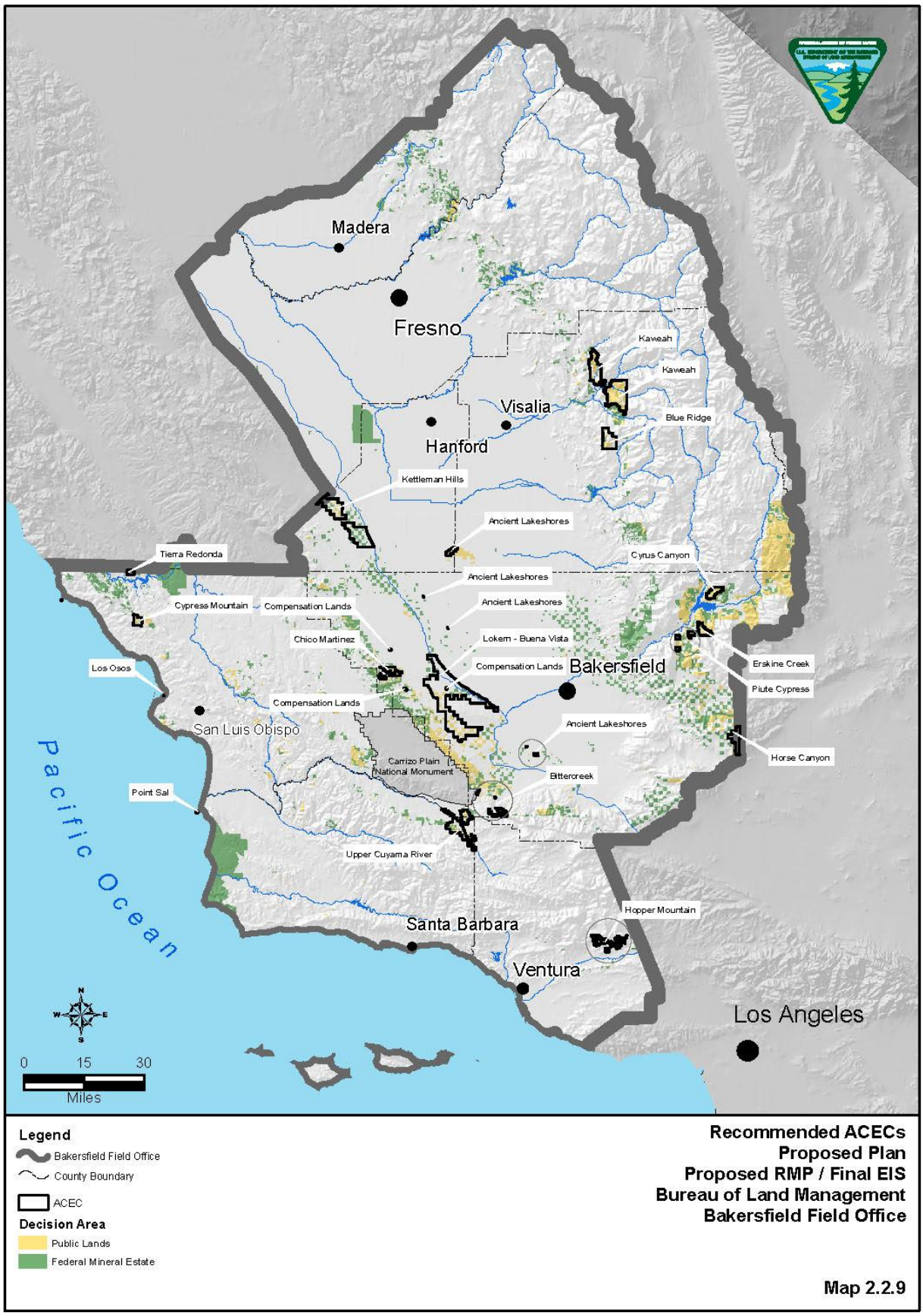

Madera
Fresno
Visalia
Hanford
Bakersfield
San Luis Obispo
Carrizo Plain National Monument
Pacific Ocean
Santa Barbara
Ventura
Los Angeles
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
Lands not available for consideration for disposal
Lands Available for Consideration For Disposal
Public Lands
Federal Mineral Estate
Lands Available for Consideration For Disposal
Proposed Plan
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 2.2.4

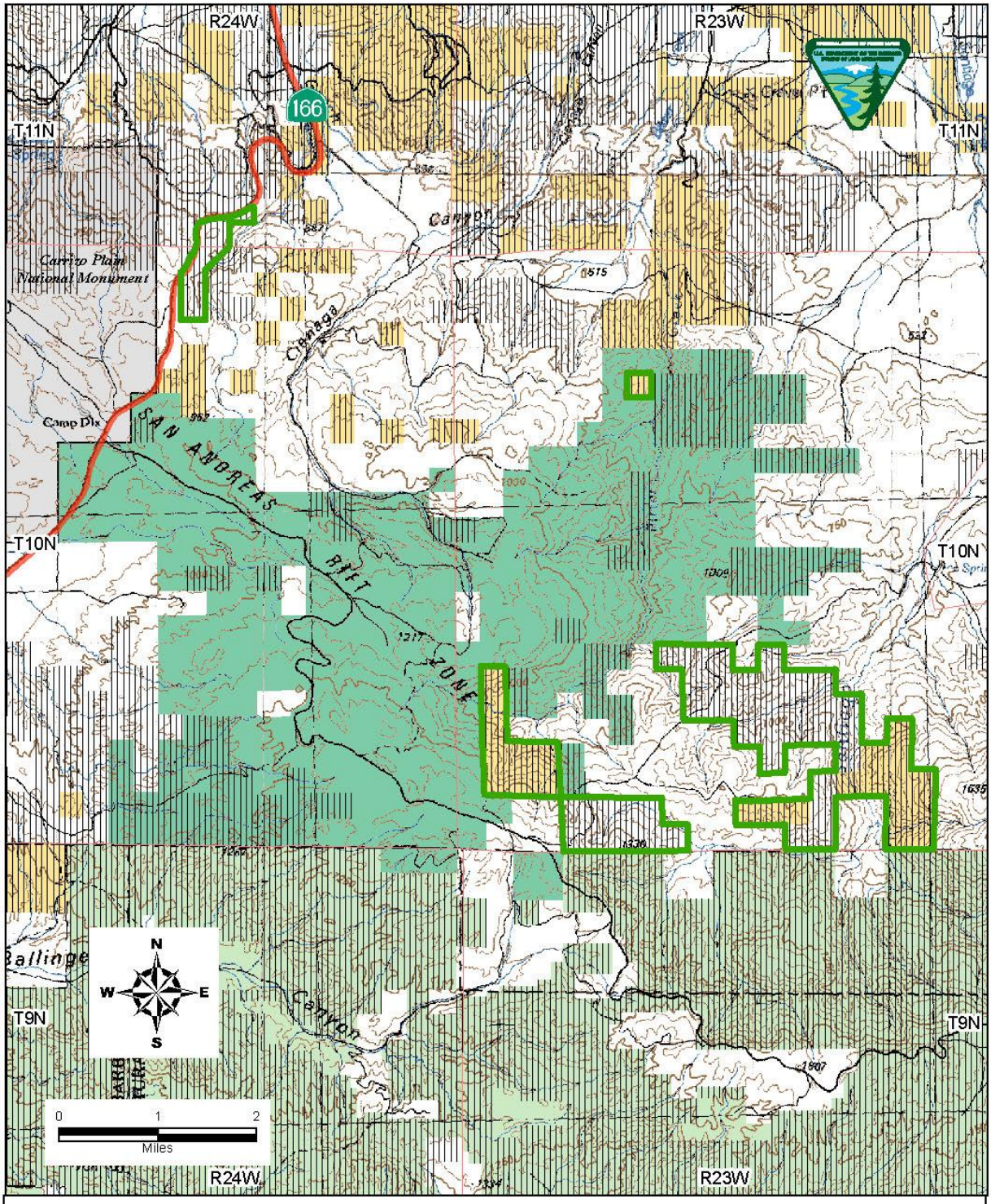

Fresno River ERMA
San Joaquin River Gorge SRMA
Madera
Fresno
Case Mountain ERMA
Visalia
Hanford
Chimney Peak ERMA
Atwell Island ERMA
Keyesville SRMA
Bakersfield
San Luis Obispo
Temblor Range SRMA
Carrizo Plain National Monument
Pacific Ocean
Santa Barbara
Ventura
Los Angeles
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
Decision Area
Public Lands
Federal Mineral Estate
Recreation Designations
Extensive Recreation Management Areas (ERMAs)
Special Recreation Management Areas (SRMAs)
Recreation Management Area Designations
Proposed Plan
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 2.2.5

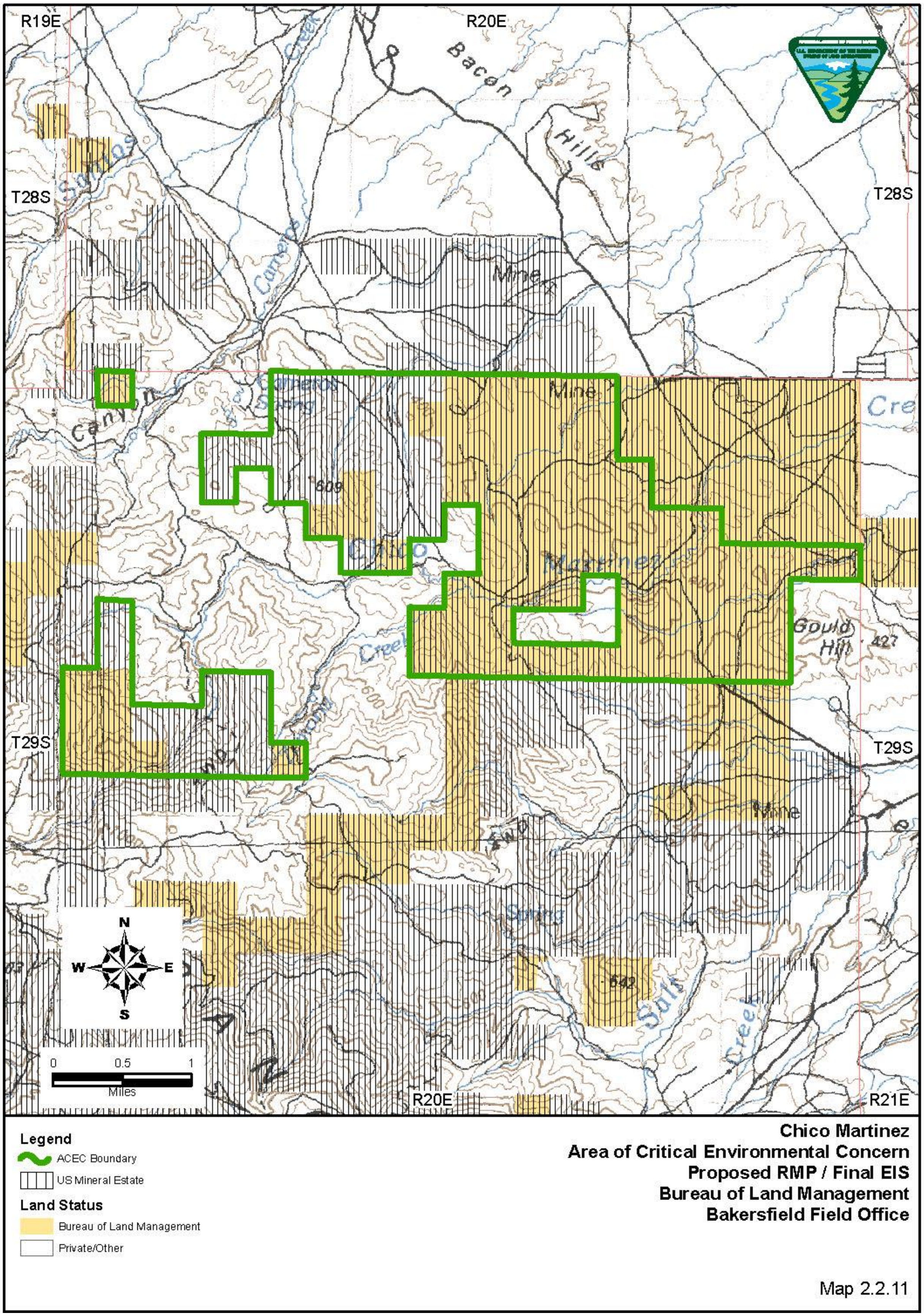

Split Mountain
6690 Ft.
Kernville
Kern River
Alta Sierra
155
Wofford Heights
Rocky Point
2858 Ft.
French Gulch RMZ
Lake Isabella
Keyesville SRMA
The Dam RMZ
Wallow Rock RMZ
Gold Fever RMZ
Mountain Mesa
South Lake
Cook Peak
5167 Ft.
Squirrel Mountain Valley
Lake Isabella
178
Bodfish
0 0.5 1
Miles
Miracle Hot Springs
Legend
Recreation Management Zones
Landstatus
Bureau of Land Management
US Forest Service
US Army Corps of Engineers
Private, Unclassified
Keyesville Special Recreation Management Area
Proposed Plan
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 2.2.6

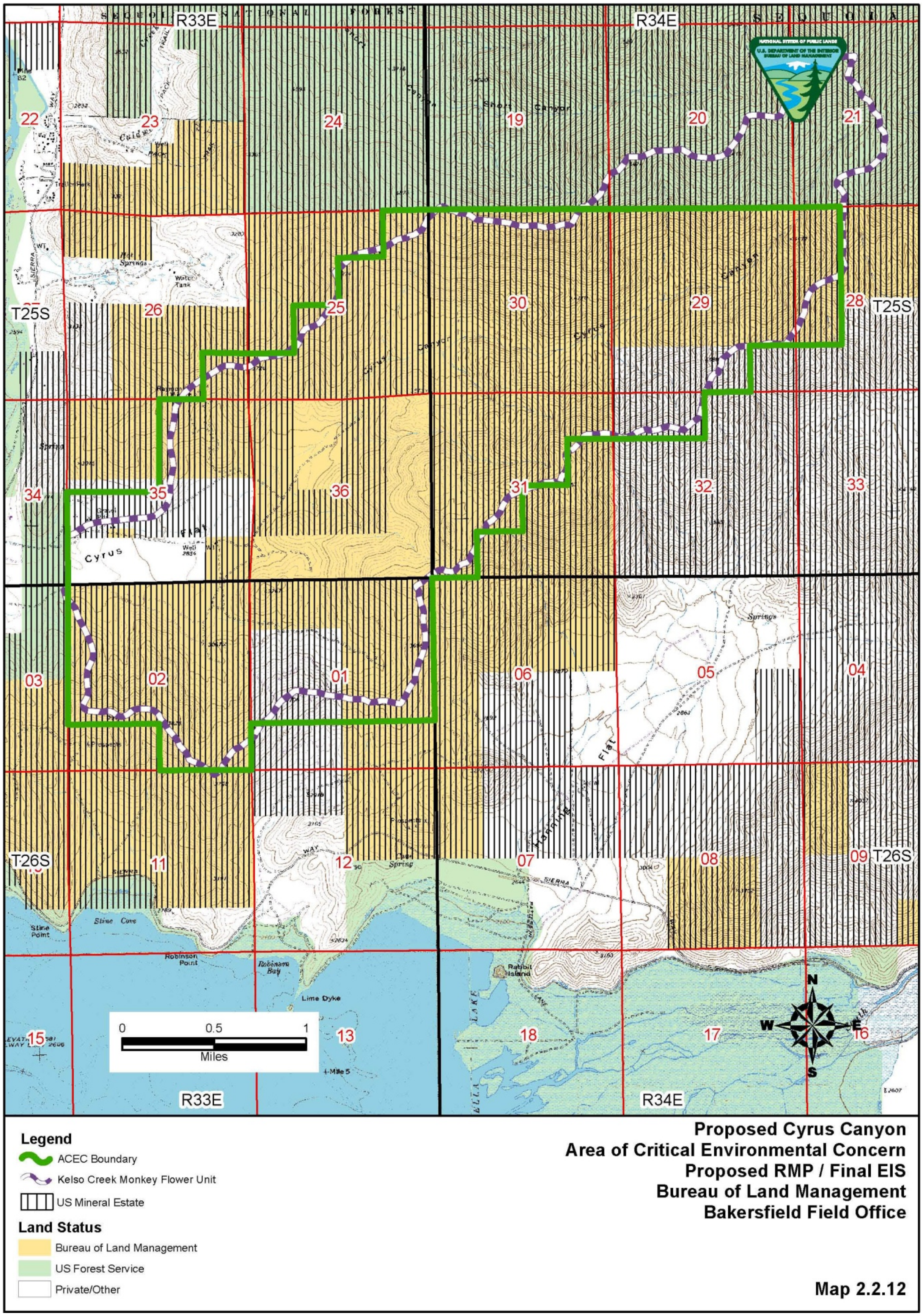

Wu Ki'Oh RMZ
Pa'San RMZ
Pa'San RMZ
San Joaquin River Gorge SRMA
Pa'San RMZ
Auberry
Tahoot RMZ
168
N
W
E
S
0
0.5
1
Miles
Legend
Bakersfield Field Office
County Boundary
Recreation Management Zones
Landstatus
Bureau of Land Management
US Forest Service
Millerton Lake State Rec. Area
Private / Other
San Joaquin River Gorge
Special Recreation Management Area
Proposed Plan
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 2.2.7


Derby Acres
33
Valley Acres
119
Fellows
Temblor North RMZ
Ford City
Taft
Temblor Range
SRMA
Carrizo Plain National Monument
Urban Interface RMZ
Maricopa
166
San Luis Obispo County
Kern County
N
W
E
S
0
2
4
Miles
Legend
Bakersfield Field Office
County Boundary
Recreation Management Zones
Landstatus
Bureau of Land Management
Private, Unclassified
City Limits
Temblor Range SRMA
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 2.2.8


Madera
Fresno
Visalia
Hanford
Bakersfield
San Luis Obispo
Santa Barbara
Ventura
Los Angeles
Pacific Ocean
Kaweah
Kaweah
Blue Ridge
Kettleman Hills
Ancient Lakeshores
Ancient Lakeshores
Ancient Lakeshores
Ancient Lakeshores
Tierra Redonda
Cypress Mountain
Compensation Lands
Chico Martinez
Compensation Lands
Compensation Lands
Cyrus Canyon
Lokern - Buena Vista
Erskine Creek
Piute Cypress
Horse Canyon
Los Osos
Carrizo Plain National Monument
Bitter creek
Point Sal
Upper Cuyama River
Hopper Mountain
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
ACEC
Decision Area
Public Lands
Federal Mineral Estate
Recommended ACECs
Proposed Plan
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 2.2.9


R24W
R23W
T11N
T10N
T9N
166
Carrizo Plain National Monument
Camp Dix
SAN ANDREAS
RIFT
ZONE
Cheaga
Canyon
N
W
E
S
0
1
2
Miles
Legend
ACEC Boundary
US Mineral Estate
Land Status
Bureau of Land Management
US Forest Service
US Fish and Wildlife Service
Private/Other
Proposed Bitter Creek
Area of Critical Environmental Concern
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 2.2.10


R19E
R20E
Bacon Hills
T28S
T28S
Mine
Mine
Canyon
Chico
Martinez
Gould Hill
427
609
642
T29S
T29S
Mine
Spring
Salt Creek
N
W
E
S
0
0.5
1
Miles
R20E
R21E
Legend
ACEC Boundary
US Mineral Estate
Land Status
Bureau of Land Management
Private/Other
Chico Martinez
Area of Critical Environmental Concern
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 2.2.11


R33E
R34E
T25S
T26S
22
23
24
19
20
21
26
25
30
29
28
34
35
36
31
32
33
03
02
01
06
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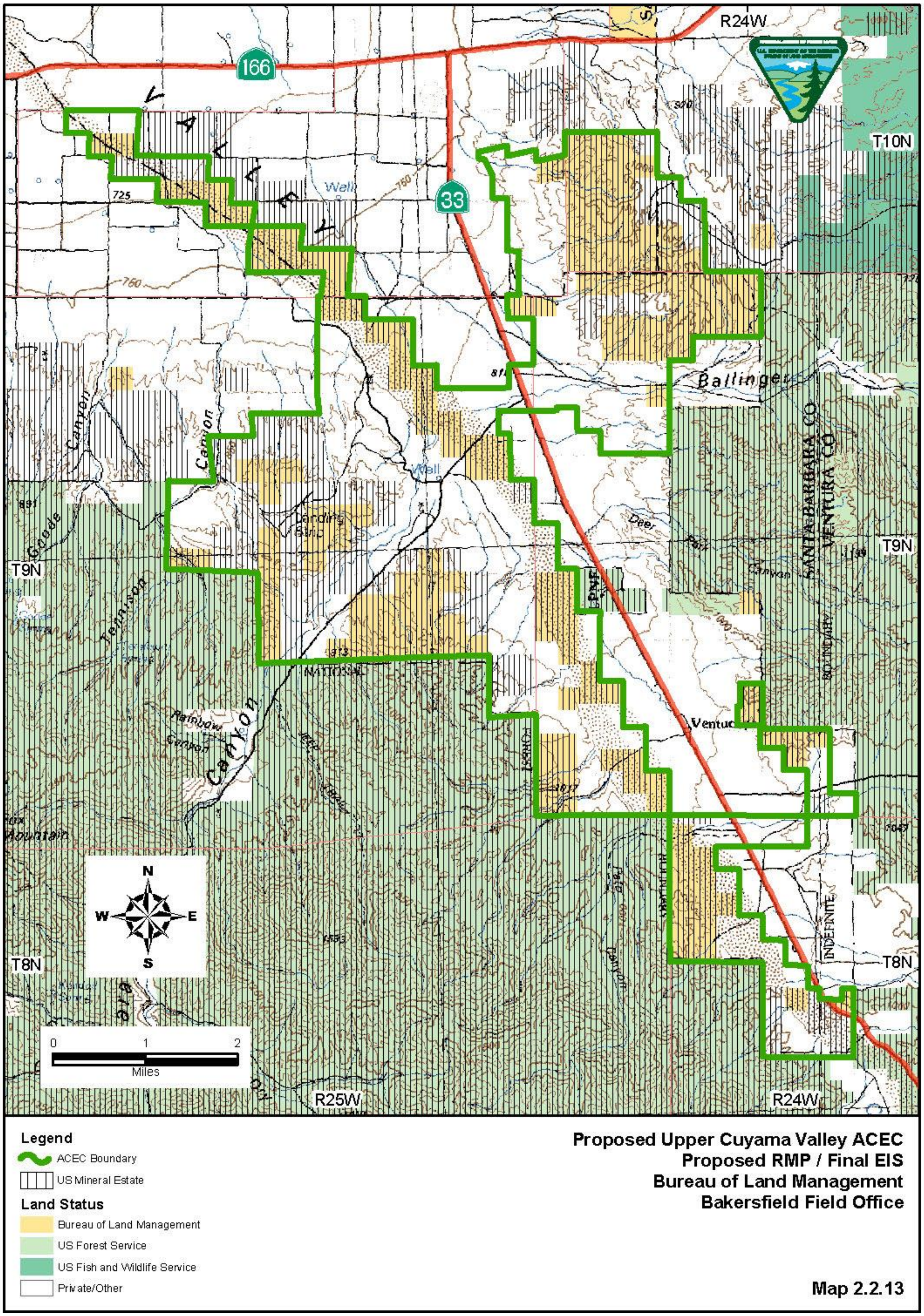
04
11
12
07
08
09
15
13
18
17
16
Short Canyon
Cyrus Canyon
Cyrus Flat
Canyon
Water Tank
Springs
Stine Cove
Stine Point
Robinson Point
Robinsons Bay
Lime Dyke
Rabbit Island
Spring
SIERRA
WAY
0
0.5
1
Miles
N
S
E
W
Legend
ACEC Boundary
Kelso Creek Monkey Flower Unit
US Mineral Estate
Land Status
Bureau of Land Management
US Forest Service
Private/Other
Proposed Cyrus Canyon
Area of Critical Environmental Concern
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 2.2.12



R24W
166
33
T10N
VALLEY
Well
Ballinger
Canyon
Canyon
Goode
Landing Strip
T9N
T9N
Deer
Park
Canyon
SANTA BARBARA CO
VENTURA CO
Tennison
NATIONAL
Rainbow
Canyon
Canyon
Ventucopa
Mountain
N
W
E
S
T8N
T8N
0
1
2
Miles
R25W
R24W
Legend
ACEC Boundary
US Mineral Estate
Land Status
Bureau of Land Management
US Forest Service
US Fish and Wildlife Service
Private/Other
Proposed Upper Cuyama Valley ACEC
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 2.2.13

2.3 Management Common to Alternatives C, D & E

The following sections describe management common to alternatives C, D and E, presented by program area. Where program management varies across alternatives, only management common to each alternative is presented. Total management decisions for each program are inclusive of the decisions in both this section and the separate alternatives section.

Management actions common to alternatives C, D and E can result because of specific limitations on management of resources and land use programs that guided the development of the management alternatives. These limitations are defined in various laws and regulations that govern BLM management decisions. They are also set forth in the planning criteria to ensure that management actions under all alternatives comply with nondiscretionary laws and regulations. In many cases, these laws and regulations preclude the development of alternatives to a given action; in some cases, they limit management either to implementing or not implementing the action. Where there is no variation in management across alternatives C, D and E within a program, decisions for that program are only presented in this section. These include; Air and Atmospheric Values, Cultural Resources, Paleontological Resources, Soil Resources, Water Resources, Wildland Fire and Ecology Management.

The goals presented in this section are resource-specific, generally area-wide, and do not vary across alternatives C, D and E. The objectives state more specifically measurable targets to achieve goals; these are generally consistent among the alternatives.

Resources

2.3.1 Air and Atmospheric Values

Goal

Contribute to the achievement of good air quality.

Objectives

Contribute to the attainment of National Ambient Air Quality Standards (NAAQS).

Reduce emissions and the particulate level impacts from BLM management activities and BLM authorized actions in accordance with State Implementation Plans (SIPs).

Decisions

Design BLM program and management activities and authorize projects to meet air quality standards in conformance with State Implementation Plans. Reduce emissions resulting from such actions by implementing BMPs (Appendix L) and other control measures.

Prevent BLM actions from degrading Federal Class I areas including Domelands Wilderness, San Raphael Wilderness, and Sequoia and Kings Canyon National Parks.

2.3.2 Biological Resources

Goals

Contribute to maintaining the biotic diversity within the Planning Area. Ensure public lands provide for a diversity of native species, ecosystems, and ecosystem processes.

Woodland and forest ecosystems are healthy, being resistant to and resilient from stand-replacing fire and/or catastrophic insect/disease infestations.

Promote the recovery of state and federally listed species. Promote conservation of other plant and animal species to prevent future listings.

Promote the success of recovery plans, conservation plans, wildlife management plans, vegetation and weed management plans, and other regional conservation strategies.

Objectives

Maintain or improve the quality and diversity of biological resources through the maintenance, enhancement, and restoration of habitats. Manage public lands to meet or exceed the Standards for Rangeland Health (see Appendix F-1).

Meet or exceed proper functioning condition of wetland or riparian habitats, maintain the hydrologic regime of vernal pools, and provide for riparian-dependent native species through habitat maintenance, restoration and enhancement.

Promote active vegetative management and treatments on our forested landscapes to manage toward healthy woodland ecosystems.

Restore, as appropriate, native plants and animals whose populations have been depleted or extirpated from the local area.

Conserve and recover state and federally listed species through the maintenance, enhancement and restoration of their habitats.

Minimize impacts on biological resources and the effectiveness of regional conservation strategies, including essential habitat linkages, from BLM actions and authorizations.

Reduce the impact that the urban interface, recreation activities, and other public uses have on listed species recovery, natural community and species conservation by coordination and collaboration with other agencies, local communities, and user groups.

Protect additional ecologically important areas, important linkages, and scarce limited habitats through land tenure adjustments and partnerships with other agencies and organizations.

Retain in public ownership lands that are important for species recovery or conservation, that contain ecologically important areas or scarce limited habitats, or contribute to regional conservation strategies.

Manage lands, interest in lands or funds acquired through compensation to benefit the species identified in the applicable USFWS or CDFG biological opinion, agreement, or other document, or to promote recovery of the target species.[15]

[15] The BLM will manage these lands consistent with the applicable compensation document, in conformance with underlying statutory authorities, and to promote recovery of the target species.

Control, decrease, or eradicate known populations of invasive nonnative plants and prevent new populations from becoming established. Control the spread of noxious weeds as identified by the California Department of Food and Agriculture and the California Invasive Plants Council (Cal-IPC, 2009).

Address at a landscape level, widespread nonnative species that displace and compete with the native flora through collaboration with weed management area members, state agencies, federal agencies, conservation organizations, and other interested parties.

Reduce the impacts, including disease transmissions, harassment, and competition, and limit the spread of nonnative animals.

Decisions

Complete land tenure adjustments (disposal) of designated critical habitat and essential habitat only with concurrence from USFWS.

Require land tenure adjustments (repositioning) of compensation lands to have concurrence[16] from both USFWS and CDFG.

Manage lands acquired specifically for the protection of biological resources in a manner consistent with the terms of acquisition[17].

Allow transplants, augmentation, and reestablishment of native species populations that have been approved by CDFG or USFWS.

Control and eliminate, when necessary and possible, nonnative animals, such as bullfrogs, feral cats, wild pigs, and wild honeybees that have negative impacts on habitats or native species.

Eliminate, relocate, or redesign uses, after site specific NEPA analysis, that may result or have resulted in unacceptable impacts on important biological resources, through actions such as, making seasonal closures, modifying grazing prescriptions, installing bat compatible closures, restricting equestrian access, relocating camping areas, and closing or realigning travel routes.

Apply SOPs, as appropriate to new BLM actions and authorizations (see Appendix L).

Implement a variety of measures (such as controlling weeds, seeding native species, performing prescribed burns, improving water availability, prescribed grazing, reducing raven nesting structures and the installing artificial dens or structures) to enhance or restore habitat conditions.

Implement actions and recommendations from recovery plans, including those to reduce mortality, provide information and education, and restore habitat to maintain, enhance and restore listed species habitats.

Seek and accept acquisition of biologically important lands and interest in lands, including compensation lands.

[16] The BLM will collaborate and consult with the USFWS and coordinate with CDFG prior to completing these land tenure adjustments.

[17] Acquisition is subject to conformance with underlying statutory authority and DOJ title standards.

Propose all existing and future parcels [18]of compensation land (including lands not specifically labeled as "compensation" within the parcel) for inclusion in the Compensation Lands ACEC (see *ACEC* Section of this chapter).

Prevent the issuance of an opening order to locatable mineral exploration and development in compensation lands where both surface and mineral estate are acquired.

Implement a variety of measures (such as fencing, planting native riparian vegetation to stabilize channels, installing in-stream structures, removing or redesigning spring alterations, removing weeds and seeding or planting appropriate native species) to restore degraded riparian areas and protect healthy riparian areas.

Manage naturally occurring waters on public lands, including public water reserves, to maintain, improve, or benefit hydrologic processes, such as in-stream flow requirements, needed for riparian systems.

Implement a variety of measures (such as removal, restriction, exclusion and education) if pets from public land users or private lands are causing wildlife depredation or other ecological damage.

Identify lands within the range of federally proposed and listed species as open to fluid mineral leasing unless otherwise closed, subject to major constraints including project relocation or exclusion, seasonal activity restriction, and extended application processing time as described in the Controlled Surface Use- Protected Species stipulation (Appendix G);

Identify lands within the range of federal candidate, state listed or bureau sensitive species as open to fluid mineral leasing unless otherwise closed, subject to moderate constraints as described in the Controlled Surface Use- Sensitive Species stipulation (Appendix G);

Identify designated or proposed critical habitat as open to fluid mineral leasing unless otherwise closed, subject to major constraints as described in the Controlled Surface Use- Critical Habitat stipulation (Appendix G);

Identify important foraging, wintering or nesting habitat for raptors as open to fluid mineral leasing unless otherwise closed, subject to major constraints as described in the Controlled Surface Use- Raptor stipulation (Appendix G), such areas include, but are not limited to: Hopper Mountain, Kaweah, San Joaquin River Gorge, Kettleman Hills, Chico Martinez, and the Temblor and Caliente NCLWMAs.

Designate the following species as priority species for management and protection:

- Special Status Species;
- species of interest to CDFG, USFWS and NMFS (such as game species, furbearers, migratory birds, marine mammals, raptors);
- species that are rare;

[18] Any future parcels of compensation land would be recommended for ACEC consideration if there is evidence that the lands meet the relevance and importance criteria. Upon completion of NEPA, public review, and a plan amendment, such lands would become part of the Compensation Lands ACEC and be provided special management attention.

- species with declining populations or with limited distributions; or
- species with high ecological importance (such as keystone, pollinator or host species)

Designate as priority plant communities and habitats; examples of which include alkali sink, Bishop pine forest, California bay forest, central maritime chaparral, coastal scrub, cypress woodlands, giant sequoia forest, oak woodland, riparian communities, serpentine chaparral, wetland and vernal pool communities, based on the following criteria:

- designated critical habitat;
- rarity,
- limited geographic distribution;
- high ecological importance;
- unique species assemblages; or
- at risk from climate change, pathogens, or other factors.

Implement the following specific management as appropriate in areas of ecological importance, ACECs, and where priority communities, habitats and species occur;

- Closure to mineral material disposal;
- Limitations on modes of travel and travel routes;
- Restrictions on fluid mineral leasing (CSU, NSO, Closure);
- Restrictions on livestock grazing;
- Restrictions on recreational opportunities (camping, campfires, hunting, shooting sports, seasonal closures);
- Recommend proposal for withdrawal from all or a portion of the mining laws; and/or
- Prohibition of the casual collection of plants or their parts without prior BLM authorization.

Identify and manage the following areas as areas of ecological importance;

Atwell Island: for protection of sensitive biological resources and to restore retired farmlands to native habitat, including wetlands.

- Identify as available for livestock grazing but only for the purpose of vegetation management to meet resource objectives other than the production of livestock forage;
- Prohibit campfires;
- Prohibit overnight camping and use except for; future specific areas identified for nocturnal visitation for wildlife viewing and stargazing;
- Prohibit cross country equestrian travel;
- Seasonally prohibit access to wetland areas, as needed to support restoration objectives;
- Coordinate with CDFG to prohibit hunting except as allowed by Special Recreation Permit and/or specially organized hunt activity; furthermore prohibit the discharge of firearms for shooting sport activities;
- Prohibit pets and other domesticated animals (not including authorized livestock) from wetland areas;

- Require all pets and domestic animals (not including authorized livestock) to be on a leash. Special Recreation Permits may be issued for activities allowing off-leash activity, such as, dog trial events; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Deer Spring: for protection of riparian resources and deer habitat.

- Identify as closed to fluid mineral leasing;
- Recommend proposal for withdrawal from appropriation and entry under the General Mining Law; and
- Identify as unavailable for livestock grazing.

Caliente Creek: for protection of the riparian ecosystem and conservation of habitat for Tehachapi slender salamander, Yellow-blotched salamander, and Bakersfield cactus.

Frog Pond: for protection of riparian ecosystems including California bay forest.

- Identify as open for fluid mineral leasing, subject to major constraints (CSU-Priority Species, Plant Communities and Habitats stipulations);
- Recommend proposal for withdrawal from appropriation and entry under the General Mining Law;
- Identify as closed to mineral materials disposals;
- Identify as unavailable for livestock grazing;
- Prohibit campfires and overnight camping;
- Prohibit equestrian use;
- Prohibit the casual collection of plants or their parts without BLM authorization; and
- Manage water resources for the benefit of the riparian ecosystem.

NCLWMA(s) (Caliente/Monache/Temblor): for improvement and maintenance of diverse assemblage of vegetative communities to benefit wildlife species, including raptors and game species, such as, deer, quail and chukar.

- Continue the withdrawal from application under the non-mineral public land laws and from disposition under the homestead, desert land entry, and script selection laws.
- Identify as open for fluid mineral leasing, subject to moderate constraints (CSU-Raptor stipulations)

South Fork of the Kern River: for protection of the riparian forest and critical habitat for the southwestern willow flycatcher; promote nesting habitat for both the southwestern willow flycatcher and the California yellow-billed cuckoo.

- Identify southwestern willow flycatcher critical habitat as unavailable for livestock grazing.

Table Mountain and Kennedy Table: for protection of vernal pools, listed vernal pool species and critical habitat for vernal pool species.

Recommend the following areas as Areas of Critical Environmental Concern (ACECs) based on their significant biological resource values; Ancient Lakeshores ACEC; Bitter Creek ACEC, Blue Ridge ACEC; Compensation Lands ACEC; Erskine Creek ACEC; Hopper Mountain ACEC; Kaweah ACEC; Kettleman Hills ACEC; Lokern-Buena Vista ACEC; Los Osos ACEC; Piute Cypress ACEC; and Pt. Sal ACEC.

Key Implementation

Partner with other agencies, institutions, organizations, and individuals to improve knowledge of the species within the Bakersfield FO and their understanding of the natural and ecological processes that influence local ecosystems. With partner agencies, coordinate monitoring of special status species for changes in population size, distribution, habitat use, and potential and existing threats.

Inventory species that are not well studied or understood, such as insects and other invertebrates, fungi, lichens, and bryophytes (such as, mosses and liverworts). Continue to improve inventories of other species.

Support inventories, monitoring, and research that identifies and defines factors that influence species population trends, especially listed and special status species. Support other research on the biology of species found in the Bakersfield FO.

Control and eliminate weeds through collaboration with weed management area members, state agencies, federal agencies, conservation organizations, and other interested parties.

Treat weed populations following integrated pest management principles (BLM 1992). Monitor to determine effectiveness of control measures and to ensure that known target weed populations are stable or diminishing.

Eliminate founder invasive nonnative weed populations before they can spread. Survey to detect new nonnative populations and begin treatment of newly discovered populations within five years of discovery.

Minimize the introduction and spread of weeds by BLM employees and public land users. For example, promote weed education, monitor corrals, promote or require weed-free hay, wash vehicles and equipment coming from other areas, and prohibit livestock and horse trailers from being cleaned on public lands.

Acquire within the Caliente Creek area of ecological importance, lands with Tehachapi slender salamander and Bakersfield cactus.

Acquire within the Upper Cuyama Valley area of ecological importance, lands with California jewelflower or Kern primrose sphinx moth.

Establish partnerships and collaborate with adjacent landowners, interested publics, stakeholders, conservation organizations, and other agencies to coordinate management and protect areas of ecological importance and ACECs.

2.3.3 Caves and Karst Resource

Goal

To secure, protect, and preserve significant caves and their associated cave resources on public lands for the perpetual use, enjoyment, and benefit of all people and to foster increased cooperation and exchange of information between the Bakersfield Field Office and those who utilize caves for scientific, education, or recreational purposes, in accordance with the Federal Cave Resources Protection Act of 1988.

Objectives

Through a designation of significance by the authorized officer and determination within the RMP, protect those known caves that possess significant cave resources, in accordance with 43 CFR 37.11(c).

Provide management framework to protect significant cave and karst resources, in accordance with BLM policy and guidelines.

Decisions

All newly discovered caves or sections of caves within the RMP decision area will be studied and inventoried for significant values. On determination of significance, the cave will be classified as Class I (open), Class II (restricted) or Class III (closed), described below. Interim management shall be as Class II to protect cave resources and may be restricted to permitted/authorized users.

Class I: These caves possess few or no sensitive features, their locations are generally widely known, and interpretive information may be available. These caves require no permit or notice to enter, but entry is recommended only for skilled and experienced cave users.

Class II: These caves may possess sensitive features, including cultural resources, pristine examples of geological formations, and sensitive biological resources. Restricted caves may be closed or further restricted to permitted and approved entry for a variety of reasons, including but not limited to: seasonal closures for the protection of sensitive biological resources, closures during periods of extreme public safety concerns (e.g., flooding), or restriction to permitted/authorized users only for scientific study, educational purpose and/or organized recreational experiences.

Class III: These caves are closed to protect sensitive cave resources. Entry requires specific authorization and may be provided only for scientific research or education.

2.3.4 Cultural Resources

Goals

Identify, preserve, and protect significant cultural resources and ensure that they are available for appropriate uses by present and future generations (FLPMA, Section 103 (c), 201(a) and (c); National Historic Preservation Act, Section 110(a); Archaeological Resources Protection Act, Section 14(a).

Seek to reduce imminent threats and resolve potential conflicts from natural or human-caused deterioration, or potential conflict with other resource uses (FLPMA Sec. 103(c), NHPA 106, 110 (a) (2)) by ensuring that all authorizations for land use and resource use will comply with the NHPA Section 106.

Native Americans have access to public lands to conduct traditional cultural and religious practices.

Objectives

Manage evaluated cultural resources and those projected to occur within the decision area within one of six cultural use allocations: scientific use; conserve for future use; traditional use; public use; experimental use; or discharged from use, as described in BLM guidance.

Design BLM actions and authorizations to minimize impacts on cultural resources including places of traditional cultural and religious importance to Native Americans.

Identify places of religious and cultural importance to Native Americans and facilitate access to these locations for traditional use.

Decisions

Allocate evaluated cultural resources within the decision area as "scientific use" for study, determination of eligibility and appropriate recordation, pending assignment to another use category, with the exception of the following:

- Allocate the Huasna Peak as "traditional use".
- Allocate the Keyesville historic sites of Walker Cabin, Keyes Mine, and Keyes Cemetery as "conserve for future use", until such time as stabilization and restoration work allows for public use.
- Allocate the Piedras Blancas Light Station ONA as "public use".
- Allocate all rock art sites, known and projected to occur, as "conserve for future use".
- Allocate the Walker Pass NHL as "public use".

Eliminate, relocate, or redesign uses following site specific NEPA that may result or have resulted in impacts on significant cultural resources including places of traditional cultural and religious importance to Native Americans.

Restore or stabilize cultural resources when they are damaged or deteriorating.

Identify lands containing significant cultural resources as open to fluid mineral leasing unless otherwise closed, subject to major constraints as described in the Controlled Surface Use (CSU) - Cultural Resources stipulation (Appendix G).

2.3.5 Lands with Wilderness Characteristics

Goal

Ensure that adequate consideration and protection, where appropriate, is given to lands with wilderness characteristics outside of designated Wilderness and Wilderness Study Areas and that these areas are managed so as not to impair these characteristics.

Objective

Provide a management framework to protect wilderness characteristics as an integral component of multiple use management of Planning Area BLM lands when it is consistent with other goals and objectives of the RMP.

2.3.6 Paleontological Resources

Goal

Identify, manage, and protect paleontological resources for scientific research, educational purposes, and public use.

Objective

Identify, manage, and protect important paleontological sites.

Decisions

Implement measures to protect paleontological resources including, but not be limited to:

- Avoidance,
- Fencing,
- Stabilization,
- Data recovery through collection or excavation,
- Interpretation, or
- Administrative closure.

Identify areas at risk of damage from illegal activities and implement management to discourage those activities.

Eliminate, relocate, or redesign uses following site specific NEPA (which may include a field inventory and data recovery) that may result or have resulted in impacts on fossil-bearing geologic units identified as Potential Fossil Yield Class (PFYC) 4 or 5.

Minimize or prevent human-caused damage to paleontological resources through educational and interpretive outreach programs focusing use on less significant paleontological resources.

Accommodate permit requests for scientific research by qualified individuals or institutions.

2.3.7 Soil Resources

Goal

Soils exhibit functional biological and physical characteristics that are appropriate to soil type, climate, and land form.

Objective

Manage soils to meet or exceed the Soil Standard of Rangeland Health (Appendix F-1), as indicated by ground or plant cover, diversity of plant species, minimal evidence of accelerated wind and water erosion and the presence of the biological soil crusts where appropriate.

Decisions

Design BLM programs and management activities and authorize projects to minimize impacts on soil productivity by implementing BMPs (Appendix L). Specifically minimize disturbance of the following soils types:

- Serpentine Soils;

- Soils supporting "Biological Crusts" – hosting communities of cyanobacteria, mosses, lichens and liverworts;
- Soils highly susceptible to erosion or compaction; and
- Soils hosting high levels of Valley Fever spores.

2.3.8 Visual Resources

Goal

Public lands demonstrate a range of visual resource values that allow for development and provide opportunities for scenic appreciation.

Objective

Utilize visual resource management classes for all public lands within the decision area to preserve and enhance scenic quality for present and future generations.

Ensure approval of projects outside the CPNM boundary but within its viewshed comply with the visual resource management objectives as described in the CPNM RMP (BLM 2010b).

2.3.9 Water Resources

Goal

Surface and groundwater comply with the objective of the Clean Water Act and all other applicable water quality requirements.

Objectives

Manage water resources to meet or exceed the Standards for Rangeland Health (Appendix F-1) by maintaining the existing quality and beneficial uses of water, protecting them where they are threatened, and restoring them where they are currently degraded.

Manage riparian/wetland vegetation, structure, and diversity and stream channels and floodplains so that they are functional and achieving physical and biological objectives.

Decisions

Design BLM program and management activities and authorize projects to meet water quality standards and maintain beneficial uses by implementing State approved BMPs (Management Measures for Polluted Runoff, see Appendix L) within the Central Coast, South Coast and Tulare basins.

Implement management actions to reduce non-point source pollution contributing to impaired water quality in any basin or segment listed as impaired in accordance with Section 303(d) of the Clean Water Act (e.g., a segment of Salinas River).

Implement BMPs for riparian/wetland health for maintenance of vegetation cover and diversity, and the physical stability of stream banks (Appendix L).

Applications for water developments or diversions on public lands would be approved only if resource objectives including wildlife, riparian, and livestock grazing needs, have been met.

Complete State water rights reporting requirements to maintain existing licenses and continue water diversion and use authorizations. Apply for new licenses and use authorizations as appropriate.

2.3.10 Wildland Fire Ecology and Management

Goals

Firefighter and public safety is the single, overriding priority in every fire management activity.

Minimize suppression costs while considering firefighter and public safety, benefits, and human and resource values to be protected.

Recognize fire as an essential ecological process and use wildland fire (both planned and unplanned ignitions) to restore or sustain ecosystem health, where appropriate.

Objectives

Maintain areas in all Fire Management Units (FMUs) that are currently in Fire Regime Condition Class 1 and manage to improve conditions in Class 2 and Class 3 areas.

Prevent, to the extent possible, the movement of wildfires from the wildlands into the Wildland Urban Interface (WUI) area, and out the WUI area into the wildlands.

Decisions

Conduct fire management planning, preparedness, prevention, suppression, fire use, restoration and rehabilitation, monitoring and education on an interagency basis with the involvement of cooperators and partners.

Identify the following three geographic areas as suitable for the use of wildland fire for resource benefit (see Map 2.2.3):

- South Sierra Fire Management Unit
- Domeland Fire Management Unit
- Portion of the Three Rivers Fire Management Unit protected by the National Park Service

Take suppression actions in the remainder of the Decision Area, commensurate with human and natural resource values at risk. Where possible, use existing natural and human-made fire control barriers, such as roads, trails, fuelbreaks and rock outcroppings rather than constructing new firelines.

Use a decision support process to analyze and document fire suppression strategies and tactics. Suppression actions may not necessarily be limited to those that result in the fewest number of acres burned, after consideration of firefighter and public safety, values at risk, resource protection needs and current and expected conditions at the time of the fire.

Use Minimum Impact Suppression Tactics (MIST) or other modified suppression techniques when suppressing fires in sensitive areas, including but not limited to: Wilderness, Wilderness Study Areas, lands managed for wilderness characteristics, culturally significant areas and ACECs. Fire managers will consult a resource advisor or archaeologist to ensure resource protection needs are addressed.

Assess all wildland fire areas for post-fire Emergency Stabilization and Rehabilitation (ESR) needs and submit ESR plans for funding. Implement approved activities in a timely manner.

Participate in local Fire Safe Councils or other community organizations to develop and implement collaborative fire mitigation and prevention strategies with communities at risk, and coordinate on the preparation of Community Wildfire Protection Plans.

Implement, as appropriate, the full range of wildland fire and fuels management practices, including prescribed fire, mechanical, chemical, biological, and cultural treatments that will support hazardous fuels reduction in coordination with vegetation and habitat management objectives and resource protection needs.

Resource Uses

2.3.11 Comprehensive Trail and Travel management

Goal

Improve access and recreational opportunities that complement the character of each geographic zone and the surrounding regions.

Objectives

Provide reasonable, safe, and environmentally sound access to visitors, local residents, licensed and permitted activities, and property owners through coordination and collaboration on travel systems with other agencies, state and local governments and interested stakeholders.

Reduce or halt proliferation of motorized and non-motorized routes.

Maintain an accurate route inventory for management purposes, and for the production of both general and recreation specific Transportation Management Network maps.

Manage OHV use to protect environmental resources, promote public safety, and provide OHV use opportunities where appropriate. Administratively designate the specific areas on public lands on which the use of OHVs is, and is not permitted.

Decisions

Delineate Travel Management Areas (TMAs) and associated modes of access and travel, as follows;

> Primitive TMA (approximately 135,800 acres): Primarily recreational traffic, access essentially cross country, with few designated and maintained trails. Area entirely restricted to non-motorized and non-mechanized modes of transport. Aircraft take-off and landing, except emergency, would be prohibited.
>
> Keyesville TMA (approximately 10,810 acres): Primarily recreational traffic, no area-wide mode of transport restrictions, motorized and mechanized use limited to designated routes for these uses. Over time specific routes may be redesignated to limit to specific modes of transport in order to maintain recreational opportunity and experience.
>
> Temblor TMA (approximately 20,860 acres): Primarily recreational traffic, no area-wide mode of transport restrictions, motorized and mechanized use limited to designated routes for these uses. Permits for motorized and mechanized competitive events would not be issued. Over

time specific routes may be redesignated to limit to specific modes of transport in order to maintain recreational opportunity and experience.

Intensive TMA (approximately 40,150 acres): Primarily industrial/commercial traffic, all travel on designated routes. No area-wide mode of transport restrictions. Implement a program of route reduction addressing route construction, use, and abandonment (including restoration) based on a balance between industrial needs and environmental concerns.

Extensive TMA (approximately 196,360 acres): General traffic from multiple uses, motorized and mechanized use limited to routes designated for these uses. No area-wide mode of transport restrictions.

Close areas where off-highway vehicles are causing or will cause unacceptable adverse effects upon soil, vegetation, wildlife, wildlife habitat, cultural resources, historical resources, threatened or endangered species, wilderness suitability, other authorized uses, or other resources to the type(s) of vehicle causing the adverse effect until the adverse effects are eliminated and measures implemented to prevent recurrence.

Define route designations and limitations as follows:

Motorized: a route allowing all modes of transport, motorized vehicles including, standard (street legal) passenger vehicles and OHVs (motorcycles, ATVs, jeeps, and specialized vehicles etc.).

Non-motorized: a route allowing modes of transport that are not motor driven (regardless of motor type e.g., gas, diesel, electric). Allowable modes of transport include, moving by foot, stock or pack animal, non-motorized boat (kayak, raft etc.), or mechanical vehicle such as a bicycle.

Non-mechanized: a route allowing only travel by natural means, such as by foot or horseback, except for approved, non-motorized access devices covered under the Americans with Disabilities Act.

Authorized: a route restricted to use by authorized user including, permittees, lessees and any other form of authorization from the BLM, for a specific route. Mode of travel restrictions may be applied in the specific BLM authorization.

Closed: a route prohibiting all types and modes of transport (including all public, authorized and administrative uses); Closed routes can be restored.

Apply the following criteria in route designation including the criteria defined in 43 CFR 8342.1;

- [Designated] trails shall be located in a manner to minimize impacts to physical resources (soils, watershed, vegetation, air, and other resources) and to prevent impairment of wilderness suitability;
- [Designated] trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention will be given to protect endangered or threatened species and their habitats; and

- [Designated] trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreation uses.
- [Designated] areas and trails shall not be located in officially designated wilderness areas or primitive areas. Areas and trails shall be located in natural areas only if the authorized officer determines that off-road vehicle use in such locations will not adversely affect their natural, aesthetic, scenic or other values for which the areas are established.

Consider, in addition to the previously identified criteria the following in all route designations (including re-designations);

- Environmental conditions, such as: soil stability, important wildlife habitat, special status species habitat, proximity to riparian areas or 303(d) streams, and visual resources.
- User conflicts, such as: motorized versus non-motorized and motorized or mechanized versus non-mechanized.
- Administrative purposes, such as: wildland fire suppression activities, safety, and resource management and permitted activities.
- Public purposes, such as: accessing public or private land, destinations for specific activities, and types of desired use (motorized, mechanized, non-motorized/ or non-mechanized).
- Route, mode-of-transport and size limitations, such as: > 50-inch wheel base (full size vehicles), < 50-inch wheel base (all-terrain vehicles), single-track vehicles (motorcycles or mountain bikes), and equestrian or pedestrian only trails.

Apply the following principles when making route designation modifications:

- Encourage public involvement in the travel management processes at all times;
- Coordinate route designations with individual stakeholders, user groups, tribes, agencies and local governments;
- Document and record route designation changes appropriately;
- Provide opportunity for public review and comment on route designation changes; and

Implement the following guidelines for management and maintenance of the travel network:

- Designate routes within newly acquired properties, rights-of-way, and easements at the time of, and in conjunction with the acquisition;
- Provide designations for newly constructed, modified, or realigned routes and routes missed by the 2009 Digital Inventory.
- Designate routes associated with new authorizations in conjunction with the normal application process and approval. As existing authorizations are renewed, their designation may be altered accordingly. These redesignations would be documented in the associated NEPA documentation, and amended in the route database and GIS. Information on new and redesignations would be available to the public;
- Address route redesignations as physical route conditions changes (erosion, washout etc.); and

Establish protocols to effectively monitor and gather data on route usage, route condition, and noncompliance with designations. These protocols would include:

- Identification of high traffic routes and areas;
- Annual monitoring of a random selection of routes to gauge effectiveness of travel management decisions and identify resource conflicts; and
- Annual review of a minimum of 10% of designated routes, and appropriate updates to the existing route inventory.

Key Implementation Decisions

Ensure existing use of public lands in the Temblor area does not result from inappropriate travel across private property through the acquisition of legal public access routes to the Temblor area.

2.3.12 Lands and Realty

Goal

Provide lands, interests in land, and authorizations for public and private uses while maintaining and improving resource values and public land administration.

Objectives

Meet other resource objectives through retention and/or land tenure adjustments.

Meet public, private, and Federal agency needs for realty-related land use authorizations and land withdrawals, including those authorizations necessary for wind, solar, biomass, and other forms of renewable energy development

Increase public access to public lands when consistent with other resource objectives.

2.3.12.1 Land Tenure

Decisions

Disposal of the following areas is not deemed to serve national interest; components of the NLCS; lands managed for wilderness characteristics; Land and Water Conservation Fund (LWCF) acquisitions; leased fluid mineral estate; mineral estate with significant fluid mineral potential[19]; and SRMAs.

Retain all lands and interest in lands in federal ownership unless disposal is deemed to serve national interest. Disposal is deemed to serve national interest if the following criteria are determined to be met through site specific investigation and, therefore, would be considered available for disposal:

- Disposal of lands would promote effective administration;
- Lands do not contain important cultural, biological, recreational, or other resource values, the loss of which cannot be adequately mitigated;
- Lands do not contribute to a regional conservation strategy or linkage;
- Lands do not have overriding public values or interests; and
- Lands do not represent substantial public investments.

[19] Retention of mineral estate does not preclude disposal of public lands surface.

Lands considered available for disposal that meet the following criteria as described in section 203(a) of FLPMA may be sold under direct, competitive, or modified sale:

- such tract because of its location or other characteristics is difficult and uneconomic to manage as part of the public lands, and is not suitable for management by another department or agency; or
- such tract was acquired for specific purpose and the tract is no longer required for that or any other purpose; or
- disposal of such tract will serve important public objectives, including but not limited to, expansion of communities and economic development, which cannot be achieved prudently or feasibly on land other than public land and which outweigh other public objectives and values, including, but not limited to, recreation and scenic values, which would be served by maintaining such tract in federal ownership.

Seek acquisition of lands and interest in lands meeting the following criteria from willing grantors;

- Demonstrate high cultural, biological or other natural resource values, important recreational opportunities or mineral potential;
- Located within specially designated areas (e.g., ACECs, Components of the NLCS, SRMAs);
- Provide access to existing parcels of public lands; and
- Promote effective administration.

2.3.12.2 Land Use Authorizations

Decisions

Continue the designation of existing and potential utility corridors delineated in the Western Regional Utility Corridor Study of 1993 as right-of-way corridors.

Identify Wilderness and lands within the PCNST corridor as exclusion areas for all types of rights-of-way.

Identify WSAs as rights-of-way avoidance areas in accordance with H 8550-1 (IMP).

Resolve unauthorized uses or occupancy to assure consistency with RMP goals and objectives.

Apply resource specific, Best Management Practices (such as BMPs for VRM, air, soil, water, biological resources, etc., see Appendix L) as terms and conditions to ROW authorizations to minimize environmental impacts.

Key Implementation Decisions

Commercial filming permits that are routine in nature (such as less that 14 days in duration and less than 50 people, use designated routes or previously disturbed areas, effect no present traditional cultural values) would be issued pursuant to FLPMA, where no surface disturbance is proposed, and where there will be minimal to no impacts on resources.

2.3.12.3 Withdrawals

Decisions

Continue the existing withdrawal from application under the non-mineral public land laws and from disposition under the homestead, desert land entry and script selection laws for the Caliente, Monache-Walker Pass and Temblor National Cooperative Land and Wildlife Management Areas (NCLWMAs) (183,620 acres)(Public Land Order 2460).

Continue the existing withdrawal from settlement, sale, location, or entry under the general land laws, including the United States mining laws, 30 U.S.C. Ch. 2 (1994), mineral leasing laws, 30 U.S.C. 181 *et seq.* (1994) and mineral material sale laws 30 U.S.C. 601-604 (1994), of Piedras Blancas Light Station (20 acres) (Public Land Order 7501).

Continue the existing withdrawal from all forms of appropriation under the public land laws, including the mining laws, 30 U.S.C. Ch. 2, but not from leasing under the mineral leasing laws, of the Piute Cypress Natural Area (760 acres) (Public Land Order 3510).

Recommend the amendment of the existing withdrawal from location under the General Mining Law, 30 U.S.C. Ch. 2, of the Keyesville (390 acres) and San Joaquin River Gorge (3,070 acres) areas to include the conditioning of entry to exclude such mining operations that require a Notice or Plan of Operations.

2.3.13 Livestock Grazing

Goal

Manage livestock grazing authorizations in a manner that meets or exceeds the Standards for Rangeland Health (Appendix F-1) and is consistent with other RMP goals.

Objective

Manage grazing authorizations to meet or exceed the Standards for Rangeland Health.

Decisions

Apply the appropriate Central California Guidelines for Livestock Grazing Management (Appendix F-1) to the applicable grazing authorizations as needed to meet the Standards for of Rangeland Health.

Manage livestock grazing on individual pastures of allotments or entire allotments which lie primarily within the Bakersfield FO Planning Area in conformance with this RMP's goals and objectives. Allow management of livestock grazing on individual pastures of allotments or entire allotments which lie primarily within other Field Office or BLM jurisdictional boundaries in conformance with the goals and objectives applicable to the managing office's land use plan (Maps LG-A, LG-B, LG-C, LG-D and LG-E, in separate map packet).

2.3.14 Minerals Management

Goal

Support development of mineral resources on public lands in an environmentally sound manner.

2.3.14.1 Leasable Minerals

Objective

Facilitate reasonable, economical, and environmentally sound exploration and development of leasable minerals while minimizing impacts to resources.

2.3.14.1.1 Fluid Minerals

Decisions

Identify 0 acres as open to fluid mineral leasing, subject to existing regulations and formal orders; and the terms and conditions of the standard lease form.

Identify 0 acres as open to fluid mineral leasing, subject to moderate constraints.

Identify 149,200 acres as closed to fluid mineral leasing:

- Non-discretionary closures – Wilderness, WSAs, Piedras Blancas ONA, and the PCNST
- Discretionary closures – some ACECs (Blue Ridge, Erskine Creek, Piute Cypress, and Point Sal) and Deer Spring area of ecological importance.

Identify 26,440 acres, in addition to that closed to all fluid mineral leasing as closed only to geothermal leasing:

- Discretionary closures – Kaweah ACEC.

Establish the major constraint "CSU - Protected Species" for the purpose of minimizing or eliminating adverse effects associated with fluid mineral development on federally proposed and listed species with the following stipulation language:

> *All or a portion of the lease occurs within the range of one or more plant or animal species that are either listed or proposed for listing as threatened or endangered by the USFWS. A list of such species will be provided at the time of leasing and updated as necessary over the term of the lease. To determine whether species on this list or their habitat are present, a preliminary environmental review will be conducted for all surface disturbing activities. Presence of habitat or species may result in the proposed action being moved, modified, or delayed to mitigate project effects. Offsite compensation that would satisfactorily offset the loss of habitat may be required. Prohibition of all surface disturbing activities on the lease will only occur as needed to avoid jeopardizing the continued existence of a listed or proposed species, or when the proposed action is inconsistent with the recovery needs of a species as identified in an approved USFWS Recovery Plan through consultation with USFWS. Furthermore, processing times for proposed actions may be delayed beyond established standards to accommodate species surveys, and consultation or conferencing with the USFWS. This stipulation shall not be waived; however, it may be modified or an exception may be granted as follows:*
>
> ***Exception:*** *The Authorized Officer may grant an exception if an environmental review determines the action as proposed or conditioned would have no effect on listed or proposed species.*

***Modification**: The Authorized Officer may modify this stipulation to reflect new information with regard to the range of listed or proposed species through the expansion or reduction of lands subject to this stipulation for a specific species.*

Establish the major constraint "CSU - Sensitive Species" for the purpose of minimizing or eliminating adverse effects associated with fluid mineral development on federal candidate, State listed and BLM sensitive species with the following stipulation language:

All or a portion of this lease is within the range of one or more plant or animal species that are either federal candidates for listing as threatened or endangered (federal candidate), are listed by the State of California as threatened or endangered (state listed), or are designated by the BLM as sensitive (BLM sensitive). A list of species will be provided at the time of leasing and updated as necessary over the term of the lease. To determine whether species on this list or their habitat are present, a preliminary environmental review will be conducted for all surface disturbing activities. Presence of habitat or species may result in the proposed action being moved more than 200 meters (656 feet) but not more than a quarter-mile or off of the lease and prohibition of activities during seasonal use period. Furthermore, processing times for proposed actions may be delayed beyond established standards to accommodate species surveys, and coordination with the USFWS and California Department of Fish and Game. This stipulation shall not be waived; however, it may be granted exception or modified as follows:

***Exception**: The Authorized Officer may grant an exception if an environmental review determines the action as proposed or conditioned would have no effect on federal candidate, state listed, and BLM sensitive species.*

***Modification**: The Authorized Officer may modify the stipulation to reflect new information with regard to federal candidate, state listed or BLM sensitive species lists. Furthermore, the authorized officer may modify the maximum distance that a potential location could be moved to extend farther than the stated quarter-mile to maintain the sensitive species protection goals.*

Establish the major constraint "CSU - Raptor" for the purpose of minimizing or eliminating adverse effects associated with fluid mineral development on sensitive raptor foraging areas, winter roosting areas, or nest sites with the following stipulation language:

All or a portion of this lease has been identified as an important raptor foraging, wintering, or nesting area. Any proposed surface disturbing activity will be reviewed to determine if the activity would affect raptor foraging, wintering, or nesting habitat. Determination of effects to raptor foraging, wintering, or nesting habitat may result in the proposed action being moved more than 200 meters (656 feet) but not more than a half-mile and prohibition of activities during seasonal use period. This stipulation may be granted exception, modified, or waived as follows:

***Exception:** The Authorized Officer may grant an exception if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.*

***Modification:** The Authorized Officer may modify the distance and other provisions of this stipulation based on new information and increasing or decreasing levels of the impacts anticipated from fluid mineral development.*

***Waiver**: The Authorized Officer may waive the stipulation should new information show the area no longer contains sensitive raptor habitat for foraging, winter roosting, or nesting.*

Establish the major constraint "CSU – Critical Habitat" for the purpose of minimizing or eliminating adverse effects associated with fluid mineral development on habitat designated as critical, or is proposed for designation as critical habitat by the USFWS with the following stipulation language:

All or a portion of this lease lies within an area that is designated as critical habitat, or is proposed for designation as critical habitat by the USFWS. A list of these areas affecting this lease will be provided at the time of leasing and will be updated as necessary over the term of the lease. Any proposed surface disturbing activity occurring on the affected portions of this lease will be reviewed to determine if the activity would affect designated or proposed critical habitat. Determination of effects to designated or proposed critical habitat may result in the proposed action being moved, modified, seasonally restricted, or delayed. Consultation or conference with the USFWS is required if designated or proposed critical habitat may be affected. Off-site compensation that would satisfactorily offset the loss of habitat may be required. Prohibition of all surface disturbing activities on the lease will only occur as needed to avoid destroying or adversely modifying critical habitat or proposed critical habitat, or when the proposed action is inconsistent with the recovery needs identified in an approved USFWS Recovery Plan based on consultation with USFWS. Furthermore, processing times for proposed actions may be delayed beyond established standards to accommodate species surveys, and consultation or conferencing with the USFWS. This stipulation shall not be waived; however, it may be granted exception or modified as follows:

***Exception:** The Authorized Officer may grant an exception if an environmental review determines the action as proposed or conditioned would have no effect on critical habitat or proposed critical habitat.*

***Modification**: The Authorized Officer may modify this stipulation to reflect new information with regard to the critical habitat or proposed critical habitat through the expansion or reduction of lands subject to this stipulation for a specific species.*

Establish the major constraint "CSU – Priority Species, Plant Communities and Habitats" for the purpose of minimizing or eliminating adverse effects associated with fluid mineral development on rare and/or endemic vegetation, plants, and communities, including riparian and serpentine endemics, with the following stipulation language:

All or a portion of the lease has been identified by the current RMP (i.e., ACECs and areas of ecological importance with this stipulation prescribed) as containing priority species, plant communities, or habitat that may be adversely affected by fluid mineral development. A list of affected parcels or portions of the lease will be provided at the time of leasing. To identify the possibility of adverse impact resulting from fluid mineral development, a preliminary environmental review will be conducted for all surface disturbing activities. Identification of adverse impacts may result in the proposed action being moved, modified, seasonally delayed, or prohibited from all or a portion of this lease. Furthermore, processing times for proposed actions may be delayed beyond established standards to accommodate species surveys. This stipulation shall not be waived, but may be granted exception or modified as follows:

Exception: *The Authorized Officer may grant an exception if an environmental review determines the action as proposed or conditioned would have no effect on priority species, plant communities, or habitats.*

Modification*: The Authorized Officer may modify the stipulation to reflect new information with regard to the presence of priority species, plant communities, or habitat through the expansion or reduction of lands subject to this stipulation.*

Establish the major constraint "CSU – Cultural Resources" for the purpose of minimizing or eliminating adverse effects associated with fluid mineral development on National Register-listed or eligible cultural properties with the following stipulation language:

All or a portion of the lease contains National Register-listed or potentially eligible cultural properties that may be adversely affected by fluid mineral development. A list of affected parcels or portions of the lease will be provided at the time of leasing. To identify the possibility of adverse impacts resulting from fluid mineral development, a preliminary cultural resource review/survey will be conducted for all surface disturbing activities. Identification of adverse impacts may result in the proposed action being moved or modified. Surface-disturbing activities would be prohibited on the portion of the lease where National Register-listed properties or properties potentially eligible for listing on the National Register occur. This stipulation may be modified, waived, or granted exception as follows:

Exception: *The Authorized Officer may grant an exception, with concurrence from the California State Historic Preservation Office and Native American tribes, if a subsequent formal eligibility evaluation indicates the cultural property is ineligible.*

Modification: *The Authorized Officer may modify the stipulation to reflect new information from formal eligibility evaluations for cultural properties through the expansion or reduction of land where surface disturbing activities would be prohibited.*

Waiver: *The Authorized Officer may grant a waiver to the stipulation should the results of formal eligibility evaluation determine all cultural properties ineligible for listing on the National Register.*

Establish the major constraint "CSU – Defense" for the purpose of minimizing or eliminating conflict between fluid mineral development and military base operations with the following stipulation language:

All or a portion of this lease contains federal mineral estate under the surface administration of the Department of Defense. Surface disturbing activities may be moved, modified, or prohibited at the discretion of the Base Commander(s) to ensure these activities do not interfere with military activity on the base and to ensure personnel safety. Furthermore, processing times for proposed actions may be delayed beyond established standards to accommodate review and coordination with the Base Commander(s). This stipulation shall not be modified or granted exception; however, it may be waived as follows:

Waiver: *The Authorized Officer may grant a waiver to this stipulation if the surface administration changes from the Department of Defense to another entity.*

Establish the major constraint "CSU – Existing Surface Use/Management" for the purpose of minimizing or eliminating conflict between fluid mineral development and existing surface use on both public lands and split estate overlying federal minerals, including risk to public health and safety, and social and economic impacts (noise, aesthetics, etc.) with the following stipulation language:

> *All or a portion of the lease contains federal mineral estate underlying surface with an established use or management that may be incompatible with fluid mineral development. A preliminary environmental review will be conducted for all surface disturbing activities to identify possible conflict between surface use and fluid mineral development. Surface disturbing activities may be moved, modified, or prohibited to accommodate the existing surface use should the Authorized Officer determine the incompatibility of these uses. Specifically, fluid mineral development shall not occur:*
>
> *(1) Closer to any development (e.g., public highway, institution, or place of public assembly) than allowed by the county/city regulation or statue applicable to the area in which the proposed action occurs (including those exceptions where closer spacing is allowed);*
>
> *(2) Within 200 feet of an occupied dwelling;*
>
> *(3) In a manner that significantly and adversely impacts natural and/or cultural resources of which the surface owner/administrator is charged with the management and protection; or*
>
> *(4) In a manner that significantly and adversely impacts existing recreation opportunity of which the surface owner/administrator is charged with the management and protection.*
>
> *Furthermore, processing times for proposed actions may be delayed beyond established standards to accommodate review and coordination with the surface owner/administrator. This stipulation shall not be waived, but may be granted exception or modified as follows:*
>
> ***Exception**: The Authorized Officer may grant an exception where a surface use agreement exists between the lessee and surface owner/administrator that allows for the proposed fluid mineral development. Furthermore, exception may be granted where the proposed action is deemed, following an environmental review, to have discountable or insignificant impacts on the existing surface use.*
>
> ***Modification**: The Authorized Officer may modify this stipulation to further restrict surface use for mineral development on a portion of or all the lease if a more stringent requirement with regard to the location of facilities is deemed necessary following an environmental review (e.g., greater than county/city restrictions on fluid mineral development).*

Establish the major constraint of "NSO – General" that prohibits surface disturbance on the entire lease for the purpose of minimizing or eliminating adverse effects on unique or significant natural and cultural resources that are incompatible with fluid mineral development with the following stipulation language:

> *All or a portion of this lease has been identified by the current RMP (e.g., ACECs and areas of ecological importance with this stipulation prescribed) as containing unique or significant natural*

or cultural values. No new surface disturbing activity is allowed on the lease. This stipulation may be granted exception, modified, or waived as follows:

Exception: *The Authorized Officer may grant an exception if, after coordination with appropriate agency (e.g., CDFG, SHPO, and USFWS), an environmental review determines the action as proposed or conditioned would not impair the values present because of temporary conditions.*

Modification: *The Authorized Officer may modify this stipulation to allow surface use on a portion or even all of the lease if an environmental review determines the action as proposed or conditioned would not impair the values present.*

Waiver: *The Authorized Officer may grant a waiver if an environmental review determines the values for which the NSO was applied no longer exist.*

These stipulations and decisions do not apply to geophysical exploration.

2.3.14.1.2 Solid (Non-Energy) Leasable Minerals

Objective

Provide opportunities for reasonable, economical, and environmentally sound exploration and development of Solid (Non-Energy) leasable minerals while minimizing impacts to resources.

Decisions

Identify all ACECs, lands managed for wilderness characteristics and suitable segments of WSRs as closed to Solid (Non-Energy) leasable mineral development.

2.3.14.2 Locatable Minerals

Objective

Facilitate reasonable, economical, and environmentally sound exploration and development of locatable minerals, while ensuring compatibility with other resources and uses including public health and safety.

Decisions

Determine and designate the ACECs (as described in ACEC management); suitable WSR corridors; lands managed for wilderness characteristics; Frog Pond and Deer Spring areas of ecological importance; Huasna Peak and South Lake Cultural Area; and developed campgrounds as unsuitable for Casual Use, Notice, and Plan of Operation levels mining operations (43 CFR 3809.10). Segregate these areas and recommend proposal for its withdrawal from appropriation and all forms of mineral entry under the General Mining Law.

2.3.14.3 Salable Minerals

Objectives

Provide salable minerals needed for community and economic purposes and facilitate their reasonable, economical, and environmentally sound development where available and compatible with resource objectives.

Decisions

Identify all ACECs, lands managed for wilderness characteristics and suitable segments of WSRs as closed to mineral material disposal, unless otherwise noted for administrative purposes only.

2.3.15 Recreation and Visitor Services

Goal

Support growing demand for recreation access to public lands and maintain a diversity of recreation opportunities promoting a multiple use philosophy.

Objective

Coordinate recreation management activities through an ecosystem-based management style that considers the landscape setting and patterns of land ownership to fully realize program goals.

Decisions

Designate 22,550 acres as the Atwell Island Extensive Recreation Management Area with the following recreation objective, management actions and allowable use decisions;

> Within the life of the RMP the Atwell Island ERMA will offer recreation opportunities in a front country setting (restored wetland from abandoned farmland), that focus on wildlife viewing and appreciation, through the non-motorized/non-mechanized exploration of the restored area(s).
>
> - Prohibit overnight camping and use except for; future specific areas identified for nocturnal visitation for wildlife viewing and stargazing.
> - Coordinate with CDFG to prohibit hunting except as allowed by Special Recreation Permit and/or specially organized hunt activity; furthermore prohibit the discharge of firearms for shooting sport activities;
> - Seasonally prohibit access to wetland areas, as needed to support restoration objectives.
> - Prohibit pets and other domesticated animals (not including authorized livestock grazing) from wetland areas.
> - Require all pets and domestic animals (not including authorized livestock grazing) to be on a leash. Special Recreation Permits may be issued for activities allowing off-leash activity, such as, dog trial events.

Designate 21,160 acres as the Case Mountain Extensive Recreation Management Area with the following recreation objective, management actions and allowable use decisions;

> Within the life of the RMP the Case Mountain ERMA will offer recreation opportunities in an unchanged middle country setting, which facilitates the visitors' freedom to participate in non-motorized activities that includes; mountain bicycling, camping and hunting.
>
> - Prohibit the discharge of firearms, except the legal taking of game species.
> - Acquire legal public access to suitable parking/staging area.
> - Develop suitable facilities to support use at parking/staging areas; establishing standard amenity fees for use of such facilities.

- Manage and maintain connected trails for mountain bicycling experiences.
- Limit available commercial Special Recreation Permits for guide and outfitting services to no more than five (5). Special Recreation Permits for competitive events would not be issued.

Designate 12,240 acres (Map 2.2.6) as the Keyesville Special Recreation Management Area, established with a "destination" market strategy for southern and central California, including the population centers of Bakersfield, Los Angeles, Riverside and San Bernardino, along with nearby rural communities. The SRMA is subdivided into four (4) Recreational Management Zones, each with the following recreation objectives, management actions and allowable use decisions (see Appendix H for a complete description of each RMZs targeted activities, experiences, benefits, and Natural Resource Recreation Settings);

Gold Fever RMZ: In visitor assessments, 65% of respondents who participated in targeted activities report the ability to realize the targeted experiences and benefits.

Targeted Activities: Cultural/historical discovery; trail use (motorized, mechanized and non-mechanized uses); and recreational gold prospecting.

Targeted Experiences: Savoring the total sensory experience of a natural landscape; escaping everyday responsibilities for awhile; feeling good about the way shared cultural heritage is being protected; learning about things; just knowing this attraction is in or near the community.

Targeted Benefits: *Personal:* Greater respect for shared cultural heritage; closer relationship with the natural world. *Community:* Greater understanding of the community's cultural identity; greater community involvement in recreation and other land use decisions. *Economic:* Improved local economic stability; maintenance of community's distinctive recreation tourism market. *Environmental:* Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails.

- Provide extensive opportunities for interpretation and education, establishing expanded amenity fees for some of these experiences.
- Establish a permit system and fee for recreational gold prospecting.
- Stabilize and maintain historic buildings and facilities to support public use.
- Establish visitor contact station to originate interpretive and educational activities from.
- Prohibit the discharge of firearms, except the legal taking of game species.

French Gulch RMZ: In visitor assessments, 50% of respondents who participated in targeted activities report the ability to realize the targeted experiences and benefits.

Targeted Activities: Trail use (motorized, mechanized and non-mechanized uses); dispersed camping; and recreational gold prospecting

Targeted Experiences: Developing skills and abilities; testing personal endurance; gaining a greater sense of self-confidence; telling others about the trip; enjoying risk-taking adventure; and discussing equipment with others.

Targeted Benefits: *Personal:* Improved mental well being; greater self-reliance; improved skills for outdoor enjoyment. *Community:* Heightened sense of satisfaction with the community. *Economic:* Improved local economic stability; maintenance of community's distinctive recreation tourism market. *Environmental:* Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails.

- Create a versatile trail system supporting a variety of uses, skill levels and experiences through collaboration with user groups and partners.
- Support competitive and commercial activities through the Special Recreation Permit process including maintaining the designated "Keyesville Classic" race course.
- Allow specialized vehicle recreation (motorcycle and mountain bicycle trials experiences) at a number of sites identified for the purpose.
- Establish a permit system and fee recreational gold prospecting.

The Dam RMZ: In visitor assessments, 50% of respondents who participated in targeted activities report the ability to realize the targeted experiences and benefits.

Targeted Activities: White-water boating; water-play; and fishing

Targeted Experiences: High adventure; personal challenge; self discovery; appreciation for the power of the natural world

Targeted Benefits: *Personal:* Increase self-respect; sense of achievement. *Community:* Bonding through shared experiences. *Economic:* Increased draw to destination; promotion of local business (outfitters); improved local economic stability; maintenance of community's distinctive recreation tourism market. *Environmental:* Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails.

- Manage Special Recreation Permitting for white-water boating in collaboration and through interagency agreement with the US Forest Service.
- Maintain existing white-water boating facilities at "Slippery Rock" and "BLM South" for use by both commercial and private boaters. Limit use of "Granite Launch" to authorized Special Recreation Permit holders. Prohibit use of the "Low-water Launch" by boaters upon completion of Granite Launch.
- Prohibit overnight camping and use of campfires.
- Prohibit the discharge of firearms and coordinate with CDFG to prohibit hunting.
- Establish a permit system and fee for recreational gold prospecting.
- Cables, ropes, or tethers shall not cross the river and must not create hazards for boaters or other river users.

Wallow Rock RMZ: In visitor assessments, 75% of respondents who participated in targeted activities report the ability to realize the targeted experiences and benefits.

Targeted Activities: Camping/Group Camping

Targeted Experiences: Enjoying the closeness of friends and family; relishing group affiliation and togetherness; enjoying meeting new people with similar interests

Targeted Benefits: *Personal:* Stronger ties with family and friends; restore mind from unwanted stress. *Community:* Greater interaction with visitors from different cultures. *Economic:* Improved local economic stability; maintenance of community's distinctive recreation tourism market. *Environmental:* Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails.

- Identify group and individual campsites within a developed campground, establishing *standard amenity* fees for use of facilities.
- Prohibit the discharge of firearms and coordinate with CDFG to prohibit hunting.
- Prohibit recreational gold prospecting.

Designate 9,250 acres (Map 2.2.7) as the San Joaquin River Gorge Special Recreation Management Area, established with a "community" market strategy for local communities, nearby rural areas and the population centers of Fresno-Clovis and Madera. The SRMA is subdivided into three (3) Recreational Management Zones, each with the following recreation objectives, management actions and allowable use decisions (see Appendix H for a complete description of each RMZs targeted activities, experiences, benefits, and Natural Resource Recreation Settings);

Pa'San RMZ: In visitor assessments, 50% of respondents who participated in targeted activities report the ability to realize the targeted experiences and benefits.

Targeted Activities: Hiking; mountain biking; and horseback riding

Targeted Experiences: Developing skills and abilities; testing personal endurance; savoring the total sensory experience of a natural landscape; escaping everyday responsibilities for awhile.

Targeted Benefits: *Personal:* Greater self-reliance; improved skills for outdoor enjoyment; closer relationship with the natural world. *Community:* Greater freedom from urban living. *Economic:* More positive contributions to local and regional economies. *Environmental:* Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails.

- Maintain, improve and expand a network of recreational trails.

Tahoot RMZ: In visitor assessments, 75% of respondents who participated in targeted activities report the ability to realize the targeted experiences and benefits.

Targeted Activities: Interpretation; environmental education; and camping

Targeted Experiences: Enjoying easy access to natural landscapes; enjoying access to hands-on environmental learning; enjoying needed physical exercise

Targeted Benefits: *Personal:* Better-informed and more responsible visitor; enhanced awareness and understanding of nature; increased appreciation of the area's cultural history. *Community:* Greater community valuation of its ethnic diversity; greater protection of the area's historic and archaeological sites. *Economic:* More positive contributions to local and regional

economies. *Environmental:* Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails.

- Maintain, improve and expand a network of recreational facilities including trails, campgrounds, parking areas, visitor contact location and outdoor classrooms; establishing standard and expanded amenity fees as appropriate.
- Ensure that management balances the preservation of natural and cultural resources with the opportunity to provide for public recreation, interpretation and education about the natural and cultural heritage of the area.
- Provide nature-based educational opportunities locally and regionally to include outdoor classrooms and interpretation of natural and cultural resources.

Wu Ki'Oh RMZ: In visitor assessments, 50% of respondents who participated in targeted activities report the ability to realize the targeted experiences and benefits.

Targeted Activities: Fishing; water play; gold panning; and kayaking

Targeted Experiences: Developing skills and abilities; testing personal endurance; enjoying risk-taking adventure; savoring the total sensory experience of a natural landscape; escaping everyday responsibilities for awhile.

Targeted Benefits: *Personal:* Greater self-reliance; improved skills for outdoor enjoyment; closer relationship with the natural world. *Community:* Greater freedom from urban living. *Economic:* More positive contributions to local and regional economies. *Environmental:* Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails.

- Restrict recreational gold prospecting activities to gold panning and sluicing only in addition to the following;
- All mining and prospecting activity must be confined to within 25 ft of the current water level.
- Prohibit disturbance of the river bank vegetation.
- Prohibit dry sluicing.

Limit dispersed camping within the Decision Area; unless otherwise noted, to 14 days within a 90 day period. After the 14th day, campers must move beyond a 25-mile radius of their previous camp. In addition:

- Prohibit dispersed camping within 100ft of any fresh water source
- Prohibit dispersed camping within 300ft of any suitable or designated WSR categorized as wild or scenic.
- Prohibit dispersed camping within 100ft of any suitable or designated WSR categorized as recreational.

Limit parking for dispersed camping (including cars, trucks, recreation vehicles, and trailers ["fifth wheels"]) to one vehicle width from the edge of the designated route.

Limit Specialized Vehicle Recreation to those areas, trails, and routes designated for that purpose within the Decision Area. Through a Special Recreation Permit, this activity could be allowed on a case-by-case basis, pending the NEPA process on each application.

Identify and support the establishment of recreation gold prospecting and mining areas within the Decision Area. Recreational mining and prospecting (casual use as defined in 43 CFR 3809.5) would be restricted by the following and may be further restricted in specific areas:

- Prohibit explosives, mercury, and other hazardous chemicals;
- Prohibited motorized equipment, including pumps (except dredges), chainsaws, and mechanized earth-moving equipment (such as backhoes and bulldozers);
- Prohibit any removal of material (dirt) for recreational mining and prospecting from site;
- Require suction dredging activities to be in compliance with California Department of Fish and Game regulations, including holding a valid permit for operation;
- Prohibit pumping of water from water courses for any purpose;
- Prohibit high-banking, hydraulic mining, and ground sluicing;
- Restrict sluices, riffle boxes, and dry washers to collecting surfaces of no greater than six square feet;
- Prohibit disturbance to trees and shrubs; including their root areas, as a result of recreational mining and prospecting;
- Rectify any surface disturbance upon completion of activities;
- Prohibit recreational mining and prospecting on or within 30ft of the centerline of designated routes and trails; and
- Require any subsurface archaeological, historical, or paleontological remains discovered during mining to be left intact; all work in the area should stop, and BLM should be notified immediately; work may resume on clearance by the BLM.

Key Implementation Decisions

Establish Special Rules (Appendix N) to implement and enforce allocations, management restrictions, and decisions within the RMP.

2.3.16 Interpretation and Environmental Education

Goal

Instill a public stewardship ethic of natural and cultural resources, and foster an appreciation of multiple-use public lands.

Establish an emotional connection to the landscape and its natural and cultural resources.

Objectives

Incorporate “Tread Lightly” and “Leave No Trace”, into BLM interpretive and education programs and visitor information media.

Provide interpretive and educational opportunities to allow all visitors to explore public lands and learn about the natural and cultural environment and reduce their impacts on biological and cultural resources.

Educate public land users and affected communities on the role of wildland fire in ecosystems, its risk to public health and safety, and the safe use of fire in the recreational environment.

Decisions

Identify San Joaquin River Gorge, Piedras Blancas Light Station, and Keyesville Historic Mining District as important cultural and historic resources available for interpretation and educational programs.

Identify Atwell Island and Piedras Blancas Light Station as important biological resource areas available for interpretation and educational programs.

Identify wildland fire as important resource requiring interpretation and education programs.

Identify SRMAs as suitable locations to conduct and promote "Take It Outside" and "Hands on the Land" interpretive and education programs.

Special Designations

2.3.17 Areas of Critical Environmental Concern

Goals

Ancient Lakeshores ACEC: Protect and preserve important cultural resources, natural systems and processes, and habitat for listed species.

Bitter Creek ACEC: Provide suitable habitat for federally listed species

Blue Ridge ACEC: Provide suitable habitat for federally listed species.

Compensation Lands ACEC: Provide suitable habitat for listed species, and protection for various natural systems.

Erskine Creek ACEC: Provide suitable habitat for sensitive species and protection for various natural processes and geologic formations.

Hopper Mountain ACEC: Provide suitable habitat for federally listed species.

Kaweah ACEC: Provide suitable habitat for sensitive species and protection for various natural processes, geologic formations, and cultural resources.

Kettleman Hills ACEC: Provide suitable habitat for federal and state listed species and protection for natural systems and processes.

Lokern-Buena Vista ACEC: Provide suitable habitat for federal and state listed species and protection for natural systems and processes.

Los Osos ACEC: Protect and preserve important cultural resources, natural systems and processes, and habitat for listed species.

Piute Cypress ACEC: Provide suitable habitat for sensitive species and protection for natural systems.

Pt. Sal ACEC: Protect and preserve important cultural resources, natural systems and processes, and habitat for listed species.

Objectives

Ancient Lakeshores ACEC: Protect significant cultural resources from degradation. Maintain rare alkali sink plant communities and ensure no net loss of associated habitat for state and federally listed plants and animals.

Bitter Creek ACEC: Provide suitable foraging and roosting habitat for California condor in support of the California Condor Recovery Program and Bitter Creek National Wildlife Refuge.

Blue Ridge ACEC: Provide suitable roosting habitat for California condor.

Compensation Lands ACEC: Manage habitat for the benefit the species identified in the applicable USFWS or CDFG biological opinion, agreement, or other document associated with the acquisition.

Erskine Creek ACEC: Protect the limestone caves, riparian areas, manage habitat to support populations of Kern County larkspur and Piute Mountain jewelflower.

Hopper Mountain ACEC: Provide suitable roosting and nesting habitat for California condor in support of the California Condor Recovery Program.

Kaweah ACEC: Protect the Case Mountain giant sequoia groves, limestone caves and other karst features, riparian areas, and cultural resources. Manage habitat to support populations of California spotted owl, Pacific fisher, and Kaweah monkey flower.

Kettleman Hills ACEC: Protect significant paleontological resources and provide habitat for the suite of San Joaquin Valley listed species including ecologically functioning valley upland habitats.

Lokern-Buena Vista ACEC: Provide habitat for the suite of San Joaquin Valley listed species including ecologically functioning valley upland habitats.

Los Osos ACEC: Protect significant cultural resources from damage and degradation. Maintain rare and endemic plant communities including coastal dune scrub, central maritime chaparral, and pygmy oak forest. Ensure no net loss of associated habitat for special status plants and animals.

Piute Cypress ACEC: Ensure no net loss of Piute Cypress groves and associated habitat for special status plants.

Pt. Sal ACEC: Preserve significant cultural resources and maintain habitat for sensitive and listed species and unique plant species assemblages.

Decisions

Ancient Lakeshores ACEC: Recommend for designation 1,985 acres of public lands; within a boundary of 2,041 acres (encompassing the existing Alkali Sink and Goose Lake ACECs with the expansion to include the Sand Ridge portion of Atwell Island), as the Ancient Lakeshores ACEC (Map 2.4.5) administered with the following special management:

- Identify as open to fluid mineral leasing subject to major constraints (NSO);
- Recommend proposal for withdrawal from appropriation and entry under the General Mining Law;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects (i.e., those producing electricity for the national grid);
- Identify as unavailable for livestock grazing, except for the Sand Ridge unit which is identified as available for livestock grazing but only for the purpose of vegetation management to meet resource objectives other than the production of livestock forage;
- Prohibit campfires and overnight camping;
- Prohibit cross country equestrian travel; and
- Prohibit the discharge of firearms, except the legal taking of game species.

Blue Ridge ACEC: Recommend to continue the designation of 3,177 acres of public land and ~~*1,572*~~ *2,104 acres* of federal mineral estate; within a boundary of ~~*9,250*~~ *11,051* acres[20], as the Blue Ridge ACEC (Map 2.4.5) administered with the following special management:

- Identify as closed to fluid mineral leasing;
- Recommend proposal for withdrawal from appropriation and entry under the General Mining Law;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects (i.e., those producing electricity for the national grid);
- Restrict public access through temporary emergency closure or in coordination with adjacent land managers, as needed for Condor protection; and
- Prohibit the discharge of firearms, except the legal taking of game species.

Erskine Creek ACEC: Recommend for designation 3,015 acres of public lands and 1,004 acres of federal mineral estate; within a boundary of 4,141 acres, as the Erskine Creek ACEC (Map 2.4.5) administered with the following special management:

- Identify as closed to fluid mineral leasing;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects (i.e., those producing electricity for the national grid);
- Identify as unavailable for livestock grazing;
- Prohibit the discharge of firearms, except the legal taking of game species; and
- Recommend proposal for withdrawal from appropriation and entry under the General Mining Law approximately 320 acres in E ½, SE ¼, Section 8; E ,SW ¼, W ½, SE ¼, Section 15; and NE ¼,

[20] This acreage change reflects a correction due to a mapping error in the Draft RMP/EIS.

NW ¼, NW ¼, NE ¼, Section 22, T. 27, S., R. 33 E., MDB&M. If additional caves are discovered within the ACEC, these would also be recommended for proposal for withdrawal from appropriation and entry under the General Mining Law.

2.3.18 Outstanding Natural Areas

Goal

Protect, conserve, and enhance, for the benefit and enjoyment of present and future generations, the Piedras Blancas Light Station Outstanding Natural Area for its unique and nationally important historical, natural, cultural, scientific, educational, scenic, and recreational values.

Objective

Reconstruct, preserve and interpret the Piedras Blancas Light Station to during the period of its greatest historic significance (1875 and 1940), while providing for resource protection and managed use by the visiting public.

Provide support for international research of coastal ecosystems surrounding the Piedras Blancas Light Station.

Protect and coordinate the interpretation of the important archaeological sites with the affected Native American communities.

Coordinate and collaborate management of the Piedras Blancas Light Station with California Department of Parks and Recreation, San Luis Obispo County, local communities, and other interested entities.

Decisions

The following features and structures would be restored or reconstructed to provide an accurate representation of what Piedras Blancas looked like in its early years:

- Lighthouse
- Fog Signal Building
- Fuel/Oil House
- Tank Storage Building
- Fuel and Storage Building
- Laundry
- Watchroom
- Keeper's Triplex
- Head Keeper's Residence
- Barn
- Historic Landscape

Close, prohibit, or otherwise make unavailable the Piedras Blancas Light Station to the following:

- All forms of entry, appropriation, or disposal under the public land laws;
- Operation of the mineral leasing and geothermal leasing laws and the mineral materials laws;
- Livestock grazing;
- Public access except for BLM tours, permits, and other specific authorizations;
- Equestrian use;
- Discharge of firearms and hunting; and
- Authorization of commercial communications transmission equipment.

Continue the withdrawal of the Piedras Blancas Light Station ONA from location, entry, and patent under the public land mining laws beyond the legislatively provided 20-year withdrawal to extend for the life of this RMP.

Manage the Piedras Blancas Outstanding Natural Area as VRM Class I, in accordance with its special designation, with special consideration of the importance of the cultural modifications and to restoring the historic lighthouse and facilities. This VRM Class I is adjusted to consider these cultural artifacts as an important facet of the visual landscape and to allow for the maintenance, repair, and continued restoration to preserve the outstanding visual landscape of the area.

Provide access to Native Americans for traditional cultural and religious purposes. The site may be closed to the general public to protect the privacy of traditional cultural and religious activities in such areas by the Native American religious community.

Acquire water supply conveyance rights on a corridor between the Light Station boundary and a nearby spring or water source and acquire an appropriative water right from the State of California for all water use.

Acquire access rights on a corridor between the Light Station boundary and the nearest public road. Add and administer as part of the Outstanding Natural Area any additional lands or interest in lands next to the Outstanding Natural Area acquired by the United States.

2.3.19 Back Country Byways

Goal

Where appropriate and feasible, highlight the spectacular nature of the western landscapes through education and interpretation along linear travel routes which provide recreational driving opportunities that allow for the experiences of solitude and isolation.

Objectives

Provide an appropriate level of driving opportunity commensurate with route conditions.

2.3.20 National Trails

Goal

Provide continued protection and support for national trails, to preserve, improve and restore the character for which they we designated.

Objectives

Coordinate and collaboration on the management of the PCNST to maintain its integrity, continue maintenance, and enforce allowable uses, while providing appropriate access and facilities for users and maintaining the scenic character and quality of the trail.

Provide for the ever-increasing outdoor recreation needs of an expanding population, promoting the preservation of, public access to, travel within, and enjoyment of the outdoor areas through the support of National Recreation Trails.

Decisions

Support and incorporate management of the PCNST Dove Springs and Cache Peak segments by the BLM Ridgecrest Field Office where the trail crosses into the Bakersfield Decision area.

Establish a 0.25-mile wide corridor along the PCNST (Owens Peak segment) to apply specific management incorporating and amended by the comprehensive PCNST Management Plan (Pacific Crest Trail Management Options Plan, BLM 1980), as follows:

- Close to fluid mineral and geothermal leasing;
- Close to the mineral material disposal;
- Designate as VRM Class I;
- Identify the corridor as a ROW exclusion area; and
- Identify the corridor as lands to be retained.

Continue designation and management of the Wu Ki' Oh Trail (formerly named the Squaw Leap Trail) as a National Recreation Trail.

2.3.21 Wild and Scenic Rivers

Goal

River segments suitable for inclusion in the National Wild and Scenic Rivers System (NWSRS) would be free-flowing in nature, meet water quality standards, and continue to possess outstandingly remarkable values (ORVs) that make them eligible.

Objectives

Determine suitable river segments for inclusion in the National Wild and Scenic Rivers System (NWSRS). Manage those suitable river segments so to maintain their free-flowing nature, water quality, ORVs, and tentative classification, pending congressional action or for the duration of the RMP.

Decisions

Establish a corridor extending 0.25 miles from each edge suitable river segment, in which the following interim protective management guidelines would apply:

- Approve no actions altering the free-flowing nature of the suitable segment through impoundments, diversions, channeling, or riprapping;
- Approve no actions that would measurably diminish the stream segment’s identified outstandingly remarkable value(s); and

- Approve no actions that would modify the setting or level of development of the suitable river segment to a degree that would change its identified classification.

2.3.22 Wilderness Study Areas

Goal

WSAs would continue to be suitable for future designation as wilderness until such time that congress either designates as wilderness or releases the area.

Objective

Manage WSAs in a manner that does not impair the suitability of the area for the future designation as wilderness until such time that Congress releases them from study status.

Decision

Manage WSAs in accordance with BLM Interim Management Policy for Lands under Wilderness Review (IMP) (BLM Handbook H-8550-1 [BLM 1995])

2.4 Alternative C

The following section describes management that would be established under Alternative C, presented by program area. Where program management is the same across all action alternatives, it is presented above under *Management Common to All Action Alternatives*. Total management decisions for each program are inclusive of the decisions in both the common to all and this section.

The goals for each resource are common to all and, therefore, are presented in that section above. Some objectives do vary within the individual alternatives those that do are described below under the *Objective* headings.

Resources

2.4.1 Air and Atmospheric Values

Management direction is common to Alternatives C, D and E.

2.4.2 Biological Resources

Decisions

Prohibit the release of un-retrieved nonnative animals, except for the use of approved biocontrol agents, authorized livestock, and the augmentation of naturalized species in accordance with a CDFG permit or plan.

Prohibit collection of dead and downed woody materials from public lands for any purpose, except where administratively approved.

Identify split estate with surface managed as compensation for biological resources as closed to fluid mineral leasing.

Identify the Compensation Lands ACEC as closed to fluid mineral leasing.

Recommend proposal for withdrawal from appropriation and entry under the General Mining Law federal mineral estate underlying compensation lands regardless of surface ownership.

Identify public lands with mineral estate adjacent to or within the boundary of the State of California's Chimineas Unit of the Carrizo Plain Ecological Reserve as closed to fluid mineral leasing.

Identify the following areas as areas of ecological importance with the specific management as described:

Conserved Lands: for protection and recovery of federally listed species on public lands identified as reserves or corridors by the USFWS and CDFG (see Conservation Strategy in Appendix B).

- Manage public lands within reserves or corridors as conserved land consistent with the direction established by the USFWS and CDFG through the Recovery Plan for Upland Species of the San Joaquin Valley and other pertinent recovery of conservation plans, subject to underlying statutory authority (FLPMA).

- Manage reserves to restrict surface disturbance on public lands in reserves to not exceed 10 percent of any 640-acre section, aliquot section, or aggregate of adjacent aliquot sections.
- Manage corridors to restrict surface disturbance on public lands in corridors to not exceed 25 percent of any 640-acre section, aliquot section, or aggregate of adjacent aliquot sections.
- Allow certain areas of high intensity oil and gas development within reserves and corridors to be identified and managed separately from the reserve and corridor system. These areas will not be subject to the 10 percent and 25 percent surface disturbance limit.
- Include certain areas outside the reserve and corridor system to be managed as corridors including the application of corridor disturbance restrictions.

Recommend the following areas as Areas of Critical Environmental Concern (ACECs) based on their significant biological resource values; Bitter Creek ACEC; Cypress Mountain ACEC; Cyrus Canyon ACEC; Irish Hills ACEC; Rusty Peak ACEC; Salinas River ACEC; Tierra Redonda ACEC; and Upper Cuyama Valley ACEC.

2.4.3 Caves and Karst Resource

Decisions

Granite Cave would be managed as part of the Granite Cave ACEC.

Designate Millerton Cave as significant cave, based on its important and significant cave resources, including geological formations, resources of known cultural importance, biotic resources, and the potential for resource-based recreation. This cave will be managed as Class III to fully protect the integrity of the area and its associated cave resources.

All caves within ACECs whose importance and significance speaks directly to the protection of known or potential cave and karst resources shall be determined significant, in accordance with 43 CFR 37.11(e). The ACECs whose designation relates to cave and karst Resources are Erskine Creek, Granite Cave, and Kaweah. Further investigation and study of these cave and karst resources may be required to assign management objectives and prescriptions. Interim management shall be as Class III to protect cave resources.

2.4.4 Cultural Resources

Management direction is common to Alternatives C, D and E.

2.4.5 Lands with Wilderness Characteristics

Decisions

Manage the following areas (17,890 acres as shown on Map 2.4.1) for the protection of wilderness characteristics: Bear Mountain, Big Pine Meadow, Chappell D Parcel, Cyrus Canyon Audubon Donation, Edgar Ranch West, Lamont Meadow Parcels, Patterson Bend, Public Proposal I (Spoor Canyon), Public Proposal II & III (Cuyama), Public Proposal IV (Santigo Creek), Public Proposal V (Bright Star Additions), and Roszewska Property.

Establish prescriptive management for the protection of wilderness characteristics as follows:

- Recommend proposal for withdrawal from mineral entry;
- Identify as closed to mineral leasing;
- Identify as closed to mineral material sales;
- Identify as Rights-of Way exclusion areas;
- Designate as OHV Closed area;
- Designate as VRM Class I;
- Livestock grazing and the activities and facilities that support a grazing program may be permitted to continue at the same level and degree after initial authorization;
- Prohibit new structures unrelated to preserving wilderness characteristics; and
- Retain in Federal ownership.

2.4.6 Paleontological Resources

Management direction is common to Alternatives C, D and E.

2.4.7 Soil Resources

Management direction is common to Alternatives C, D and E.

2.4.8 Visual Resources

Decisions

Designate VRM classes for the Decision area (Map 2.4.2) and summarized by the following;

- Class I: 163,110 acres
- Class II: 250,060 acres
- Class III: 475,560 acres
- Class IV: 261,030 acres

2.4.9 Water Resources

Management direction is common to Alternatives C, D and E.

2.4.10 Wildland Fire Ecology and Management

Management direction is common to Alternatives C, D and E.

Resource Uses

2.4.11 Comprehensive Trail and Travel management

Decisions

Designate in accordance with 43 CFR 8340.05(f), (g), and (h) the following OHV areas:

- Open: 0 acres
- Closed: 166,300 acres
- Limited: 237,780 acres

Key Implementation Decisions

Designate roads and/or trails as identified on *Draft RMP / Draft EIS* Travel Management Network Maps C/D 1-9 (BLM 2011a) summarized by the following mileages:

- Motorized: 656 miles
- Non-motorized: 39 miles
- Non-mechanized: 45 miles
- Authorized: 617 miles
- Closed: 580 miles

2.4.12 Lands and Realty

2.4.12.1 Land Tenure

Decisions

Determine the public lands (62,610 acres) and federal mineral estate (337,560 acres) shown on Map 2.4.3 as available for consideration of a disposal action (sale, exchange, or other means) in so much that these lands meet the "isolated, difficult or expensive to manage, or are needed for community expansion" disposal criteria contained in FLPMA Section 203(a). However, site-specific investigation to ascertain whether a specific parcel meets the disposal criteria outlined in this RMP would still be required prior to any disposal action being taken.

2.4.12.2 Land Use Authorizations

Decisions

Identify all ACECs, the Piedras Blancas ONA, and designated critical habitat as Right-of-way avoidance areas, except for rights-of-way related to utility scale renewable energy projects.

Identify the Piedras Blancas ONA, designated critical habitat, SRMAs, and VRM Class I and II areas as exclusion areas for utility scale renewable energy Rights-of-way.

Identify lands managed for wilderness characteristics, and Wild and Scenic River Corridors as Rights-of-way exclusion areas.

2.4.12.3 Withdrawals

Decisions

Recommend proposal for withdrawal all or certain types of mining operations under the mining laws 62,670 acres in 21 areas.

2.4.13 Livestock Grazing

Objective

Provide for livestock grazing opportunities on lands in the grazing decision area so as to enhance other resources while meeting RMP goals.

Decisions

Allocate 322,200 acres of public land as available for livestock grazing; of which 7,800 acres (Atwell Island) would be available only for the purpose of vegetation management objectives other than producing livestock forage. Allocate the remaining 72,700 acres as unavailable for livestock grazing, including riparian corridors of the San Joaquin River, North Fork of the Kaweah River, Caliente Creek, Canebrake Creek and the Deer Spring, Frog Pond and South Fork of the Kern River areas of ecological importance and Big Pine Meadow and Rosewska Meadow (Map LG-C, separate map packet).

Allocate newly acquired lands to match allocations given to the surrounding or adjacent lands, except where land is unsuitable for livestock grazing or the purpose for which the land was acquired is incompatible for livestock grazing including restrictions placed on future use through acquisition documents.

Apply the appropriate Bakersfield FO-specific livestock grazing management guidelines (Appendix F-2) to the applicable grazing authorizations within the grazing decision area as follows:

For Allotments within San Joaquin Valley listed species habitat;

- Mulch Readiness at 500 lbs/acre and 2" green growth, or 700 lbs/acre without green growth
- Mulch Threshold at 500 lbs/acre
- with Saltbush Scrub; Dec.1-May 31 season of use or meet form class, foliage density, and reproductive uniformity criteria

For Riparian areas in;

- Poor-Fair Condition; No grazing, use exclusionary fencing if needed.
- Good-Excellent Condition; No grazing, use exclusionary fencing if needed.

For known occupied habitats and/or known populations of;

- California jewelflower - No grazing unless in approved study or research show grazing to be beneficial.
- San Joaquin woolly threads - Apply the Central CA Guidelines for Livestock Grazing Management.

- Kern mallow - No grazing unless in approved study or research shows grazing to be beneficial.
- Hoover's woolly Star - Apply the Central CA Guidelines for Livestock Grazing Management.
- Kelso Creek monkeyflower - No grazing.
- Kern primrose sphinx moth - No grazing.
- Tehachapi slender salamander - No grazing.
- Other species that become listed - Prescription that takes into account specific species requirements.

Key Implementation Decisions

Authorize livestock grazing at the initial implementation levels (Appendix F-5). Based on existing authorizations, projected new authorizations and application of the central California and Bakersfield FO Specific livestock grazing management guidelines, forage authorized for livestock grazing within the Decision Area would total approximately 37,800 AUMs.

2.4.14 Minerals Management

2.4.14.1 Leasable Minerals

2.4.14.1.1 Fluid Minerals

Decisions

Identify approximately 966,160 acres as open to fluid mineral leasing, subject to major constraints (both CSU – Protected Species and CSU – Sensitive Species). Of this at least 8,400 acres would also be subject to a No Surface Occupancy stipulation. Additional CSU stipulations may be applied to all new leases in conjunction with the lease sale as determined appropriate and in conformance with the RMP.

Identify 46,850 acres as closed to fluid mineral leasing:

- Discretionary closures –ACECs (Bitter Creek and Compensation Lands), State of California's Chimineas Unit of the Carrizo Plain Ecological Reserve, federal minerals below lands managed as compensation, lands managed for wilderness characteristics, and suitable WSR corridors.

2.4.14.1.2 Solid (Non-Energy) Leasables

Decisions

Identify 0 acres as open to solid (non-energy mineral) leasing and development.

Deny applications for all new non-energy leasables.

2.4.14.2 Locatable Minerals

Decisions

Determine and designate the Keyesville SRMA as unsuitable for Casual Use, Notice, and Plan of Operation levels mining operations (43 CFR 3809.10). Segregate this area and recommend proposal for its withdrawal from appropriation and all forms of mineral entry under the General Mining Law.

2.4.14.3 Salable Minerals

Decisions

Identify 781,120 acres as open to mineral material disposal.

2.4.15 Recreation and Visitor Services

Decisions

Identify 191,680 acres as lands not managed within a Recreation Management Area. Close 10,965 of these acres (Map 3.24.1) to public access located within producing oilfields, with densities averaging higher than 20 wells per 40 acres (or 0.5 wells per acre).

Designate 123,450 acres (Map 2.4.4) as the Chimney Peak Extensive Recreation Management Area with the following recreation objective, management actions and allowable use decisions;

> Throughout the life of the RMP the Chimney Peak ERMA will offer recreation opportunities, in an unchanged backcountry/primitive physical recreation setting, that facilitate the visitors' freedom to participate in primitive unconfined recreation types through easy access to designated Wilderness including camping grounds, trailheads and trails.
>
> - Maintain and improve designated camping areas at Chimney Creek, Long-Valley and Walker Pass.

Designate 23,750 acres (Map 2.4.4) as the Temblor Extensive Recreation Management Area with the following established recreation objective and management actions and allowable use decisions;

> Within the life of the RMP the Temblor ERMA will offer recreation opportunities in a back country physical setting, that facilitate the visitor's ability to participate in a variety of dispersed recreation activities commensurate with other resource values.
>
> - Acquire legal public access.

2.4.16 Interpretation and Environmental Education

Management direction is common to Alternatives C, D and E.

Special Designations

2.4.17 Areas of Critical Environmental Concern

Goal

Chico Martinez ACEC: Protect cultural resources, geologic formations, and various natural processes.

Cypress Mountain ACEC: Protect and preserve natural systems and processes.

Cyrus Canyon ACEC: Provide suitable habitat for sensitive species and protection for natural systems.

Granite Cave ACEC: Protect cultural resources, geologic formations, and various natural processes.

Horse Canyon ACEC: Protect cultural resources and various natural processes.

Irish Hills ACEC: Protect and preserve natural systems and processes.

Rusty Peak ACEC: Protect and preserve natural systems and processes

Salinas River ACEC: Provide suitable habitat for special status species and protection for natural systems.

Tierra Redonda ACEC: Protect geologic formations, and various natural processes.

Upper Cuyama Valley ACEC: Provide suitable habitat for sensitive and listed species and protection for natural systems.

Objectives

Chico Martinez ACEC: Protect important cultural, paleontological resources, and the Zemorrian stage geologic formations. Provide habitat for the San Joaquin Suite of listed species.

Cypress Mountain ACEC: Preserve unique plant communities of serpentine chaparral and northern interior cypress forest dominated by Sargent cypress.

Cyrus Canyon ACEC: Protect sensitive biological resources including Kelso Creek monkeyflower and riparian values.

Granite Cave ACEC: Protect several sensitive species and significant cultural resources including those associated with traditional Native American values.

Horse Canyon ACEC: Protect significant cultural sites, paleontological resources, and traditional cultural properties associated with Native American values.

Irish Hills ACEC: Preserve unique plant communities including coastal live oak forest, southern bishop pine, and chaparral, including numerous rare and endemic plants.

Rusty Peak ACEC: Preserve unique plant communities of serpentine chaparral, coast live oak woodland, and valley and foothill grassland, including San Luis serpentine dudleya and other sensitive plant species.

Salinas River ACEC: Maintain rare plant communities including central coast live oak riparian forest, central coast arroyo willow riparian forest, sycamore alluvial woodland, and central coast riparian scrub. Ensure no net loss of associated habitat for special status plants and animals.

Tierra Redonda ACEC: Preserve significant paleontological resources, unique sand dune formation and communities of coast live oak woodland.

Upper Cuyama Valley ACEC: Protect habitat for blunt-nosed leopard lizard and its hybrid zone, Kern primrose sphinx moth, and California jewelflower. Maintain the link between the Sierra Madre and the San Emigdio Mountains.

Decisions

Bitter Creek ACEC: Recommend for designation 1,026 acres of public lands and 5,095 acres of federal mineral estate; within a boundary of 20,914 acres, as the Bitter Creek ACEC (Map 2.4.5) administered with the following special management:

- Identify as closed to fluid mineral leasing;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Prohibit public access to lands adjacent to USFWS surface (434 acres);
- Prohibit campfires and overnight camping; and
- Prohibit the discharge of firearms and coordinate with CDFG to prohibit hunting.

Chico Martinez ACEC: Recommend to continue the designation of 3,234 acres of public lands and 1,374 acres of federal mineral estate; within a boundary of 7,217 acres, as the Chico Martinez ACEC (Map 2.4.5) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to moderate constraints (CSU-Protected Species, CSU-Sensitive Species and CSU-Raptor stipulations);
- Identify as closed to mineral materials disposals, except for administrative purposes; and
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects.

Compensation Lands ACEC: Recommend for designation 283 acres of public lands and any future parcels of compensation land as the Compensation Lands ACEC (Map 2.4.5) administered with the following special management:

- Identify as closed to fluid mineral leasing;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Manage all existing and future parcels[21] of compensation land (including lands not specifically labeled as "compensation" within the parcel) as part of the Compensation Lands ACEC;
- Recommend proposal for withdrawal from appropriation and entry under the General Mining Law if necessary, otherwise lands and minerals would remain unopened to entry under the mining laws;
- Prohibit campfires and overnight camping;
- Prohibit cross country equestrian travel in areas that are not grazed by livestock;
- Prohibit the discharge of firearms, except the legal taking of game species; and
- Require all pets to be leashed (maximum eight-foot length) at all times. Require removal of pet fecal matter by owners or handlers.

Cypress Mountain ACEC: Recommend to continue the designation of 1,080 acres of public lands; within a boundary of 3,035 acres, as the Cypress Mountain ACEC (Map 2.4.5) administered with the following special management:

[21] Any future parcels of compensation land would be recommended for ACEC consideration if there is evidence that the lands meet the relevance and importance criteria. Upon completion of NEPA, public review, and a plan amendment, such lands would become part of the Compensation Lands ACEC and be provided special management attention.

- Identify as open for fluid mineral leasing, subject to moderate constraints (CSU- Priority Species, Plant Communities and Habitats stipulations);
- Recommend proposal for withdrawal from appropriation and entry under the General Mining Law;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify as unavailable for livestock grazing;
- Prohibit campfires and overnight camping;
- Prohibit cross county equestrian travel;
- Prohibit the discharge of firearms, except the legal taking of game species; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Cyrus Canyon ACEC: Recommend for designation 5,373 acres of public lands and 1 acre of federal mineral estate; within a boundary of 5,374 acres, as the Cyrus Canyon ACEC (Map 2.4.5) administered with the following special management:

- Identify as closed to mineral materials disposals, except for administrative purposes;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify as unavailable for livestock grazing;
- Prohibit campfires and overnight camping;
- Prohibit equestrian use;
- Prohibit the discharge of firearms, except the legal taking of game species;
- Prohibit the casual collection of plants or their parts without BLM authorization; and
- No new apiary permits will be authorized. The existing apiary permit will not be renewed on expiration.

Granite Cave ACEC: Recommend for designation 31 acres of public lands and 11 acres of federal mineral estate; within a boundary of 42 acres, as the Granite Cave ACEC (Map 2.4.5) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to major constraints (NSO);
- Recommend proposal for withdrawal from appropriation and entry under the General Mining Law;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects; and
- Prohibit public access.

Hopper Mountain ACEC: Recommend for designation 2,027 acres of public lands and 2,947 acres of federal mineral estate; within a boundary of 4,978 acres, as the Hopper Mountain ACEC (Map 2.4.5) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to major constraints (NSO).
- Recommend proposal for withdrawal from appropriation and entry under the General Mining Law;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;

- Identify portions as unavailable for livestock grazing;
- Restrict public access through temporary emergency closure or in coordination with adjacent land managers, as needed for Condor protection;
- Implement Best Management Practices to minimize impacts on condors from public use and oil field activities;
- Prohibit campfires and overnight camping; and
- Prohibit the discharge of firearms, except the legal taking of game species.

Horse Canyon ACEC: Recommend to continue the designation of 1,491 acres of public lands and 1,339 acres of federal mineral estate; within a boundary of 6,897 acres, as the Horse Canyon ACEC (Map 2.4.5) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to major constraints (NSO);
- Recommend proposal for withdrawal from appropriation and entry under the General Mining Law;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify as unavailable for livestock grazing;
- Prohibit the discharge of firearms, except the legal taking of game species; and
- Prohibit rock hounding, including the causal collection of fossils, mineral agates, and semi-precious stones.

Irish Hills ACEC: Recommend for designation 1,090 acres of public land and 564 acres of federal mineral estate; within a boundary of 1,814 acres, as the Irish Hills ACEC (Map 2.4.5) administered with the following special management:

- Identify as open to fluid mineral leasing, subject to moderate constraints (CSU - Priority Species, Plant Communities and Habitats stipulation);
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify as unavailable for livestock grazing;
- Prohibit campfires and overnight camping, except in any future developed recreation sites developed in partnership with adjacent land owners;
- Prohibit the discharge of firearms and coordinate with CDFG to prohibit hunting;
- Prohibit cross country equestrian travel; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Kaweah ACEC: Recommend for designation 26,891 acres of public lands and 150 acres of federal mineral estate; within a boundary of 33,559 acres (expanding the existing Case Mountain ACEC), as the Kaweah ACEC (Map 2.4.5) administered with the following special management:

- Identify as open for leasing oil and gas resources, subject to moderate constraints (CSU-Raptor stipulations);
- Identify as closed to geothermal leasing;
- Recommend proposal of cave and karst resources and the giant sequoia groves for withdrawal from appropriation and entry under the General Mining Law;

- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify the giant sequoia groves as unavailable for livestock grazing;
- Prohibit public access to recreation sites along the North Fork of the Kaweah River.
- Prohibit the discharge of firearms, except the legal taking of game species;
- Prohibit the casual collection of plants or their parts without BLM authorization; and
- Protect the giant sequoia groves and mixed conifer forest through implementation of fuels reduction techniques including prescribed burning and vegetation thinning, and removal of ladder fuels.

Kettleman Hills ACEC: Recommend to continue the designation of 6,726 acres of public lands and 6,969 acres of federal mineral estate; within a boundary of 28,874 acres (expanding the existing 9,794-acre ACEC), as the Kettleman Hills ACEC (Map 2.4.5) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to moderate constraints (CSU-Protected Species, CSU-Sensitive Species, and CSU-Raptor stipulations);
- Identify as closed to mineral materials disposals, except for administrative purposes;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects; and
- Prohibit campfires and overnight camping.

Lokern-Buena Vista ACEC: Recommend to continue the designation of 11,352 acres of public lands and 4,113 acres of federal mineral estate; within a boundary of 69,474 acres (combining the existing Lokern ACEC with the expansion to include the Buena Vista Hills and Valley), as the Lokern-Buena Vista ACEC (Map 2.4.5) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to major constraints (CSU-Protected Species and CSU-Sensitive Species stipulations;
- Identify as closed to mineral materials disposals, except for administrative purposes);
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Prohibit public access except for travel through the area on county or state roads;
- Designate as an OHV Closed area; and
- Prohibit discharge of firearms, except the legal taking of game species.

Los Osos ACEC: Recommend for designation 5 acres of public lands; within a boundary of 32 acres, as the Los Osos ACEC (Map 2.4.5) administered with the following special management:

- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify as unavailable for livestock grazing;
- Prohibit campfires and overnight camping;
- Designate as OHV Closed area;
- Prohibit mechanized use, equestrian use, and cross-country travel by pedestrians;
- Prohibit all pets;
- Prohibit the discharge of firearms, except the legal taking of game species; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Piute Cypress ACEC: Recommend to continue the designation of 2,305 acres of public lands and 212 acres of federal mineral estate; within a boundary of 2,544 acres (expanding the existing 1,104-acre ACEC), as the Piute Cypress ACEC (Map 2.4.5) administered with the following special management:

- Identify as closed to fluid mineral leasing;
- Identify as closed to mineral materials disposals, except for administrative purposes;
- Recommend proposal for withdrawal from appropriation and entry under the General Mining Law if the WSA is released by congress from study status;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Protect Piute cypress communities from livestock grazing if deemed necessary through appropriate studies;
- Prohibit overnight camping and campfires;
- Prohibit the discharge of firearms, except the legal taking of game species; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Pt. Sal ACEC: Recommend to continue the designation of 77 acres of public lands; within a boundary of 77 acres, as the Pt. Sal ACEC (Map 2.4.5) administered with the following special management:

- Identify as closed to fluid mineral leasing;
- Recommend proposal for withdrawal from appropriation and entry under the General Mining Law;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify as unavailable for livestock grazing;
- Prohibit public access; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Rusty Peak ACEC: Recommend for designation 786 acres of public lands and 1 acre of federal mineral estate; within a boundary of 789 acres, as the Rusty Peak ACEC (Map 2.4.5) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to moderate constraints (CSU- Priority Species, Plant Communities and Habitats stipulation);
- Identify as unavailable for livestock grazing; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Salinas River ACEC: Recommend to continue the designation of 946 acres of public lands and 658 acres of federal mineral estate; within a boundary of 2,383 acres, as the Salinas River ACEC (Map 2.4.5) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to moderate constraints (CSU- Priority Species, Plant Communities and Habitats stipulations);
- Recommend proposal of the riparian zone (approximately 10 acres) for withdrawal from appropriation and entry under the General Mining Law;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;

- Identify as unavailable for livestock grazing;
- Prohibit campfires and overnight camping;
- Prohibit cross country equestrian travel; and
- Prohibit the discharge of firearms, except the legal taking of game species.

Tierra Redonda ACEC: Recommend to continue the designation of 331 acres of public lands and 81 acres of federal mineral estate; within a boundary of 1,311 acres, as the Tierra Redonda ACEC (Map 2.4.5) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to major constraints (NSO);
- Recommend proposal for withdrawal from appropriation and entry under the General Mining Law;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify as unavailable for livestock grazing;
- Prohibit campfires and overnight camping;
- Designate as an OHV Closed area;
- Prohibit mechanized and equestrian use;
- Prohibit the discharge of firearms and coordinate with CDFG to prohibit hunting; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Upper Cuyama Valley ACEC: Recommend for designation 6,351 acres of public lands and 2,584 acres of federal mineral estate; within a boundary of 15,247 acres, as the Upper Cuyama Valley ACEC (Map 2.4.5) administered with the following special management:

- Identify as open for fluid mineral leasing subject to moderate constraints (CSU-Protected Species and CSU-Sensitive Species) stipulations;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify as unavailable for livestock grazing habitat containing California jewelflower or Kern primrose sphinx moth;
- Prohibit equestrian use in habitat containing California jewelflower or Kern primrose sphinx moth;
- Prohibit cross country equestrian travel outside of livestock grazing allotments; and

Prohibit the casual collection of plants or their parts without BLM authorization.

2.4.18 Outstanding Natural Areas

Management direction is common to Alternatives C, D and E.

2.4.19 Back Country Byways

Decision

Revoke the Back Country Byway designation of Canebrake and Long Valley Loop Roads.

2.4.20 National Trails

Management direction is common to Alternatives C, D and E.

2.4.21 Wild and Scenic Rivers

Decision

Determine as suitable and recommended for congressional designation in the NWSRS for the classifications identified the;

- Lower Kern River (Recreational);
- South Fork of the Kern River (Recreational);
- East Fork of the Kaweah (Recreational);
- Middle Fork of the Kaweah (Recreational);
- North Fork of the Kaweah (Scenic/Recreational);
- The Salinas River (Scenic);
- Chimney Creek (Wild/Recreational); and
- San Joaquin River Segment 1 (Wild/Scenic).

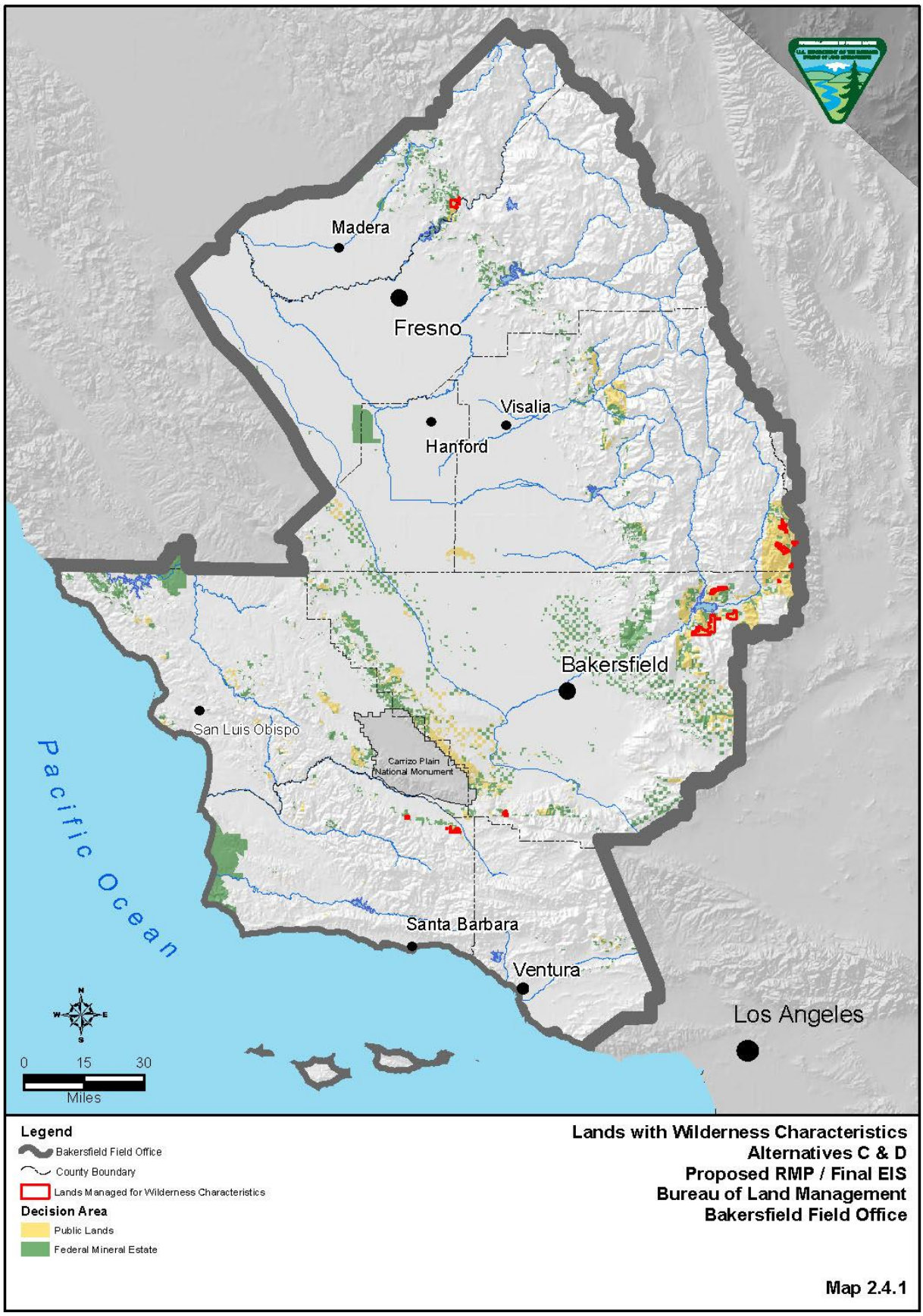
2.4.22 Wilderness Study Areas

Objective

Provide continued protection of wilderness character within WSAs if released by Congress from study status.

Decision

Manage as lands with wilderness characteristics all WSAs released from study status by congress, unless congressional release language provides other specific management guidance.


Madera
Fresno
Visalia
Hanford
Bakersfield
San Luis Obispo
Carrizo Plain National Monument
Pacific Ocean
Santa Barbara
Ventura
Los Angeles
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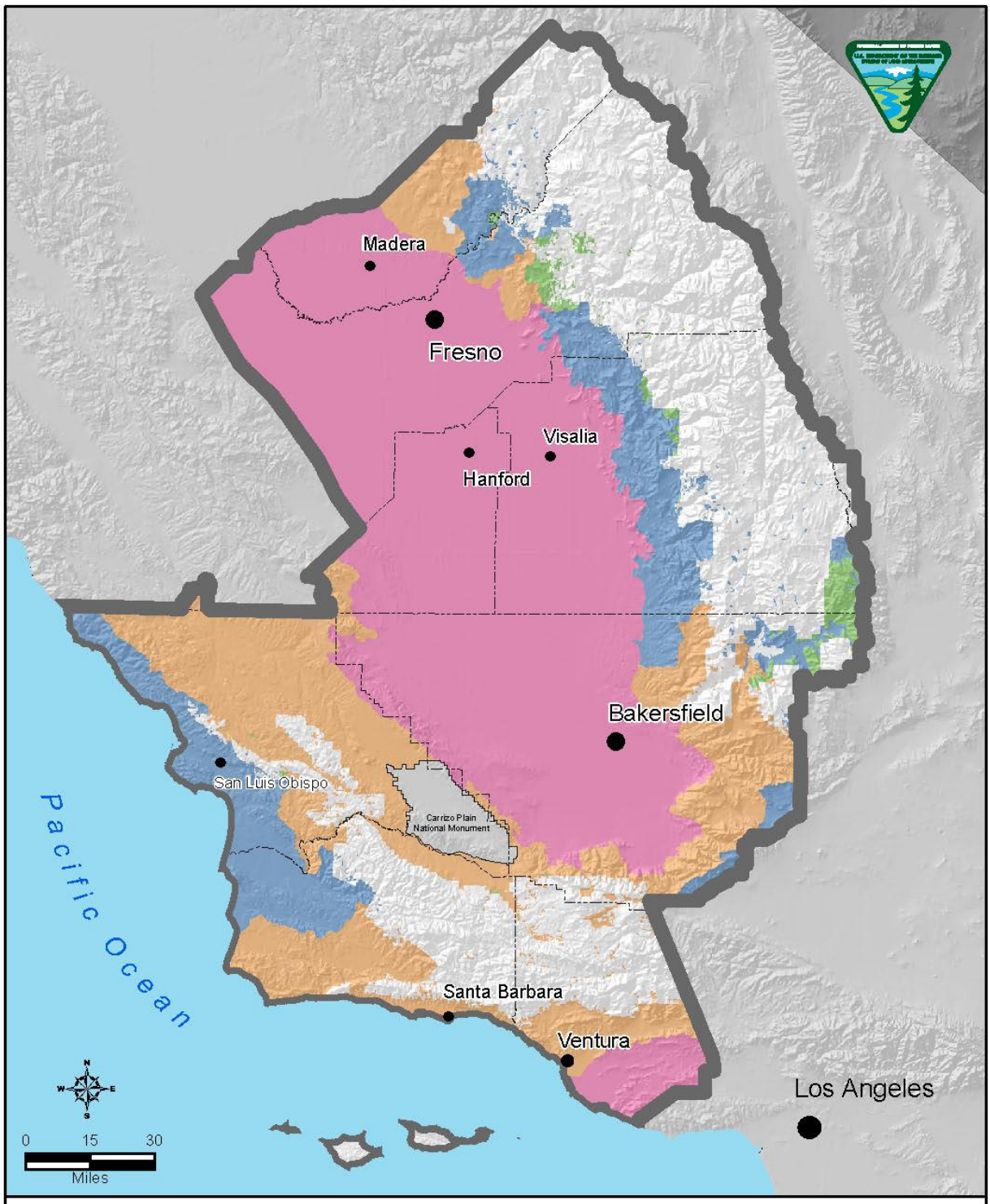
0
15
30
Miles
Legend
Bakersfield Field Office
County Boundary
Lands Managed for Wilderness Characteristics
Decision Area
Public Lands
Federal Mineral Estate
Lands with Wilderness Characteristics
Alternatives C & D
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 2.4.1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San Luis Obispo
Carrizo Plain National Monument
Pacific Ocean
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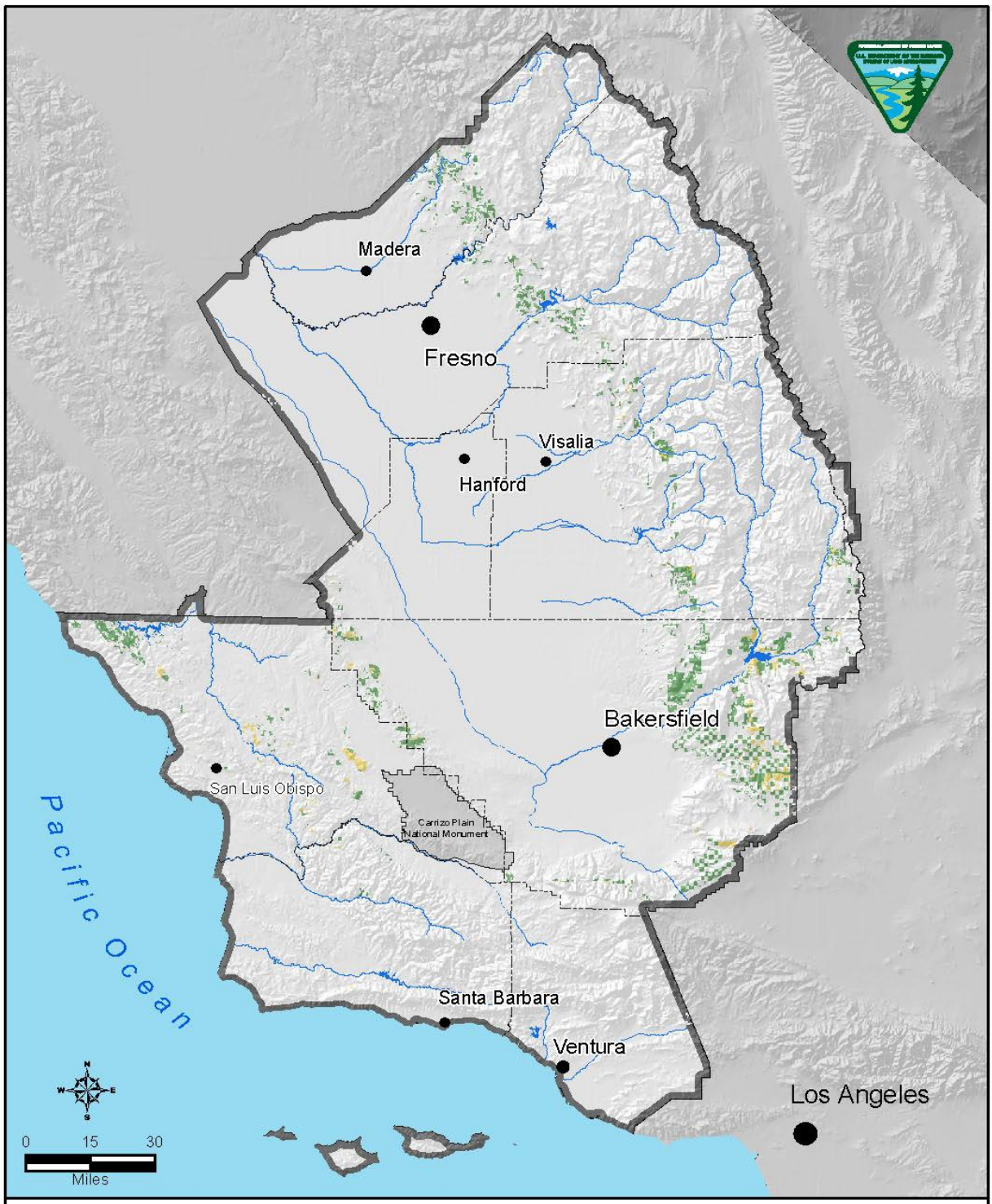
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
Visual Resource Management (VRM)
Class I
Class II
Class III
Class IV
Visual Resource Management Objectives
Alternatives C & D
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 2.4.2


Madera
Fresno
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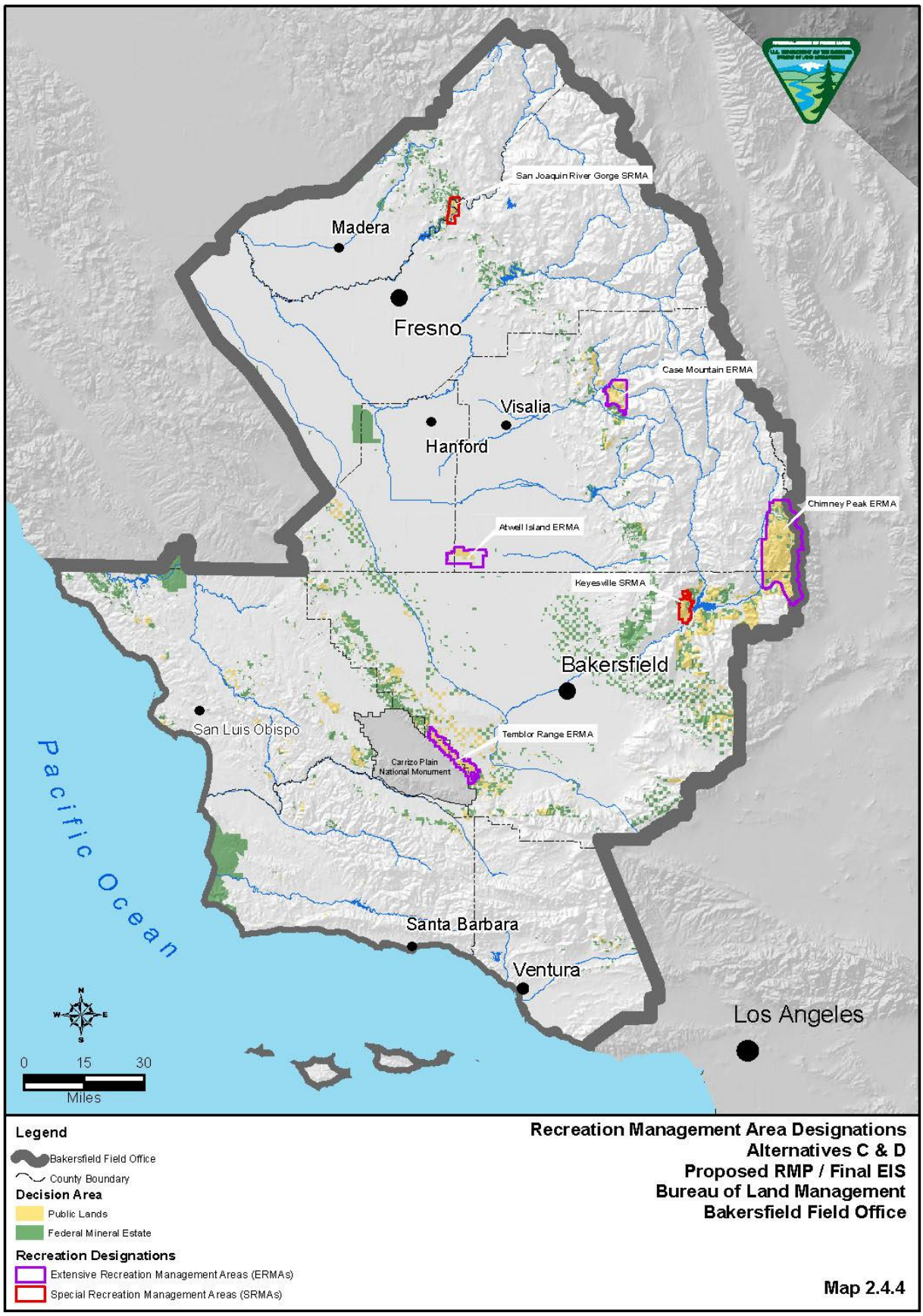
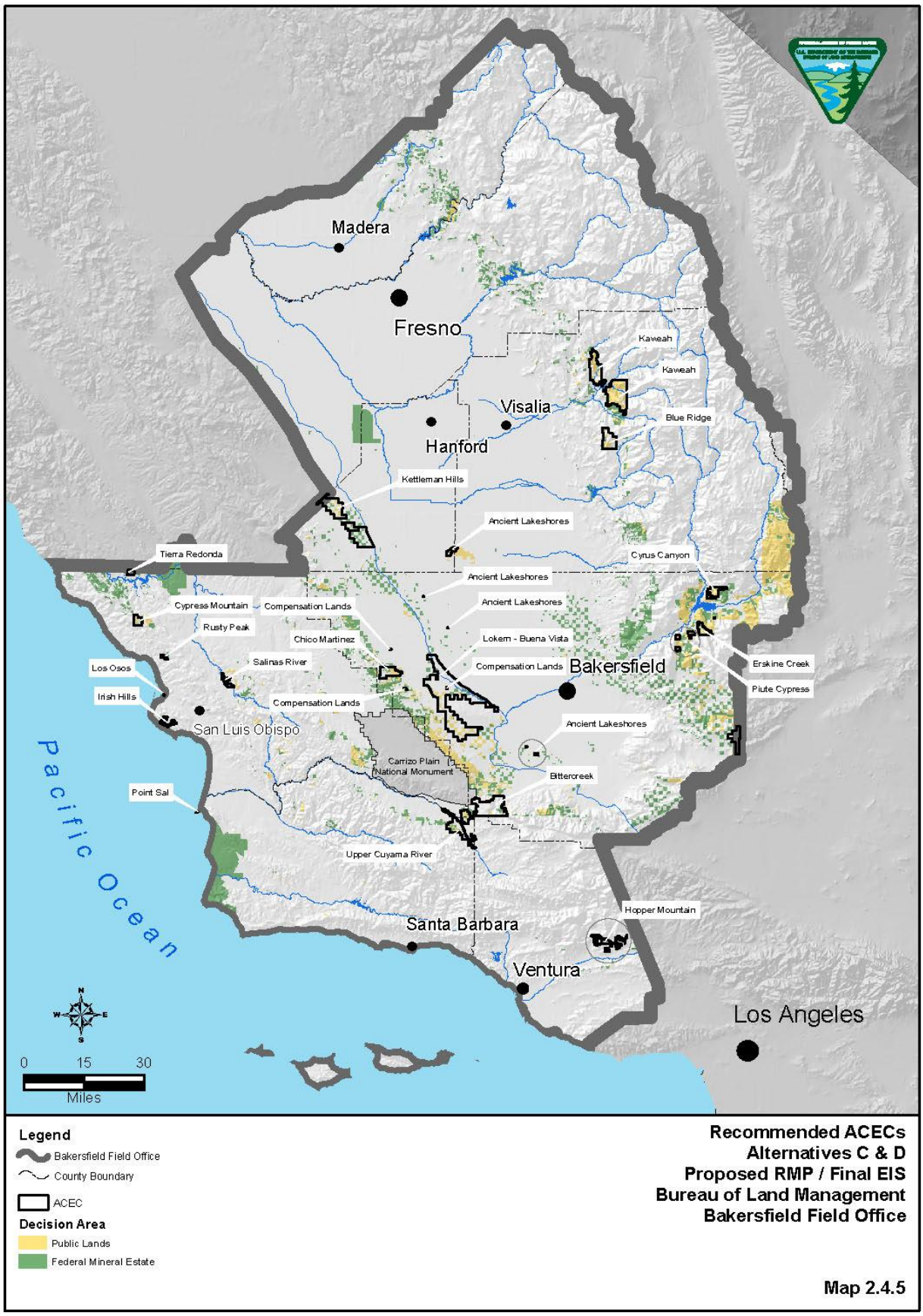
Bakersfield
San Luis Obispo
Carrizo Plain National Monument
Pacific Ocean
Santa Barbara
Ventura
Los Angeles
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
Lands Available for Consideration For Disposal
Public Lands
Federal Mineral Estate
Lands Available for Consideration For Disposal
Alternatives C & D
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 2.4.3


San Joaquin River Gorge SRMA
Madera
Fresno
Case Mountain ERMA
Visalia
Hanford
Chimney Peak ERMA
Atwell Island ERMA
Keyesville SRMA
Bakersfield
San Luis Obispo
Temblor Range ERMA
Carrizo Plain National Monument
Pacific Ocean
Santa Barbara
Ventura
Los Angeles
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
Decision Area
Public Lands
Federal Mineral Estate
Recreation Designations
Extensive Recreation Management Areas (ERMAs)
Special Recreation Management Areas (SRMAs)
Recreation Management Area Designations
Alternatives C & D
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 2.4.4


Madera
Fresno
Visalia
Hanford
Kaweah
Kaweah
Blue Ridge
Kettleman Hills
Ancient Lakeshores
Tierra Redonda
Cyrus Canyon
Ancient Lakeshores
Cypress Mountain
Compensation Lands
Ancient Lakeshores
Rusty Peak
Chico Martinez
Lokern - Buena Vista
Los Osos
Salinas River
Compensation Lands
Bakersfield
Erskine Creek
Irish Hills
Piute Cypress
Compensation Lands
San Luis Obispo
Ancient Lakeshores
Carrizo Plain National Monument
Bitter creek
Point Sal
Pacific Ocean
Upper Cuyama River
Hopper Mountain
Santa Barbara
Ventura
Los Angeles
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
ACEC
Decision Area
Public Lands
Federal Mineral Estate
Recommended ACECs
Alternatives C & D
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 2.4.5

2.5 Alternative D

The following section describes management that would be established under Alternative D, presented by program area. Where program management is the same across all action alternatives, it is presented above under *Management Common to All Action Alternatives*. Total management decisions for each program are inclusive of the decisions in both the common to all and this section.

The goals for each resource are common to all and, therefore, are presented in that section above. Some objectives do vary within the individual alternatives those that do are described below under the *Objective* headings.

Resources

2.5.1 Air and Atmospheric Values

Management direction is common to Alternatives C, D and E.

2.5.2 Biological Resources

Decisions

Prohibit the release of un-retrieved nonnative animals, except for the use of approved biocontrol agents, authorized livestock, and the augmentation of naturalized species in accordance with a CDFG permit or plan.

Prohibit collection of dead and downed woody materials from public lands for any purpose, except where administratively approved.

Identify split estate with surface managed as compensation for biological resources as closed to fluid mineral leasing.

Identify the Compensation Lands ACEC as closed to fluid mineral leasing.

Recommend proposal for withdrawal from appropriation and entry under the General Mining Law federal mineral estate underlying compensation lands regardless of surface ownership.

Identify public lands with mineral estate adjacent to or within the boundary of the State of California's Chimineas Unit of the Carrizo Plain Ecological Reserve as closed to fluid mineral leasing.

Identify the following areas as areas of ecological importance with the specific management as described:

Conserved Lands: for protection and recovery of federally listed species on public lands identified as reserves or corridors by the USFWS and CDFG (see Conservation Strategy in Appendix B).

- Manage public lands within reserves or corridors as conserved land consistent with the direction established by the USFWS and CDFG through the Recovery Plan for Upland Species of the San Joaquin Valley and other pertinent recovery of conservation plans, subject to underlying statutory authority (FLPMA).

- Manage reserves to restrict surface disturbance on public lands in reserves to not exceed 10 percent of any 640-acre section, aliquot section, or aggregate of adjacent aliquot sections.
- Manage corridors to restrict surface disturbance on public lands in corridors to not exceed 25 percent of any 640-acre section, aliquot section, or aggregate of adjacent aliquot sections.
- Allow certain areas of high intensity oil and gas development within reserves and corridors to be identified and managed separately from the reserve and corridor system. These areas will not be subject to the 10 percent and 25 percent surface disturbance limit.
- Include certain areas outside the reserve and corridor system to be managed as corridors including the application of corridor disturbance restrictions.

Recommend the following areas as Areas of Critical Environmental Concern (ACECs) based on their significant biological resource values; Bitter Creek ACEC; Cypress Mountain ACEC; Cyrus Canyon ACEC; Irish Hills ACEC; Rusty Peak ACEC; Salinas River ACEC; Tierra Redonda ACEC; and Upper Cuyama Valley ACEC.

2.5.3 Caves and Karst Resource

Decisions

Granite Cave would be managed as part of the Granite Cave ACEC.

Designate Millerton Cave as significant cave, based on its important and significant cave resources, including geological formations, resources of known cultural importance, biotic resources, and the potential for resource-based recreation. This cave will be managed as Class III to fully protect the integrity of the area and its associated cave resources.

All caves within ACECs whose importance and significance speaks directly to the protection of known or potential cave and karst resources shall be determined significant, in accordance with 43 CFR 37.11(e). The ACECs whose designation relates to cave and karst Resources are Erskine Creek, Granite Cave, and Kaweah. Further investigation and study of these cave and karst resources may be required to assign management objectives and prescriptions. Interim management shall be as Class III to protect cave resources.

2.5.4 Cultural Resources

Management direction is common to Alternatives C, D and E.

2.5.5 Lands with Wilderness Characteristics

Decisions

Manage the following areas (17,890 acres as shown on Map 2.4.1) for the protection of wilderness characteristics: Bear Mountain, Big Pine Meadow, Chappell D Parcel, Cyrus Canyon Audubon Donation, Edgar Ranch West, Lamont Meadow Parcels, Patterson Bend, Public Proposal I (Spoor Canyon), Public Proposal II & III (Cuyama), Public Proposal IV (Santigo Creek), Public Proposal V (Bright Star Additions), and Roszewska Property.

Establish prescriptive management for the protection of wilderness characteristics as follows:

- Recommend proposal for withdrawal from mineral entry;
- Identify as closed to mineral leasing;
- Identify as closed to mineral material sales;
- Identify as Rights-of Way exclusion areas;
- Designate as OHV Closed area;
- Designate as VRM Class I;
- Prohibit new structures unrelated to preserving wilderness characteristics; and
- Retain in Federal ownership.

2.5.6 Paleontological Resources

Management direction is common to Alternatives C, D and E.

2.5.7 Soil Resources

Management direction is common to Alternatives C, D and E.

2.5.8 Visual Resources

Decisions

Designate VRM classes for the Decision Area (Map 2.4.2, above) and summarized by the following;

- Class I: 163,110 acres
- Class II: 250,060 acres
- Class III: 475,560 acres
- Class IV: 261,030 acres

2.5.9 Water Resources

Management direction is common to Alternatives C, D and E.

2.5.10 Wildland Fire Ecology and Management

Management direction is common to Alternatives C, D and E.

Resource Uses

2.5.11 Comprehensive Trail and Travel management

Decisions

Designate in accordance with 43 CFR 8340.05(f), (g), and (h) the following OHV areas:

- Open: 0 acres
- Closed: 166,300 acres

- Limited: 237,780 acres

Key Implementation Decisions

Designate roads and/or trails as identified on *Draft RMP / Draft EIS* Travel Management Network Maps C/D 1-9 (BLM 2011a), summarized by the following mileages:

- Motorized: 656 miles
- Non-motorized: 39 miles
- Non-mechanized: 45 miles
- Authorized: 617 miles
- Closed: 580 miles

2.5.12 Lands and Realty

2.5.12.1 Land Tenure

Decisions

Determine the public lands (62,610 acres) and federal mineral estate (337,560 acres) shown on Map 2.4.3 as available for consideration of a disposal action (sale, exchange, or other means) in so much that these lands meet the "isolated, difficult or expensive to manage, or are needed for community expansion" disposal criteria contained in FLPMA Section 203(a). However, site-specific investigation to ascertain whether a specific parcel meets the disposal criteria outlined in this RMP would still be required prior to any disposal action being taken.

2.5.12.2 Land Use Authorizations

Decisions

Identify all ACECs, the Piedras Blancas ONA, and designated critical habitat as Right-of-way avoidance areas, except for rights-of-way related to utility scale renewable energy projects.

Identify the Piedras Blancas ONA, designated critical habitat, SRMAs, and VRM Class I and II areas as exclusion areas for utility scale renewable energy Rights-of-way.

Lands managed for wilderness characteristics and suitable Wild and Scenic River Corridors are identified as Right-of-way exclusion areas.

2.5.12.3 Withdrawals

Decisions

Recommend proposal for withdrawal all or certain types of mining operations under the mining laws 62,670 acres in 21 areas.

2.5.13 Livestock Grazing

Objective
Eliminate livestock grazing on lands in the grazing decision area for the life of the plan.

Decisions
Allocate 0 acres of public land as Available for livestock grazing and 402,800 acres of land as unavailable for livestock grazing, as shown on Map LG-D, in separate map packet.

Allocate newly acquired lands as unavailable for livestock grazing.

Key Implementation Decisions
Initiate the process (43 CFR 4110.4-2(b) and 43 USC 1712 (e)) to terminate existing grazing permits/leases for the life of the plan. Forage available for livestock grazing within the Decision Area managed under other RMPs would total 900 AUMs (Appendix F-5).

2.5.14 Minerals Management

2.5.14.1 Leasable Minerals

2.5.14.1.1 Fluid Minerals

Decisions
Identify approximately 966,160 acres as open to fluid mineral leasing, subject to major constraints (both CSU – Protected Species and CSU – Sensitive Species). Of this at least 8,400 acres would also be subject to a No Surface Occupancy stipulation. Additional CSU stipulations may be applied to all new leases in conjunction with the lease sale as determined appropriate and in conformance with the RMP.

Identify 46,850 acres as closed to fluid mineral leasing:

- Discretionary closures –ACECs (Bitter Creek and Compensation Lands), State of California's Chimineas Unit of the Carrizo Plain Ecological Reserve, federal minerals below lands managed as compensation, lands managed for wilderness characteristics, and suitable WSR corridors.

2.5.14.1.2 Solid (Non-Energy) Leasables

Decisions
Identify 0 acres as open to solid (non-energy) mineral leasing and development.

Deny applications for all new non-energy leasables.

2.5.14.2 Locatable Minerals

Decisions
Determine and designate the Keyesville SRMA as unsuitable for Casual Use, Notice, and Plan of Operation levels mining operations (43 CFR 3809.10). Segregate this area and recommend proposal for its withdrawal from appropriation and all forms of mineral entry under the General Mining Law.

2.5.14.3 Salable Minerals

Decisions

Identify 781,120 acres as open to mineral material disposal.

2.5.15 Recreation and Visitor Services

Decisions

Identify 191,680 acres as lands not managed within a Recreation Management Area. Close 10,965 of these acres (Map 3.24.1) to public access located within producing oilfields, with densities averaging higher than 20 wells per 40 acres (or 0.5 wells per acre).

Designate 123,450 acres (Map 2.4.4) as the Chimney Peak Extensive Recreation Management Area with the following recreation objective, management actions and allowable use decisions;

> Throughout the life of the RMP the Chimney Peak ERMA will offer recreation opportunities, in an unchanged backcountry/primitive physical recreation setting, that facilitate the visitors' freedom to participate in primitive unconfined recreation types through easy access to designated Wilderness including camping grounds, trailheads and trails.
>
> - Maintain and improve designated camping areas at Chimney Creek, Long-Valley and Walker Pass.

Designate 23,750 acres as the Temblor Extensive Recreation Management Area(Map 2.4.4) with the following established recreation objective and management actions and allowable use decisions;

> Within the life of the RMP the Temblor ERMA will offer recreation opportunities in a back country physical setting, that facilitate the visitor's ability to participate in a variety of dispersed recreation activities commensurate with other resource values.
>
> - Acquire legal public access.

2.5.16 Interpretation and Environmental Education

Management direction is common to Alternatives C, D and E.

Special Designations

2.5.17 Areas of Critical Environmental Concern

Goal

Chico Martinez ACEC: Protect cultural resources, geologic formations, and various natural processes.

Cypress Mountain ACEC: Protect and preserve natural systems and processes.

Cyrus Canyon ACEC: Provide suitable habitat for sensitive species and protection for natural systems.

Granite Cave ACEC: Protect cultural resources, geologic formations, and various natural processes.

Horse Canyon ACEC: Protect cultural resources and various natural processes.

Irish Hills ACEC: Protect and preserve natural systems and processes.

Rusty Peak ACEC: Protect and preserve natural systems and processes

Salinas River ACEC: Provide suitable habitat for special status species and protection for natural systems.

Tierra Redonda ACEC: Protect geologic formations, and various natural processes.

Upper Cuyama Valley ACEC: Provide suitable habitat for sensitive and listed species and protection for natural systems.

Objectives

Chico Martinez ACEC: Protect important cultural, paleontological resources, and the Zemorrian stage geologic formations. Provide habitat for the San Joaquin Suite of listed species.

Cypress Mountain ACEC: Preserve unique plant communities of serpentine chaparral and northern interior cypress forest dominated by Sargent cypress.

Cyrus Canyon ACEC: Protect sensitive biological resources including Kelso Creek monkeyflower and riparian values.

Granite Cave ACEC: Protect several sensitive species and significant cultural resources including those associated with traditional Native American values.

Horse Canyon ACEC: Protect significant cultural sites, paleontological resources, and traditional cultural properties associated with Native American values.

Irish Hills ACEC: Preserve unique plant communities including coastal live oak forest, southern bishop pine, and chaparral, including numerous rare and endemic plants.

Rusty Peak ACEC: Preserve unique plant communities of serpentine chaparral, coast live oak woodland, and valley and foothill grassland, including San Luis serpentine dudleya and other sensitive plant species.

Salinas River ACEC: Maintain rare plant communities including central coast live oak riparian forest, central coast arroyo willow riparian forest, sycamore alluvial woodland, and central coast riparian scrub. Ensure no net loss of associated habitat for special status plants and animals.

Tierra Redonda ACEC: Preserve significant paleontological resources, unique sand dune formation and communities of coast live oak woodland.

Upper Cuyama Valley ACEC: Protect habitat for blunt-nosed leopard lizard and its hybrid zone, Kern primrose sphinx moth, and California jewelflower. Maintain the link between the Sierra Madre and the San Emigdio Mountains.

Decisions

Bitter Creek ACEC: Recommend for designation 1,026 acres of public lands and 5,095 acres of federal mineral estate; within a boundary of 20,914 acres, as the Bitter Creek ACEC (Map 2.4.5) administered with the following special management:

- Identify as closed to fluid mineral leasing;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Prohibit public access to lands adjacent to USFWS surface (434 acres);
- Prohibit campfires and overnight camping; and
- Prohibit the discharge of firearms and coordinate with CDFG to prohibit hunting.

Chico Martinez ACEC: Recommend to continue the designation of 3,234 acres of public lands and 1,374 acres of federal mineral estate; within a boundary of 7,217 acres, as the Chico Martinez ACEC (Map 2.4.5) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to moderate constraints (CSU-Protected Species, CSU-Sensitive Species and CSU-Raptor stipulations);
- Identify as closed to mineral materials disposals, except for administrative purposes; and
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects.

Compensation Lands ACEC: Recommend for designation 283 acres of public lands and any future parcels of compensation land as the Compensation Lands ACEC (Map 2.4.5) administered with the following special management:

- Identify as closed to fluid mineral leasing;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Manage all existing and future parcels[22] of compensation land (including lands not specifically labeled as "compensation" within the parcel) as part of the Compensation Lands ACEC;
- Recommend proposal for withdrawal from appropriation and entry under the General Mining Law if necessary, otherwise lands and minerals would remain unopened to entry under the mining laws;
- Prohibit campfires and overnight camping;
- Prohibit cross country equestrian travel in areas that are not grazed by livestock;
- Prohibit the discharge of firearms, except the legal taking of game species; and
- Require all pets to be leashed (maximum eight-foot length) at all times. Require removal of pet fecal matter by owners or handlers.

Cypress Mountain ACEC: Recommend to continue the designation of 1,080 acres of public lands; within a boundary of 3,035 acres, as the Cypress Mountain ACEC (Map 2.4.5) administered with the following special management:

[22] Any future parcels of compensation land would be recommended for ACEC consideration if there is evidence that the lands meet the relevance and importance criteria. Upon completion of NEPA, public review, and a plan amendment, such lands would become part of the Compensation Lands ACEC and be provided special management attention.

- Identify as open for fluid mineral leasing, subject to moderate constraints (CSU- Priority Species, Plant Communities and Habitats stipulations);
- Recommend proposal for withdrawal from appropriation and entry under the General Mining Law;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify as unavailable for livestock grazing;
- Prohibit campfires and overnight camping;
- Prohibit cross county equestrian travel;
- Prohibit the discharge of firearms, except the legal taking of game species; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Cyrus Canyon ACEC: Recommend for designation 5,373 acres of public lands and 1 acre of federal mineral estate; within a boundary of 5,374 acres, as the Cyrus Canyon ACEC (Map 2.4.5) administered with the following special management:

- Identify as closed to mineral materials disposals, except for administrative purposes;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify as unavailable for livestock grazing;
- Prohibit campfires and overnight camping;
- Prohibit equestrian use;
- Prohibit the discharge of firearms, except the legal taking of game species;
- Prohibit the casual collection of plants or their parts without BLM authorization; and
- No new apiary permits will be authorized. The existing apiary permit will not be renewed on expiration.

Granite Cave ACEC: Recommend for designation 31 acres of public lands and 11 acres of federal mineral estate; within a boundary of 42 acres, as the Granite Cave ACEC (Map 2.4.5) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to major constraints (NSO);
- Recommend proposal for withdrawal from appropriation and entry under the General Mining Law;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects; and
- Prohibit public access.

Hopper Mountain ACEC: Recommend for designation 2,027 acres of public lands and 2,947 acres of federal mineral estate; within a boundary of 4,978 acres, as the Hopper Mountain ACEC (Map 2.4.5) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to major constraints (NSO).
- Recommend proposal for withdrawal from appropriation and entry under the General Mining Law;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;

- Identify portions as unavailable for livestock grazing;
- Restrict public access through temporary emergency closure or in coordination with adjacent land managers, as needed for Condor protection;
- Implement Best Management Practices to minimize impacts on condors from public use and oil field activities;
- Prohibit campfires and overnight camping; and
- Prohibit the discharge of firearms, except the legal taking of game species.

Horse Canyon ACEC: Recommend to continue the designation of 1,491 acres of public lands and 1,339 acres of federal mineral estate; within a boundary of 6,897 acres, as the Horse Canyon ACEC (Map 2.4.5) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to major constraints (NSO);
- Recommend proposal for withdrawal from appropriation and entry under the General Mining Law;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify as unavailable for livestock grazing;
- Prohibit the discharge of firearms, except the legal taking of game species; and
- Prohibit rock hounding, including the causal collection of fossils, mineral agates, and semi-precious stones.

Irish Hills ACEC: Recommend for designation 1,090 acres of public land and 564 acres of federal mineral estate; within a boundary of 1,814 acres, as the Irish Hills ACEC (Map 2.4.5) administered with the following special management:

- Identify as open to fluid mineral leasing, subject to moderate constraints (CSU - Priority Species, Plant Communities and Habitats stipulation);
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify as unavailable for livestock grazing;
- Prohibit campfires and overnight camping, except in any future developed recreation sites developed in partnership with adjacent land owners;
- Prohibit the discharge of firearms and coordinate with CDFG to prohibit hunting;
- Prohibit cross country equestrian travel; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Kaweah ACEC: Recommend for designation 26,891 acres of public lands and 150 acres of federal mineral estate; within a boundary of 33,559 acres (expanding the existing Case Mountain ACEC), as the Kaweah ACEC (Map 2.4.5) administered with the following special management:

- Identify as open for leasing oil and gas resources, subject to moderate constraints (CSU-Raptor stipulations);
- Identify as closed to geothermal leasing;
- Recommend proposal of cave and karst resources and the giant sequoia groves for withdrawal from appropriation and entry under the General Mining Law;

- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify the giant sequoia groves as unavailable for livestock grazing;
- Prohibit public access to recreation sites along the North Fork of the Kaweah River.
- Prohibit the discharge of firearms, except the legal taking of game species;
- Prohibit the casual collection of plants or their parts without BLM authorization; and
- Protect the giant sequoia groves and mixed conifer forest through implementation of fuels reduction techniques including prescribed burning and vegetation thinning, and removal of ladder fuels.

Kettleman Hills ACEC: Recommend to continue the designation of 6,726 acres of public lands and 6,969 acres of federal mineral estate; within a boundary of 28,874 acres (expanding the existing 9,794-acre ACEC), as the Kettleman Hills ACEC (Map 2.4.5) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to moderate constraints (CSU-Protected Species, CSU-Sensitive Species, and CSU-Raptor stipulations);
- Identify as closed to mineral materials disposals, except for administrative purposes;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects; and
- Prohibit campfires and overnight camping.

Lokern-Buena Vista ACEC: Recommend to continue the designation of 11,352 acres of public lands and 4,113 acres of federal mineral estate; within a boundary of 69,474 acres (combining the existing Lokern ACEC with the expansion to include the Buena Vista Hills and Valley), as the Lokern-Buena Vista ACEC (Map 2.4.5) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to major constraints (CSU-Protected Species and CSU-Sensitive Species stipulations;
- Identify as closed to mineral materials disposals, except for administrative purposes);
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Prohibit public access except for travel through the area on county or state roads;
- Designate as an OHV Closed area; and
- Prohibit discharge of firearms, except the legal taking of game species.

Los Osos ACEC: Recommend for designation 5 acres of public lands; within a boundary of 32 acres, as the Los Osos ACEC (Map 2.4.5) administered with the following special management:

- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify as unavailable for livestock grazing;
- Prohibit campfires and overnight camping;
- Designate as OHV Closed area;
- Prohibit mechanized use, equestrian use, and cross-country travel by pedestrians;
- Prohibit all pets;
- Prohibit the discharge of firearms, except the legal taking of game species; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Piute Cypress ACEC: Recommend to continue the designation of 2,305 acres of public lands and 212 acres of federal mineral estate; within a boundary of 2,544 acres (expanding the existing 1,104-acre ACEC), as the Piute Cypress ACEC (Map 2.4.5) administered with the following special management:

- Identify as closed to fluid mineral leasing;
- Identify as closed to mineral materials disposals, except for administrative purposes;
- Recommend proposal for withdrawal from appropriation and entry under the General Mining Law if the WSA is released by congress from study status;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Protect Piute cypress communities from livestock grazing if deemed necessary through appropriate studies;
- Prohibit overnight camping and campfires;
- Prohibit the discharge of firearms, except the legal taking of game species; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Pt. Sal ACEC: Recommend to continue the designation of 77 acres of public lands; within a boundary of 77 acres, as the Pt. Sal ACEC (Map 2.4.5) administered with the following special management:

- Identify as closed to fluid mineral leasing;
- Recommend proposal for withdrawal from appropriation and entry under the General Mining Law;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify as unavailable for livestock grazing;
- Prohibit public access; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Rusty Peak ACEC: Recommend for designation 786 acres of public lands and 1 acre of federal mineral estate; within a boundary of 789 acres, as the Rusty Peak ACEC (Map 2.4.5) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to moderate constraints (CSU- Priority Species, Plant Communities and Habitats stipulation);
- Identify as unavailable for livestock grazing; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Salinas River ACEC: Recommend to continue the designation of 946 acres of public lands and 658 acres of federal mineral estate; within a boundary of 2,383 acres, as the Salinas River ACEC (Map 2.4.5) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to moderate constraints (CSU- Priority Species, Plant Communities and Habitats stipulations);
- Recommend proposal of the riparian zone (approximately 10 acres) for withdrawal from appropriation and entry under the General Mining Law;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;

- Identify as unavailable for livestock grazing;
- Prohibit campfires and overnight camping;
- Prohibit cross country equestrian travel; and
- Prohibit the discharge of firearms, except the legal taking of game species.

Tierra Redonda ACEC: Recommend to continue the designation of 331 acres of public lands and 81 acres of federal mineral estate; within a boundary of 1,311 acres, as the Tierra Redonda ACEC (Map 2.4.5) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to major constraints (NSO);
- Recommend proposal for withdrawal from appropriation and entry under the General Mining Law;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify as unavailable for livestock grazing;
- Prohibit campfires and overnight camping;
- Designate as an OHV Closed area;
- Prohibit mechanized and equestrian use;
- Prohibit the discharge of firearms and coordinate with CDFG to prohibit hunting; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Upper Cuyama Valley ACEC: Recommend for designation 6,351 acres of public lands and 2,584 acres of federal mineral estate; within a boundary of 15,247 acres, as the Upper Cuyama Valley ACEC (Map 2.4.5) administered with the following special management:

- Identify as open for fluid mineral leasing subject to moderate constraints (CSU-Protected Species and CSU-Sensitive Species) stipulations;
- Identify as an exclusion area for rights-of-way related to utility scale renewable energy projects;
- Identify as unavailable for livestock grazing habitat containing California jewelflower or Kern primrose sphinx moth;
- Prohibit equestrian use in habitat containing California jewelflower or Kern primrose sphinx moth;
- Prohibit cross country equestrian travel outside of livestock grazing allotments; and

Prohibit the casual collection of plants or their parts without BLM authorization.

2.5.18 Outstanding Natural Areas

Management direction is common to Alternatives C, D and E.

2.5.19 Back Country Byways

Decision

Revoke the Back Country Byway designation of Canebrake and Long Valley Loop Roads.

2.5.20 National Trails

Management direction is common to Alternatives C, D and E.

2.5.21 Wild and Scenic Rivers

Decision

Determine as suitable and recommended for congressional designation in the NWSRS for the classifications identified the;

- Lower Kern River (Recreational);
- South Fork of the Kern River (Recreational);
- East Fork of the Kaweah (Recreational);
- Middle Fork of the Kaweah (Recreational);
- North Fork of the Kaweah (Scenic/Recreational);
- The Salinas River (Scenic);
- Chimney Creek (Wild/Recreational); and
- San Joaquin River Segment 1 (Wild/Scenic).

2.5.22 Wilderness Study Areas

Objective

Provide continued protection of wilderness character within WSAs if released by Congress from study status.

Decision

Manage as lands with wilderness characteristics all WSAs released from study status by congress, unless congressional release language provides other specific management guidance.

2.6 Alternative E

The following section describes management that would be established under Alternative E, presented by program area. Where program management is the same across all action alternatives, it is presented above under *Management Common to All Action Alternatives*. Total management decisions for each program are inclusive of the decisions in both the common to all and this section.

The goals for each resource are common to all and, therefore, are presented in that section above. Some objectives do vary within the individual alternatives those that do are described below under the *Objective* headings.

Resources

2.6.1 Air and Atmospheric Values

Management direction is common to Alternatives C, D and E.

2.6.2 Biological Resources

Decisions

Prohibit removal of dead and downed woody materials from public lands, except where administratively approved. Collection of fire wood from dead and down woody material for on-site campfires is permissible provided woody material is less than four inches in diameter.

Prohibit the release of un-retrieved nonnative animals, except for the use of approved biocontrol agents, authorized livestock, and for recreational purpose and the augmentation of naturalized species in accordance with a CDFG permit or plan.

Identify lands managed by the BLM or an entity other than BLM (split estate) as compensation for biological resources as open to fluid mineral leasing subject to major constraint (CSU – compensation lands).

Identify the following areas as areas of ecological importance with the specific management as described:

Conserved Lands: for protection and recovery of federally listed species on public lands identified as reserves or corridors by the USFWS and CDFG (see Conservation Strategy in Appendix B).

- Manage public lands within reserves or corridors as conserved land consistent with the direction established by the USFWS and CDFG through the Recovery Plan for Upland Species of the San Joaquin Valley and other pertinent recovery of conservation plans, subject to underlying statutory authority (FLPMA).
- Manage reserves to restrict surface disturbance on public lands in reserves to not exceed 10 percent of any 640-acre section, aliquot section, or aggregate of adjacent aliquot sections.

- Manage corridors to restrict surface disturbance on public lands in corridors to not exceed 25 percent of any 640-acre section, aliquot section, or aggregate of adjacent aliquot sections.
- Allow certain areas of high intensity oil and gas development within reserves and corridors to be identified and managed separately from the reserve and corridor system. These areas will not be subject to the 10 percent and 25 percent surface disturbance limit.

Cypress Mountain: for protection of the rare and unique plant communities of serpentine chaparral and northern interior cypress forest, dominated by Sargent cypress.

- Identify as open for fluid mineral leasing, subject to major constraints (CSU- Priority Species, Plant Communities and Habitats stipulations);
- Recommend proposal for withdrawal from appropriation and entry under the General Mining Law;
- Identify as unavailable for livestock grazing;
- Prohibit campfires;
- Prohibit overnight camping;
- Prohibit cross county equestrian travel;
- Prohibit the discharge of firearms, except the legal taking of game species; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Cyrus Canyon: to protect sensitive plant populations, especially habitat for Kelso Creek monkeyflower.

- Identify as closed to mineral materials disposals, except for administrative purposes;
- Identify as available for livestock grazing, except areas excluded for protection of monkeyflower species (Mimulus spp.);
- Prohibit campfires and overnight camping;
- Prohibit equestrian use;
- Prohibit the discharge of firearms, except the legal taking of game species;
- Prohibit the casual collection of plants or their parts without BLM authorization; and
- No new apiary permits will be authorized. The existing apiary permit may be renewed but not transferred.

Irish Hills: for protection of diverse coastal plant communities, including Bishop pine forest, rare plant habitat, and notably large oaks and manzanita.

- Identify as open to fluid mineral leasing, subject to major constraints (CSU - Priority Species, Plant Communities and Habitats stipulation);
- Identify as unavailable for livestock grazing;
- Prohibit campfires and overnight camping, except in any future developed recreation sites developed in partnership with adjacent land owners.
- Prohibit the discharge of firearms, except the legal taking of game species;

- Prohibit cross country equestrian travel; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Rusty Peak: for protection of serpentine chaparral, coastal live oak woodland, perennial grassland, San Luis serpentine dudleya and other sensitive plant species.

- Identify as open for fluid mineral leasing, subject to moderate constraints (CSU- Priority Species, Plant Communities and Habitats stipulation);
- Identify as unavailable for livestock grazing; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Salinas River: for protection of diverse vegetation communities and the exemplary riparian area.

- Identify as open for fluid mineral leasing, subject to moderate constraints (CSU- Priority Species, Plant Communities and Habitats stipulations);
- Recommend proposal of the riparian zone (approximately 10 acres) for withdrawal from appropriation and entry under the General Mining Law;
- Identify as unavailable for livestock grazing;
- Prohibit campfires and overnight camping;
- Prohibit cross country equestrian travel; and
- Prohibit the discharge of firearms, except the legal taking of game species.

Tierra Redonda: for protection of the, coast live oak woodland and habitat associated with the unique sand dune formation.

- Identify as open for fluid mineral leasing, subject to major constraints (NSO);
- Recommend proposal for withdrawal from appropriation and entry under the General Mining Law;
- Identify as closed to mineral materials disposals and solid mineral leasing;
- Identify as unavailable for livestock grazing;
- Prohibit campfires and overnight camping;
- Prohibit cross country equestrian travel;
- Prohibit the discharge of firearms, except the legal taking of game species; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Upper Cuyama Valley: for protection of habitat for blunt-nosed leopard lizard, Kern primrose sphinx moth, and California jewelflower, to protect the leopard lizard hybrid zone, and to maintain a linkage between the Sierra Madre and the San Emigdio Mountains.

- Identify as open for fluid mineral leasing subject to major constraints (CSU-Protected Species and CSU-Sensitive Species) stipulations;
- Identify as unavailable for livestock grazing habitat containing California jewelflower or Kern primrose sphinx moth;

- Prohibit equestrian use in habitat containing California jewelflower or Kern primrose sphinx moth;
- Prohibit cross country equestrian travel outside of livestock grazing allotments; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

2.6.3 Caves and Karst Resource

Decisions

Designate Granite Cave as a significant cave, based on its important and significant cave resources, which include both cultural and biotic resources, that are within and dependent on the cave. This cave will be managed as Class III to fully protect the cultural integrity of the area and its associated cave resources.

Designate Millerton Cave as a significant cave, based on its important and significant cave resources, including geological formations, resources of known cultural importance, biotic resources, and the potential for resource-based recreation. This cave will be managed as Class I to allow occasional recreational use.

All caves within ACECs whose importance and significance speaks directly to the protection of known or potential cave and karst resources shall be determined significant, in accordance with 43 CFR 37.11(e). The ACECs whose designation relates to cave and karst resources are Erskine Creek and Kaweah. Further investigation and study of these cave and karst resources may be required to assign management objectives and prescriptions. Interim management shall be as Class II to protect cave resources.

2.6.4 Cultural Resources

Management direction is common to Alternatives C, D and E.

2.6.5 Lands with Wilderness Characteristics

Decisions

Establish prescriptive management for the protection of wilderness characteristics on 0 acres.

2.6.6 Paleontological Resources

Management direction is common to Alternatives C, D and E.

2.6.7 Soil Resources

Management direction is common to Alternatives C, D and E.

2.6.8 Visual Resources

Decisions

Designate VRM classes for the Decision Area (Map 2.6.1) and summarized by the following;

- Class I: 143,300 acres
- Class II: 36,740 acres
- Class III: 361,620 acres
- Class IV: 608,100 acres

2.6.9 Water Resources

Management direction is common to Alternatives C, D and E.

2.6.10 Wildland Fire Ecology and Management

Management direction is common to Alternatives C, D and E.

Resource Uses

2.6.11 Comprehensive Trail and Travel management

Decisions

Designate in accordance with 43 CFR 8340.05(f), (g), and (h) the following OHV areas:

- Open: 70 acres
- Closed: 136,280 acres
- Limited: 264,560 acres

Key Implementation Decisions

Designate roads and/or trails as identified on *Draft RMP / Draft EIS* Travel Management Network Maps E 1-9 (BLM 2011a), summarized by the following mileages:

- Motorized: 1683 miles
- Non-motorized: 31 miles
- Non-mechanized: 45 miles
- Authorized: 112 miles
- Closed: 65 miles

2.6.12 Lands and Realty

2.6.12.1 Land Tenure

Decision

Determine the public lands (63,730 acres) and federal mineral estate (328,790 acres) shown on Map 2.6.2 as available for consideration of a disposal action (sale, exchange, or other means) in so much that these lands meet the "isolated, difficult or expensive to manage, or are needed for community expansion" disposal criteria contained in FLPMA Section 203(a). However, site-specific investigation to ascertain whether a specific parcel meets the disposal criteria outlined in this RMP would still be required prior to any disposal action being taken.

Disposal of unleased mineral estate with no fluid mineral potential may be deemed to serve national interest therefore may be considered for disposal.

2.6.12.2 Land Use Authorizations

Decision

Identify all ACECs and the Piedras Blancas ONA as Right-of-way avoidance areas.

2.6.12.3 Withdrawals

Decisions

Recommend proposal for withdrawal all or certain types of mining operations under the mining laws 17,770 acres in 14 areas.

2.6.13 Livestock Grazing

Objectives

Increase or improve livestock grazing opportunities on lands in the grazing decision area so as to meet the RMP goals.

Decisions

Allocate 345,800 acres of public land as available for livestock grazing; of which 7,800 acres (Atwell Island) would be available only for the purpose of vegetation management objectives other than producing livestock forage. Allocate the remaining 49,100 acres as unavailable for livestock grazing, including the Deer Spring, Frog Pond, South Fork of the Kern River, Irish Hills, Rusty Peak, Salinas River and Tierra Redonda areas of ecological importance and Big Pine Meadow and Rosewska Meadow (Map LG-E, in separate map packet).

Allocate newly acquired lands as available for livestock grazing, unless the purpose for the acquisition cannot be achieved under any level or management of livestock grazing.

Apply the appropriate Bakersfield FO-specific livestock grazing management guidelines (Appendix F-2) to the applicable grazing authorizations within the grazing decision area as follows:

For Allotments within San Joaquin Valley listed species habitat;

- Mulch Readiness at 500 lbs/acre and 2" green growth, or 700 lbs/acre without green growth
- Mulch Threshold at 500 lbs/acre
- with Saltbush Scrub; Dec.1-May 31 season of use or meet form class, foliage density, and reproductive uniformity criteria

For Riparian areas in;

- Poor-Fair Condition; Nov.1-May 31 season of use and apply the Central CA Guidelines for Livestock Grazing Management
- Good-Excellent Condition - Maintain current season of use and apply the Central CA Guidelines for Livestock Grazing Management as needed.

For known occupied habitats and/or known populations of;

- California jewelflower - No grazing unless in approved study or research show grazing to be beneficial.
- San Joaquin woolly threads - Apply the Central CA Guidelines for Livestock Grazing Management.
- Kern mallow - No grazing unless in approved study or research shows grazing to be beneficial.
- Hoover's woolly Star - Apply the Central CA Guidelines for Livestock Grazing Management.
- Kelso Creek monkeyflower - No grazing.
- Kern primrose sphinx moth - No grazing.
- Tehachapi slender salamander - Apply the Central CA Guidelines for Livestock Grazing Management.
- Other species that become listed - Prescription that takes into account specific species requirements.

Key Implementation Decisions

Authorize livestock grazing at the initial implementation levels (Appendix F-5). Based on existing authorizations, projected new authorizations and application of the central California and Bakersfield FO Specific livestock grazing management guidelines, forage authorized for livestock grazing within the Decision Area would total approximately 42,300 AUMs.

2.6.14 Minerals Management

2.6.14.1 Leasable Minerals

2.6.14.1.1 Fluid Minerals

Decisions

Establish the major constraint of "CSU – Bitter Creek ACEC" for the purpose of preventing or reducing disturbance to current or future refuge resources from fluid mineral development with the following stipulation language:

> *All or a portion of this lease occurs within the boundaries of the Bitter Creek ACEC and the Bitter Creek National Wildlife Refuge. No new surface disturbing activity is allowed on the lease. Furthermore, access to federal minerals within the lease will only be allowed from off-site sources not within the Bitter Creek National Wildlife Refuge boundary. This stipulation shall not be waived, however may be granted exception or modified as follows:*
>
> ***Exception:*** *The Authorized Officer may grant an exception if, after coordination with USFWS, an environmental review determines the action as proposed or conditioned would not impair the values present and is consistent with the management of the National Wildlife Refuge.*
>
> ***Modification:*** *The Authorized Officer may modify this stipulation to allow surface use on a portion or the entire lease if, after coordination with USFWS, an environmental review determines the action as proposed or conditioned would not impair the values present and is consistent with the management of the National Wildlife Refuge.*

Identify approximately 1,013,010 acres as open to fluid mineral leasing, subject to major constraints (both CSU – Protected Species and CSU – Sensitive Species). Of this at least 3,590 acres would also be subject to a No Surface Occupancy stipulation. Additional CSU stipulations may be applied to all new leases in conjunction with the lease sale as determined appropriate and in conformance with the RMP.

2.6.14.1.2 Solid (Non-Energy) Leasables

Decision

Identify 897,070 acres as open to solid (non-energy) mineral leasing and development.

2.6.14.2 Locatable Minerals

Decision

Determine and designate the following areas as unsuitable for Notice and Plan of Operation levels mining operations (43 CFR 3809.10): The Dam, Wallow Rock, and Gold Fever RMZs. Segregate these areas and recommend proposal for their withdrawal from location under the General Mining Law and condition mineral entry to permit only Casual Use operations (43 CFR 3809.5).

Determine and designate the following areas as unsuitable for Casual Use, Notice, and Plan of Operation levels mining operations (43 CFR 3809.10): the Sargent Cypress Groves in the Cypress Mountain area of ecological importance and Tierra Redonda area of ecological importance. Segregate these areas and

recommend proposal for their withdrawal from appropriation and all forms of mineral entry under the General Mining Law.

Allow mining operations in designated ACECs, but only in a manner that would not impair or degrade those significant resource values that led to the ACEC designation. Require a Plan of Operations in all designated ACECs. Approve the Plan of Operations only if operations would not irreparably damage those resource values for which the ACEC was designated.

2.6.14.3 Salable Minerals

Decisions

Identify 896,830 acres as open to mineral material disposal.

2.6.15 Recreation and Visitor Services

Decisions

Identify 188,120 acres as lands not managed within a Recreation Management Area.

Designate 160 acres (T 7 S, R 20 E, Section 2) (Map 2.6.3) as the Fresno River Extensive Recreation Management Area with the following recreation objective, management actions and allowable use decisions;

> Within the life of the RMP the Fresno River ERMA will offer limited recreation opportunities in a rural setting, facilitating various interpretative and educational opportunities.
>
> - Prohibit the discharge of firearms and coordinate with CDFG to prohibit hunting.

Designate 3,400 acres (Map 2.6.3) as the North Fork Extensive Recreation Management Area with the following recreation objective, management actions and allowable use decisions;

> Throughout the life of the RMP the North Fork ERMA will offer recreation opportunities in a middle country setting, facilitating visitor participation in fishing, hunting and water-play.
>
> - Provide public access to the North Fork ERMA at Advance and Cherry Falls.
> - Maintain parking facilities at the Advance and Cherry Falls recreation sites.
> - Close the Paradise recreation site, unless land ownership issues can be resolved.

Designate 123,450 acres (Maps 2.6.3 and Map 2.6.4) as the Chimney Peak Special Recreation Management Area, established with an "undeveloped" market strategy (Appendix H) serving the wider southern and central California communities. The SRMA is subdivided into three (3) Recreational Management Zones, each with the following recreation objectives, management actions and allowable use decisions (Appendix H contains a complete description of each RMZs targeted activities, experiences, benefits, and Natural Resource Recreation Settings);

> Byway RMZ: In visitor assessments, 65% of respondents who participated in targeted activities report the ability to realize the targeted experiences and benefits.
>
> **Targeted Activities:** Driving for Pleasure; Wildlife Viewing; Scenic Appreciation

Targeted Experiences: Enjoying closeness of family and friends; learning more about the things that are there; enjoying having easy access to natural landscapes

Targeted Benefits: *Personal:* Improved outdoor knowledge and self-confidence; enhanced awareness and understanding of nature. *Community:* Heightened sense of satisfaction with the community. *Economic:* More positive contributions to local and regional economies; increased local tourism revenues. *Environmental:* Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails.

- Maintain and improve designated camping areas at Chimney Creek, Long-Valley and Walker Pass.
- Establish standard amenity fees for overnight camping at designated camping areas.
- Expand interpretive and education efforts along the Chimney Peak Byway.

PCNST RMZ: In visitor assessments, 75% of respondents who participated in targeted activities report the ability to realize the targeted experiences and benefits.

Targeted Activities: Destination Hiking; Horseback Riding/Packing; Primitive Camping

Targeted Experiences: Developing skills and abilities; enjoying the esteem of others; testing personal endurance; gaining a greater sense of self-confidence; telling others about the trip

Targeted Benefits: *Personal:* Improved mental well being; greater self-reliance; improved skills for outdoor enjoyment; a spiritual connection to the world. *Community:* Heightened sense of satisfaction with the community. *Economic:* More positive contributions to local and regional economies; increased local tourism revenues. *Environmental:* Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails.

- Maintain and improve existing trail head facilities.
- Increase access to PCNST through the development of additional connector trails and trailhead facilities.

Wilderness RMZ: In visitor assessments, 50% of respondents who participated in targeted activities report the ability to realize the targeted experiences and benefits.

Targeted Activities: Hiking; Horseback Riding; Primitive Camping

Targeted Experiences: Gaining a greater sense of self-confidence; testing personal endurance; savoring the total sensory experience (sight sound, and smell) of a natural landscape; feeling good about solitude, being isolated and independent; enjoying an escape from crowds of people; nurturing personal spiritual values and growth.

Targeted Benefits: ***Personal:*** A more holistic sense of wellness; a greater sensitivity to awareness of outdoor aesthetics, nature's art and elegance; greater self-reliance; a closer relationship with the natural world. ***Community:*** Greater freedom from urban living. ***Economic:*** More positive contributions to local and regional economies; increased local tourism revenues.

Environmental: Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails.

Designate 23,750 acres (Maps 2.2.8 and Map 2.6.3) as the Temblor Range Special Recreation Management Area, established with a "community" market strategy for local communities (Taft), nearby rural areas and the population center of Bakersfield. The SRMA is subdivided into three (2) Recreational Management Zones, each with the following recreation objectives, management actions and allowable use decisions (Appendix H contains a complete description of each RMZs targeted activities, experiences, benefits, and Natural Resource Recreation Settings);

Temblor North RMZ: In visitor assessments, 50% of respondents who participated in targeted activities report the ability to realize the targeted experiences and benefits.

Targeted Activities: OHV trail riding; hunting; target shooting

Targeted Experiences: Developing skills and abilities; testing personal endurance; enjoying risk-taking adventure; savoring the total sensory experience of a natural landscape; escaping everyday responsibilities for awhile

Targeted Benefits: *Personal:* Greater self-reliance; improved skills for outdoor enjoyment; Closer relationship with the natural world. *Community:* Providing a place near but outside the community to recreate; removing unwanted use from industrial areas; addressing health and safety concerns. *Economic:* Improved local economic stability; maintenance of community's distinctive recreation tourism market. *Environmental:* Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails.

- Develop high quality trail system, including maintenance of many existing trail and creating additional recreation trails in partnership with user groups and adjacent land owners.

Urban Interface RMZ: In visitor assessments, 65% of respondents who participated in targeted activities report the ability to realize the targeted experiences and benefits.

Targeted Activities: OHV trail riding; driving for pleasure; dispersed camping

Targeted Experiences: Developing skills and abilities; testing personal endurance; enjoying risk-taking adventure; savoring the total sensory experience of a natural landscape; escaping everyday responsibilities for awhile

Targeted Benefits: *Personal:* Greater self-reliance; improved skills for outdoor enjoyment; closer relationship with the natural world. *Community:* Providing a place near but outside the community to recreate; removing unwanted use from industrial areas; addressing health and safety concerns. *Economic:* Improved local economic stability; maintenance of community's distinctive recreation tourism market. *Environmental:* Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails.

- Acquire legal public access.

- Establish parking/staging area in cooperation with adjacent land owners.
- Develop high quality trail system, including maintenance of many existing trail and creating additional recreation trails in partnership with user groups and adjacent land owners.

2.6.16 Interpretation and Environmental Education

Management direction is common to Alternatives C, D and E.

Special Designations

2.6.17 Areas of Critical Environmental Concern

Decisions

Bitter Creek ACEC: Recommend for designation 1,026 acres of public lands and 5,095 acres of federal mineral estate; within a boundary of 20,914 acres, as the Bitter Creek ACEC (Map 2.6.5) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to major constraints (NSO – Bitter Creek ACEC).
- Prohibit public access to lands adjacent to USFWS surface (434 acres);
- Prohibit campfires and overnight camping; and
- Prohibit the discharge of firearms and coordinate with CDFG to prohibit hunting.

Compensation Lands ACEC: Recommend for designation 283 acres of public lands and any future parcels of compensation land as the Compensation Lands ACEC (Map 2.6.5) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to major constraint (CSU-Compensation Lands).
- Manage all existing and future parcels[23] of compensation land (including lands not specifically labeled as "compensation" within the parcel) as part of the Compensation Lands ACEC;
- As appropriate, lands and minerals would remain unopened to entry under the General Mining Laws;
- Prohibit campfires and overnight camping;
- Prohibit cross country equestrian travel in areas that are not grazed by livestock;
- Prohibit the discharge of firearms, except the legal taking of game species; and
- Require all pets to be leashed (maximum eight-foot length) at all times. Require removal of pet fecal matter by owners or handlers.

[23] Any future parcels of compensation land would be recommended for ACEC consideration if there is evidence that the lands meet the relevance and importance criteria. Upon completion of NEPA, public review, and a plan amendment, such lands would become part of the Compensation Lands ACEC and be provided special management attention.

Hopper Mountain ACEC: Recommend for designation 2,027 acres of public lands and 2,947 acres of federal mineral estate; within a boundary of 4,978 acres, as the Hopper Mountain ACEC (Map 2.6.5) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to moderate constraints (CSU-Protected Species and CSU-Raptor stipulations).
- Identify portions as unavailable for livestock grazing;
- Restrict public access through temporary emergency closure or in coordination with adjacent land managers, as needed for Condor protection;
- Implement Best Management Practices to minimize impacts on condors from public use and oil field activities;
- Prohibit campfires and overnight camping; and
- Prohibit the discharge of firearms, except the legal taking of game species.

Kaweah ACEC: Recommend for designation 26,891 acres of public lands and 150 acres of federal mineral estate; within a boundary of 33,559 acres (expanding the existing Case Mountain ACEC), as the Kaweah ACEC (Map 2.6.5) administered with the following special management:

- Identify as open for leasing oil and gas resources, subject to moderate constraints (CSU-Raptor stipulations);
- Identify as closed to geothermal leasing;
- Identify the giant sequoia groves as unavailable for livestock grazing;
- Prohibit campfires and overnight camping at the Kaweah River recreation sites.
- Prohibit the discharge of firearms, except the legal taking of game species;
- Prohibit the casual collection of plants or their parts without BLM authorization; and
- Protect the giant sequoia groves and mixed conifer forest through implementation of fuels reduction techniques including prescribed burning and vegetation thinning, and removal of ladder fuels.

Kettleman Hills ACEC: Recommend to continue the designation of6,726 acres of public lands and 3,070 acres of federal mineral estate; within a boundary of 16,483 acres, as the Kettleman Hills ACEC (Map 2.6.5) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to moderate constraints (CSU-Protected Species, CSU-Sensitive Species, and CSU-Raptor stipulations);
- Identify as closed to mineral materials disposals, except for administrative purposes; and
- Prohibit campfires.

Lokern-Buena Vista ACEC: Recommend to continue the designation of11,352 acres of public lands and 4,113 acres of federal mineral estate; within a boundary of 69,474 acres (combining the existing Lokern ACEC with the expansion to include the Buena Vista Hills and Valley), as the Lokern-Buena Vista ACEC (Map 2.6.5) administered with the following special management:

- Identify as open for fluid mineral leasing, subject to major constraints (CSU-Protected Species and CSU-Sensitive Species stipulations;

- Identify as closed to mineral materials disposals, except for administrative purposes); and
- Prohibit campfires.

Los Osos ACEC: Recommend for designation 5 acres of public lands; within a boundary of 32 acres, as the Los Osos ACEC (Map 2.6.5) administered with the following special management:

- Identify as unavailable for livestock grazing;
- Prohibit campfires and overnight camping;
- Designate as OHV Closed area.
- Prohibit mechanized use, equestrian use, and cross-country travel by pedestrians;
- Require all pets to be leashed (maximum eight-foot length) at all times. Require removal of pet fecal matter by owners or handlers
- Prohibit the discharge of firearms, except the legal taking of game species; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Piute Cypress ACEC: Recommend to continue the designation of2,305 acres of public lands and 212 acres of federal mineral estate; within a boundary of 2,544 acres (expanding the existing 1,104-acre ACEC), as the Piute Cypress ACEC (Map 2.6.5) administered with the following special management:

- Identify as closed to fluid mineral leasing;
- Identify as closed to mineral materials disposals, except for administrative purposes;
- Protect Piute cypress communities from livestock grazing if deemed necessary through appropriate studies;
- Prohibit campfires; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

Pt. Sal ACEC: Recommend to continue the designation of77 acres of public lands; within a boundary of 77 acres, as the Pt. Sal ACEC (Map 2.6.5) administered with the following special management:

- Identify as closed to fluid mineral leasing;
- Identify as unavailable for livestock grazing;
- Prohibit campfires and overnight camping;
- Designate as OHV Closed area;
- Prohibit mechanized and equestrian use;
- Prohibit the discharge of firearms and coordinate with CDFG to prohibit hunting; and
- Prohibit the casual collection of plants or their parts without BLM authorization.

2.6.18 Outstanding Natural Areas

Management direction is common to Alternatives C, D and E.

2.6.19 Back Country Byways

Decisions

Continue designation of Canebrake and Long Valley Loop Roads as the Chimney Peak Backcountry Byway. Maintain Chimney Peak Backcountry Byway as a Type II Byway.

Key Implementation Decisions

Restore connectivity of the Long Valley Loop Road across private property.

2.6.20 National Trails

Decisions

Designate and manage the PCNST corridor as the Pacific Crest Recreation Management Zone (RMZ), within the Chimney Peak Special Recreation Management Area (SRMA).

Recommend for designation the San Joaquin River Trail as a National Recreation Trail in coordination with other affected entities.

2.6.21 Wild and Scenic Rivers

Decisions

Determine all river segments as not suitable, and not recommended for Congressional designation.

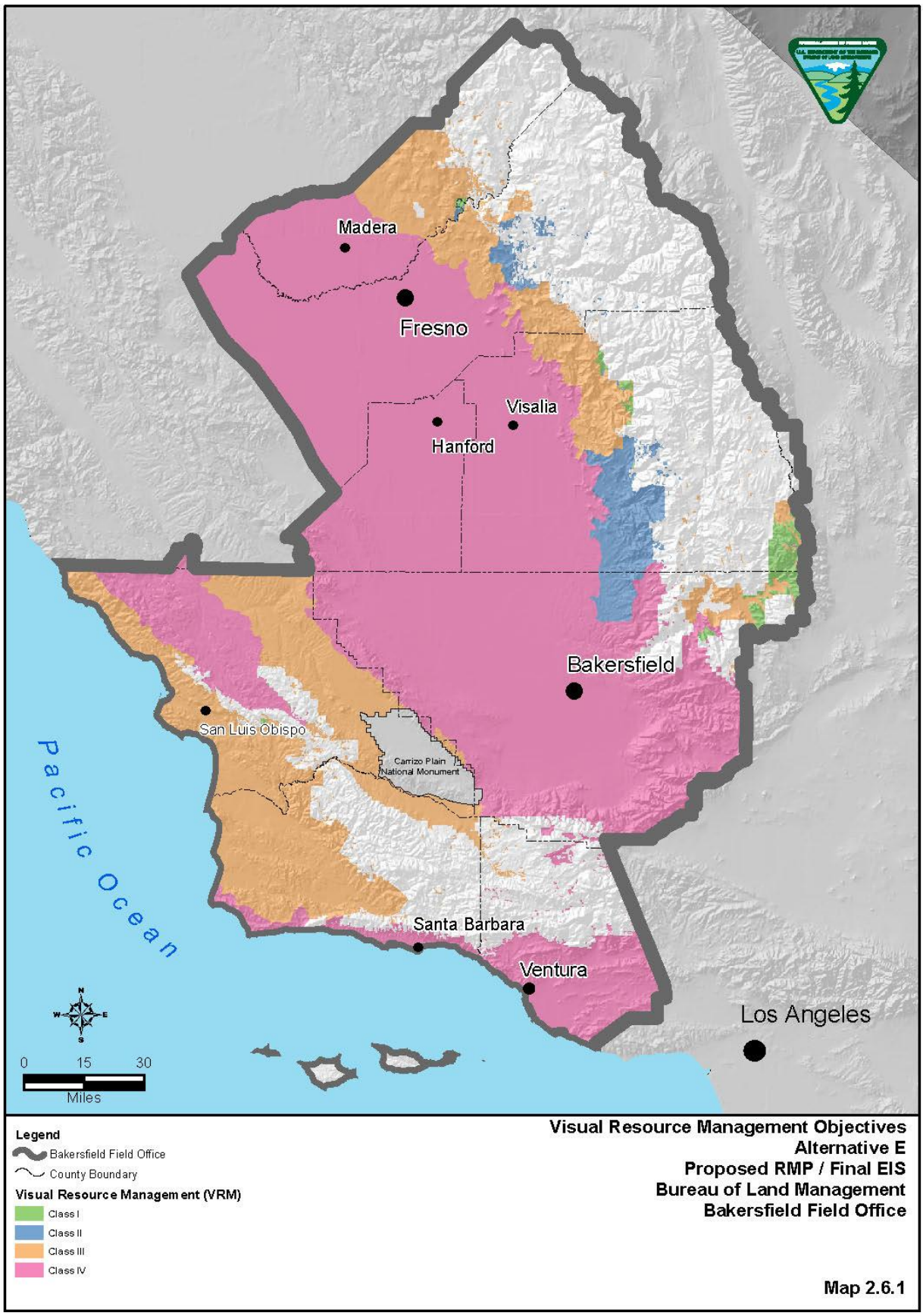
2.6.22 Wilderness Study Areas

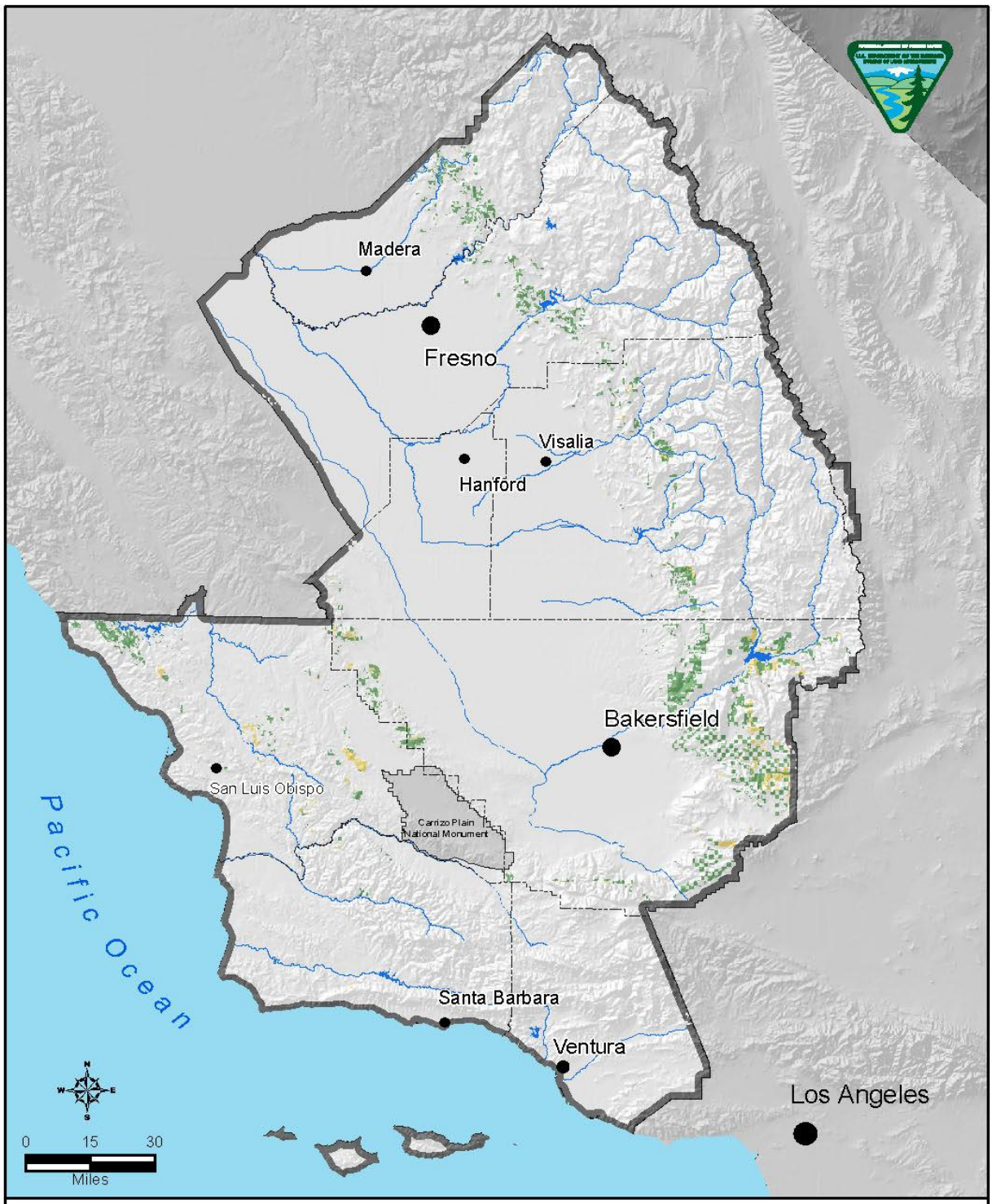
Objectives

If released by congress, manage WSAs commensurate with the resources values present.

Decisions

Manage all released WSAs a multiple-use dispersed public lands unless congressional release language or existing overlapping management designation dictates otherwise.


Madera
Fresno
Visalia
Hanford
Bakersfield
San Luis Obispo
Carrizo Plain National Monument
Pacific Ocean
Santa Barbara
Ventura
Los Angeles
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
Visual Resource Management (VRM)
Class I
Class II
Class III
Class IV
Visual Resource Management Objectives
Alternative E
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 2.6.1


Madera
Fresno
Visalia
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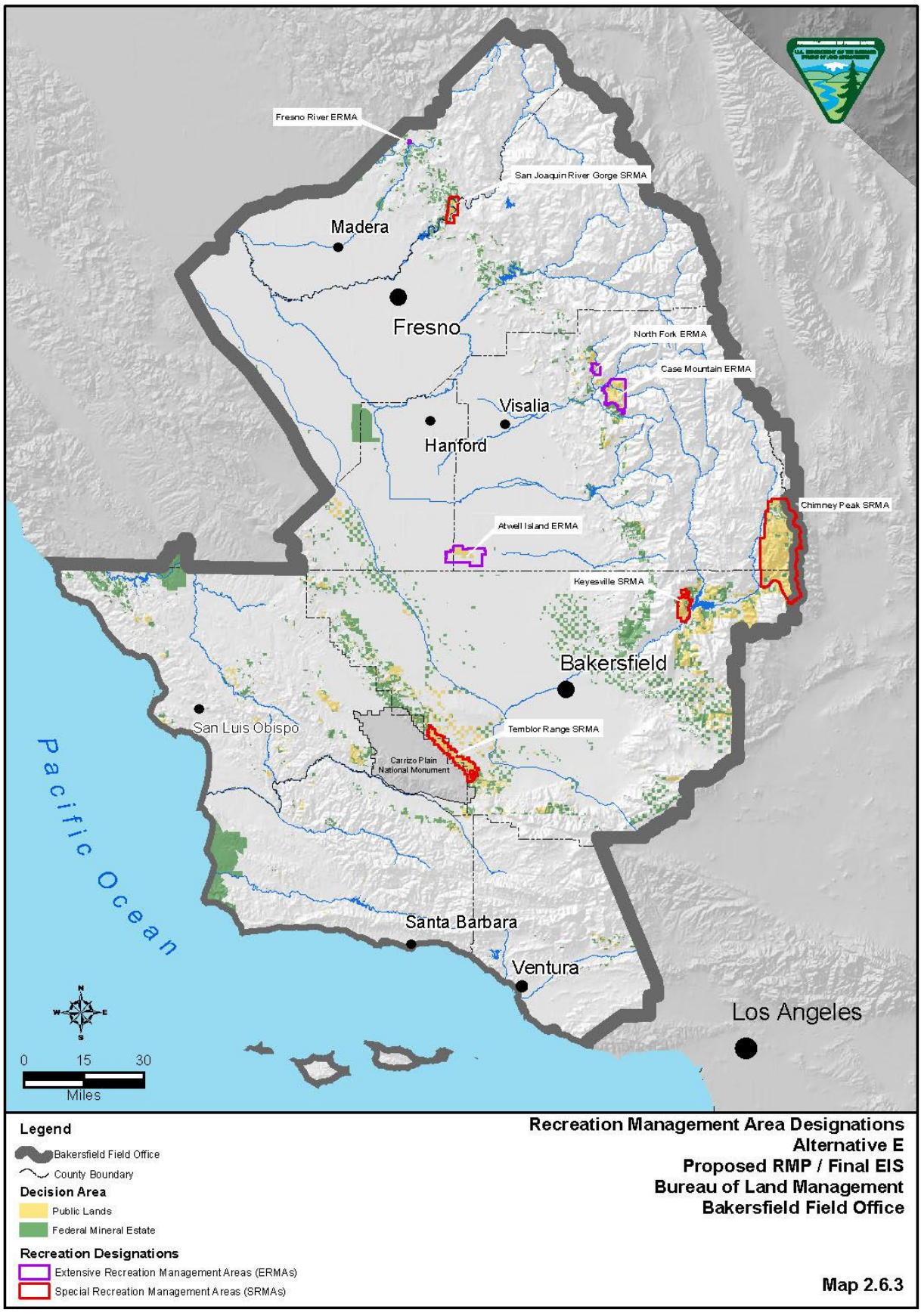
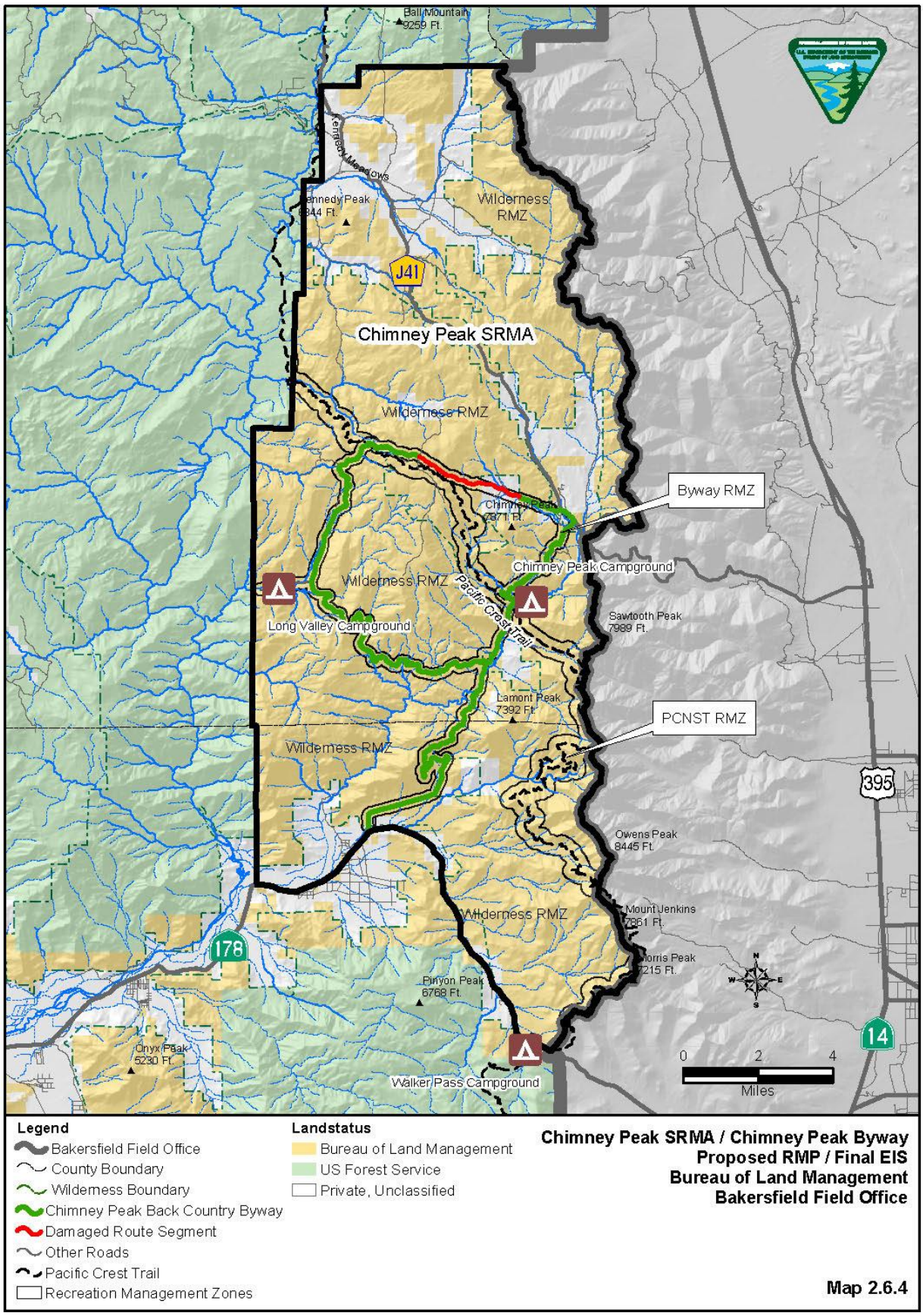
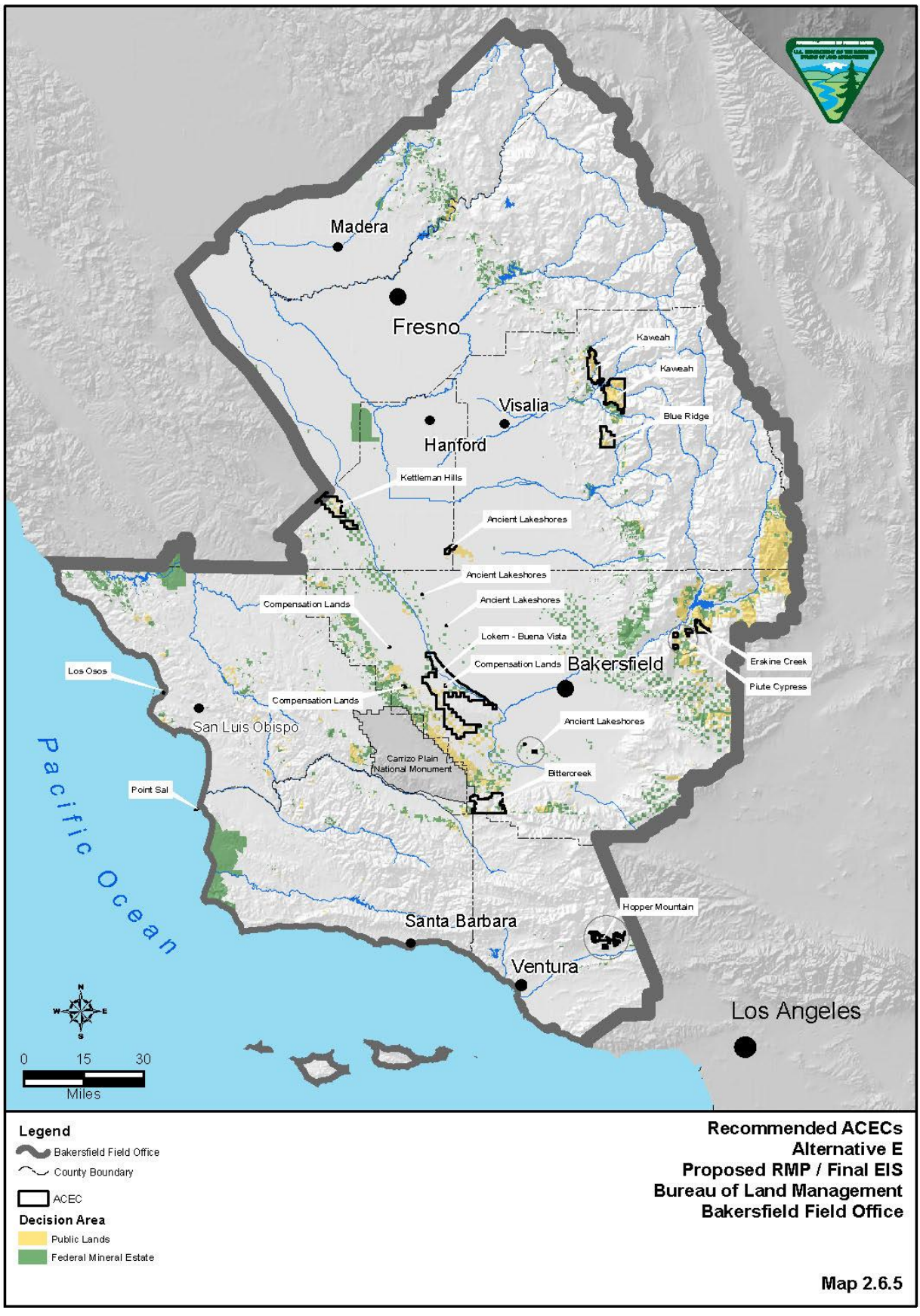
Bakersfield
San Luis Obispo
Carrizo Plain National Monument
Pacific Ocean
Santa Barbara
Ventura
Los Angeles
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
Lands Available for Consideration For Disposal
Public Lands
Federal Mineral Estate
Lands Available for Consideration For Disposal
Alternative E
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 2.6.2.


Fresno River ERMA
San Joaquin River Gorge SRMA
Madera
Fresno
North Fork ERMA
Case Mountain ERMA
Visalia
Hanford
Chimney Peak SRMA
Atwell Island ERMA
Keyesville SRMA
Bakersfield
San Luis Obispo
Temblor Range SRMA
Carrizo Plain National Monument
Pacific Ocean
Santa Barbara
Ventura
Los Angeles
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
Decision Area
Public Lands
Federal Mineral Estate
Recreation Designations
Extensive Recreation Management Areas (ERMAs)
Special Recreation Management Areas (SRMAs)
Recreation Management Area Designations
Alternative E
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 2.6.3


Bell Mountain
5259 Ft.
Kennedy Meadows
Kennedy Peak
8844 Ft.
Wilderness
RMZ
J41
Chimney Peak SRMA
Wilderness RMZ
Byway RMZ
Chimney Peak
7871 Ft.
Chimney Peak Campground
Wilderness RMZ
Pacific Crest Trail
Long Valley Campground
Sawtooth Peak
7989 Ft.
Lamont Peak
7392 Ft.
PCNST RMZ
Wilderness RMZ
395
Owens Peak
8445 Ft.
Mount Jenkins
7861 Ft.
Wilderness RMZ
178
Morris Peak
7215 Ft.
Pinyon Peak
6768 Ft.
Onyx Peak
5230 Ft.
14
Walker Pass Campground
0 2 4
Miles
Legend
Bakersfield Field Office
County Boundary
Wilderness Boundary
Chimney Peak Back Country Byway
Damaged Route Segment
Other Roads
Pacific Crest Trail
Recreation Management Zones
Landstatus
Bureau of Land Management
US Forest Service
Private, Unclassified
Chimney Peak SRMA / Chimney Peak Byway
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 2.6.4


Madera
Fresno
Visalia
Hanford
Kaweah
Kaweah
Blue Ridge
Kettleman Hills
Ancient Lakeshores
Ancient Lakeshores
Ancient Lakeshores
Compensation Lands
Lokern - Buena Vista
Compensation Lands
Bakersfield
Erskine Creek
Piute Cypress
Los Osos
Compensation Lands
San Luis Obispo
Ancient Lakeshores
Carrizo Plain National Monument
Bitter creek
Point Sal
Pacific Ocean
Hopper Mountain
Santa Barbara
Ventura
Los Angeles
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
ACEC
Decision Area
Public Lands
Federal Mineral Estate
Recommended ACECs
Alternative E
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 2.6.5

2.7 Alternatives Considered but not Analyzed in Detail

The following alternative was eliminated from detailed study because it did not meet the purpose and need for the proposal or was outside of the technical, legal, or policy constraints of developing a land use plan for public land resources and uses.

2.7.1 Proactive Land Disposal Alternative

Consideration was given to an alternative that would proactively market or offer parcels for sale on either an individual basis or by grouping a number of parcels and marketing them together. In this scenario, lands outside of designated areas (ACECs, Special Recreation Management Areas, Wilderness, etc.) would be actively sold or otherwise disposed of. Equity would either flow to the federal treasury, or be used to acquire additional lands within the designated areas *under the authority of Federal Land Transaction Facilitation Act (currently expired)*; the number of designated areas might be reduced to allow for an even greater concentration of management.

This alternative was dismissed for several reasons. In many cases, even public lands outside of special designations have public values - the oilfields are one notable example. Many scattered parcels have been considered for disposal in the past, but were found to have unique biological, cultural, and or recreation values. Some are integral to landscape conservation strategies. It is expected that a land tenure adjustment program will continue within each of the alternatives that are carried forward. After considering the above points and weighing public comments during public scoping, this alternative was deemed to be inconsistent with RMP goals and objectives and not in the public interest.

2.7.2 Prohibition Oil and Gas Development Alternative

Oil and gas development is an authorized use of BLM-administered lands and encouraged by national energy policy. Therefore it would be arbitrary and inconsistent with existing laws to analyze closing the entire Decision Area to development. Moreover, that analysis would be disingenuous since extensive valid lease rights exist that could be developed regardless of changes in management in this RMP revision. The action alternatives do include minor modifications to the approach under Alternative A, specifically the application of Controlled Surface Use stipulations on areas previously subject to standard terms and conditions. The concept of placing greater restriction (i.e., more closed acres or no surface occupancy (NSO) stipulation) was considered, however, closure of lands with little or no oil and gas development potential was deemed to be unnecessary. Furthermore, a large portion of the developable area is already developed and productive.

2.7.3 Restrict Solid (Non-Energy) Leasable and Salable Mineral Development Alternative

Mineral developments are an authorized use of BLM-administered lands. Therefore it would be arbitrary and inconsistent with existing laws to analyze closing the entire Decision Area to development. Generally the Decision Area has limited potential for these mineral resources. The concept of placing greater restriction (i.e., more closed acres) was considered, however, closure of lands with little or no potential for these minerals was deemed to be unnecessary.

2.7.4 Modified Grazing Alternative

Livestock grazing is an authorized use of BLM-administered lands. In development of the alternatives a greater range of acres allocated as Available/Unavailable (besides total elimination of this use) was considered, however, additional restrictions (i.e., less Available acres) were deemed to be arbitrary and unnecessary as ~~*further*~~ resource conflicts~~ *did not exist*~~ *had not been documented* or could be addressed through site-specific use of livestock exclusions and adjustments to the permit/lease terms and conditions. *The development of all of the alternatives considered the impact of livestock grazing on all sensitive areas and where resource objectives could not be achieved under any level or management of livestock use, these areas were made Unavailable.* In addition, less restriction of livestock grazing (i.e., more Available acres) was deemed to not adequately address the purpose and need, and issues identified in the RMP as they relate to biological resources.

2.8 Comparison of Alternatives

This section (Table 2.1) provides a summary of the primary differences between the five alternatives (A through E). Due to the breadth of management prescriptions in the alternatives, this section describes only the key elements of each alternative; considered to be those that address (or are related to) a planning issue previously identified, those that may have the biggest impact on resources and those that may be considered to be controversial.

Differences between the wording of the objectives, allocations, and management actions from the main text of this chapter should not be construed to confine or redefine management contained within the complete alternatives. Some wording was modified to be more concise in the summary table. In addition acreage presented reflects the total Decision Area (surface and/or federal mineral estate) affected by the decision.

Table 2.1
Summary of Alternatives

	Decision	A	B	C	D	E
	Air and Atmospheric Values					
	Design BLM program and management activities and authorize projects to meet air quality standards. Reduce emissions resulting from such actions by implementing BMPs.	-	X	X	X	X
	Prevent BLM actions from degrading Federal Class I areas including Domeland Wilderness, San Raphael Wilderness, and Sequoia and Kings Canyon National Parks.	-	X	X	X	X
	Biological Resources					
	Identified as Special Management Areas (SMAs) for biological resource management:	10 areas	-	-	-	-
	Identified areas of ecological importance, with specific management:	-	~~11~~ *12* areas *275,657 acres*	8 area	8 areas	15 areas
	Proposed Areas of Critical Environmental Concern (ACECs) for the protection of biological resources:	11 ACECs 52,350 acres	~~16~~ *18* ACECs ~~96,660~~ *99,500* acres	20 ACECs 101,010 acres	20 ACECs 101,010 acres	12 ACECs 74,920 acres
	Identified, for fluid mineral leasing, split estate with surface managed as compensation for biological resources as:	-	CSU Compensation	Closed	Closed	CSU Compensation
	Identified, for fluid mineral leasing, Compensation Lands (ACEC) as:	-	NSO	Closed	Closed	CSU
	Recommend proposal for withdrawal from the mining laws compensation lands for biological resources regardless of surface owner.	-	X	X	X	-
	Identified, for fluid mineral leasing, lands within or adjacent to the State of California's Chimineas Unit of the Carrizo Plain Ecological Reserve as:	-	CSU Chimineas	Closed	Closed	CSU
	Apply various CSU stipulations to all new fluid mineral leases including CSU-Protected Species and CSU-Sensitive Species on every lease, and CSU-Critical Habitat and CSU-Raptor as appropriate.	X	X	X	X	X
	Manage Conserved Lands as reserves or corridors subject to surface disturbance limitations.	-	X	X	X	X
	Acquire biologically important lands (including compensation lands) and manage consistent with the terms of acquisition.	X	X	X	X	X

Table 2.1
Summary of Alternatives

	Decision	A	B	C	D	E
	Implement a variety of management actions (including recommendation from recovery plan) to enhance and restore habitat, including degraded riparian areas and habitat for listed species.	X	X	X	X	X
	Control and eliminate, as appropriate nonnative animals and weeds.	-	X	X	X	X
	Eliminate, relocate or redesign uses that may result in unacceptable impacts on important biological resources	-	X	X	X	X
	Cave and Karst Resources					
	Designate Granite Cave as a significant cave and assign a management class of:	-	Class III (Closed)	-	-	Class III (Closed)
	Designate Millerton Cave as a significant cave and assign a management class of:	-	Class I (Open)	(Class III) Closed	(Class III) Closed	Class I (Open)
	Designate all caves within ACECs, whose importance and relevance values identifies cave resources, as significant and assign a management class of:	-	Class II (Restricted)	Class III (Closed)	Class III (Closed)	Class II (Restricted)
	Assign an interim specific management class to as yet undiscovered caves or cave segments until a significance determination is made:	-	Class II (Restricted)	Class II (Restricted)	Class II (Restricted)	Class II (Restricted)
	Cultural Resources					
	Protect significant cultural resources through the application of a Controlled Surface Use- Cultural Resources stipulation on fluid mineral leasing, on new leases, as appropriate:	-	X	X	X	X
	Eliminate, relocate, or redesign uses following site specific NEPA that may result or have resulted in impacts on significant cultural resources	-	X	X	X	X
	Allocate evaluated cultural resources within the decision area as “scientific use” except Huasna Peak, Keyesville historic sites, Piedras Blancas Light Station, rock art sites and Walker Pass NHL.	-	X	X	X	X
	Lands with Wilderness Characteristics					
	Lands managed for wilderness characteristics:	-	6 areas 3,470 acres	13 areas 17,890 acres	13 areas 17,890 acres	0 areas 0 acres

Table 2.1
Summary of Alternatives

	Decision	A	B	C	D	E
	Paleontological Resources					
	Consider surface-disturbing activities that affect fossil-bearing geologic units identified as PFYC 4 in site specific analyses, which may include a field inventory.	-	X	X	X	X
	Minimize or prevent damage to paleontological resources through educational and interpretive outreach programs focusing use on areas of PFYC 3 or less.	-	X	X	X	X
	Soil Resources					
	Design BLM activities and authorizations to minimize impacts on soils by implementing BMPs. Specifically protecting; Serpentine Soils; Soils supporting "Biological Crusts"; and Soils highly susceptible to erosion.	-	X	X	X	X
	Visual Resources					
	Designate as VRM Class I	120,820 acres[24]	~~144,730~~ *175,340* acres	163,110 acres	163,110 acres	143,300 acres
	Designate as VRM Class II	-	~~207,790~~ *208,650* acres	250,060 acres	250,060 acres	36,740 acres
	Designate as VRM Class III	4,760 acres	~~525,860~~ *542,220* acres	475,560 acres	475,560 acres	361,620 acres
	Designate as VRM Class IV	3,820 acres	~~271,380~~ *283,840* acres	261,030 acres	261,030 acres	608,100 acres
	Water Resources					
	Design BLM activities and authorizations to meet water quality standards and maintain beneficial uses by implementing *such measures as* State approved BMPs (Management Measures for Polluted Runoff).	-	X	X	X	X
	Implement management actions to reduce non-point source pollution contributing to impaired water quality in any basin or segment listed as impaired.	-	X	X	X	X
	Authorize water developments or diversions on public lands only after resource objectives have been met.	-	X	X	X	X

[24] Established by BLM Policy and Guidance for Wilderness and ONA management

Table 2.1
Summary of Alternatives

	Decision	A	B	C	D	E
	Wildland Fire Ecology and Management					
	Identify the South Sierra, Domeland and a portion of the Three Rivers FMU as suitable for the use of wildland fire for resource benefit.	-	X	X	X	X
	Use a decision support process to analyze and document fire suppression strategies and tactics.	-	X	X	X	X
	Use Minimum Impact Suppression Tactics (MIST) or other modified suppression techniques when suppressing fires in sensitive areas	-	X	X	X	X
	Participate in local Fire Safe Councils or other community organizations to develop and implement collaborative fire mitigation and prevention strategies with communities at risk, and coordinate on the preparation of Community Wildfire Protection Plans.	-	X	X	X	X
	Comprehensive Trail and Travel Management					
	Designate as OHV Open area:	0 acres	0 acres	0 acres	0 acres	70 acres
	Designate as OHV Closed area:	139,490 acres	141,100 acres	166,300 acres	166,300 acres	136,280 acres
	Designate as OHV Limited Use area:	264,590 acres	262,870 acres	237,780 acres	237,780 acres	264,560 acres
	Routes designated Motorized:	1895 miles	~~770~~ *1,429* miles	656 miles	656 miles	1683 miles
	Routes designated *Motorized* - Authorized:	0 miles	~~783~~ *160* miles	617 miles	617 miles	112 miles
	Routes designated Non-Motorized:	0 miles	~~31~~ *27* miles	39 miles	39 miles	31 miles
	Routes designated Non-Mechanized:	41 miles	~~45~~ *41* miles	45 miles	45 miles	45 miles
	Routes designated Closed:	0 miles	~~308~~ *293* miles	580 miles	580 miles	65 miles
	Lands and Realty					
	Identify as Rights-of-Way avoidance areas *for all ROWs*:	-	~~128,000~~ *102,550* acres	157,920 acres	157,920 acres	96,080 acres
	Identify as Rights-of-Way exclusion areas *for all ROWs*:	-	~~121,300~~ *118,860* acres	151,410 acres	151,410 acres	121,300 acres
	Identify as Rights-of-Way avoidance areas for utility scale renewable energy ROWs:	-	*30,180 acres*	-	-	-
	Identify as Rights-of-Way exclusion areas for utility scale renewable energy ROWs:	-	261,690 acres			

Table 2.1
Summary of Alternatives

	Decision	A	B	C	D	E
	Livestock Grazing					
	Allocate as available for livestock grazing:	314,600 acres	~~328,700~~ 328,900 acres	322,200 acres	0 acres	345,800 acres
	Allocate as available for livestock grazing only for the purpose of vegetation management:	0 acres	7,800 acres	7,800 acres	0 acres	7,800 acres
	Allocate as unavailable for livestock grazing:	61,200 acres	~~66,200~~ 66,100 acres	72,700 acres	402,800 acres	49,100 acres
	Unallocated for livestock grazing:	26,900 acres	0 acres	0 acres	0 acres	0 acres
	Estimated annual AUMs	37,600 AUMs	~~39,100~~ 40,200 AUMs	36,200 AUMs	0 AUMs	41,400 AUMs
	Minerals					
	Open to fluid mineral leasing subject to standard terms and conditions:	304,080 acres	0 acres	0 acres	0 acres	0 acres
	Open to fluid mineral leasing subject to moderate constraints:	0 acres	0 acres	0 acres	0 acres	0 acres
	Open to fluid mineral leasing subject to major constraints:	707,280 acres	~~999,950~~ 1,011,470 acres	966,160 acres	966,160 acres	1,013,010acres
	Open with a No Surface Occupancy Stipulation:	4,910 acres	3,880 acres	8,400 acres	8,400 acres	3,590 acres
	Closed to fluid mineral leasing:	150,850 acres	~~162,260~~ 149,600 acres	196,050 acres	196,050 acres	149,200 acres
	Closed to geothermal leasing:	169,350 acres	~~188,700~~ 176,040 acres	209,310 acres	209,310 acres	175,640 acres
	Open to Solid (non-energy) mineral leasing:	817,690 acres	~~818,330~~ 908,510 acres	0 acres	0 acres	897,070 acres
	Open to mineral material disposal:	817,690 acres	~~818,330~~ 908,510 acres	781,120 acres	781,120 acres	896,830 acres
	Recommend proposal for withdrawal from the General Mining Laws:	10,130 acres	~~29,050~~ 0 acres	62,670 acres	62,670 acres	17,770 acres
	Continue discretionary existing withdrawal from the General Mining Laws on:	*4,240 acres*	*4,240 acres*	*4,240 acres*	*4,240 acres*	*4,240 acres*
	Recreation and Visitor Services					
	Special Recreation Management Areas (SRMAs) designations:	1 SRMAs 4,760 acres	3 SRMAs ~~45,240~~ 41,590 acres	2 SRMAs 21, 490 acres	2 SRMAs 21, 490 acres	4 SRMAs 168,690 acres

Table 2.1
Summary of Alternatives

	Decision	A	B	C	D	E
	Extensive Recreation Management Areas (ERMAs) designations:	2 ERMAs 399,320 acres	4 ERMAs ~~167,320~~ 130,580 acres	4 ERMAs 190,910 acres	4 ERMAs 190,910 acres	4 ERMAs 47,270
	Total area not designated as Recreation Management Areas (RMAs):	0 acres	~~191,520~~ 232,150 acres	191,680 acres	191,680 acres	188,120 acres
	Total area open to public access:	404,080 acres	~~392,660~~ 400,210 acres	380,680 acres	380,680 acres	404,080 acres
	Total area open to overnight camping:	400,230 acres	~~361,240~~ 382,500 acres	328,890 acres	328,890 acres	383,720 acres
	Total area open to unrestricted (trails and cross country) equestrian use:	402,000 acres	~~358,530~~ 383,620 acres	335,050 acres	335,050 acres	381,370 acres
	Total area open to the discharge of firearms:	276,141 acres	~~204,950~~ 390,120 acres[25]	167,970 acres	167,970 acres	229,280 acres
	Total area recommended to remain open to hunting:	404,080 acres	~~373,140~~ 396,780 acres	349,480 acres	349,480 acres	397,070 acres
	Areas of Critical Environmental Concern (ACECs)					
	Propose for designation as ACEC:	13 ACECs 59,808 acres	~~17~~ 18 ACECs ~~99,490~~ 104,170 acres	22 ACECs 108,248acres	22 ACECs 108,248 acres	12 ACECs 74,918 acres
	Ancient Lakeshores ACEC – Biological & Cultural Resources	-	1,985 acres	1,985 acres	1,985 acres	1,985 acres
	Alkali Sink ACEC - Biological & Cultural Resources	402 acres	*[26]	*	*	*
	Bitter Creek ACEC – Biological Resources	-	~~6,121~~ 2,812 acres	6,121 acres	6,121 acres	6,121 acres
	Blue Ridge ACEC - Biological Resources	5,295 acres	5,281 acres	5,281 acres	5,281 acres	5,281 acres
	Case Mountain ACEC – Biological Resources	26,468 acres	*[27]	*	*	*
	Chico Martinez ACEC – Cultural Resources	4,607acres	4,687 acres	4,608 acres	4,608 acres	-
	Compensation Lands ACEC – Biological Resources	-	283 acres	283 acres	283 acres	283 acres
	Cypress Mountain ACEC – Biological Resources	1,080 acres	1,080 acres	1,080 acres	1,080 acres	-

[25] Although open, some of this area may be restricted by non-discretionary rules (e.g., State Laws) or unsuitable for this activity.
[26] Incorporated into the Ancient Lakeshores ACEC
[27] Incorporated into the Kaweah ACEC

Table 2.1
Summary of Alternatives

	Decision	A	B	C	D	E
	Cyrus Canyon ACEC – Biological Resources	-	~~5,374~~ *4,300* acres	5,374 acres	5,374 acres	-
	Erskine Creek ACEC - Cave/Karst & Biological Resources	-	~~4,019~~ *4,018* acres	4,019 acres	4,019 acres	4,019 acres
	Goose Lake ACEC - Biological & Cultural Resources	40 acres	*	*	*	*
	Granite Cave ACEC – Cultural Resources	-	-	42 acres	42 acres	-
	Hopper Mountain ACEC – Biological Resources	-	~~4,974~~ *4,514* acres	4,974 acres	4,974 acres	4,974 acres
	Horse Canyon ACEC – Cultural Resources	2,830 acres	2,830 acres	2,830 acres	2,830 acres	-
	Irish Hills ACEC – Biological Resources	-	-	1,654 acres	1,654 acres	-
	Kaweah ACEC – Cave/Karst & Biological Resources	-	~~27,041~~ *27,037* acres	27,041 acres	27,041 acres	27,041 acres
	Kettleman Hills ACEC – Biological Resources	9,794 acres	13,695 acres	13,695 acres	13,695 acres	9,796 acres
	Lokern ACEC – Biological Resource	6,632 acres	*[28]	*	*	*
	Lokern-Buena Vista ACEC – Biological Resources	-	15,465 acres	15,465 acres	15,465 acres	15,465 acres
	Los Osos ACEC – Biological & Cultural Resources	-	5 acres	5 acres	5 acres	5 acres
	Piute Cypress ACEC – Biological Resources	1,104 acres	2,517 acres	2,517 acres	2,517 acres	2,517 acres
	Pt. Sal ACEC (acres) - Biological & Cultural Resources	77 acres	~~77~~ *76*acres	77 acres	77 acres	77 acres
	Rusty Peak ACEC – Biological Resources	-	-	787 acres	787 acres	-
	Salinas River ACEC – Biological Resources	1,604 acres	-	1,604 acres	1,604 acres	-
	Tierra Redonda ACEC – Biological & Paleontological Resources	412 acres	412 acres	412 acres	412 acres	-
	Upper Cuyama Valley ACEC – Biological Resources	-	~~8,935~~ *9,024* acres	8,935 acres	8,935 acres	-
	Back Country Byways					
	Designate Long Valley Loop and Canebrake Roads as the Chimney Creek Back Country Byway:	X	-	-	-	X
	National Trails					
	Recommend the San Joaquin River Trail for designation as a National Recreation Trail:	-	X	-	-	X

[28] Incorporated into the Lokern-Buena Vista ACEC

Table 2.1
Summary of Alternatives

	Decision	A	B	C	D	E
	Wild and Scenic Rivers					
	Determine as suitable for congressional designation in the National Wild and Scenic River System (NWSRS):	0 river segments	~~2~~ *4* river segments *(27 miles)*	8 river segments	8 river segments	0 river segments
	Establish management corridor for suitable river segments affecting:	-	~~*3,880*~~ *7,600* acres	12,220 acres	12,220 acres	0 acres
	Wilderness Study Areas (WSAs)					
	Manage WSAs, if released by congress, for wilderness characteristics:	-	6 areas 1,880 acres	11 areas 21,140 acres	11 areas 21,140 acres	0 areas 0 acres
	Manage WSAs, if released by congress as part of an ACEC:	-	3 areas 18,650 acres	0 areas 0 acres	0 areas 0 acres	0 areas 0 acres
	Manage WSAs, if released by congress as multiple-use dispersed land:	-	2 areas 610 acres	0 areas 0 acres	0 areas 0 acres	11 areas 21,140 acres

2.9 Comparison of Impacts

The Summary of Environmental Consequences by Alternative (Table 2.2) summarizes potential impacts under alternatives A through E. Due to the breadth of management prescriptions and range of resulting impacts, this section describes only the key impacts of each alternative; considered to be those that address (or are related to) a planning issue previously identified, those that may have the biggest impact on resources and those that may be considered to be controversial.

Where appropriate, the table quantifies (e.g., more acreage implies more impact, either beneficial or adverse) potential impacts anticipated from BLM-authorized actions or qualitative descriptions comparing the impact potential among the alternatives (e.g., highest potential, lowest potential, or moderate potential) with brief descriptions of the qualifying rational. This summary does not present the cumulative impacts occurring from non-BLM actions.

The environmental consequences of alternatives are not anticipated to exceed known legal thresholds or standards over the life of this RMP. Standard practices, BMPs, and guidelines for surface-disturbing activities are built into each alternative to avoid and minimize potential impacts (Appendix L). The BLM would consider mitigation of residual impacts during subsequent implementation-level projects and any associated environmental analyses performed at that time. All alternatives include reclamation of surface disturbance to reduce long-term impacts.

Table 2.2
Summary of Environmental Consequences by Alternative

Summary of Impact	A	B	C	D	E
Air and Atmospheric Values					
Potential change in emission trends for Ozone	No Change	Slight Increase	Slight Increase	Slight Increase	Slight Increase
Potential change in emission trends for PM10	No Change	Slight Decrease	Decrease	Greatest Decrease	Very Slight Decrease
Potential change in emission trends for PM2.5	No Change	Slight Increase	Slight Increase	Slight Increase	Slight Increase
Biological Resources					
Number of special status species afforded protection through special management within ACECs from a total of 328 species.	93 species (28%)	83 species (25%)	124 species (38%)	124 species (38%)	57 species (17%)
Number (percent) of federally listed species known or with potential to occur in the Decision Area, afforded protection through special management within ACECs from a total of 53 species.	14 species (27%)	19 species (36%)	23 species (43%)	23 species (43%)	16 species (30%)
Percent of motorized routes available to the public potentially resulting in habitat loss and disturbance to wildlife in areas specifically identified for biological resources management (including Conserved Lands).	95%*	88%	80%	80%	95%
Cave and Karst Resources					
Potential for loss or diminishment of cave resources	Highest potential	Low potential	Lowest potential	Lowest potential	Low potential
Cultural Resources					
Area (percent of Decision Area) with reduced potential for degradation of factors contributing to eligibility as a result of surface disturbance from BLM actions:	13%	14%	18%	18%	12%
Number of recorded sites (percent of known) at risk from disturbance related to Motorized access (direct destruction, accessibility for looting etc.):	439 (63%)	~~134~~ *388* (~~19%~~ *64%*)	119 (17%)	119 (17%)	344 (49%)
Number of recorded sites (percent of known) protected from disturbance related to Motorized access (i.e., in proximity of closed routes):	0 (0%)	~~58~~ *90* (~~8%~~ *15%*)	165 (24%)	165 (24%)	1 (<1%)
Potential for destruction of sites and diminishment of TCP values at Horse Canyon:	High potential	Low potential	Lowest potential	Lowest potential	Highest potential

Table 2.2
Summary of Environmental Consequences by Alternative

Summary of Impact	A	B	C	D	E
Lands with Wilderness Characteristics					
Protection of lands with wilderness characteristics through prescriptive management on (percent of lands with wilderness characteristics):	0% 0 acres	21% 3,470 acres	100% + 17,890 acres	100% + 17,890 acres	0% 0 acres
Protection of Lands with wilderness characteristics through overlapping designations e.g., ACECs, Backcountry RMZs (percent of lands with wilderness characteristics):	0% 0 acres	24% 3,820 acres	Some overlapping designations with more stringent management	Some overlapping designations with more stringent management	36% 5,830 acres
Lands at risk of loss of wilderness characteristics (percent of lands with wilderness characteristics):	100% 16,190 acres	55% 8,900 acres	0% 0 acres	0% 0 acres	64% 10,360 acres
~~*Paleontological Resources*~~					
~~*Areas of PFYC 4 (acres) protected from surface disturbance impacts resulting from BLM authorizations*~~	~~*2 areas (1,050 acres)*~~	~~*3 areas (14,710 acres)*~~	~~*4 areas (16,670 acres)*~~	~~*4 areas (16,670 acres*~~	~~*2 areas (13,820 acres)*~~
Soil Resources					
Area (acres/percent of Decision Area) with reduced potential for degradation of soils as a result of surface disturbance associated with BLM authorizations:	155,760 acres 39%	166,140 acres 41%	204,450 acres 51%	204,450 acres 51%	152,790 acres 38%
Portion of motorized route network crossing in areas susceptible to erosion potentially resulting in accelerated erosion rates.	3%	1%	1%	6%	3%
Visual Resources					
VRI Class I preserved (VRM Class I):	81%	100%	84%	84%	81%
VRI Class II preserved or retained (VRM Class I & II):	0%	85%	98%	98%	47%
VRI Class III partially retained (VRM Class III)	0%	61%	31%	31%	84%
VRI Class IV with major modification (VRM Class IV)	0%	32%	30%	30%	70%
Water Resources					
Area (percent of Decision Area) indirectly maintaining or improving of water quality resulting from protective prescriptive applied through area designations.	225,120 acres (56%)	301,140 acres (75%)	322,110 acres (80%)	322,110 acres (80%)	279,650 acres (69%)
Wildland Fire Ecology and Management					
Increased incidence of human-caused fires as a result of increased recreational visitation	Moderate potential	Moderate potential	Lowest potential	Low potential	Highest potential
Improvement in fire regime condition class as a result of vegetation management.	Lowest potential	Moderate potential	High potential	Highest potential	Low potential

Table 2.2
Summary of Environmental Consequences by Alternative

Summary of Impact	A	B	C	D	E
Comprehensive Trail and Travel Management					
Change (percent) to areas of travel opportunity and potential for travel network to extend for motorized and mechanized uses:	No change	4% decrease in area	6% decrease in area	6% decrease in area	1% increase in area
Change (percent) to motorized route opportunities for all users:	50% increase	18% decrease	30% decrease	30% decrease	43% increase
Lands and Realty					
Probability of a net loss of public lands and federal mineral estate as a result of land tenure adjustments (acquisitions and disposals) based on criteria in the RMP:	High probability (99% available for disposal)	Low probability (greater than 99% retained)	Low probability (greater than 99% retained)	Low probability (greater than 99% retained)	Low probability (greater than 99% retained)
Loss of opportunity to establish new rights-of-way (increased percent of areas with ROW restrictions [avoidance and exclusion areas])	0% increase in restricted areas	62% increase in restricted areas	77% increase in restricted areas	77% increase in restricted areas	55% increase in restricted areas
Loss of opportunity for utility scale renewable energy projects in areas with potential for development beyond standard ROW exclusion areas.	No additional exclusions for renewable energy projects	25% of area with potential excluded	60% of area with potential excluded	60% of area with potential excluded	No additional exclusions for renewable energy projects
Livestock Grazing					
Change (percent) to the opportunity to utilize public lands for grazing operations:	No change	6% increase	4% increase	100% decrease	10% increase
Potential grazing opportunity (AUMs) [29]	37,600 AUMs	40,000 AUMs	37,800 AUMs	900 AUMs	42,300 AUMs
Minerals Management					
Area with potential, available for Oil & Gas development (percent of area with potential closed):	154,760 acres (2%)	154,760 acres (2%)	142,890 acres (10%)	142,890 acres (10%)	156,400 acres (1%)
Area with potential, available for Solid (non-energy) leasable development (percent of area with potential closed):	34,590 acres (1%)	34,340 acres (2%)	0 acres (100%)	0 acres (100%)	34,760 acres (1%)
Area with potential, available for locatable mineral development (percent of area with potential withdrawn):	236,360 acres (8%)	~~228,780~~ 236,320 acres (~~10%~~ 8%)	222,180 acres (13%)	222,180 acres (13%)	236,080 acres (8%)

[29] These figures include 900 AUMs authorized by other RMPs.

Table 2.2
Summary of Environmental Consequences by Alternative

Summary of Impact	A	B	C	D	E
Area with potential, available for salable mineral development (percent of area with potential closed):	43,330 acres (16%)	30,300 acres (41%)	30,170 acres (41%)	30,170 acres (41%)	33,700 acres (34%)
Recreation and Visitor Services					
Area (percent of Decision Area) lost to all public opportunities for recreation (i.e., permanent public closure).	0 acres (0%)	~~11,000~~ 4,000 acres (~~3%~~ < 1%)	23,000 acres (6%)	23,000 acres (6%)	0 acres (0%)
Area (percent of Decision Area) lost to camping opportunities.	2,890 acres (<1%)	~~42,840~~ 21,820 acres (~~11%~~ 5%)	75,190 acres (19%)	75,190 acres (19%)	20,360 acres (5%)
Area (percent of Decision Area) lost to unrestricted equestrian activities.	450 acres (<1%)	~~45,550~~ 20,700 acres (~~11%~~ 5%)	69,030 acres (17%)	69,030 acres (17%)	22,710 acres (6%)
Area (percent of Decision Area) lost to recreation shooting sports (e.g., Target Shooting, paintball etc.)	127,930 acres (32%)	~~199,130~~ 167,620 acres (~~49%~~ 41%)	236,110 acres (58%)	236,110 acres (58%)	174,800 acres (43%)
Areas of Critical Environmental Concern (ACECs)					
Potential for degradation and loss of relevant values on (number of areas, acres):	4 20,940 acres	0 0 acres	0 0 acres	0 0 acres	1 2,830 acres
Back Country Byways					
Change to the visual and social values, and administrative setting of the Chimney Peak Backcountry Byway	Values and settings maintained	Special designation revoked	Special designation revoked	Special designation revoked	Values and settings enhanced, potential increase in use
National Trails					
Potential for visual and social values to be diminished along trails.	Highest potential	Lowest potential	Lowest potential	Lowest potential	Low potential
Wild and Scenic Rivers					
Free flowing characteristics and ORVs protected by recommendation for inclusion in the NWSRS on (number and miles of river segment):	0 river segments 0 miles	~~2~~ 4 river segments ~~8~~ 27 miles	8 river segments 31 miles	8 river segments 31 miles	0 river segments 0 miles
ORVs (river corridor acres) protected by overlapping designations (ACECs, areas of ecological importance, etc.):	12,220 acres	12,220 acres	12,220 acres	12,220 acres	12,220 acres

Table 2.2
Summary of Environmental Consequences by Alternative

Summary of Impact	A	B	C	D	E
Wilderness Study Areas (WSAs)					
Continued protection, if released by congress, of wilderness values through overlapping designations or management direction on (percent of lands currently WSAs):	54% 11,470 acres	97% 20,530 acres	100% 21,140 acres	100% 21,140 acres	88% 18,650 acres
Social and Economic Resources					
Contribution to local employment opportunities and income as a result of BLM actions and authorizations:	*3,521 jobs* *$200.9 million in labor income*	*3,519 jobs* *$203.5 million in labor income*	*3,488 jobs* *$202 million in labor income*	*3,359 jobs* *$198.3 million in labor income*	*3,537 jobs* *$204.1 million in labor income*
Potential to disproportionately impact minority or low income populations:	Lowest	Low	Low	Moderate	Lowest
Public Safety and Health					
Risks to public health from industrialized areas reduced from (acres)	0 acres	~~*10,000*~~ *4,000* acres	10,000 acres	10,000 acres	0 acres
Risks to public health from travel across serpentine soils remain from routes (miles)	6 miles	5 miles	5 miles	5 miles	6 miles

3 Chapter Three

Introduction

This chapter describes existing conditions for Bureau of Land Management (BLM) resource programs, resource uses, special designations, and the social and economic environment in the Bakersfield FO Planning Area. The description of the affected environment uses the best and most recent data available. This chapter does not, however, provide detail about environmental components that would not be affected or that are not essential to the understanding or resolution of planning issues.

In addition to describing existing conditions, where appropriate, this chapter identifies management challenges for resource programs and resource uses within the Decision Area. The BLM reviewed current management and combined with the scoping process for revising the 1997 Caliente RMP (existing plan) identified these management challenges. By describing existing conditions for resource programs in the Planning Area, this chapter serves as the baseline against which Chapter 4 analyzes potential impacts of the alternatives.

Overview of Planning Area

The Planning Area encompasses about 17 million acres throughout Kings, San Luis Obispo, Santa Barbara, Tulare, Ventura, Madera, eastern Fresno, and western Kern Counties. Stretching from the coastal islands in the Pacific Ocean across the Central Valley to the crest of the Sierra Nevada Range, public lands are scattered across the Planning Area in numerous small parcels. With a variety of settings and landforms, this is a region of diverse topography and landscapes, and extraordinary biodiversity. Elevations range from sea level to more than 14,500 feet at Mount Whitney. The BLM Bakersfield FO is directly responsible for the management of approximately 400,000 acres of public land and 1.2 million acres of Federal mineral estate (i.e., the Decision Area).

The Planning Area is comprised of three bioregions; the Central Coast, the San Joaquin Valley, and Sierra, each with their own characteristic land forms, vegetative communities, wildlife, and public lands uses. The Central Coast bioregion features coastal scenery, farmland, and vineyards and a climate that is mild, seasonally moist, and sometimes foggy. The San Joaquin Valley bioregion features a large expanse of valley floor, riddled with dry washes stemming from the foothills of the Coastal and Sierra ranges. The weather is hot and dry in summer, with long sunny days, whereas winters are moist and often blanketed with heavy fog. The Sierra bioregion is a vast and rugged mountainous area and includes forests, lakes, and rivers that generate much of the state's water supply. The climate varies with the elevation, offering cold snowy winters and cool summers at higher elevations and rainy winters and mild summers in the foothills.

A significant portion of the biologic diversity of California resides within the boundaries of the Bakersfield FO. For example, of the 130 federally listed animal species in California, over a third is found within the Planning Area and 120 different vegetation series are known or have the probability of being found on lands within the Decision Area.

Historic and prehistoric use of the region have led to wide variety of cultural resources; diverse in nature and widely distributed across the Planning Area. Native American occupation of the Planning Area

extends as far back as at least 12,000 years ago as evidenced by typical prehistoric archaeological assemblages, such as, lithic scatters, bedrock milling features, shell middens, and pictograph and petroglyph sites, being common throughout the area. The historic use of the region has focuses on mineral and agricultural development, remnants of which survive in place on several areas of public land.

Over 20 million people live within a few-hour drive of public lands within the Planning Area. As both a result of demand and diversity in land forms and ecological communities present, a variety of recreational uses occur, ranging from primitive dispersed activities to resource-dependent intensive recreation opportunities. Activities include equestrian use, camping, hiking, nature study, photography, off-highway vehicle use, target shooting, and hunting. Some use of the public land is, however limited by the lack of legal public access across adjoining private lands.

Resources

3.1 Air and Atmospheric Values

This section provides a summary of air quality, climate, and meteorology in the Planning Area, and addresses climate change, including a discussion on Greenhouse Gas emissions (GHG). Additional background information is provided in the Air Resources Appendix (Appendix A). BLM manages air resources ~~*to comply*~~ *in compliance* with *all* applicable Federal*, State, and local* laws, ~~*and*~~ regulations, and ~~*State and local air quality*~~ rules; *air quality management objectives are outlined in an Air Resources Management Plan, which is included in Appendix A*. Federal law requires BLM actions to conform to applicable State Implementation Plans (SIPs). BLM further manages air resources by designing projects to minimize emissions in compliance with local air rules. Design features may include implementation of Best Available Control Measures (BACM), Maximum Available Control Technology (MACT), and Best Management Practices (BMP) (refer to Appendix A).

Existing sources of emissions within the Planning Area include vehicle and equipment use, energy and mineral development, construction (residential, non-residential, and industrial), rights-of-way (such as power lines, pipelines (fluid mineral and water)), roads, communication sites, and other facilities), fuels management (prescribed fire and mechanical vegetation treatment), resource road maintenance, livestock grazing, agriculture, and recreational use of public lands. Generally, surface disturbing actions generate fugitive dust while vehicle and equipment use results in emissions, both which impact air quality. The largest BLM emission rates are associated with energy and mineral development and recreational vehicle travel on public lands, which represent a very small percentage of pollutant emissions in the Planning Area (see Figure 3.1-2).

Activities directly undertaken by the BLM or requiring its approval must comply with applicable federal, state, and local air quality regulations and meet federal air quality standards. BLM management activities and programs are broad, with many potential sources of emissions that are minimal and little affected by the planning decisions. These would include ongoing administrative uses (such as facility operation, fleet vehicle use, etc.) that although create emissions, are at levels that are presumed to conform to federal standards. Administrative activities are not further discussed in this plan. Management actions and programs that may contribute levels of emissions of concern are distilled into four broad categories for analysis purposes. For example, all vehicle use on unpaved roads can create particulate emissions; rather than separating these by class, such as recreation, non-recreation,

administrative, etc., they are all lumped under the "vehicle use" category below. The four emission categories analyzed in this plan are as follows:

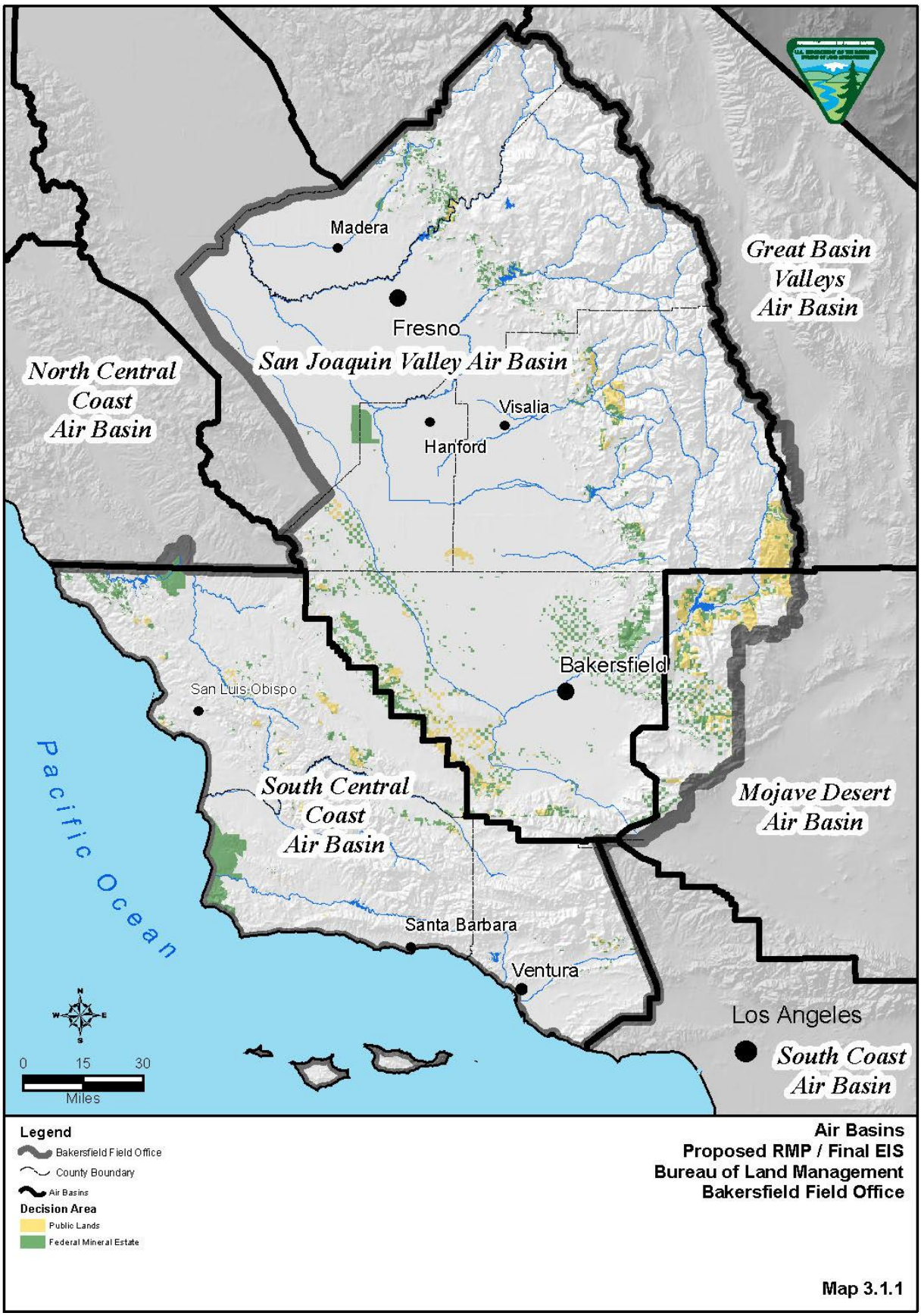
- Vehicle use on unpaved roads (including OHV use and wind erosion from disturbed surfaces);
- Fire management (including wildland fire, managed fire and prescribed fire);
- Energy development (oil and gas), mineral extraction, and mining operations; and,
- Livestock grazing activity.

3.1.1 Air Quality

This RMP addresses air quality within the Planning Area, focusing on BLM activities and programs in the Decision Area that potentially effect air quality and result in changes from the existing situation. The Planning Area is divided into six air basins that are generally grouped by similar geographic and meteorological conditions. These include the San Joaquin Valley Air Basin, the Mojave Desert Air Basin (eastern Kern County part), South Central Coast Air Basin, and small portions of the North Central Coast Air Basin (Monterey County) and the Great Basin Valley Air Basin (Inyo County) (Map 3.1.1). The majority of the Decision Area occurs within the San Joaquin Valley Air Basin and the eastern portion of Kern County, in the Mojave Desert Air Basin. In Monterey County, BLM manages the federal mineral estate under Camp Roberts. Surface management of lands in the Inyo County portion of the Planning Area is the responsibility of the U.S. Forest Service. Regulatory oversight authority for air quality matters rests at the local level with various air districts (see Table.3.1-1.), at the State level with the California Air Resources Board (CARB), and at the federal level with the U.S. Environmental Protection Agency (EPA), Region IX. The BLM has air program responsibilities through its permitting programs and Clean Air Act (CAA) requirements to analyze all actions for conformity to air quality plans. ~~*The BLM is further committed to comply with the procedures outlined in a recent Air Quality MOU (effective June 23, 2011) with the USDA, the DOI and the EPA; this MOU outlines a common framework for analyzing and mitigating impacts to air quality and AQRVs associated with Federal oil and gas decisions through the NEPA process.*~~

Table 3.1-1
Air Basins, Counties and ~~*Governing*~~ *Local* Air Districts within the Planning Area

Air Basin	Counties within Air Basin	Air Pollution Control Districts (APCD)
San Joaquin Valley Air Basin	Kern County Kings County Fresno County Madera County	San Joaquin Valley Unified APCD
South Central Coast Air Basin	Ventura County Santa Barbara County San Luis Obispo County	Ventura County APCD Santa Barbara County APCD San Luis Obispo APCD
Mojave Desert Air Basin	Kern County (eastern Kern portion only)	East Kern APCD
North Central Coast Air Basin	Monterey County (portion)	Monterey Bay Unified APCD
Great Basin Valleys Air Basin	Inyo County (portion)	Great Basin Unified APCD


Madera
Fresno
San Joaquin Valley Air Basin
Great Basin Valleys Air Basin
North Central Coast Air Basin
Visalia
Hanford
Bakersfield
San Luis Obispo
Pacific Ocean
South Central Coast Air Basin
Mojave Desert Air Basin
Santa Barbara
Ventura
Los Angeles
South Coast Air Basin
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
Air Basins
Decision Area
Public Lands
Federal Mineral Estate
Air Basins
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.1.1

The federal Clean Air Act (CAA), as amended, and the California Clean Air Act (CCAA) contain the primary provisions relating to air quality. Provisions of the federal CAA that apply to BLM actions include the National Ambient Air Quality Standards (NAAQS), *attainment/*non-attainment area designations, the development of state implementation plans (SIPs), prevention of significant deterioration (PSD), air toxics, and ~~*federal*~~ *general* conformity. The U.S. EPA, CARB, and regional air districts have *also* issued rules to implement federal and state Clean Air Acts.

Criteria pollutants are defined as those pollutants for which the federal and state governments have established ambient air quality standards for concentrations in order to protect public health. Under the federal CAA, the U.S. EPA has established NAAQS for seven criteria pollutants: ozone, respirable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), carbon monoxide, nitrogen dioxide, lead, and sulfur dioxide. California has established State Ambient Air Quality Standards for the same criteria pollutants, plus an additional 3 pollutants (visibility reducing particulates, sulfates, and hydrogen sulfide). The State ambient air quality standards for California are stricter than the Federal standards and are listed in Table 3.1-2. Under State law, designations are made ~~*by*~~ *using actual measured* pollutant *levels*, rather than by averaging *over* time *(Federal method)*. Although more stringent, the State standards have no specific dates to attain, unlike Federal standards. ~~*Several of these*~~ *Not all* criteria pollutant *levels in the district* currently meet *the* NAAQS. The BLM *contribution to* area sources of ~~*attainment pollutant*~~ emissions *that are within attainment levels* are *considered* minor and therefore ~~*will*~~ *are* not ~~*be*~~ analyzed in Chapter 4 (see Appendix A).

Table 3.1-2
Federal and State Ambient Air Quality Standards (AAQS)

Pollutant	Averaging Time	Federal Standard	California Standard
Ozone (O_3)	8 Hour	0.075 ppm (147 µg/m^3)[a]	0.070 ppm (137 µg/m^3)
	1 Hour	—	0.09 ppm (180 µg/m^3)
Particulate Matter (PM_{10})	Annual	—	20 µg/m^3
	24 Hour	150 µg/m^3	50 µg/m^3
Fine Particulate Matter ($PM_{2.5}$)	Annual	15 µg/m^3	12 µg/m^3
	24 Hour	35 µg/m^3	~~*No Separate State Standard*~~
Carbon Monoxide (CO)	8 Hour	9 ppm (10 mg/m^3)	9.0 ppm (10 mg/m^3)
	1 Hour	35 ppm (40 mg/m^3)	20 ppm (23 mg/m^3)
Nitrogen Dioxide (NO_2)	Annual	53 ppb (100 µg/m^3)[b]	0.03 ppm (57 µg/m^3)
	1 Hour	100 ppb (188 µg/m3)[b]	0.18 ppm (339 µg/m^3)
Sulfur Dioxide (SO_2)	24 Hour	*0.14 ppm (for certain areas)c*	0.04 ppm (105 µg/m^3)
	3 Hour	—	—
	1 Hour	75 ppb (196 µg/m^3)[c]—	0.25 ppm (655 µg/m^3)
	Annual Arithmetic Mean	*0.030 ppm (for certain areas)c*	
Sulfates (SO_4)	24 Hour	—	25 µg/m^3
Lead (Pb)	30 Day Average	—	1.5 µg/m^3
	Calendar Quarter	1.5 µg/m^3	—
Hydrogen Sulfide (H_2S)	1 Hour	No Federal Standards	0.03 ppm (42 µg/m^3)
Vinyl Chloride (chloroethene)	24 Hour		0.01 ppm (26 µg/m^3)
Visibility Reducing Particulates	8 Hour		~~*In sufficient amount to produce an extinction coefficient of 0.23 per kilometer due to particles when the relative humidity is less than 70%.*~~

NOTES:

a The 1997 8-hour standard is 0.08 ppm.

b ~~*The U.S. EPA is in the process of implementing this new standard(effective January 22, 2010).*~~ Note the EPA standard is in units of parts per billion (ppb) and California standards are in the units of parts per million (ppm). ~~*This standard is based on the 3-year average of the 98th percentile of the yearly distribution of 1-hour daily maximum concentrations.*~~ *To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb.*

c The U.S. EPA established new 1-hour SO_2 standard, effective August 23, 2010. EPA also revoked the existing 24-hour SO_2 standard of 0.14 ppm and the annual primary SO_2 standard of 0.030 ppm. ~~*Note the new EPA standard is in units of parts per billion (ppb).*~~ *Note the 1-hour national standard is in units of parts per billion (ppb). To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb.*

d *In 1989, the ARB converted the statewide 10-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" for the statewide standards.*

SOURCE: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf

Criteria pollutant concentrations are measured at a number of compliance monitoring networks throughout the State. Emissions inventory data from these monitoring networks are utilized to determine if areas meet federal standards (NAAQS). These standards are used to classify all areas as to whether they meet (attain) or exceed (nonattainment) the thresholds established for these pollutants. Based on the EPA 2010 designations, the primary pollutants of concern in the Planning Area are Ozone, PM_{10}, and $PM_{2.5}$ (Table 3.1-3.). The remaining criteria pollutants are either unclassified, or in attainment with the NAAQS; refer to the Air Resources Appendix (Appendix A) for additional detail.

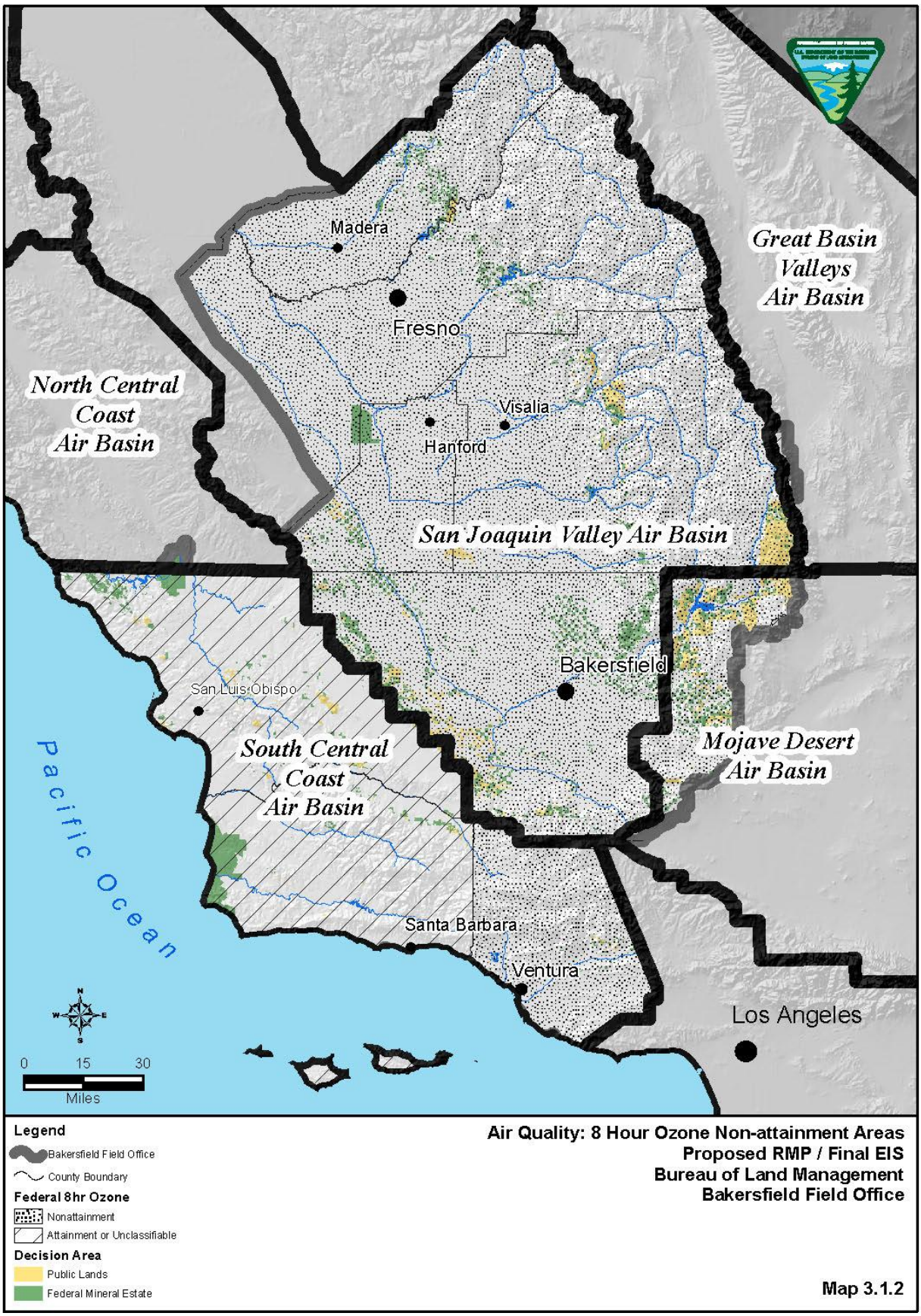
Table 3.1-3 indicates the federal ~~*2010*~~ *2011* air quality designations within the Planning Area. Standards for 8-hour ozone & PM_{10} use a nonattainment area classification system based on severity (marginal, moderate, serious, severe, and extreme). Areas with more severe air quality problems have later attainment dates and progressively more requirements; marginal areas have the least amount of time to attain the standard whereas extreme areas have the most time. The $PM_{2.5}$ standard does not use a classification system, which simplifies the attainment year and planning requirements. Areas that are classified as non-attainment by the EPA are required to prepare and implement a State Implementation Plan (SIP) that identifies and quantifies sources of emissions and presents a comprehensive strategy to control and reduce locally generated emissions.

Table 3.1-3
Federal Designations within the Planning Area

Air Basin	Air Quality District	Pollutant	Planning Area Name	Federal Designation
San Joaquin Valley	San Joaquin Valley Unified APCD	Ozone (8-hour)	San Joaquin Valley, CA	Nonattainment Extreme[1]
		$PM_{2.5}$		Nonattainment
		PM_{10}		Maintenance
		CO		*Maintenance*
Mojave Desert	East Kern County APCD	Ozone (8-hour)	Eastern Kern County, CA	Nonattainment Serious[1]
		PM_{10}		Nonattainment
		$PM_{2.5}$		Unclassifiable/Attainment
		CO		*Maintenance*
South Central Coast	Ventura County APCD	Ozone (8-hour)	Ventura County, CA	Serious[1] Nonattainment
		PM_{10}		Unclassified
		$PM_{2.5}$		Unclassifiable/Attainment
		CO		*Maintenance*
	San Luis Obispo County APCD	Ozone (8-hour)	San Luis Obispo County, CA	Unclassifiable/Attainment
		PM_{10}		Unclassified
		$PM_{2.5}$		Unclassifiable/Attainment
		CO		*Maintenance*
	Santa Barbara County APCD	Ozone (8-hour)	Santa Barbara County, CA	Unclassified/ Attainment
		PM_{10}		Unclassified
		$PM_{2.5}$		Unclassifiable/Attainment
		CO		*Maintenance*
Great Basin Valleys	Great Basin Unified APCD	*CO*	Inyo County, CA	*Maintenance*
		All Criteria Pollutants		Unclassified/Attainment
North Central Coast	Monterey Bay Unified APCD	*CO*	Monterey County, CA	*Maintenance*
		All Criteria Pollutants		Unclassified/Attainment

[1] EPA classification (e.g. Moderate, Extreme, or Severe,) establishes the required attainment date of the federal standard for Ozone and PM10.

The majority of the Planning Area has been classified as non-attainment for 8-hour Ozone (see Map 3.1.2). A very small portion of the Planning Area in eastern Kern County is classified as non-attainment for PM_{10} and the entire San Joaquin Valley air basin is designated as maintenance for PM_{10} (see Map 3.1.3). Portions of the Planning Area have been classified as non-attainment for $PM_{2.5}$ under the State and/or national standards (see Map 3.1.4). *As of September 27, 2010, all CO areas have been redesignated to maintenance areas.*


Madera
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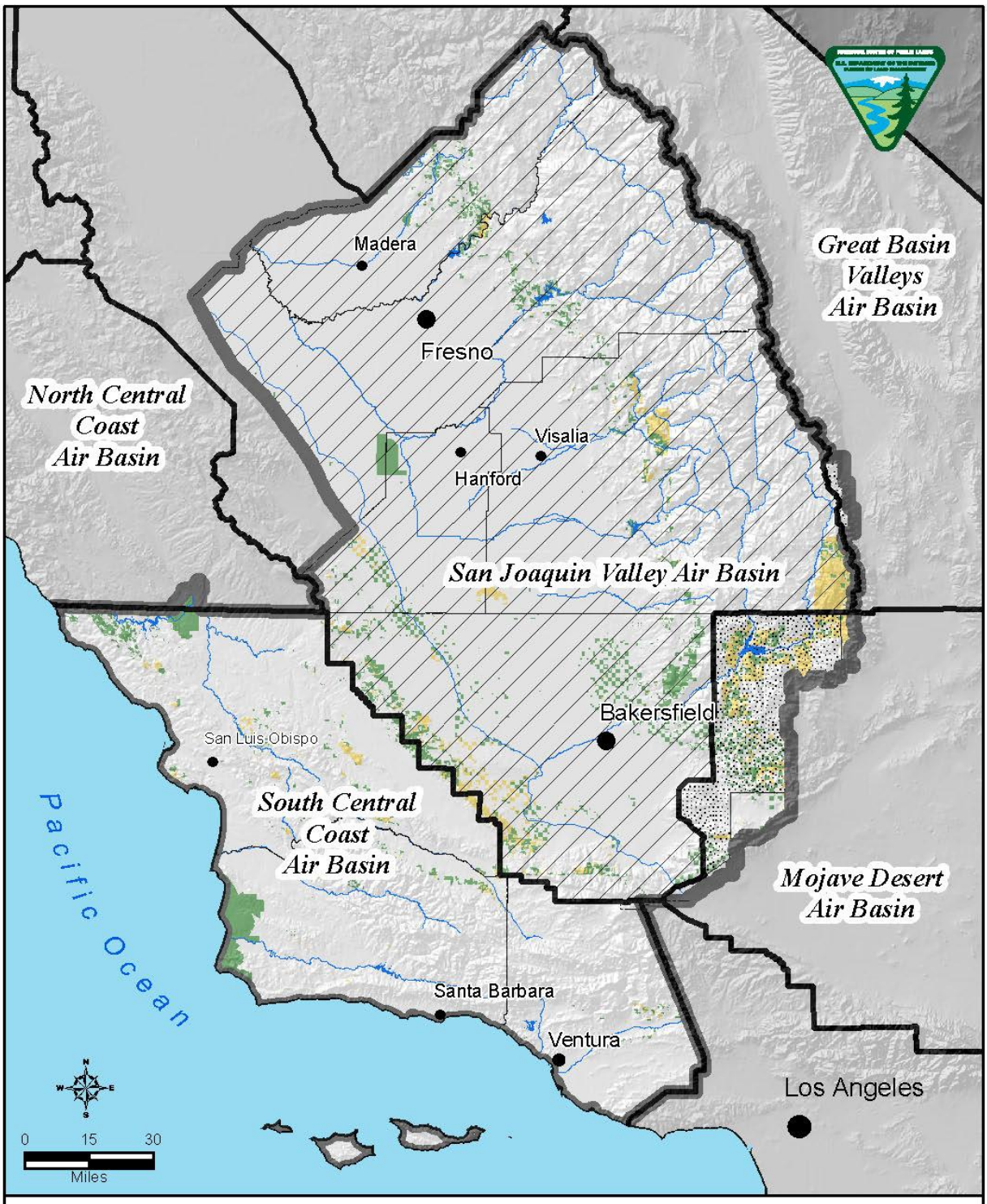
Hanford
Great Basin Valleys Air Basin
North Central Coast Air Basin
San Joaquin Valley Air Basin
Bakersfield
San Luis Obispo
South Central Coast Air Basin
Mojave Desert Air Basin
Pacific Ocean
Santa Barbara
Ventura
Los Angeles
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
Federal 8hr Ozone
Nonattainment
Attainment or Unclassifiable
Decision Area
Public Lands
Federal Mineral Estate
Air Quality: 8 Hour Ozone Non-attainment Areas
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.1.2


Madera
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Great Basin Valleys Air Basin
North Central Coast Air Basin
San Joaquin Valley Air Basin
Bakersfield
San Luis Obispo
South Central Coast Air Basin
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Pacific Ocean
Santa Barbara
Ventura
Los Angeles
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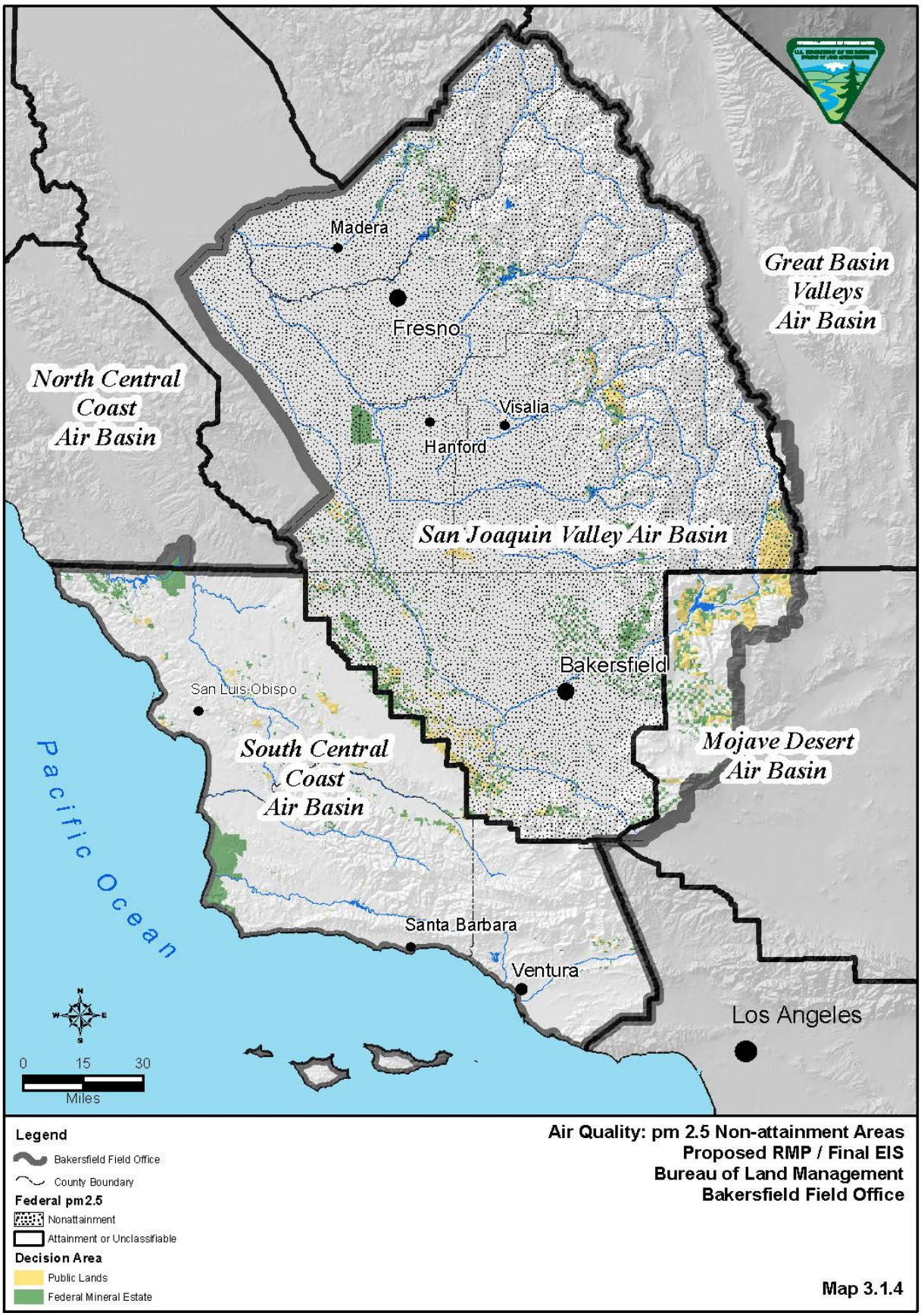
Miles
Legend
Bakersfield Field Office
County Boundary
Federal PM10
Maintenance
Nonattainment
Unclassifiable
Decision Area
Public Lands
Federal Mineral Estate
Air Quality: PM10 Non-Attainment and Maintenance Areas
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.1.3


Madera
Fresno
Visalia
Hanford
Great Basin Valleys Air Basin
North Central Coast Air Basin
San Joaquin Valley Air Basin
Bakersfield
San Luis Obispo
South Central Coast Air Basin
Mojave Desert Air Basin
Pacific Ocean
Santa Barbara
Ventura
Los Angeles
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
Federal pm2.5
Nonattainment
Attainment or Unclassifiable
Decision Area
Public Lands
Federal Mineral Estate
Air Quality: pm 2.5 Non-attainment Areas
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.1.4

3.1.1.1 Current Conditions

Air quality in the Planning Area is improving and nonattainment events have been episodic (San Joaquin Valley APCD, 2010 and Ventura County APCD, 2008). There are times that localized areas have not met federal air quality standards due to locally generated and/or transported pollutants from a variety of sources. High PM_{10} concentrations that violated NAAQS peaked in the early 1990s. However, in more recent years, favorable monitoring data has led to reclassification by the US EPA for PM_{10}, and redesignation for most of the Planning Area. Implementation of dust control rules and controls on a number of critical sources have led to the reductions in PM_{10} concentrations, and the redesignation of the San Joaquin Valley Air Basin as a PM_{10} maintenance area.

The numbers of violations of the NAAQS for ozone has declined. Rules establishing controls for ozone precursor emissions have been implemented, but air basins in the Planning Area continue to be impacted by mobile source emissions, primarily from vehicle use.

Background concentrations of criteria pollutants in the Planning Area are indicated below in Figure 3.1-1. Levels of 8-hour Ozone and $PM_{2.5}$ (24-hour) were in excess of the NAAQS, based on 2008 emissions data taken from various monitoring stations. To provide context for possible BLM contributions to these conditions in the San Joaquin Valley air basin, a more in depth analysis of NOx shows the major source of emissions is mobile sources (vehicles). These sources are ~~*mostly*~~ outside of BLM control and outside the jurisdiction of regional air districts (see Figure 3.1-2).

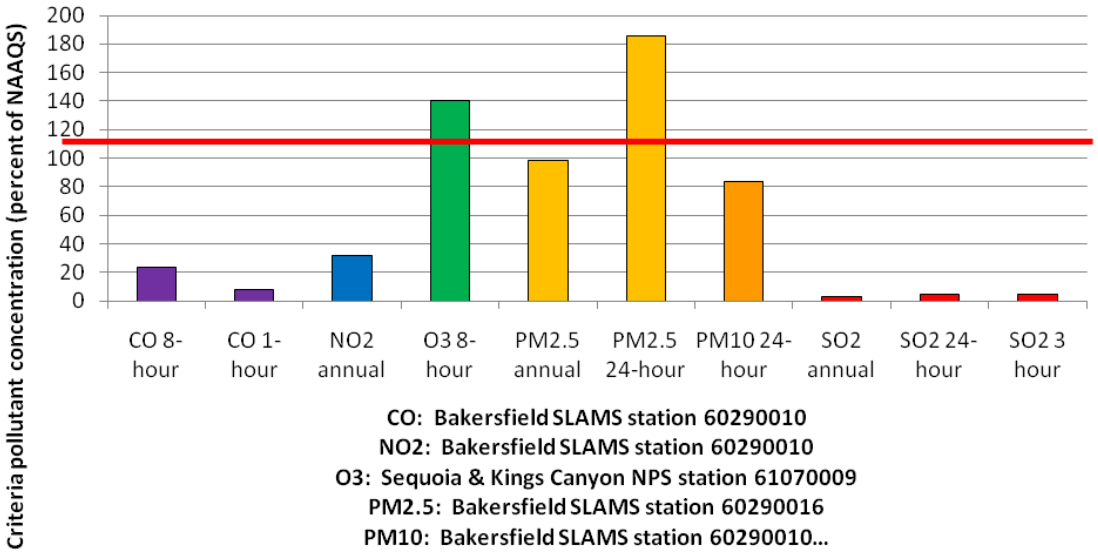


Figure 3.1-1 – Background Concentrations of Criteria Pollutants in the Planning Area 2008

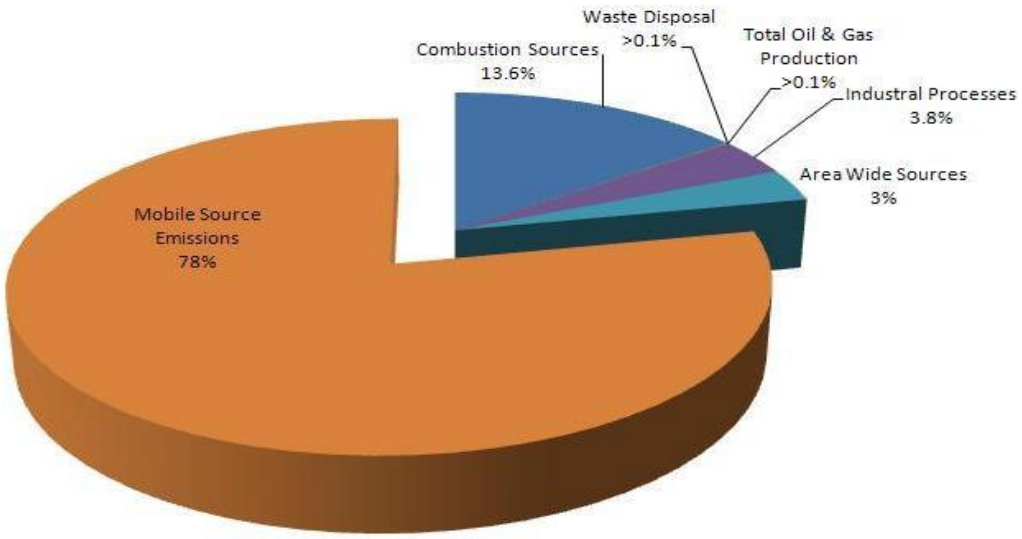


Figure 3.1-2 – NOx Sources in the San Joaquin Valley Air Basin

Table 3.1-4 lists available data from the CARB database that is applicable to this analysis and notes where data is not comparable or lacking. The statewide emissions inventories used in this document include emission resulting from federal lands and actions.

Table 3.1-4
Air Quality Baseline Emissions for Applicable Criteria Pollutants

Activity (Source)	***Pollutant***	***Total Emissions from Inventory (tons/year)***	***Emissions from BLM (tons/year)***	***% of Total Inventory***	***Location (Air District)***	***Notes***
Oil and Gas Production in the Planning Area	*NOx* *SOx* *ROG* *PM_{10}* *$PM_{2.5}$*	*4916.55* *876* *14877.4* *846.85* *839.5*	*373.386* *68.01* *1230.54* *60.971* *60.971*	*7.6%* *7.8%* *8.27%* *7.2%* *7.2%*	*SJVAPCD*	*In 2010, total oil and gas production Emissions represented >0.1% of NOx emissions in SJV air basin (refer to Figure 3.1-2)*

	NOx SOx ROG PM_{10} $PM_{2.5}$	1171.65 2876.2 1934.5 127.75 109.5	25.01053 3.37041 33.73732 1.01105 1.01105	2.13% 0.12% 1.74% 7.2% 7.2%	San Luis Obispo & Santa Barbara South Central Coast	This area is classified "attainment" for all criteria pollutants.
	NOx SOx ROG PM_{10} $PM_{2.5}$	131.4 32.85 1306.7 14.6 14.6	10.86678 2.41484 69.1248 1.20742 1.20742	8.27% 7.35% 5.29% 8.27% 8.27%	VCAPCD	
Livestock Grazing	NOx VOC PM_{10} $PM_{2.5}$	No emission inventory data exists for range Livestock Grazing			SJVAPCD SLOCAPCD SBCAPCD VCAPCD EKAPCD	
Vehicle Use on Unpaved Roads	PM_{10} $PM_{2.5}$	41.5	6.2 1.7	0.14%	SJVAPCD	
	PM_{10} $PM_{2.5}$	Specific inventory is incomplete for this category			SLOCAPCD SBCAPCD VCAPCD EKAPCD	
Fire Management	NOx VOC PM_{10} $PM_{2.5}$	Data is spotty for this source			SJVAPCD SLOCAPCD SBCAPCD VCAPCD EKAPCD	Inventories are not comparable.

Ozone (O_3): Ozone (O_3) is a colorless, toxic gas. Ozone is one of a number of substances called photochemical oxidants, formed in the atmosphere as a result of the action of ultraviolet sunlight on certain chemicals in the atmosphere. Chemicals that react to form ozone are referred to as precursor emissions and include nitrogen oxides (NO_x), and reactive organic gas (ROG) (sometimes called volatile organic compounds (VOC)). NOx is a primary culprit in the formation of both ozone and $PM_{2.5}$. The Ozone forms downwind from the precursor source during the daylight hours. The reaction is accelerated by increased sunlight intensity and temperature. As a result, the maximum Ozone levels are generally reached in the late afternoon during the warmer times of the year. Ozone occurs in two layers in the atmosphere. The layer immediately surrounding the earth's surface is called the troposphere. The troposphere extends up about 10 miles and it is here that ground level ozone ("bad ozone") is a pollutant that damages human health, vegetation and many common materials. The stratosphere extends up from about 10 to 30 miles and ozone here is considered "good" because it protects life from harmful ultraviolet rays.

The majority of the Planning Area is in non-attainment with the federal standards for 8-hour Ozone, This includes portions of the South Central Coast Air Basin and the entire San Joaquin Valley Air Basin. For a number of years, several studies have looked at ozone pollution problems that occur in these air basins. According to the SJVAPCD Annual Report to the Community (SJVAPCD 2010), the summer of 2010 was

the cleanest on record in the Valley, continuing the 20-year trend. Based on the current 8-hour federal standard, there have been a greater number of "Good" air quality days than "Unhealthy" air quality days, and the number of "Good" days has continued to increase since 2000.

Counties within the Planning Area that are in attainment with federal ozone standards include Santa Barbara and San Luis Obispo Counties (South Central Coast Air Basin); Monterey County (North Central Coast Air Basin); and Inyo County (Great Basin Valleys Air Basin).

Particulate Matter (PM)*: Particulate matter is comprised of finely divided soils or liquids such as dust, fly ash, soot, smoke, aerosols, fumes, mists, and vapors that can be suspended in the air for extended periods of time. Particles originate from a variety of stationary and mobile sources and may be directly emitted (primary emissions) or formed in the atmosphere (secondary emissions). Primary anthropogenic PM sources include industrial processes, agricultural operations, combustion of wood and fossil fuels, construction and demolition activities, and entrainment of road dust. Natural sources that contribute to the PM problem include windblown dust and wildfires.*

Sources of secondary PM directly emit air contaminants that form or help form PM. Pollutants such as SOx, NOx, VOCs, and ammonia are considered PM precursor emissions; controls that reduce PM precursor emissions tend to have a beneficial impact on ambient PM levels.

Respirable Particulate Matter (PM10): PM_{10} emissions are comprised of particulate material ~~*below*~~ *equal to or less than* 10 microns and is a mixture of substances including elemental carbon, lead and nickel; compounds such as nitrates, organics and sulfates; and complex mixtures such as diesel exhaust and soil. Ambient PM_{10} can be caused by both environmental factors and human activities. Particulate emissions are considered direct when particles are emitted directly from the source. PM_{10} precursor emissions are emitted as gases that form into particles in the atmosphere downwind from the source. Human activities that contribute to the PM_{10} emissions include combustion sources such as stack emissions, diesel exhaust, and smoke from prescribed fire and wild fire, fugitive dust sources such as construction and demolition activities, off highway vehicle (OHV) travel, unpaved public roads and parking lots, industrial activities, OHV open areas and military activities. The combustion sources tend to produce smaller particulates (less than 5μ) while fugitive sources tend to produce larger particulates (larger than 5μ).

One of the reasons for concern with PM_{10} emissions is their adverse effect on human health. All of the PM_{10} particles are considered Respirable Particulate because they can be inhaled into the nose, throat and/or lungs. The fine PM_{10} particles are the largest threat to health because they tend to deposit in the air sacks. In addition, many of the fine particles are from precursor emissions, several of which are toxic or carcinogenic. Fugitive dust is primarily coarse particulate *matter* that ~~*are*~~ *is* not as likely to contain toxic materials. The national PM_{10} standards ~~*are considered to be*~~ *establish* a level ~~*at*~~ *above* which the whole population would have health effects from PM_{10}. The State PM_{10} standards are considered public health goals.

Nearly all of the Planning Area has had recorded concentrations of PM_{10} in excess of the national and state ambient air quality standards for PM_{10} emissions. However, based on current designations, the EPA has classified only one area within the Bakersfield FO Planning Area as a federal PM_{10} non-attainment area, the East Kern County, CA- Serious non-attainment area. The EPA redesignated the entire San Joaquin Valley Air Basin to attainment/maintenance of the federal PM_{10} standards in November 2008. No monitoring sites have experienced PM_{10} violations in the SJVAB since 2003.

Fine Particulate Matter ($PM_{2.5}$): These fine particles have been implicated as an increased health risk and consist of chemical compounds that mostly result from combustion processes. $PM_{2.5}$ is a hotspot type of pollutant. The primary source of $PM_{2.5}$ in the atmosphere is combustion products and is likely be found in the same areas as ozone. It forms from both direct sources and secondarily from the chemical transform of precursor emissions in the atmosphere. Many of the precursor emissions are from combustion sources also. Some of these precursor emissions include SO_2 and NOx. The US EPA estimates that secondary $PM_{2.5}$ accounts for 50% of the ambient $PM_{2.5}$ in many areas. Characterization work by the US EPA and others ~~*have developed*~~ *has resulted in* an understanding of the sources of $PM_{2.5}$ for a number of areas. Work done by Heloemmen and others in Phoenix, Arizona found that 57% of the $PM_{2.5}$ was from direct combustion sources (US EPA 1997). They also found that unpaved road travel accounted for 1% of the *$PM_{2.5}$* emissions. Work by the Desert Research Institute in the San Joaquin Valley found that unpaved roads accounted for >1% of the $PM_{2.5}$ and that soil accounted for around 7% of the $PM_{2.5}$. These studies found that most of the soil $PM_{2.5}$ came from construction and agricultural fields. Major sources for $PM_{2.5}$ are diesel engines, power plants, boilers and such (US EPA 1997). Control strategies *and programs* for *reducing* $PM_{2.5}$ have targeted diesel engines *and other high emitting vehicles (boats, off-road equipment)* which are ~~*now being*~~ regulated by the State.

Any areas that are classified as nonattainment areas by the US EPA would have to reduce the ambient $PM_{2.5}$ levels. The 1997 $PM_{2.5}$ primary standard was revised in 2006; US EPA final designations for the 2006 $PM_{2.5}$ standard were signed in October 2009. Currently the San Joaquin Valley Air Basin is the only portion *of the* Planning Area that is classified as federal nonattainment for $PM_{2.5}$. The projections from air regulators indicate a reduction in $PM_{2.5}$ levels as the regulations take effect and the required technology advances are implemented.

According to the San Joaquin Valley APCD $PM_{2.5}$ levels are declining and the number of "Good" air quality days (based on the federal Air Quality Index (AQI) scale) is increasing with fewer "unhealthy" days recorded in late 2009 through early 2010 as compared to previous years (SJVAPCD 2010).

Carbon Monoxide (CO)*: CO is essentially inert to plants and materials but can have significant effects on human health because it combines readily with hemoglobin and thus reduces the amount of oxygen transported in the bloodstream. Effects on humans range from slight headaches to nausea to death.*

The major sources of carbon monoxide are combustion processes, such as fuel combustion in motor vehicles and industrial processes, agricultural burning, prescribed burning, and wildfires. Motor vehicles and other internal combustion engines are the dominant source of CO emissions in most areas. CO is also created during refuse, agricultural, and wood stove burning, and by some industrial processes. High CO levels develop primarily during winter when periods of light winds combine with ground-level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions.

CO levels have dramatically declined over the past decade, and are expected to continue this trend (http://www.arb.ca.gov/planning/sip/co/overview.pdf). In spite of increased vehicle travel statewide, these reductions are mainly attributed to CARB's stringent motor vehicle and clean fuels programs.

3.1.2 Conformity Determination

The classification of any area as a federal nonattainment or maintenance area brings an additional requirement for federal agencies. Section 176(c) of the CAA, as amended (42 U.S.C. 7401 et seq.), and

regulations under 40 CFR, part 93, subpart W, state that "no department, agency or instrumentality of the federal government shall engage in, support in any way or provide financial assistance for, license or permit, or approve any activity which does not conform to an applicable implementation plan." *The intent of the General Conformity requirements is to prevent the air quality impacts of Federal actions from causing or contributing to a violation of the NAAQS or interfering with the purpose of the SIP. This means that under the CAA 176(c) and 40 CFR, part 93, subpart W (conformity rules), federal agencies must make a determination that proposed actions in federal nonattainment areas conform to the applicable EPA approved implementation plans (if pertinent) before the action is taken.*

The regulations provide a phased process for meeting the General Conformity requirements of the CAA; these are 1) Applicability Analysis, 2) Conformity Determination, and 3) Review process. These regulations recognize a number of federal actions do not result in a significant increase in emissions, and therefore, include a number of exemptions such as de minimis emission levels based on the pollutant and nonattainment severity. As defined by 40 CFR 93 §153, *de minimis* levels are the minimum thresholds for which a conformity determination must be performed. Geographic areas that meet NAAQS are exempt from determining conformity with SIPs. Criteria pollutant rates that apply to nonattainment and maintenance areas within the Planning Area are indicated in Table 3.1-5.

Table 3.1-5
Criteria Pollutant Rates that Apply to Nonattainment Areas within the Planning Area

Pollutant	Nonattainment Area Type	Tons/Year
Ozone (NOx and/or VOCs)	~~*Serious*~~ *Extreme*	50
	Severe	25
	~~*Extreme*~~ *Serious*	10
	Other ozone NAA's (outside an ozone transport region)	100
PM_{10}	~~*Moderate*~~ *Serious*	100
	~~*Serious*~~ *Moderate*	70
	Maintenance	100
$PM_{2.5}$	Direct emissions	100
	SO_2, NOx, VOC or ammonia	100
CO	*All Maintenance Areas*	*100*

~~*The BLM has developed a ten-step process to comply with the federal conformity requirements*~~. Since the Bakersfield RMP proposes management actions and activities that will occur in both nonattainment and maintenance areas, the General Conformity requirements are applicable. The BLM has developed a ten-step process to comply with the federal General Conformity requirements (refer to Appendix A). At this RMP stage, an applicability analysis is required to determine whether current and anticipated emissions are below *de minimis* and whether a formal conformity determination is required. Federal actions with emissions less than the *de minimis* levels are not required to complete General Conformity analyses.

The proposed management actions ~~*in Alternatives B-E*~~ will be analyzed for conformance with relevant State Implementation Plans (SIPS). As described above, not all portions of the Planning Area are within designated nonattainment areas. *General Conformity does not apply to pollutants that meet NAAQS, nor does it apply in areas that meet federal air quality standards (attainment, unclassified).* Not all BLM management actions or programs that emit criteria pollutants will occur in all portions of the Planning

Area. Therefore, some of these actions do not require a conformity analysis. For example, since there is no oil and gas development in the eastern portion of Kern County (Mojave Desert Air Basin), the East Kern APCD SIPs are therefore not evaluated for associated pollutants. Although there are several SIPs prepared for the South Central Coast Air Basin, the conformity analysis for this basin is focused only on the Ventura County portion, since the County is classified as non-attainment ~~*with*~~ *for* the federal 8-hour ozone standard. Refer to Appendix A for a list of SIPs considered and those identified as relevant or applicable to BLM planning efforts.

Implementation plans were evaluated in determining the conformance of BLM management activities associated with four broad categories of emissions: 1) energy development (oil and gas, non-energy minerals); 2) vehicle use on unpaved roads; 3) wildland fire ecology and fuels management; and 4) livestock grazing. The applicable implementation plans include the following:

- *San Joaquin Valley Air Pollution Control District 2007 Ozone Plan (SJVAPCD 2007a)*
- *San Joaquin Valley Air Pollution Control District 2007 PM10 Maintenance Plan and Request for Redesignation (SJVAPCD 2007b)*
- *San Joaquin Valley Air Pollution Control District 2008 PM2.5 Plan (SJVAPCD 2008)*
- *Ventura County Air Pollution Control District FINAL Ventura County 2007 Air Quality Management Plan (VCAPCD 2007)*
- *State Strategy 2007 (CARB 2009a)*

These implementation plans include emissions inventories and source categories and identify control measures that bring actions into conformance with attainment strategies. Any BLM management action and authorized activity must comply with all permitting requirements of the respective air district, including current controls (e.g. rules and regulations). ~~*Refer to Appendix A for additional information and comprehensive rule lists by air district.*~~ *Refer to Appendix A for a list of SIPs considered and identified as relevant or applicable to BLM planning efforts, and for comprehensive rule lists by air district.*

Current control measures identified in the San Joaquin Valley APCD air quality plans that are relevant to BLM activities and programs may include Flares; Boilers, Steam Generators and Process Heaters; VOC Emissions from Decontamination of Soil; Steam Enhanced Crude Oil Production Well Vents; Components Used in Oil/Gas Production and Processing; Crude Oil Production Sumps; Heavy Crude Oil Components; Storage of Organic Liquids; Heavy Oil Test Stations and Gauge Tanks; and Prescribed Burning and Hazard Reduction Burning (see Air Resources Appendix A for a comprehensive listing of control measures applicable to BLM activities).

As identified in the SJVAPCD PM_{10} Maintenance Plan, compliance with Regulation VIII will adequately reduce PM_{10} emissions associated with BLM management actions and program activities The current control measures established and implemented to reduce PM_{10} emissions apply to construction equipment, vehicles, and unpaved road dust.

Example control measure categories for stationary sources identified in the Ventura County Air Quality Management Plan (AQMP) for ozone that are applicable to BLM management activities may include: Boilers, Steam Generators and Heaters; Crude Oil Storage Tank Degassing Operations; Vapor Recovery for Above Ground Storage Tanks; Soil Decontamination Operations; and Managed Burning and Disposal. In addition, a new rule under development will address the control of VOCs from oil wells prior to repair work in Ventura County.

3.1.3 Sensitive Areas

Sensitive areas within the Planning Area include mandatory Federal Class I areas, other National Parks and wilderness areas, wilderness study areas, wildland/urban interface areas, and urban areas.

3.1.3.1 Urban Areas

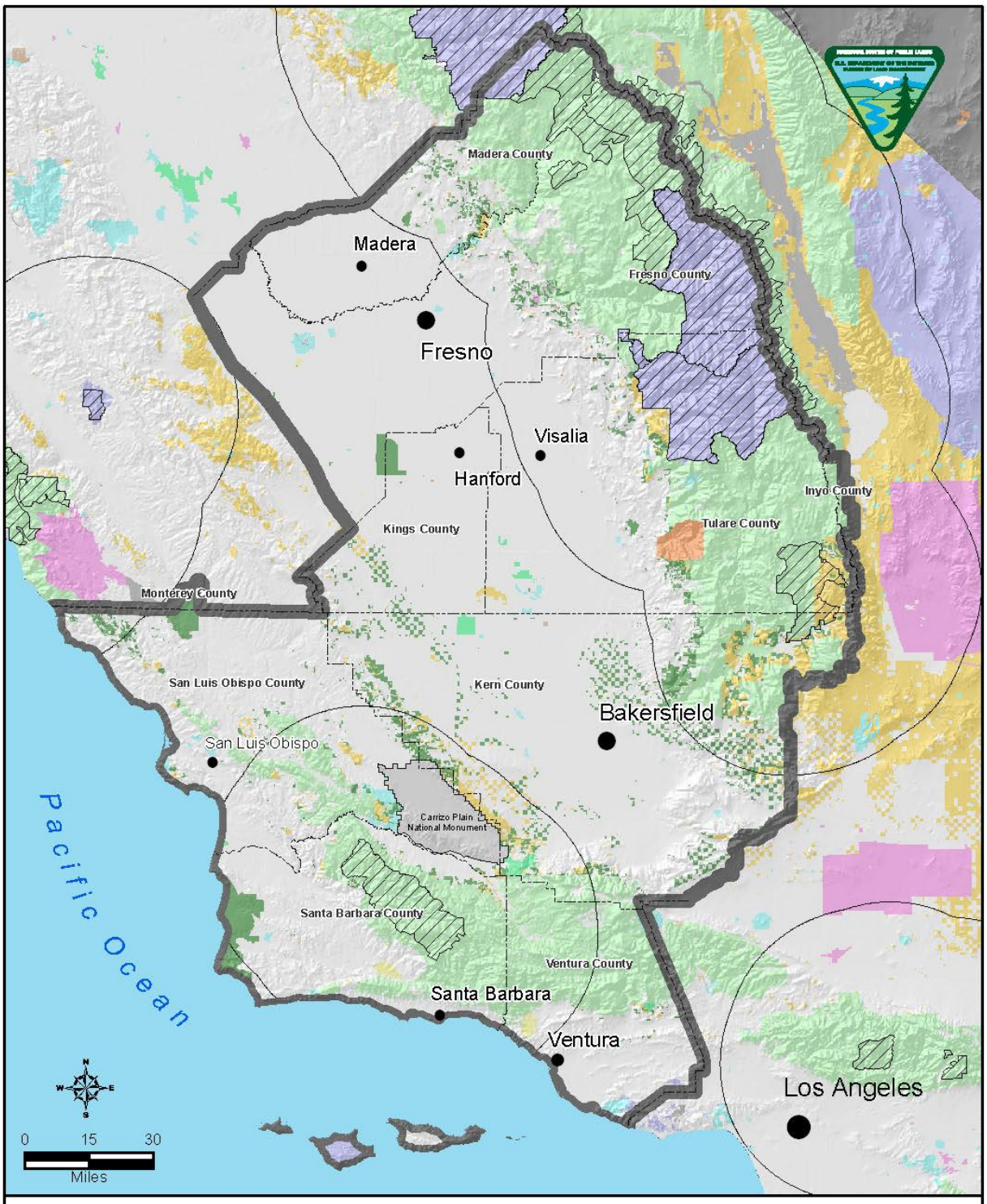
Within urban areas or population centers sensitive receptors include, but are not limited to, hospitals, schools, daycare facilities, elderly and convalescent facilities. Occupants of these facilities are generally more susceptible to adverse pollution effects. These types of facilities are expected to occur in populated regions within the Bakersfield FO; notable areas in close proximity to federal lands include, but are not limited to, Auberry, Three Rivers, Avenal, Alpaugh, Lake Isabella, Bakersfield, Taft, Maricopa, Fellows, and Derby Acres (refer to Map 1.1).

3.1.3.2 Mandatory PSD Class I Areas

The federal CAA also requires the US EPA to protect visibility conditions within the Class I areas established under the PSD program. Class 1 areas are listed wilderness areas and National Parks. *The federal PSD program is essentially the New Source Review (NSR) program for areas meeting national air quality standards*. One element of the PSD permit program is a review of the extent to which a proposed large stationary emission source (e.g., power plants) will impair visibility conditions in Class I areas. ~~*The CAA also requires development of programs to remedy existing visibility impairment in Class I areas if that visibility impairment results from man-made air pollution. For a Class 1 area to qualify for a PSD review, it must be located within 75 kilometers of the potential emission source*~~. *PSD applies to major new sources or major modifications of existing sources in areas designated attainment with federal standards. What constitutes a major source varies based on the type of permit involved, the pollutant(s) emitted, and the designation of the area where the source is located. A source is major if it exceeds certain thresholds, expressed in tons per year. For example, under Title V of the CAA, a source with the potential to emit 100 tons per year of any criteria pollutant is a major source and requires a Title V permit. PSD requires Best Available Control Technology, air quality analysis and public participation; generally permits are issued by local air districts.*

There are portions of eight mandatory PSD Class I visibility protection areas that occur within the Planning Area (Map 3.1.5); these Class I areas include:

- Kaiser Wilderness Area;
- Yosemite National Park;
- John Muir Wilderness Area;
- Kings Canyon National Park;
- Sequoia National Park;
- Dome Land Wilderness Area;
- San Rafael Wilderness; and
- Minarets Wilderness Area


Madera County
Madera
Fresno County
Fresno
Visalia
Hanford
Inyo County
Tulare County
Kings County
Monterey County
San Luis Obispo County
Kern County
Bakersfield
San Luis Obispo
Carrizo Plain National Monument
Pacific Ocean
Santa Barbara County
Ventura County
Santa Barbara
Ventura
Los Angeles
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Legend
Bakersfield Field Office
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Clean Air Act: Class I areas
Class I areas. 50 km buffer.
Decision Area
Public Lands
Federal Mineral Estate
Mandatory Prevention of Significant Deterioration
(PSD) Class I Areas
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.1.5

~~*Additional mandatory PSD Class I areas occur outside the Planning Area, but within 75 km of the FO boundary; these include Pinnacles Wilderness Area, Ventana Wilderness, Hoover Wilderness Area, Emigrant Wilderness Area, San Gabriel Wilderness, and Cucamonga Wilderness.*~~ Most lands in mandatory PSD Class I visibility protection areas are managed by the National Park Service and the U.S. Forest Service. BLM does not currently have any stationary sources subject to PSD review in the Decision Area *and no major stationary sources under BLM jurisdiction occur within 75 km of these Class I areas*.

Visibility in the Planning Area is monitored by the interagency network of IMPROVE stations including those in Yosemite and Sequoia National Parks, Pinnacles National Monument, Domelands and Raphael Wilderness Areas. Annual visibility in California ranged from 28 to 68 miles in 2004. Annual visibility in and near the Planning Area ranges from 49 to 93 miles (IMPROVE 2009). In and near the Planning Area, daily visibility ranges from 7 to 23 miles. The standard range of view (miles) is generally greater in the eastern portion of the Planning Area, and daily visibility distance is generally improved during the winter and spring months.

3.1.4 Hazardous Air Pollutants

Hazardous air pollutants (HAPs) are air pollutants suspected or known to cause cancer, birth defects, neurological damage, or other health issues. In California, HAPs are also referred to as toxic air contaminants (TACs). Section 112 of the CAA addresses emissions of HAPs; EPA regulates 187 HAPs by developing Maximum Achievable Control Technology (MACT) standards. Except for lead, there are no established ambient air quality standards for HAPs. Instead, these compounds are managed by air regulatory agencies on a case-by-case basis depending on the quantity and type of emissions and proximity of potential sensitive receptors. ~~*With respect to air quality, sensitive receptors are considered to be land uses that include groups of people or individuals that would be particularly vulnerable to potential adverse effects associated with air pollution, such as hospitals, schools, and daycare centers.*~~ For some air pollutants that are known to be particularly dangerous to human health, e.g. Naturally Occurring Asbestos (NOA), all human receptors would be considered sensitive. Section 112 requires that the EPA establish emission standards for major sources, which are defined as a stationary source or group of stationary sources that emit or have the potential to emit 10 tons per year or more of a single HAP or 25 tons per year or more of a combination of HAPs.

As discussed in *Soil Resources* and *Public Health and Safety*, serpentine soils are known to occur within the Planning Area. Serpentine soils may potentially contain naturally occurring asbestos (NOA). NOA is regulated by both the EPA and CARB. Asbestos-containing dust in serpentine soils is particularly of concern when this material is used in unpaved surfacing and/or is disturbed by vehicles and other means, including earthwork and road improvement (CARB 200*2*~~*1*~~). In addition, in areas where commercial mining has occurred in the past, there is a potential for the presence of mercury. HAPs can also originate from mobile sources such as vehicles or off-road equipment. Diesel engines emit a complex mix of pollutants, the most visible of which are very small carbon particles or "soot," known as diesel particulate matter (DPM). CARB has identified DPM as a TAC. ~~*BLM program activities and management actions would be expected to implement MACT standards; as a result HAPs emissions are not further addressed in this plan.*~~ Any major source would be expected to comply with EPA standards for stationary sources, as described above. *Currently there are no major stationary sources on public lands managed by the BLM; as a result HAPs emissions are not addressed further in this plan.*

3.1.5 Smoke Management

Smoke management indicators include concentrations of carbon monoxide and particulate matter. BLM's current~~ly manages~~ wildland fire and fuels management includes prescribed burning. Smoke management within the Planning Area is addressed by Smoke Management Plans, coordinated with the appropriate air district on burn permits. Title 17 of the California Code of Regulations (*Subchapter 2. Smoke Management Guidelines for Agricultural and Prescribed Burning*) provides the over-arching direction for smoke management in the State of California. Title 17 sets the meteorological criteria for determination of burn day status by air basin and provides overarching direction for management of smoke from prescribed fires. In addition, it directed each air district to prepare and submit a smoke management program to the California Air Resources Board for approval. Each air district within the Planning Area has an approved smoke management program. Prior to prescribed burning activities, the BLM must submit a smoke management plan to the applicable air district for approval. The BLM works with the air district to schedule burning activities when meteorological conditions will promote dispersal of emissions, not contribute to poor air quality, and will be in conformance with applicable state implementation plans. The air district is the final regulatory authority on approving planned ignitions based on smoke management concerns. The air district is also consulted when fires are managed for resource benefit. Their input is considered in the determination to manage for resource benefit or to suppress the fire.

3.1.6 Climate and Meteorology

Climate indicators include temperature, precipitation, wind, barometric pressure, humidity, sunshine and cloudiness. Climate and meteorology are discussed below by region, based on similar topographical and meteorological conditions that are helpful in understanding pollution transport.

3.1.6.1 San Joaquin Valley

The San Joaquin Valley (Valley) is a continuous intermountain valley approximately 250 miles long and averaging 80 miles wide. On the western edge of the valley is the Coast Mountain range, with peaks reaching 5,020 feet, and on the east side is the Sierra Nevada range, with some peaks exceeding 14,000 feet. The Tehachapi Mountains form the southern boundary of the Valley. The Tehachapi mountain range includes peaks over 6,000 feet and contains mountain passes to the Los Angeles basin and the Mojave Desert. The Valley floor is open to the north only and has an average elevation of 200 feet.

Although marine air generally flows into the basin from the San Joaquin River Delta, the region's topographic features restrict air movement through and out of the basin. The Coastal Range hinders wind access into the valley from the west, the Tehachapi Mountains prevent most southerly passage of airflow, and the high Sierra Nevada range forms a significant barrier to the east. Additionally, most of the surrounding mountains are above the normal height of summer inversion layers, which are at 1,500 to 3,000 feet. These topographic features result in weak airflow.

The wind pattern produces conditions that result in poor horizontal dispersion of pollutants. When there are high pressure systems over the SJV, pollutant dispersal is also limited vertically by inversions and is highly susceptible to pollutant accumulation over time.

Warm dry summers and cool winters characterize the SJV floor. The average mean temperature over a thirty-year period is 65°F (see Figure 3.1-3). High daily temperature readings in summer average around 95°F. The SJV also experiences mild winters, where the average daily low temperature is 45°F. In

general, the SJV averages 106 days a year with 90°F or hotter and 40 days a year with 100°F or hotter. The daily summer temperature variation can be as much as 30°F. The SJV has an inland Mediterranean climate that averages over 260 sunny days per year, primarily because semi-permanent high pressure systems establish themselves over the SJV and deflect low pressure systems that might otherwise bring rain and winds.

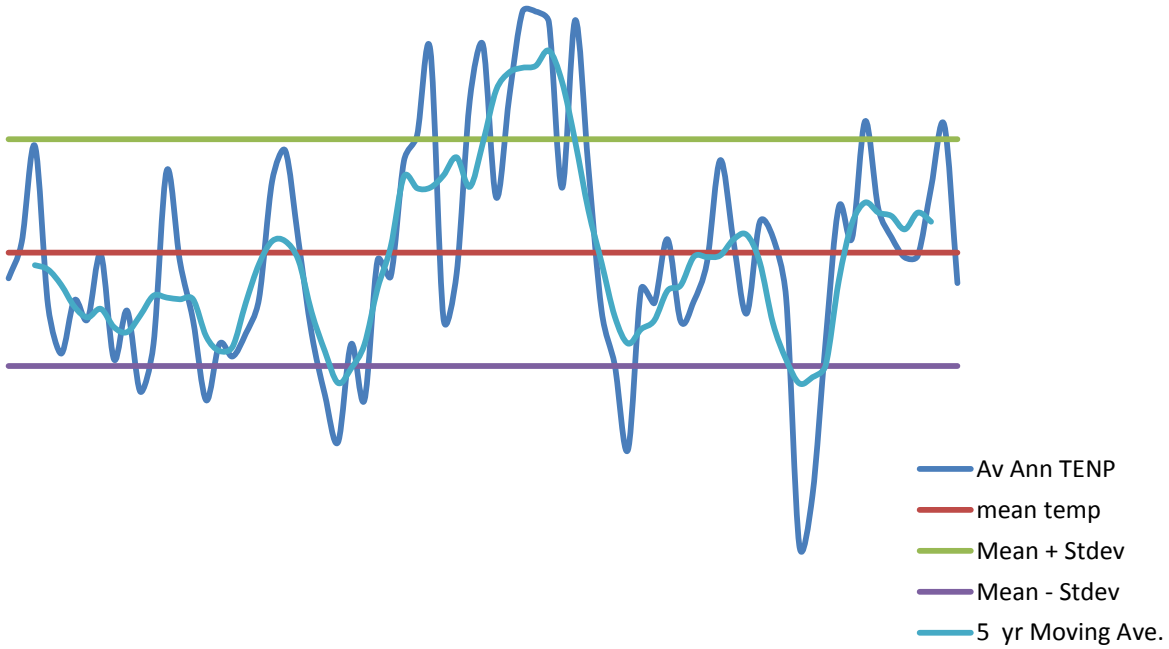


Figure 3.1-3 – Average Annual Temperature for Bakersfield, CA

Precipitation in the Valley portion of the Planning Area is confined primarily to the winter months (October – March), with some usually occurring in late summer and fall. Average annual rainfall for the valley floor ranges from 11 inches in the northern part (Fresno) to six inches in the south (Bakersfield).

For the purposes of transport, wind flows and inversion layers are discussed. Wind speed and direction play an important role in the dispersion and transport of air pollutants. Wind moves ozone precursors and ozone downwind from source areas of emissions or areas where ozone is formed.

During the daytime, surface winds enter the Valley primarily from the north through the San Francisco Bay Area; they also enter through passes in the coastal range. The air picks up ozone precursors emitted in the Bay Area and transports them down the valley where they eventually form ozone. Precursor emissions from Valley source areas—Stockton, Modesto, and Merced, for example (which occur outside the Bakersfield Field Office)—are also transported down the valley where they are converted to ozone. This general transport moves air near the *land* surface south from Stockton to Bakersfield. The effect of the transport is seen to the southeast of Fresno and Bakersfield. The city of Parlier near Fresno and the

communities of Edison and Arvin near Bakersfield often experience the highest ozone levels in the Valley. Air leaves the southern end of the valley during the day by flowing over Tehachapi Pass southeast of Bakersfield into the Mojave Desert, thereby transporting ozone and other pollutants out of the Valley, into portions of eastern Kern County. Also during the daytime, heated air rises into the mountains and transports ozone and other pollutants up the Sierra Nevada and coastal mountains.

At night, the same general wind flow pattern continues, with some important exceptions. First, the air is no longer able to exit the southern end of the SJV because it encounters cooler drainage winds from the surrounding mountains. Consequently, it is forced back north to set up a circular flow pattern known as the Fresno eddy. The eddy circulates pollutants counterclockwise and returns polluted air to urban areas where more precursors are added the next day. Another important difference about the nighttime winds in the SJV is that they typically are caused by a jet stream of fast moving air at an altitude of about 1,000 feet and a speed of up to 30 mph. Lastly, some of the pollutants transported to higher altitudes from daytime heating return to the valley at night because of drainage winds from the mountains.

Inversions affect air pollutant transport by limiting vertical dispersion of pollutants. The two common types of inversion in the SJV are radiation and subsidence. Studies have shown that radiation inversions tend to persist longer into daylight hours in the southern part of the SJV due to a lack of marine air intrusion and associated atmospheric mixing.

On the worst dispersion days the inversion may remain only a few hundred feet above the surface of the SJV. Subsidence inversions are caused by downward motion (subsidence) high in the atmosphere, typically in association with a high pressure area positioned along the coast. As air descends under the influence of the high pressure system, it compresses and heats up, and as a result becomes warmer than the air beneath it. This limits the vertical mixing, as the warm air aloft restricts air movement from below.

During inversion events, air pollutant emissions build up in the atmosphere below the inversion; ozone precursors then react to form ozone, and levels increase from day to day. One-hour concentrations of ozone that exceed federal standards generally occur in the Valley during strong inversions. During many periods of high ozone levels, the Valley is likely experiencing a combination of radiation and subsidence inversions (SJVUAPCD 2008).

3.1.6.2 South Central Coast Area

Surface and upper-level wind flow varies both seasonally and geographically in the South Central Coast basin and inversion conditions common to the area can affect the vertical mixing and dispersion of pollutants. The prevailing wind flow patterns in the basin are not necessarily those that cause high ozone values. In fact, high ozone values are often associated with atypical wind flow patterns. Meteorological and topographical influences that are important to air quality in the South-Central Coast area are discussed below.

Semi-permanent high pressure that lies off the Pacific Coast leads to limited rainfall (around 18 inches per year), with warm dry summers and relatively damp winters. Maximum summer temperatures average about 70 degrees Fahrenheit near the coast and in the high 80s to 90s inland. During winter, average minimum temperatures range from the 40s along the coast to the 30s inland. Additionally, cool, humid marine air causes frequent fog and low clouds along the coast, generally during the night and morning in the late spring and early summer. The fog and low clouds can persist for several days until broken up by a change in the weather pattern.

In the northern portion of the region (north of the ridgeline of the Santa Ynez Mountains), the sea breeze (from sea to land) is typically northwesterly throughout the year, while the prevailing sea breeze in the southern portion of the county is from the southwest. During summer, these winds are stronger and persist later into the night, when the sea breeze weakens and is replaced by light land breezes (from land to sea). The alternation of the land-sea breeze cycle can sometimes produce a "sloshing" effect, where pollutants are swept offshore at night and carried back onshore during the day. This effect is exacerbated when wind speeds are low.

The terrain around Point Conception, combined with the change in orientation of the coastline from north-south to east-west, can cause counterclockwise circulation (eddies) to form east of the point. These eddies fluctuate temporally and spatially, often leading to highly variable winds along the southern coastal strip. Point Conception also marks the change in the prevailing surface winds from northwesterly to southwesterly.

Santa Ana winds are northeasterly winds that occur primarily during fall and winter, but occasionally in spring. These are warm, dry winds blown from the high inland desert that descend down the slopes of a mountain range. Wind speeds associated with Santa Ana winds are generally 15 to 20 mph, though they can sometimes reach speeds in excess of 60 mph. During Santa Ana conditions, pollutants emitted in Santa Barbara, Ventura County, and the South Coast Air Basin (the Los Angeles region) are moved out to sea. These pollutants can then be moved back onshore into Santa Barbara County in what is called a post-Santa Ana condition. The effects of this condition can be experienced throughout the air basin. Not all post-Santa Ana conditions, however, lead to high pollutant concentrations in Santa Barbara and Ventura County.

Upper level winds (measured at Vandenberg Air Force Base once each morning and afternoon) are generally from the north or northwest throughout the year, but occurrences of southerly and easterly winds do occur in winter, especially during the morning. The infrequent upper level winds from the south and east during the summer are usually associated with periods of high ozone levels. Surface and upper level winds can move pollutants that originate in other areas into these counties.

Surface temperature inversions (0 to 500 feet) are most frequent during the winter, and subsidence inversions (1,000 to 2,000 feet) are most frequent during the summer. Inversions are an increase in temperature with height and are directly related to the stability of the atmosphere. Inversions act as a cap to the pollutants that are emitted below or within them. ~~*(CAP 2007).*~~

3.1.7 Climate Change

Global climate change is the term commonly used to refer to any significant change in measures of climate (such as temperature, precipitation, or wind) lasting for an extended period (decades or longer) (EPA 2011b). The term "climate change" is often used interchangeably with the term "global warming." Climate change or global warming is an average increase in the temperature of the atmosphere near the earth's surface and in the troposphere, which can contribute to changes in global climate patterns. The global distribution of temperature increase is varied, and in some locations average temperatures have actually decreased. Climate change has been attributed to a variety of causes, both natural and human-induced (EPA 2011b). Issues of concern with respect to climate change include how climate variability may affect resources and how human activities and other factors may affect climate.

Ongoing scientific research has identified the potential effects of "greenhouse gas" (GHG) emissions on global climate. The primary GHGs responsible for climate change are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), ozone, fluorinated gases, and water vapor. Through complex interactions on a regional and global scale, these GHG emissions cause a net warming effect of the atmosphere; different types of GHGs have varying global warming potentials (GWPs). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere. Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as "CO_2 equivalent" and is defined as the amount of a GHG emitted multiplied by its GWP. CO_2 has a GWP of one. Some GHGs, such as CO_2, CH_4, and N_2O, occur naturally and are emitted into the atmosphere through natural processes (e.g. geothermal vents) and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills. Human-created GHGs, which have a much greater heat absorption potential than CO_2, include fluorinated gases, such as hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, which are byproducts of certain industrial processes ~~*(CARB 2006)Cal EPA 2006)*~~. Although GHG levels have varied for millennia, with corresponding variations in climatic conditions, recent industrialization and burning of fossil carbon sources have caused CO_2 concentrations to increase dramatically, and are likely to contribute to overall climatic changes, typically referred to as 'global warming'.

The assessment of GHG emissions and climate change is in its formative phase, and it is not yet possible to know with confidence the net impacts to climate. Observed climatic changes may be caused by GHG emissions, or may reflect natural fluctuations (U.S. GAO 2007). We know that in the past the earth has gone through a number of ice ages with periods of warming and droughts between the periods. The most recent Ice Age ended around 13,000 years ago and the climate has warmed and dried since then. The warming and drying has not been continuous. Around 900 AD a 200 year drought nearly dried up Mono Lake (called the Medieval Warming) (Singer and Avery, 2007). The Intergovernmental Panel on Climate Change recently concluded that "Warming of the climate system is unequivocal" and "Most of the observed increase in globally average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic [man-made] greenhouse gas concentrations" (IPCC, 2007).

The current scientific consensus holds that emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have resulted in much higher concentrations of GHGs in the atmosphere than would be expected to occur naturally. In the last decade, increased GHGs are believed to have resulted in increases in global temperature and other climate change effects never previously recorded. Data show that the earth's average surface temperature has increased by about 1.2 to 1.4 degrees Fahrenheit in the last 100 years.~~*(EPA 2011c).*~~ The eight warmest years on record (since 1850) have all occurred since 1998, with the warmest year being 2005 (EPA *2011b*~~*c*~~). Without additional meteorological monitoring systems, it is difficult to determine the spatial and temporal variability and change of climatic conditions, but increasing concentrations of GHG are likely to accelerate the rate of climate change.

In 2001, the IPCC indicated that by the year 2100, global average surface temperatures will rise 1.4 to 5.8°C (2.5 to 10.4°F) above 1990 levels. The National Academy of Sciences (2006) has confirmed these findings, but also indicated there are uncertainties how climate change will affect different regions. Computer model predictions indicate that increases in temperature will not be equally distributed, but are likely to be accentuated at higher latitudes. Warming during the winter months is expected to be higher than during the summer. *Recent analyses of global climate model predictions indicate that*

southern California will become hotter and drier (Christensen et al. 2007). Higher temperatures are projected to increase the frequency, intensity, and duration of conditions conducive to air pollution formation, potentially increasing the number of days conducive to air pollution by 75 to 85 percent in the San Joaquin Valley, under a higher emissions scenario, and by 25 to 35 percent under a lower emissions scenario (California Climate Action Team 2006). Based on the California Climate Action Team "Climate Scenarios" analysis, the projected temperature increases in California would result in widespread consequences including:

- *A 70-90 percent reduction of Sierra Nevada snowpack;*
- *Range expansion in many species, range contractions in other species with significant populations already established;*
- *A likely shift in the ranges of existing invasive plants and weeds; and*
- *Up to a 55 percent increased risk of large wildfires.*

The latest EPA greenhouse gas inventory shows that in 2008, the U.S. emitted slightly less than 7 billon metric tons of greenhouse gases (U.S. EPA 2011c). California is a substantial contributor of global GHGs. The State is the fifteenth largest emitter of greenhouse gases in the world, producing 479.8 million metric carbon dioxide equivalents according to the most recent 2005 inventory of emissions (~~*CalEPA*~~ *CARB* 2006). Transportation accounts for a much larger portion of emissions than in other states, with 38 percent of emissions coming from this sector (~~*Cal EPA*~~ *CARB 2009*).

3.1.7.1 Federal Regulation

There are currently no federal significance thresholds established for GHG emissions, or approved guidance on addressing GHG emission impacts under NEPA. According to the EPA, "the United States government has established a comprehensive policy to address climate change" that includes slowing the growth of emissions; strengthening science, technology, and institutions; and enhancing international cooperation. To implement this policy, "the Federal government is using voluntary and incentive-based programs to reduce emissions and has established programs to promote climate technology and science." The federal government's goal is to reduce the GHG intensity (a measurement of GHG emissions per unit of economic activity) of the American economy by 18 percent over the 10-year period from 2002 to 2012. In addition, the EPA administers multiple programs that encourage voluntary GHG reductions, including "ENERGY STAR," "Climate Leaders," and Methane Voluntary Programs. However, at the time of this writing, there are no adopted federal plans, policies, regulations, or laws directly regulating GHG emissions.

On October 30, 2009, the US EPA published a rule for the mandatory reporting of greenhouse gases from large GHG emissions sources in the United States. Implementation of 40 CFR Part 98 is referred to as the Greenhouse Gas Reporting Program (GHGRP). In general, the threshold for reporting is 25,000 metric tons or more of carbon dioxide equivalent (CO2e) per year, at the facility level. This rule was revised November 30, 2010 to include the requirement to report fugitive and vented GHG emissions from crude petroleum and natural gas systems. Comprehensive, nationwide emissions data will provide a better understanding of GHG sources and will guide development of the policies and programs to reduce emissions (http://www.epa.gov/climatechange/emissions/ghgrulemaking.html).

The Council on Environmental Quality (CEQ) issued draft guidance to federal agencies on February 18, 2010 regarding GHG emissions (CEQ 2010). This guidance "proposes to advise Federal agencies they should consider opportunities to reduce GHG emissions caused by proposed Federal actions and adapt

their actions to climate change impacts throughout the NEPA process." If a proposed action would be anticipated to cause direct emissions of 25,000 metric tons or more of CO_2-equivalent GHG emissions on an annual basis, CEQ proposes agencies should consider this an indicator that a quantitative and qualitative assessment may be meaningful to decision makers and the public. However, Federal plans that cover multiple actions subject to NEPA, may more appropriately address GHG emissions at the level of individual projects.

Any stationary source within the Planning Area that directly emits 25,000 metric tons or more of CO_2-equivalent GHG on an annual basis is subject to GHG emissions accounting requirements, pursuant to the Clean Air Act. *Furthermore, the guidance also states that it is not currently useful for NEPA analysis to attempt to link specific climatological changes to a particular project or emissions.*

In light of climate change projections, the DOI is taking the lead in protecting our nation's resources from these impacts and in managing our public lands to mitigate the effects of climate change. With respect to the BLM, Department of the Interior Secretarial Order 3289 (signed September 14, 2009) requires each bureau and office of the DOI to consider and analyze potential climate change impacts when making decisions regarding potential use of resources under the Department's purview. *The Order established a framework for bureaus to coordinate climate-change science and resource management strategies (DOI 2011). The Climate Change Response Council, eight DOI Regional Climate Science Centers, and a network of Landscape Conservation Cooperatives (including Interior and other agencies) are working to communicate data and coordinate our response to the impacts of climate change within and among our bureaus. The BLM recognizes that the public lands are facing increasingly complex and widespread environmental challenges that transcend traditional management boundaries. These challenges include managing wildfire; controlling weeds; providing for energy development; and addressing impacts from the effects of climate change. The BLM is developing a landscape-scale management approach that offers a way to integrate the BLM's conservation, restoration, and development programs (BLM 2012).*

The first draft national strategy was released in January 2012 to aid decision makers and resource managers in preparing for and reducing the impacts of climate change on species, ecosystems, and the people and economies that depend on them (DOI 2012b).~~http://www.doi.gov/news/pressrelease/National-Strategy-Proposed-to-Respond-to-Climate-Change's-Impacts-on-Fish-Wildlife-Plants_January 19, 2012).~~ The draft National Fish, Wildlife and Plants Climate Adaptation Strategy represents a framework that will guide the nation's efforts during the next five years to respond to current and future climate change impacts including species distributions and migration patterns, the spread of invasive species and wildlife diseases, changes in sea level, changes in freshwater availability, etc. (USFWS 2012).~~www.wildlifeadaptationstrategy.gov~~ The strategy is intended to provide a roadmap for use in considering climate change implications to their ongoing wildlife and habitat management activities. It does not prescribe mandatory activities that agencies must take nor suggest regulatory actions; the Strategy is expected to become final May/June 2012.

3.1.7.2 State and Local Regulation

In 2005, California Governor Arnold Schwarzenegger issued Executive Order S-3-05, establishing statewide GHG emission reduction targets of 2000 levels by 2010, 1990 levels by 2020, and 80 percent below 1990 levels by 2050. In 2006, Governor Schwarzenegger signed Assembly Bill (AB) 32, the Global

Warming Solutions Act, which capped the State's GHG emissions at 1990 levels by 2020. This is the first statewide program in the country to mandate an economy-wide emissions cap that includes enforceable penalties. The *Climate Change Scoping Plan*, approved by CARB in 2008 to fulfill AB 32, is the State's roadmap to reach GHG reduction goals. The plan outlines a number of key strategies to reduce GHG emissions. The measures in the Scoping Plan will be in effect by 2012 and will include a number of discrete early action measures to reduce GHG emissions. A summary of relevant GHG legislation in California is presented below:

- ***AB 4420 (1988).*** This bill directed the California Energy Commission, in consultation with CARB and other agencies, to study and report on how global warming trends may affect California's energy supply and demand, economy, environment, agriculture, and water supplies.
- ***AB 1493 (2002).*** This bill requires CARB to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of greenhouse gases from motor vehicles.
- ***AB 32 (2006).*** This bill requires statewide GHG emissions be reduced to 1990 levels by 2020. Reductions to be accomplished via enforceable statewide cap on GHGs are to be phased in starting in 2012. The bill directs CARB to develop and implement regulations to reduce statewide emissions from stationary sources and specifies that regulations adopted in response to AB 1493 be used to address GHG emissions from vehicles. The bill requires CARB adopt a quantified cap on GHG emissions representing 1990 emissions levels. It includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.
- ***SB 97 (2007).*** This bill directed the Governor's Office of Planning and Research to develop proposed CEQA Guidelines by July 1, 2009, and adopt guidelines by January 1, 2010.
- ***SB 375 (2008).*** This bill requires coordination between transportation planning and land use planning. The bill directs CARB to develop regional GHG emission reduction targets to be achieved from automobile and light truck sectors by 2020 and 2035. CARB is to work with California's 18 metropolitan planning organizations to align their regional transportation, housing and land use plans and prepare a "sustainable communities strategy" to reduce vehicle miles traveled in their respective communities.

Pursuant to SB 97, the State adopted new CEQA guidelines concerning GHG emissions on March 18, 2010. The new guidelines do not propose a particular threshold of significance to be applied in determining whether a project's contribution to global climate change is significant. Rather, they provide guidance on determining the significance of impacts resulting from a project's GHG emissions as well as appropriate mitigation measures (Sections 15064.4 and 15126.4). The new guidelines indicate that lead agencies have discretion to determine which type of methodology to use to evaluate GHG emissions, given that such methodologies are evolving (Section 15064.4).

Confirmed by correspondence with SJVAPCD staff, their policy and guidance on addressing GHG emission impacts is only available for CEQA analyses; however the air district's guidance may be generally used by land-use agencies for reference (BLM 2011b). The *SJVAPCD District Policy Addressing GHG Emission Impacts for Stationary Source Projects* indicates that the need to quantify project specific

impacts is negated if emissions reductions are achieved by implementing BPS. This approach is based on the use of BPS and their associated, pre-quantified GHG emission reduction effectiveness. Furthermore, the *SJVAPCD Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects Under CEQA* indicates that projects implementing BPS are not required to quantify greenhouse gas emissions. BLM concludes that the requirement to quantify GHG emissions and to implement SJVAPCD BPS to reduce GHG emissions would occur at the application stage, and would be analyzed in a site-specific NEPA analysis; this is consistent with draft CEQ guidance.

To improve CARB's estimates of GHG emissions in California, they conducted an Oil and Gas Industry Survey in 2009 to accurately quantify equipment and operation processes for the 2007 calendar year. The 2007 Oil and Gas Industry Survey Results, Draft Report was posted for public review and comment in August 2011 (http://www.arb.ca.gov/cc/oil-gas/oil-gas.htm). The survey was completed by 325 companies, representing approximately 97% of the crude oil and gas production in California. Total emissions for equipment covered under this survey are estimated to be 18.8 million metric tons of CO2e; combustion sources (equipment burning fuel for energy) account for 87 percent of the total CO2e emissions, while the remaining 13 percent of the CO2e emissions come from vented and fugitive sources (CARB 2011a). Based on this survey, nearly 76% of the statewide total CO2e emissions for these operations occur in the San Joaquin Valley APCD.

The emissions data will be used to create a sector specific baseline inventory and to develop a control measure to reduce GHG emissions from the crude oil and natural gas production, processing, and storage sector (CARB 2011b). Furthermore, CARB is in the process of developing protocols to quantify fugitive and vented emissions from upstream oil and gas operations. The two protocols under development are 1) quantification of methane, carbon dioxide, and VOC emissions from crude oil and produced water separation and storage tank systems; and 2) quantification of fugitive and vented carbon dioxide, and VOC emissions from crude oil and natural gas processes and equipment.

3.2 Biological Resources

Ranging from the Pacific coast to the crest of the Southern Sierra Nevada, the Planning Area encompasses diversity in geography matched by a corresponding diversity in vegetation, habitats, plants and animals. One hundred and twenty different vegetation series (Sawyer and Keeler-Wolf 1995, CNPS 2009a) are known or have the probability of being found on lands managed by the Bakersfield FO. California has more species of plants and animals, and more endemic species (excluding Hawaii), than any other state. A significant portion of this biologic diversity resides within the boundaries of the Bakersfield FO. For example, of the 130 federally listed animal species in California, over a third is found within the Planning Area. A more detailed overview of the biological resources present within the Bakersfield FO can be found in Appendix B.

California is also the most populous state in the nation. A high percentage of that population resides in or makes use of lands within the Planning Area. The combination of high biologic diversity and high public use results in a high number of native habitats and species that are considered threatened, endangered, sensitive, or otherwise on the decline.

Native habitats and populations are managed by restricting or modifying actions involving public lands, by the restoration of degraded sites, by species-specific conservation actions, and by the use of special designations and stipulations to protect critical species and habitats and to minimize negative impacts to biological processes and resources. Management of native species is most effective and efficient when

populations and habitats are large enough to withstand short-term environmentally caused decline. As species and the habitats on which they depend become scarce, the options available to managers become limited biologically, politically, and economically. Rather than manage for individual species, the preference is to manage for ecosystems, healthy biological processes, and suites of species to preserve long-term biodiversity.

BLM manages biological resources under a variety of authorities including:

- Bald Eagle Protection Act of 1940, as amended;
- Endangered Species Act of 1973, as amended;
- Fish and Wildlife Coordination Act of 1958, as amended;
- Marine Mammal Protection Act of 1972, as amended;
- Migratory Bird Treaty Act of 1918, as amended;
- Sikes Act of 1960, as amended;
- BLM Manual 6840, including California Supplements (special status species);
- EO 11990 of May 1977 (wetlands);
- EO 11988 of May 1977 (floodplain management); and
- EO 11987 of May 1977 (exotic organisms).

Because the biological resources important to the BLM are not restricted to public lands, BLM collaborates with other federal agencies, State and local governments, private land owners, conservation groups, and other interested publics in the design and implementation of regional conservation plans and other conservation efforts. BLM lands are an important part of regional conservation efforts and provide protection for listed and sensitive species, especially plants, which have much less protection on non-federal surface. Scattered BLM lands also play an important part in regional conservation plans, act as catalysts for new conservation initiatives, function as wildlife corridors and reserves, and, as development in California continues, can become important conservation areas as adjacent native habitat is lost.

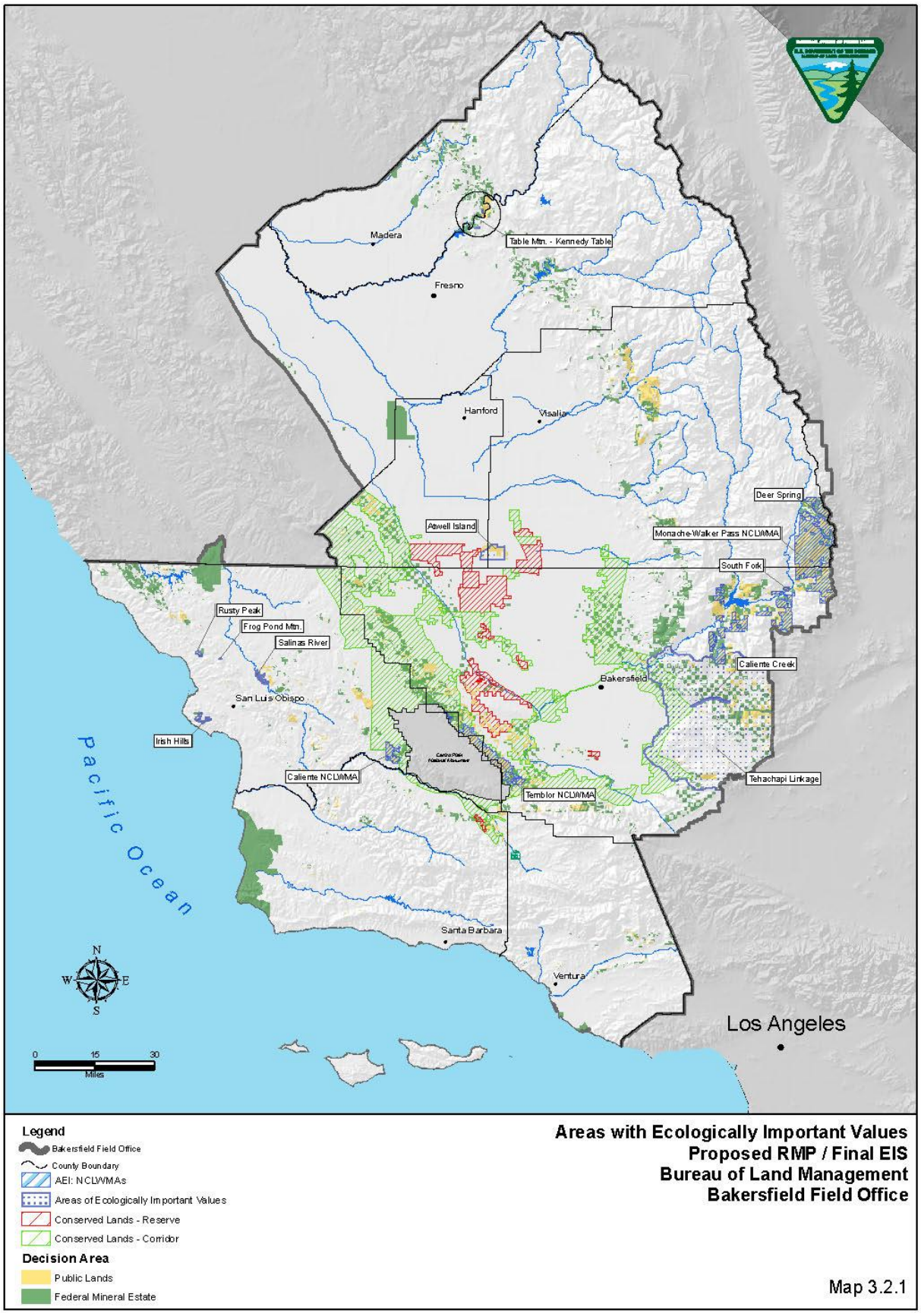
Ecosystem health can be measured in a number of ways, using a variety of indicators, depending on the habitat or species of interest. The overall goal is to maintain healthy plant and animal communities and functioning biological processes, the components of which are listed below:

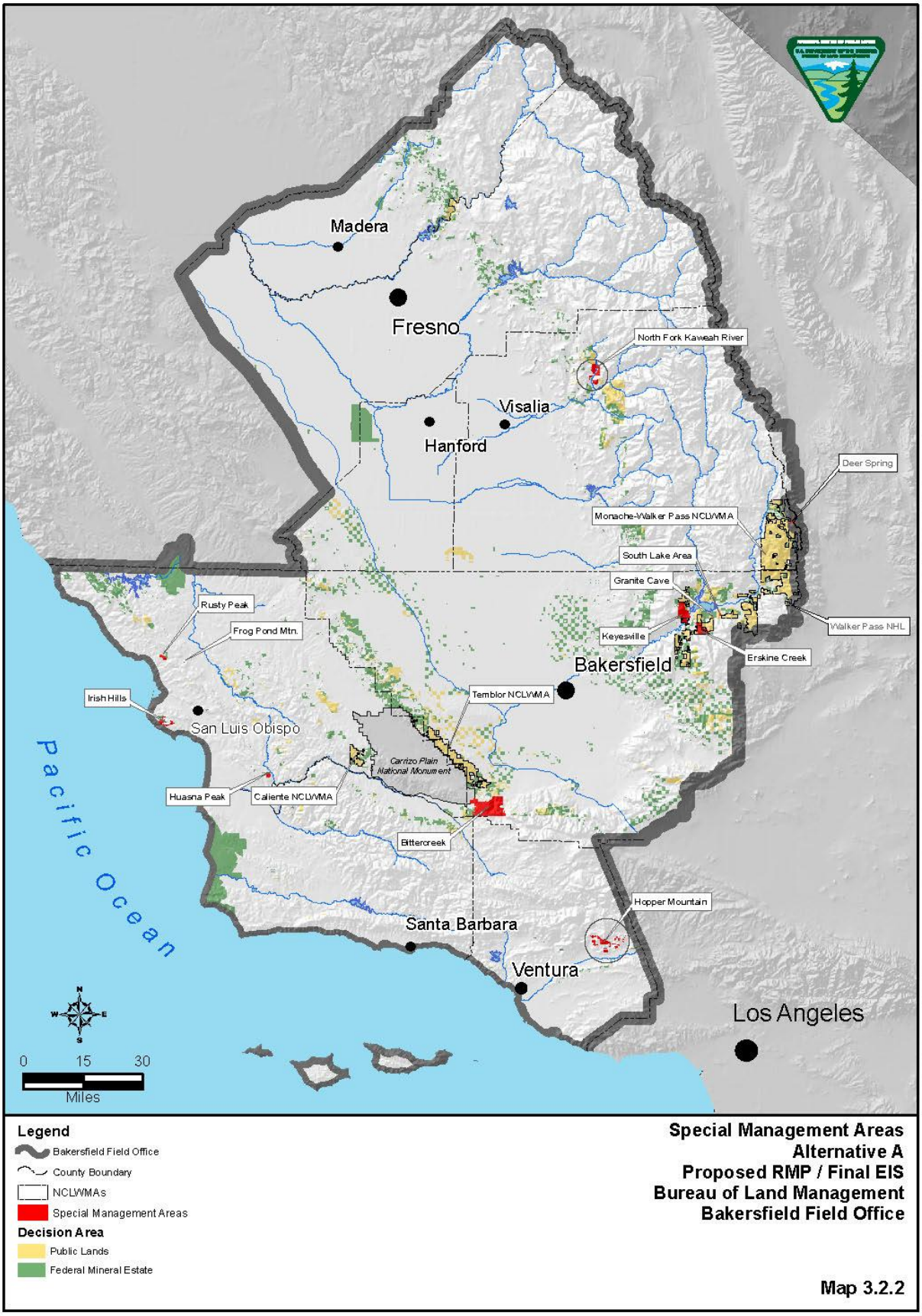
- Intact soils (with low erosion, functioning hydrologic processes, biological crusts present where appropriate, and with adequate soil biological activity and soil formation).
- Healthy vegetation (with diverse composition and life forms, correct species for site, not inundated with weedy species, with appropriate size classes, vigor and structure, and with adequate reproduction).
- Healthy animal communities (diverse, with appropriate predator-prey ratios, with correct species for site, not with high levels of introduced or problematical species, with appropriate age classes, and with adequate reproduction).
- Properly functioning riparian areas (supporting appropriate wetland vegetation, and with intact hydrological processes).

The condition of biological resources on public lands within the Decision Area has been evaluated as an element of the rangeland health assessments conducted on 97 grazing allotments between 1998 and 2010. During these assessments, indicators of the health of the biological resources are evaluated using the condition of the soils, the amount of erosion, biological soil organisms, vegetation composition, plant diversity, plant cover, plant vigor, ages of trees and shrubs, damage from animal use, wildlife habitat structure, and wildlife species composition and abundances. About 293,300 acres have been assessed, with 282,600 acres rated as healthy (96%) and 10,700 acres (4%) as having unhealthy conditions (Appendix F-3a). The most common reason for the unhealthy conditions of the biological resources has been the lack of adequate shrub cover and poor vigor in some San Joaquin Valley habitats, invasive species dominating an area, or damage to riparian habitats along streams or at springs. These assessments indicate that the biological resources on the public lands are in generally good condition and exhibit ecological function and processes appropriate for the individual sites. BLM lands, however, are under constant pressure to provide multiple uses (e.g. energy development, recreation opportunities, community infrastructure) and adjacent private lands continue to be impacted. Management actions developed in RMPs are designed to minimize impacts to important biological resources. BLM has public trust obligations derived from law and directives to manage public lands for the benefit of subsequent generations of Americans.

Overall, the trend within the Planning Area is a continued fragmentation, degradation and loss of natural habitats, followed by a reduction in biodiversity. The disruption of natural ecological processes (e.g. fire, succession) and the introduction of exotic species also impacts biodiversity. With increased human impacts, generalist species and those adapted to disturbance are favored, while rare and specialized species decline. The primary impact to biological resources is a result of the increase in human population and associated impacts from development, other economic activities, and recreation. Threats to native habitat include examples such as complete destruction from conversion to agriculture; fragmentation as intervening natural areas are developed into homes, commercial sites and roads; and degradation from OHV, other recreation activities, and grazing. As habitats are degraded or lost, some native plant and animal populations decline to such an extent that they meet the criteria for listing as threatened or endangered. In certain areas, however, regional conservation plans have been successful in protecting habitat, establishing protocols for development in sensitive areas, and increasing the amount of conserved lands. Examples within the ~~*Bakersfield FO*~~ *Planning Area* include the Valley Floor Habitat Conservation Plan focusing on a suite of rare San Joaquin Valley species; *the Southern Sierra Nevada and Tehachapi Mountain corridor*; and recent efforts by state, county and city governments to preserve large tracts of land in the Irish Hills area of San Luis Obispo County.

In the future, BLM lands will become increasingly more important in the conservation of biological resources as adjacent unprotected private lands are developed for, or degraded by, human uses. Areas of most concern include populations of rare and sensitive species, unique habitats and important linkages; these areas are identified on Map 3.2.1. A number of these areas are currently managed as either ACECs (Map 3.17.1) or *administratively identified* Special Management Areas (Map 3.2.2).


Madera
Table Mtn. - Kennedy Table
Fresno
Hanford
Visalia
Deer Spring
Atwell Island
Monache-Walker Pass NCL/WMA
South Fork
Rusty Peak
Frog Pond Mtn.
Salinas River
Caliente Creek
Bakersfield
San Luis Obispo
Irish Hills
Pacific Ocean
Caliente NCL/WMA
Tehachapi Linkage
Temblor NCL/WMA
Santa Barbara
Ventura
Los Angeles
N
W
E
S
0
15
30
Miles
Legend
Bakersfield Field Office
County Boundary
AEI: NCL/WMAs
Areas of Ecologically Important Values
Conserved Lands - Reserve
Conserved Lands - Corridor
Decision Area
Public Lands
Federal Mineral Estate
Areas with Ecologically Important Values
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.2.1


Madera
Fresno
Visalia
Hanford
North Fork Kaweah River
Deer Spring
Monache-Walker Pass NCLWMA
South Lake Area
Granite Cave
Walker Pass NHL
Keyesville
Erskine Creek
Bakersfield
Rusty Peak
Frog Pond Mtn.
Irish Hills
San Luis Obispo
Temblor NCLWMA
Carrizo Plain National Monument
Huasna Peak
Caliente NCLWMA
Bittercreek
Hopper Mountain
Santa Barbara
Ventura
Los Angeles
Pacific Ocean
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
NCLWMAs
Special Management Areas
Decision Area
Public Lands
Federal Mineral Estate
Special Management Areas
Alternative A
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.2.2

Threats to specific areas and habitats can be identified for some areas within the Bakersfield FO, and for some areas, BLM has adopted specific policy to guide BLM actions. Because much of the native habitat within the San Joaquin Valley has been lost to agricultural, urban and industrial development, BLM has developed specific protocols and restrictions, so that native habitat and rare species are protected, while allowing a reasonable amount of development in this important oil-producing area.

3.2.1 Special Status Species

Special status species are those with populations that have declined to the point of substantial federal or state agency concern. BLM special status species include species that are proposed for listing, are officially listed as threatened or endangered, or are candidates for listing as threatened or endangered under the provisions of the Endangered Species Act (ESA). BLM special status species also include species that are designated by the State Director as BLM sensitive species (BLM 2008b). The ESA mandates that all federal agencies use their authorities to further the purposes of the ESA by carrying out programs for conserving endangered and threatened species. The ESA also requires a federal agency to ensure that any action it authorizes, funds, or implements is not likely to jeopardize the continued existence of any endangered or threatened species or to destroy or adversely modify designated critical habitat. BLM policy is to conserve *federally* listed species and the ecosystems on which they depend. It also is to ensure that BLM actions are consistent with the conservation needs of all special status species and to not contribute to the need to list any special status species.

Federally proposed species are those that have been officially proposed for listing as threatened or endangered under the ESA; federally listed species are those officially listed as threatened or endangered under the ESA. Endangered species are those that are in danger of extinction throughout all or a significant portion of their ranges. Threatened species are those that are in danger of becoming endangered in the foreseeable future. Federal candidate species are those on whom the US Fish and Wildlife Service has sufficient information to warrant proposing them for listing but is precluded from doing so by higher listing priorities.

BLM California sensitive species are designated by the BLM California State Director in cooperation with the CDFG, as follows:

- Those species that could become endangered in or extirpated from a state or within a significant portion of their distribution;
- Those whose status is under review by the USFWS or National Marine Fisheries Service (NMFS);
- Those that are undergoing or are predicted to undergo significant downward trends in habitat capability that would reduce their distribution;
- Those whose populations or densities are declining significantly or that are predicted to decline significantly such that it becomes necessary to designate their federal status as listed, proposed, or candidate or to designate their state status as listed;
- Those that typically have small and widely dispersed populations;
- Those that inhabit ecological refugia or other specialized or unique habitats; or
- Those that are state listed but that may be better conserved under BLM sensitive species status.

The list of BLM California sensitive plant species corresponds to the California Rare Plants Rank 1b (previously known as CNPS list 1b), a designation made by the California Native Plant Society for those plants considered most rare by the California botanical community.

Less rare plants are designated as California Rare Plants Rank, some of which are of interest to BLM because of their potential to become increasingly rare or because there are significant populations on public land. California species of special concern are those animal species that are of concern to the state because declining numbers, restricted range, or continuing threats have made them vulnerable to extinction. A California fully protected animal species has additional protection due to its rarity or potential for extinction. American Bird Conservancy watch list species are bird species that the American Bird Conservancy and Audubon Society has determined to have limited ranges or whose populations are in decline or are threatened.

Eighty six federally listed species (41 plant and 45 animal species) occur within the Planning Area, 38 of which (19 plant and 19 animal species) are known to occur or are likely to occur on public lands within Decision Area (Appendix B), and three additional species may occur on split estate. Public land provides important habitat for 16 listed species: Morro Manzanita, succulent owl's clover, California jewelflower, Chorro Creek bog thistle, Springville clarkia, Kern mallow, Indian Knob mountain balm, San Joaquin woollythreads, San Joaquin Valley Orcutt grass, Morro shoulderband snail, valley elderberry longhorn beetle, blunt-nosed leopard lizard, California condor, giant kangaroo rat, Tipton kangaroo rat, and San Joaquin kit fox. In addition, public land provides potentially important habitat for 16 additional listed species: Mariposa pussy paws, purple amole, La Graciosa thistle, Gaviota tarplant, Lompoc yerba santa, Hartweg's golden sunburst, Tulare pseudobahia, Parish's checkerbloom, Keck's checkerbloom, vernal pool fairy shrimp, vernal pool tadpole shrimp, Kern primrose sphinx moth, California tiger salamander, California red-legged frog, southwestern willow flycatcher, and Buena Vista Lake shrew.

Most special status species have more than one special status or are also federally listed. Within the Planning Area, there are five federal candidate animal species, 70 CESA listed species (35 plant and 35 animal species), 76 California animal species of special concern, 17 California fully protected animal species, 241 BLM California sensitive species (194 plant and 47 animal species), and 31 American Bird Conservancy watch list species (Appendix B). Over half of these species are known to occur or are likely to occur on public lands; additional species may occur on split estate.

The USFWS officially designates critical habitat under the ESA. These are specific areas that contain features essential for the conservation of a threatened or endangered species and that require special management considerations or protection. Critical habitat for 25 animal and 20 plant species occurs within the Planning Area. Twelve of these critical habitat areas contain public lands within the Decision Area, and the species found there are succulent owl's clover, San Joaquin Valley orcutt grass, hairy orcutt grass, Morro shoulderband snail, vernal pool fairy shrimp, vernal pool tadpole shrimp, steelhead (southern California coast and south-central California coast populations), California tiger salamander, California red-legged frog, California condor, and southwestern willow flycatcher. Critical habitat for six additional species, Hoover's spurge, Camatta Canyon amole, Keck's checkerbloom, arroyo southwestern toad, western snowy plover, and coastal California gnatcatcher, includes split estate.

In general most special status species continue to be in decline as habitat is lost or degraded. Special status species populations on BLM land are generally in better condition than on unprotected lands due to specific management actions and use restrictions (see Appendix B and Appendix L) to protect and conserve habitat.

3.2.2 Featured Species and Communities

In addition to special status species, Bakersfield BLM places an emphasis on maintaining or improving habitat conditions for species of interest to CDFG and USFWS; species with declining populations or with limited distributions; and species with high ecological values. Plant communities or habitats that are rare, have limited distributions, have high ecological importance, contain unique assemblages, or are at risk from climate change, pathogen or other factors are also given more management emphasis.

Featured Plant Communities: Some plant communities are of concern because of rarity (e.g., alkali sink, serpentine vegetation, pygmy oak forest, California bay forest, and rare conifers); high ecological importance (e.g. saltbush scrub, riparian, cryptogamic crusts); or potential for future serious decline (oak woodlands, giant sequoia forest). For the rare communities, the BLM lands represent a major portion of the existing habitat. Communities with high ecological importance support suites of rare species, provide important resources such as water, or provide important ecological processes, such as the benefits to soils from cryptogamic crusts. Some critical plant communities, such as oak woodlands, are in peril due to nonnative pathogens (such as sudden oak death), continuing development, grazing pressures, altered fire regimes, and a shift of temperature and precipitations regimes due to climate change.

BLM manages vegetation by restricting or relocating human activities and land uses, by the application of controlled burns, and by the active restoration of native species to degraded areas. BLM is also part of region-wide efforts to preserve native habitat and cooperatively manage important areas, especially in regards to the future unprecedented rapid change in climate.

Game and Furbearer Species: BLM manages game and furbearer habitat to meet herd unit or population objectives set by CDFG. Management actions include water developments, prescribed burns, protective fencing of riparian areas, and maintaining shrub conditions. Mule deer (*Odocoileus hemionus*) occur on public lands throughout the Sierra Nevada and Sierra foothill, and the Temblor Range. Black-tailed deer, a subspecies of mule deer, occur on most public lands from the Coast Ranges west. Most of these herds are in stable condition. Herd unit condition and trend is detailed in Appendix B. Pronghorn (*Antilocapra americana*) have been reintroduced into the Carrizo Plain and Antelope Valley and are likely to use public land in the Temblor Foothills, Cuyama Valley, Maricopa, and Tehachapi areas. Tule elk (*Cervus canadensis nannodes*) have been reintroduced to the Caliente Range and are likely to occur on public land in the Taylor Canyon area of the Caliente Range. Significant numbers of black bear (*Ursus americana*) occur on public land, primarily in the Case Mountain, Milk Ranch Peak, Three Rivers, and Chimney Peak areas. Nonnative wild pigs (*Sus scrofa*) occur on public land on scattered coastal parcels and in the Blue Ridge, Three Rivers, Case Mountain, Milk Ranch Peak, Fresno River, and San Joaquin River Gorge areas.

Both California quail (*Callipepla californica*) and mountain quail (*Oreortyx pictus*) occur on public lands. California quail occur throughout the Decision Area. Limited numbers of mountain quail inhabit public land in the Sierra Nevada, including Case Mountain, Milk Ranch Peak, Blue Ridge, and Chimney Peak. Nonnative chukar (*Alectoris chukar*) inhabit public lands in the Temblor Range, Taylor Canyon, Freeborn-Hubbard, Kelso Valley, and Chimney Peak areas. Sooty grouse (*Dendragapus obscurus*) can be found on public land in the Case Mountain, Milk Ranch Peak, Blue Ridge, and Chimney Peak areas. Mourning doves (*Zenaida macroura*) occur throughout the Decision Area. Band-tail pigeons (*Columba fasciata*) are primarily found in the Case Mountain, Milk Ranch Peak, Blue Ridge, and San Joaquin River Gorge areas, with limited numbers in the Lake Isabella area. Nonnative wild turkey (*Meleagris gallopavo*) inhabits the

South Fork of the Kern River and may occur at the San Joaquin River Gorge and along the North Fork of the Kaweah River. Cottontail (*Sylvilagus* spp.) and jackrabbits (*Lepus* spp.) are dispersed throughout the Decision Area.

Furbearers, including bobcat (*Lynx rufus*), coyote (*Canis latrans*), red fox (*Vulpes vulpes*), and grey fox (*Urocyon cinereoargenteus*), inhabit public land throughout the Decision Area. Pine marten (*Martes americana*) is likely to occur on public lands in the Case Mountain, Milk Ranch Peak, and Blue Ridge areas. Beaver (*Castor canadensis*) are known from the Salinas, Kern, and Kaweah Rivers.

Habitat conditions for these species are evaluated using the Standards for Rangeland Health and Proper Functioning Condition of riparian and wetland areas. Since 1998, over 273,500 acres have been evaluated, with 94% rated as healthy; indicating that habitat on BLM lands is in good condition for these species.

Waterfowl, Raptors and Migratory Birds: Limited waterfowl habitat occurs on public land. The main waterfowl habitat is along the Kern, Kaweah, and San Joaquin Rivers and at Atwell Island. Limited numbers of waterfowl also use scattered parcels of public land with pools or ponds throughout the Decision Area. Limited water restricts the amount of waterfowl habitat available; however, 300 acres of new wetlands have been constructed at Atwell Island.

Public lands provide nesting, wintering and foraging habitat for various raptor species. Twenty-nine raptor species are likely to inhabit public lands, including ten owl species. Primary areas for tree- and cliff-nesting species include the Sierra foothills and Sierra Nevada, Taylor Canyon, and scattered parcels in the Coast Range. Ground-nesting species, such as the burrowing owl, occur throughout the San Joaquin Valley. A small disjunct population of burrowing owls was present on public land in the South Lake area, near Lake Isabella. Development on adjacent land and associated human activity may have caused this population to decline or disappear. Wintering areas include the entire Planning Area.

Public lands are used by over 82 species of neotropical migrating birds during migration and for nesting. Important migration corridors include routes along the southern Sierra Nevada and the Transverse Ranges. The quality of habitat is generally related to vegetation structure and unobstructed flyways. Some species, such as the horned lark (*Eremophila alpestris*), require low, open vegetation; while species such as the western meadowlark (*Sturnella neglecta*) require tall, dense vegetation. Other species, like the loggerhead shrike (*Lanius ludovicianus*), require shrubs with a certain structure; while species like the willow flycatcher (*Empidonax traillii*) require dense multi-leveled vegetation associated with special features, such as water. Human activity, and uncontrolled dogs and cats reduce the quality of habitat in certain areas by displacing, disturbing or predating on nesting birds. Livestock grazing that does not meet the Standards for Rangeland Health may prevent establishment of vegetation structure needed by some bird species for nesting and foraging.

3.2.3 Aquatic, Wetland, and Riparian Habitat

Limited fish habitat occurs on BLM land. The main fish habitat on public land is along the Kern, Kaweah, and San Joaquin rivers. Limited fish habitat may also occur on short segments of rivers or streams that cross public land. Ocean fisheries may occur at Point Sal and Piedras Blancas.

Essential Fish Habitat, as identified by National Marine Fisheries Service (NMFS), does not occur in the Decision Area. Although USGS hydrologic unit 18060006 is identified as Essential Fish Habitat for coho

salmon (*Oncorhynchus kisutch*) and a portion of hydrologic unit 18060006 occurs in the Planning Area, coho salmon do not occur south of Santa Cruz County (CDFG 2008a; NMFS 2008).

Aquatic wetland and riparian habitat include streams and springs throughout the Decision Area. Many springs and streams occur in the Sierra Nevada and its foothills. River systems include the San Joaquin River and short segments of the Salinas River, Kern River, Kaweah River, and Tule River. Alkali lakes and ponds include Goose Lake and the Tulare Lakebed. Vernal pools include basalt table land depressions at Kennedy Table and Table Mountain. Public land also includes intertidal habitat above mean high tide at Point Sal and Piedras Blancas.

Efforts to assess the condition of riparian habitat on public lands have focused on the Sierra Nevada region. Only a few riparian areas in the San Joaquin Valley, Coast Range and coast areas have been assessed. Of the stream miles evaluated between 1987 and 2009, 67 miles were in good to excellent condition and 1.3 miles were in poor to fair condition.

Over 1000 springs occur on public lands in the Bakersfield FO. Most of these support an area of riparian vegetation near the water source and many support a linear riparian zone leading downstream from the source. Of the springs evaluated between 1984 and 2009, 80 percent were in good to excellent condition and 20 percent were in poor to fair condition. Concentrated livestock use is typically the cause of the poor or fair condition. Changes in grazing use and protective fencing have been used to improve certain areas.

3.2.4 Weeds

There are over 200 problematic invasive plants within the Planning Area (Appendix B, Weed Species within the Planning Area), as identified by the California Department of Food and Agriculture and the California Invasive Plants Council (Cal-IPC 2009). These nonnative species compete with native plants for water, light, and soil nutrients. This competition can put vulnerable native species at risk and degrade native habitat (DiTomaso 2000; Dudley and Deloach 2004). Saltcedar degrades riparian systems by shading shorter vegetation, by increasing salt content in the upper levels of the soils, and by drying up soils, sometimes to the extent that surface water is no longer available for animal use. Before the introduction of Mediterranean weeds, habitat now dominated by annual grasses supported native bunchgrass or diverse communities of native herbs.

Some introduced species, notably the annual Mediterranean grasses, facilitate the ignition and spread of wildfires, thereby altering fire regimes and resulting in a conversion of shrub communities into nonnative annual grasslands (Brooks et al. 2004; D'Antonio and Vitousek 1992) and changes in woodland structure or conversion of woodlands into chaparral or grasslands.

Various agents introduce and spread weeds. Seed and viable plant fragments are spread by natural forces, such as wind and water. Animals, both native and domesticated, disperse weeds via fur and feces. Humans spread weeds on their clothes, their work and recreation vehicles, and machinery. Weeds also benefit from soil-disturbing activities, such as those associated with vehicle passage, construction projects, livestock operations, and equestrian travel. The deposition of atmospheric nitrogen as a result of air pollution from automobiles and industrial sources has also favored weedy species over natives (Brooks 2003; Weiss 1999).

Currently, weed control or eradication efforts are focused on 22 species. It is not known how many of the species in Appendix B occur on public lands because systematic inventories have not been done.

Most weed inventories have been opportunistic as part of field visits for other purposes. The Atwell Island Project has had specific surveys for weeds. The Bakersfield FO cooperates with other federal, state, and county agencies in weed control and is a member of weed management area organizations for San Luis Obispo, Kern, Kings, Madera, and Tulare Counties.

Ongoing weed concerns include iceplant (*Carpobrotus* spp.) at Point Sal and Piedras Blancas, purple veldt grass (*Ehrharta calycina*) at Los Osos and Point Sal, tamarisk, puncturevine (*Tribulus terestris*), and Russian knapweed (*Acroptilon repens*) at Atwell Island, tamarisk and perennial pepperweed (*Lepidium latifolium*) in the Alkali Sinks ACEC and tree of heaven (*Ailanthus altissima*), purple loosestrife (*Lythrum salicaria*), and perennial pepperweed in the Kern watershed. Weeds continue to be spread and favored by human activities. Some species, especially those with the potential to impact agriculture or degrade natural areas, are primary targets for control and eradication, however, funding has not been sufficient and current economic realities suggest that weed problems will continue. New weeds are to be expected, especially with the changing conditions associated with climate change.

Weed management within the Decision Area is in accordance with national BLM policy (BLM 2007a, 2007b) and follows integrated pest management principles. This is the design and implementation of weed treatment methods based on the biology of the target weed. Weed control includes such methods as hand pulling, mechanical treatment, prescribed fire, flaming, mowing, biological control, and the selective use of herbicides.

Weed control has been an important component in restoring native vegetation within the Decision Area. Before they were seeded with native species, the fallow previously farmed fields at the Atwell Island Project have been burned to remove weeds and weed seed. Other fields are not taken out of alfalfa production until just before planting with natives. In this way, only mesic weeds are present, and they do not survive the drier conditions in the restored native habitat. The restoration of native coastal scrub at the Piedras Blancas Light Station started with the removal of iceplant that had spread across the landscape. Treatment consisted of hand pulling and cutting, in conjunction with the use of herbicides. Because there was still a viable and diverse seed bank beneath the layer of iceplant, most of the restoration occurred naturally once the iceplant was gone and did not require large-scale reseeding with native species.

3.3 Caves and Karst Resource

The Federal Cave Resources Protection Act of November 1988 (amended 1990) set forth to protect significant caves on federal lands by identifying their location, regulating their use, requiring permits for removing their resources, and prohibiting destructive acts. The act requires that caves be considered when preparing and implementing resource management plans and allows for specific cave locations to be kept confidential.

From the Federal Cave Resources Protection Act, the BLM developed implementation regulations (CFR 43, Part 37), which provide criteria for identifying significant caves, a process for nominating and designating caves, and management guidance. Caves on public lands may be considered significant for their biotic, cultural, geologic, hydrologic, recreational, educational, or scientific values.

Caves are generally found in karst formations, which are geologic areas, composed of soluble rocks, such as limestone or gypsum. Caves are defined as “any naturally occurring void, cavity, recess, or system of interconnected passages which occurs beneath the earth’s surface or within a cliff or ledge (excluding

mines, tunnels and other manmade excavations) and which is large enough to permit an individual to enter" (Federal Cave Resources Protection Act, 1990). Areas of karst formation with caves are known to occur within the Planning Area; notable examples include caves within the National Park (Crystal Cave) and National Forest (Boyden Cavern, Church Cave, Packsaddle Cave). These intensively managed caves provide extensive recreational opportunity including interpretation and educational programs. Within the Decision Area, karst formations are known to specifically occur in the vicinity of Lake Isabella along Erskine Creek and the Case Mountain-Milk Ranch Peak area.

The Erskine Creek area is currently a Special Management Area with the cave and karst formation specifically identified for management. Special management applied restricts fluid mineral development, of which there is limited potential, and recommends the area containing known caves for proposal for withdrawal from the mining laws. Caves in this area are important for their biotic values including habitat for Townsend's big-eared bat. The location of specific caves in this area is not widely known, although details of some cave resources (including cave maps) are available in specialized publications.

The karst formation within the Case Mountain-Milk Ranch Peak area is currently managed with the Case Mountain ACEC, although the management doesn't speak specifically to protection of this resource. This area also applies specific management to reduce the impact of certain types of mineral development, of which there is limited potential. Caves in this area are important for their biotic values and geologic structures.

Outside of karst formations caves can also occur in other rock types, including lava flows (of which there are none in the decision area) and granite. There are two identified and named caves within the Sierra Nevada Mountains, occurring in granite formations: Millerton Cave (within the San Joaquin River Gorge SRMA) and Granite Cave (near Lake Isabella).

Millerton Cave is a system of caves occurring within and outside the Decision Area; with the primary access occurring within. These caves are recognized as important for their uncommon geologic nature and recreational value. The cave is widely known and documented in both general and specialized media. Although there are no actual use figures for the cave, the Bakersfield FO routinely processes Special Recreation Permits for cave use by organized groups. Anecdotal reports give credence to the assumption that the cave is widely used by a full range of recreationalists. The cave has been impacted by this use in various ways from installation of "anchor points" for caving equipment to petty vandalism.

Granite Cave, currently managed within the 5 acres Granite Cave Special Management Area, is protected specifically for its cultural resources and value to contemporary Native American peoples. The Special Management Area provides protection of surface disturbance resulting from fluid mineral development (of which there is little potential). The cave entrance has been gated and the gate maintained to protect cultural artifacts within the cave.

3.4 Cultural Resources

Cultural resources are locations of human activity, occupation, or use. They include expressions of human culture and history in the physical environment, such as prehistoric or historical period archaeological sites, buildings, structures, objects, districts, or other places. Cultural resources can also be natural features, plants, or animals that are considered to be important to a past or contemporary culture, subculture, or community. A modified BLM Class I review of existing archaeological and

historical background information for the Planning Area was completed in order to provide a baseline for the analysis of potential impacts to cultural resources (BLM 2009a).

Prehistoric resources are recognized as those attributed to Native American groups who occupied the region prior to European contact. Historical period resources are those generally over 50 years old and associated with Native American contact period history, and European, and American exploration, settlement and development. Although a few explorers traversed the region earlier, in California the time of contact between Native Americans and Europeans is generally identified as the 1770s.

Sites of cultural significance to contemporary populations are referred to as Traditional Cultural Properties (TCP). These sites are rooted in the community's history and are important in maintaining cultural identity. Examples of TCPs for Native American communities include natural landscape features, trail systems, places used for ceremonies and worship, places where plants are gathered that are used in traditional medicines and ceremonies, places where artisan materials are found, and places and features of traditional subsistence systems, such as hunting areas.

Authorities for managing cultural resources and programs of historic preservation exist under the

- National Environmental Policy Act (NEPA, Pub. L. 91-190),
- Federal Lands Policy and Management Act (FLPMA, Pub. L. 91-579),
- Archaeological Resources Protection Act (ARPA, 16 USC 470),
- Native American Graves Protection and Repatriation Act (NAGPRA, 25 USC 3001),
- Historic Sites Act of 1935 (Pub. L. 73-292),
- Antiquities Act of 1906 (16 USC 431-433),
- American Indian Religious Freedom Act (AIRFA, Pub. L. 95-341),
- Executive Order 13007 ("Sacred Sites", 61 FR 105), and
- National Historic Preservation Act of 1966 as amended (NHPA, Pub. L. 89-665).

A National Programmatic Agreement among the BLM, the Advisory Council on Historic Preservation (ACHP) and the National Conference of State Historic Preservation Officers (NCSHPO) sets forth the manner in which the responsibilities deriving from the NHPA shall be met. The NHPA describes the process for identifying and evaluating historic properties, for assessing the effects of federal actions on historic properties, and for consulting to avoid, reduce, or minimize adverse effects. The term "historic properties" refers to cultural resources that meet specific criteria for eligibility for listing on the National Register of Historic Places NRHP. Potential adverse effects to historic properties must be considered during the course of any federal action.

In carrying out its responsibilities both under the National Programmatic Agreement and statutory authorities, the BLM has also developed policies and procedures through its directives system (BLM Manual Series 8100-8170) to guide BLM's planning and decision making as it pertains to historic properties and preservation. In addition, pursuant to the National Programmatic Agreement, a *State Protocol Agreement Among the California State Director of the Bureau of Land Management and the California State Historic Preservation Officer and the Nevada Historic Preservation Officer Regarding the Manner in Which the Bureau of Land Management will Meet its Responsibilities Under the National Historic Preservation Act and the National Programmatic Agreement Among the BLM, the Advisory Council of Historic Preservation and the National Conference of State Historic Preservation Officers* has

been developed providing direct guidance for the management of cultural resources within the Decision Area.

Eligibility determinations are usually completed as part of project impact assessments or proactive National Register listing actions. As a result, unless a specific action necessitates this determination; all cultural sites are generally treated as if they are eligible historic properties and afforded the associated emphasis on preservation through avoidance of any potential adverse effect. If a cultural resource is evaluated and does not meet the criteria identified for eligibility under the NHPA, it is not recognized as an historic property and as a result it is not managed for preservation. A similar process applies to the assessment of the eligibility of a TCP.

At an area-wide level, the BLM manages cultural resources through the categorization of evaluated cultural resources according to their nature and relative preservation value. These use categories include scientific use, conservation for future use, traditional use, public use, and experimental use or those resources discharged from management (Table 3.4-1).

Table 3.4-1
Cultural Resource Use Allocations and Desired Outcomes

Use Allocation	Desired Outcome
Scientific use	Preserved until research potential is realized
Conservation for future use	Preserved until conditions for use are met
Traditional use	Long-term preservation
Public use	Long-term preservation, on-site interpretation
Experimental use	Protected until used
Discharged from management	Ineligible cultural resources; no use after evaluation/recordation; not preserved

BLM cultural resource management also identifies specific geographic areas which contain significant cultural resources for additional protective measures. These decisions are based on the presence of known cultural resources, a probability for unrecorded significant resources, imminent threats from natural or human-caused deterioration, or potential conflict with other resource uses.

Within the Decision Area cultural resources are diverse and widely distributed. Due to terrain, geomorphology, access and visibility, and past and current land use patterns only a partial cultural resources inventory of the Decision Area has been completed. Approximately 232,018 acres of BLM managed lands have been surveyed for the possible presence of cultural sites. There are 696 prehistoric and historical period recorded archaeological sites that are administered by the Bakersfield FO, this includes one National Historic Landmark, *the* Walker Pass *National Historic Landmark, one historic district, the Pt. Sal Ataje National Register District* and ~~*two*~~ *one* site individually listed on the NRHP; the ~~*Piedras Blancas Light Station and,*~~ South Lake Cultural Area. All cultural sites are manifested by exposed artifacts, features, or structures. These sites are vulnerable to disturbance and destruction through both natural and man-made forces. Impacts resulting from erosion, animal intrusion, and human use, including vandalism and looting, subjects these cultural resources to accelerated rates of deterioration, destruction, or removal from public lands

To address the impacts of livestock grazing an amendment to the State Protocol Agreement between BLM and the SHPO provides specific guidance regarding the potential impacts to cultural resources. This guidance directs that all areas potentially impacted by livestock use, such as at water troughs, salt licks

and loafing and trailing areas, are assessed for the presence of cultural sites when grazing permits or leases are renewed. If impacts are discovered, mitigation measures such as fencing, erosion control or water trough removal may be implemented. This assessment includes Native American consultation in order to determine if places of cultural significance to these people are also being affected.

Of the uses impacting cultural resources, OHV-related impacts have been identified as a significant source of damage to archaeological sites and other historic properties, second only to development. The recent study, The Effects of Off-Highway Vehicles on Archaeological Sites and Selected Natural Resources of Red Rock Canyon State Park (Sampson 2007), investigated OHV use and its effects on cultural and natural resources within Red Rock Canyon State Park in Kern County. This study verified that OHV recreation had the unintended consequence of enabling artifact collectors and looters to access vast areas of public land, putting cultural sites at risk. Irresponsible OHV use was documented as the primary cause for the "inadvertent or purposeful destruction of significant cultural features," occurring most frequently in areas close to roads or campgrounds.

The most at risk or sensitive resources are currently managed within ACECs (Map 3.17.1) or Special Management Areas (Map 3.2.2) that provide prescriptive management to eliminate incompatible use and alleviate adverse impacts.

3.4.1 Prehistoric Resources

There is archaeological evidence of Native American occupation of the region within the Planning Area dating to at least 12,000 years ago. The typical prehistoric archaeological assemblages found in the Planning Area are lithic scatters, flaked stone artifacts, groundstone, shell ornaments, bedrock milling features, shell middens, animal bones, quarry debris, hearths, pictograph and petroglyph sites, and burials. These artifacts and features are most commonly found within the context of habitation sites, ranging from small temporary camps to large village complexes.

Within the Decision Area there are nine areas where significant prehistoric resources or Native American traditional values are present. To protect these vulnerable resources, the details and exact locations of archaeological sites within these areas is withheld from public disclosure, pursuant to the National Historic Preservation Act of 1966, as amended, Section 304.

Point Sal – managed as an ACEC *and includes the Pt. Sal Ataje National Register District*. This unspoiled portion of the Central California coastline contains a wealth of information for scientific research, particularly with regard to themes of marine subsistence, responses to environmental change and the development of community organization

Goose Lake – managed as an ACEC. This area is representative of the large scale lake shore environments once found throughout the San Joaquin Valley which played an important role in regional cultural development.

Chico-Martinez – managed as an ACEC. The attraction of the many springs and rock formations in this area has contributed to its important role in regional prehistory.

Atwell Island – portions of this area contain a significant remnant of the once widespread lakeshore environments which played an important role in San Joaquin Valley regional cultural development.

San Joaquin River Gorge – managed as a SRMA This area plays an important role in local Native American cultural practices including traditional resource use.

Horse Canyon – managed as an ACEC. This area is associated with important prehistoric, ethnographic and contemporary Native American traditional cultural values. Of specific concern is the *cumulative impact of* unregulated causal collecting of agates and other minerals that has occurred within the Horse Canyon area for many years which has resulted in damage and destruction of *sensitive* cultural resources.

Huasna Peak – contemporary Chumash informants have identified the area around Huasna Peak as having especially significant spiritual values. The area is currently being managed as a BLM SMA for the protection of the natural landscape in order to preserve the Native American traditional values associated with it.

Nicholls Peak – contemporary Kawaiisu and Tubatulabal informants have identified the area surrounding Nicholls Peak as having significant spiritual values. Of specific concern is the system of roads that have encroached upon the areas these two tribal groups find significant.

South Lake Cultural Area – managed as a BLM SMA. This area is associated with important prehistoric, ethnographic and contemporary Native American cultural values.

Granite Cave – managed as an SMA. This area is associated with particularly important cultural values for contemporary Native Americans.

Los Osos - This area is associated with important prehistoric, ethnographic and contemporary Native American traditional cultural values.

3.4.2 Historic Resources

Spanish exploration and settlement in the late eighteenth century, and later the establishment of missions, initiated the historical period in the Planning Area. This ushered in many changes in indigenous demographics, land use patterns, traditional practices, and the resulting archaeological site types.

Subsequent Anglo settlement in the early nineteenth century focused on ranching, timber harvesting, and mining with the arrival of the first American explorers. By the end of the nineteenth century, disease and subjugation had decimated the Native American people. The subsequent developments of the mineral industries (oil and gold) and large-scale agriculture during this period were highly significant in shaping the economic development and demographic history of the Planning Area. Historical period site types found in the region reflect this emphasis, the most common being infrastructure related to mining and oil field development as well as, agriculture and ranching.

Within the Decision Area there are five locations identified for important historical period values. These include:

Piedras Blancas – managed as an Outstanding Natural Area (ONA). The facility is ~~*listed*~~ *eligible for listing* on the NRHP as a historic district ~~*(P-40-040855)*~~ and is recognized for its importance in early coastal navigation, as well as maritime and onshore trade and commerce (see Outstanding Natural Areas Section). An MOA between the BLM and the SHPO exists for the management of its cultural resources ~~*including Native American values*~~.

Atwell Island – The area contains an adobe brick building constructed in 1900. The adobe still stands, with some modifications, and is of local historical interest because it was constructed before the founding of the nearby towns of Alpaugh and Allensworth.

Walker Pass National Historical Landmark – The area is valued for historical important events in American history that occurred at this location. The pass was used repeatedly by early explorers as a route through the Sierra Nevada. The area is being managed as a BLM SMA that direct management to protect the characteristics of the natural landscape and viewshed, which contributed toward its designation as a National Historical Landmark.

Advance Colony – Located on the North Fork of the Kaweah. This site was the location of an early settlement of nineteenth century "utopian socialists." The North Fork of the Kaweah is managed as a BLM SMA to protect these cultural resources, while providing for river access.

Keyesville – Contains one of the most significant concentrations historical remains within the Planning Area. This includes standing structures, such as the Walker cabin and barn, home of early settlers to the region, the Keyes mine, and portions of the Keyesville village, cemetery, and fort. The Keyesville area played a significant role in the early American westward expansion, settlement, and mineral exploitation in California. The area is managed as a BLM SMA to protect these cultural resources while providing for recreational use.

3.4.3 Ethnographic Documentation and Native American Consultation

Native American traditional territories located within the Planning Area include areas occupied or used by the Salinan, Chumash, Esselen, Costanoan, Yokut, Mono, Tubatulabal, Kawaiisu, Shoshone, Paiute, and Kitanemuk people.

There are ~~*eight*~~ *nine* federally recognized tribes whose tribal lands are within the Planning Area; the Picayune Rancheria of Chukchansi Indians, the North Fork Rancheria of Mono Indians and members of the Tule River Reservation, the Cold Springs Rancheria, the Big Sandy Rancheria and the Table Mountain Rancheria, the Santa Ynez Band of Chumash Indians, *the Tejon Indian Tribe* and the Tachi Yokuts of the Santa Rosa Rancheria. Ongoing consultation with the descendants of these Native American tribes is important in identifying potentially important cultural or religious sites, including TCPs.

3.5 Lands with Wilderness Characteristics

Public lands with wilderness characteristics (as defined in Section 2 of the Wilderness Act, 16 U.S.C. § 1131(c) provide social, cultural, economic, scientific, and ecological benefits for present and future generations. Many people and communities value these lands for hunting and fishing, observing wildlife, hiking, and other non-motorized and non-mechanized recreational uses. Lands with wilderness characteristics are also important for their scientific, cultural, and historic objects, which further our understanding of human and natural history, the functions of healthy ecosystems, and how human activities change our world. They also provide a variety of valuable ecosystem services, including carbon sequestration, watershed protection, and air purification, and may contain habitat for numerous threatened and endangered species and other rare biological resources worthy of protection.

In accordance with Section 201 of FLPMA, the BLM is required to maintain a current inventory of public lands under its jurisdiction and determine within that inventory those lands possessing wilderness

characteristics outside of Wilderness Study Areas or units of the National Wilderness Preservation System. These lands are described as "Lands with Wilderness Characteristics (LWC)". The inventory is completed only in consideration of the existing conditions as opposed to potential conditions that may result from a future planning decision.

In addition to review and maintenance of existing LWC data, analysis of: (1) new data concerning resource conditions for lands previously determined not to poses LWC; (2) newly acquired lands; and (3) citizen information (public LWC nominations) meeting the minimum standard for further review, is performed in conjunction with the land use planning process to establish an updated, current LWC inventory.

To address LWC through this planning effort, the Bakersfield FO: (1) reviewed and updated the existing inventories of wilderness characteristics, particularly for lands outside of designated Wilderness and WSAs, including the Final Intensive Inventory of Public Lands Administered by BLM California outside the California Desert Conservation Area (BLM, 1979); (2) inventoried lands more recently acquired ; and (3) reviewed five nominations made through the scoping process consistent with Section 201 of FLPMA. Table 3.5-1, identifies the results of the aforementioned LWC inventory review. Additional detail for each area was presented in Appendix K of the Draft RMP/Draft EIS (BLM 2011a). This document includes the complete inventory and describes the considerations taken in making the determinations, including the area's roadless nature, overall size (both in isolation and when considered with adjacent lands), presence of naturalness, opportunities to experience solitude and participate in primitive unconfined recreation, and the practicality and ability of managing for wilderness characteristics. Although the inventory determines that there are approximately 16,190 acres of LWC, only about 3,630 is deemed to be manageable in an unimpaired state due to the size limitation of the parcel and/or proximity to urban development of the other areas.

Table 3.5-1
Areas Reviewed for LWC

Inventory Number[30]	Property Name	Acreage	LWC Determination
CA-010-002 / CAC060-002	Hopper Mountain	783	LWC not present
CA-010-007 / CAC060-007	Tepusquet Peak	1,024	LWC not present
CA-010-016 / CAC060-016	Sespe-Frazier	243	no longer public lands
CA-010-017 / CAC060-017	Orchard Peak	1,840	LWC not present
CA-010-028 / CAC060-028	Bear Mountain[31]	2,226	LWC present in areas (approximately 2,000 acres)
CA-010-035 / CAC060-035	Temblor Range	~15,000	LWC not present or impractical to manage
CA-010-036 / CAC060-036	Spoor Canyon / Public Proposal I	240	LWC not present or impractical to manage
CA-010-037 / CAC060-037	Cuyama / Public Proposal II & III	1,014	LWC not present or impractical to manage
CA-010-040 / CAC060-040	Freeborn/Hubbard	7,192	LWC not present or impractical to manage
CA-010-052 / CAC060-052	Walker Basin/Caliente Creek	360	LWC not present or impractical to manage
- / CAC060-201	Lamont Meadow	218	LWC present / adjacent Wilderness
- / CAC060-202	Edgar Ranch West	268	LWC present / adjacent Wilderness (Sec. 6)
- / CAC060-203	Big Pine Meadow	644	LWC present / adjacent Wilderness
- / CAC060-204	Roszewska Ranch	418	LWC present / adjacent Wilderness
- / CAC060-205	Chappell, D Parcel	80	LWC present / adjacent Wilderness
- / CAC060-206	Cyrus Canyon Donation	1501	LWC present but impractical to manage
- / CAC060-207	Craig Ranch	967	LWC not present or impractical to manage
- / CAC060-208	Piedras Blancas Light Station	19	LWC not present
- / CAC060-209	Atwell Island	7,935	LWC not present
- / CAC060-210	Patterson Bend	2,367	LWC present (approximately 2,200 acres) but impractical to manage
- / CAC060-211	National Petroleum Reserve II	10,777	LWC not present
- / CAC060-212	Public Proposal IV (Santiago Creek)	471	LWC not present or impractical to manage
- / CAC060-213	Public Proposal V – Bright Star Additions[32]	3,651	LWC present (approximately 2,100 acres) but impractical to manage

[30] Old / New inventory numbers (updated to match current numbering systems)
[31] 13,134 acres of the original study area designated as the Chimney Peak Wilderness area in 1994.
[32] 5,231 acres of the original proposal are within the Piute Cypress ISA WSA.

3.6 Paleontological Resources

Paleontological resources are crucial to our understanding of several aspects of biological and geological history. Climate change studies, tectonics and biological evolutionary processes are distinct scientific disciplines which rely on the information provided by paleontological resources.

There are a variety of paleontological resources in the Planning Area, including plant and animal fossils (both vertebrate and invertebrate) of marine and terrestrial origin. Some of these resources have significant recreational, scientific, and educational value of which several have provided time-rock correlations that have worldwide strato-chronographic and paleo-ecological ramifications. Paleontological localities in the Planning Area generally encompass a mix of public and private lands requiring collaboration and cooperation for successful management and preservation of these resources.

For management purposes a "significant" paleontological resource is any paleontological resource that is of scientific interest, including most vertebrate fossil remains and traces, and certain rare or unusual invertebrate of plant fossils. Significant paleontological resources are the subject of paleontological assessment and mitigation concerns during project specific NEPA analysis and collection of these resources on federal lands or during federally authorized actions requires a BLM Paleontological Resources Use Permit.

To ensure that significant paleontological resources in the Decision Area are managed correctly the paleontology program adheres to policy and guidance for ~~*avoiding or mitigating*~~ *addressing* potential impacts. Paleontological resources are managed under the following principal authorities:

- Paleontological Resources Preservation Act of 2009 (Sections 6301-6312 of the Omnibus Public Lands Act of 2009, 16 USC 470aaa); mandating the management and preservation of paleontological resources on public land using scientific principles and expertise. *The BLM is required to supervise a chain of custody for paleontological resources that first identifies significant paleontological resources, authorizes their removal from the ground, ensures their transfer to an approved repository and maintains a system of accountability for unique scientific resources in perpetuity.* Programs to increase public awareness about the significance of paleontological resources are also mandated, and civil and criminal penalties are provided for prohibited acts of vandalism and theft of paleontological resources and other violations of the act.
- The Federal Land Policy and Management Act of 1976 (P.L. 94-579); requiring that the public lands be managed in a manner that protects the "quality of scientific" and other values. The Act also requires the public lands to be inventoried and provides that permits may be required for the use, occupancy and development of the public lands.
- The National Environmental Policy Act of 1969 (P.O. 91-190); requiring that "important historic, cultural and natural aspects of our national heritage" be protected, and that "a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences…in planning and decision making" be followed.

~~*Additional regulations address the casual collection of invertebrate and plant fossils (43 CFR 8365.1-5(b)), and the free use collection of petrified wood (43 CFR 3622(a)).* *In addition*~~ All authorized surface disturbing activities carry a discovery clause which states that in the event of the discovery of paleontological remains during the course of project construction, all work at the location will cease until appropriate BLM staff have been contacted, the significance of the remains are assessed and appropriate ~~*avoidance or mitigation*~~ actions *including fossil specimen collection, preparation and museum curation* are implemented.

In most areas, BLM regulation regarding the management of paleontological resources allows for the casual unpermitted collection of reasonable amounts of common invertebrate and plant fossils, including petrified wood. Casual collecting in Section 6301(1) of OPLMA-PRP means:

"… the collecting of a reasonable amount of common invertebrate and plant paleontological resources for non-commercial personal use, either by surface collection or the use of non-powered hand tools resulting in only negligible disturbance to the Earth's surface and other resources."

However the excavation or collection of all vertebrate and uncommon invertebrate fossil resources requires a BLM Paleontological Resource Use Permit which is subject to BLM standards of scientific research and paleontological collections management.

The BLM uses the Potential Fossil Yield Classification (PFYC) system to classify paleontological resource potential (Table 3.6-1). This allows for assessing possible resource impacts and mitigation needs for actions involving surface disturbance, land tenure adjustments, and land use planning. The PFYC system provides a uniform method to assess potential occurrences of paleontological resources and to evaluate possible impacts using geologic units. Occurrences of paleontological resources are closely tied to the geologic units, such as formations, members, or beds that contain them. The probability of finding paleontological resources can be broadly predicted from the geologic units present at or near the surface. It is intended to be a broad approach for planning efforts and as an intermediate step in evaluating specific projects.

Table 3.6-1
Potential Fossil Yield Class Descriptions

PFYC	Potential	Description
Class 1	**Very Low**	Geologic units not likely to contain recognizable fossil remains (igneous, metamorphic, or Precambrian rock units).
Class 2	**Low**	Sedimentary geologic units not likely to contain vertebrate fossils or scientifically significant invertebrate fossils.
Class 3	**Moderate** or **Unknown**	Fossiliferous sedimentary geologic units where fossil content varies in significance, abundance, and predictable occurrence, or sedimentary units of unknown fossil potential.
Class 4	**High**	Geologic units containing a high occurrence of significant fossils. Vertebrate fossils or scientifically significant invertebrate or plant fossils are known to occur and have been documented but may vary in occurrence and predictability. Surface-disturbing activities may adversely affect paleontological resources in many cases.
Class 5	**Very High**	Highly fossiliferous geologic units that consistently and predictably produce vertebrate fossils or scientifically significant invertebrate or plant fossils and that are at risk of human-caused adverse impacts or natural degradation.

Using the PFYC system, geologic units are classified based on the relative abundance of vertebrate fossils or scientifically significant invertebrate or plant fossils and their sensitivity to adverse impacts, with a higher class number indicating a higher potential for the occurrence of these resources.

The PFYC system is not intended to be applied to specific paleontological localities or small areas within units. Although significant localities may occasionally occur in a geologic unit, a few widely scattered important fossils or localities do not necessarily indicate a higher class; instead, the relative abundance of significant localities is intended to be the major determinant for the class assignment.

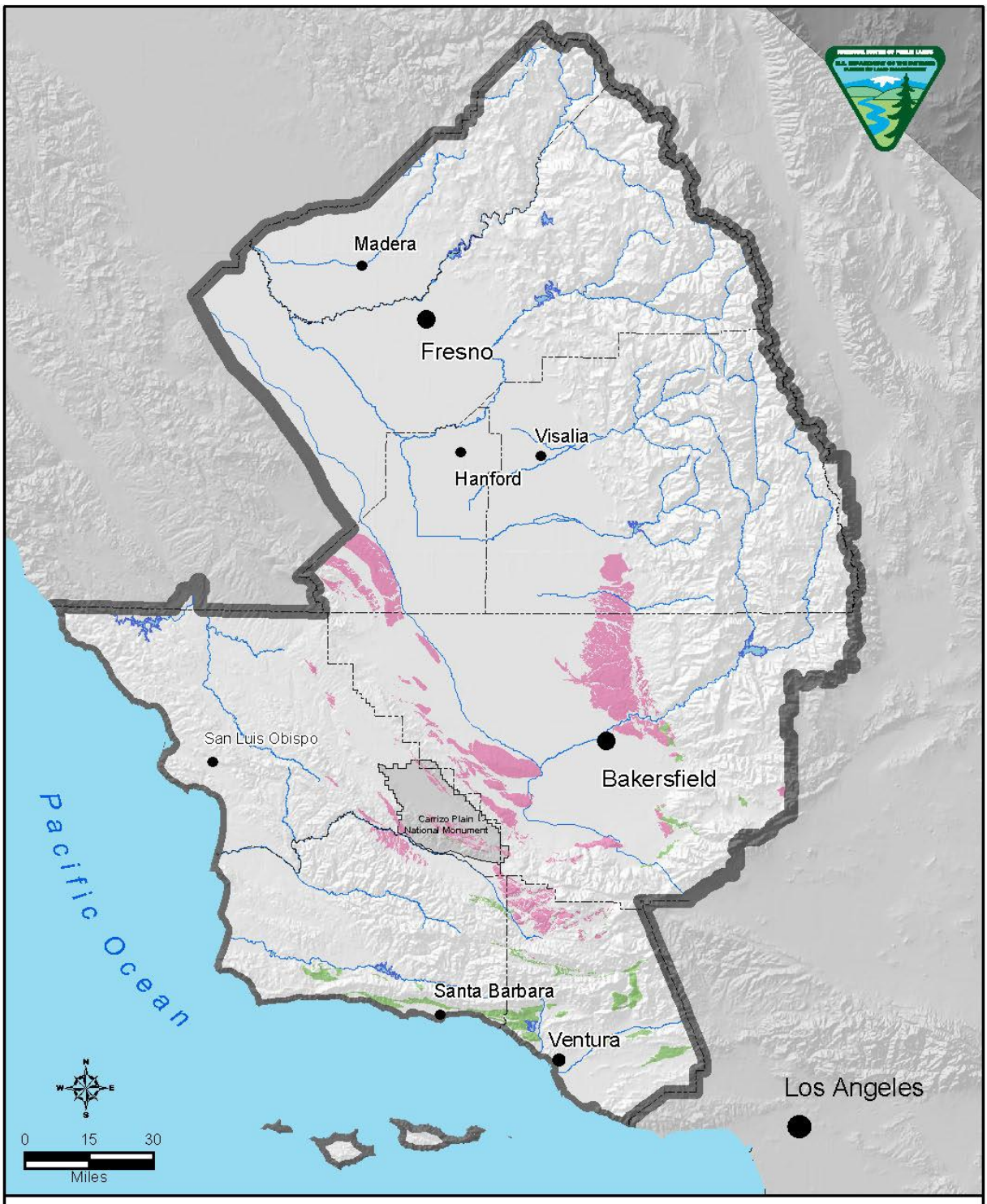
The BLM has classified formations in the Planning Area from existing data using the PFYC system. *This classification is based upon the best information currently available for the potential occurrence of significant paleontological resources within these geological formations. As a result, this classification is subject to revision and refinement as additional information becomes available. This classification is also used to gauge sensitivity for the occurrence of these resources. A map depicting the location of PFYC Class 4 and 5 formations within the Decision Area is provided below (Map 3.6.1).* Those formations *currently known to* contain *significant PFYC Class 4 and 5* paleontological resources *are listed in Table 3.6-2*.

Table 3.6-2
Paleontological Resources Found within Geologic Formations that Outcrop within the Decision Area[33]

Name of Formation (Map Abbreviation)	Formation Description	Age	Fossil Types Known to Occur	PFYC Class	Decision Area Acres
Bopesta (Tbo)	Sandstone; conglomerate	Late Miocene	Nonmarine: Significant terrestrial mammals including artiodactyls, perissodactyls and carnivora	5	680
Caliente (Tcs)	Sandstone; conglomerate	Middle and Lower Miocene	Nonmarine; Several species of horse from the early Hemingfordian to late Hemphillian	5	94
Etchegoin (Te)	Sand, gravel, clay, conglomerate	Pliocene and Upper Miocene	Marine and Nonmarine; Mastadon, beaver, horse, sea lion, eared seals, whales, porpoises in the Kettlemen Hills	5	1,656
Freeman Silt/Jewett Sand (Ml)	Siltstone; sandstone	Miocene	Marine; Mollusks, marine mammals, silicified wood, foraminifers	5	50
Kern River (QP)	Alluvium; sandstone and conglomerate; siltstone and mudstone	Pleistocene to Miocene	Nonmarine; Continental vertebrate fossils of early Hemphillian age	5	1,056

[33] The contents of this table are subject to revision based upon the best available information regarding the location and nature of geological formations which may contain significant fossil remains within the Decision Area. Please contact the Bakersfield Field Office for possible changes to this list.

Name of Formation (Map Abbreviation)	Formation Description	Age	Fossil Types Known to Occur	PFYC Class	Decision Area Acres
Morales (QTm)	Fluvial sandstone	Pleistocene and Upper Pliocene	Nonmarine; Sparse vertebrate fossils of Blancan age	5	2,360
Nonmarine rocks of Santa Barbara (Tng)	Gypsiferous mudstone member	Lower Miocene and Upper Oligocene	Nonmarine; Horse	4	140
Round Mountain Silt (Mm)	Siltstone; claystone	Miocene	Marine; whale, seal, turtle, porpoise	5	349
San Joaquin (Tsj)	Sand, gravel, clay, conglomerate	Pliocene	Mastadon, beaver, horse, sea lion, eared seals, whales, porpoises in the Kettlemen Hills	5	3,639
Sespe (Tsp)	Sandstone; conglomerate	Middle Eocene to Early Miocene	Nonmarine Vertebrates- Late Uintan; Arikareean; Early Heminfordian and Early Oligocene to Miocene marine vertebrates and invertebrates	4	262
Tulare (QTt)	Sandstone; conglomerate	Pliocene	Marine and Nonmarine; horse, snakes, birds, lizards ,turtles, sabre-toothed cats, dogs, zebras, horses, peccaries,camels, ground sloths, rabbits, squirrels, gophers, pocket mice, kangaroo rats, pack rats, deer mice, cotton rats and moles	5	17,417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Bakersfield Field Office
County Boundary
Paleontological Resources
PFYC 5
PFYC 4
Paleontological Resources: PFYC 4 & 5 Formation
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.6.1

~~*There are no PFYC Class 5 formations identified within the Decision Area. There are 19,361 acres of PFYC Class 4 formations at six localities within the Decision Area including within the Tierra Redonda, Horse Canyon, Kettleman Hills and Chico Martinez ACECs. These significant paleontological values contribute to the ACEC designation for these areas. The remaining fossil bearing formations scattered throughout the Decision Area comprise approximately 873 acres and have all been assigned a PFYC Class 3 designation.*~~

~~*There are several significant paleontological formations that occur within the Planning Area but are not found within the Decision Area. These include the Miocene paleontological deposits of the Bena Petrified Forest, Caliente Mountain-Padrone Springs, Comanche Point, Cuyama Phosphate, and Heald Peak localities. Pliocene deposits occur at the San Emigdio Ranch and Horn Toad Hills localities. Eocene, Cretaceous and Triassic deposits are found at the Wheeler Gorge, Turney-Panoche Hills and Lindsey localities respectively. Consideration of these formations during the planning process provides a clearer picture of potential indirect and cumulative impacts to these paleontological resources located outside of the Decision Area as a result of federal actions authorized by the BLM.*~~

~~*Paleontological resources are subject to damage and destruction as a result of both authorized and unauthorized ground surface disturbing activities. This includes the illegal collection of significant paleontological resources which may occur at localities in easily accessible areas. Of specific concern is the unregulated causal collecting of agates and other minerals that has occurred within the Sand Canyon-Cache Creek locality for many years which has resulted in damage and destruction of these sensitive resources.*~~

There are presently 11 geological formations with potential sensitivity (PFYC 4 and 5) for the occurrence of significant fossil remains within the Decision Area. These are listed in Table 3.6-2. These formations account for a total of 27,723 acres of public lands that have a degree of paleontological sensitivity which will trigger screening for paleontological compliance requirements for all BLM authorized actions.

3.7 Soil Resources

Soil resources provide the foundation for vegetation and biological communities, and, safeguard water and air quality. Terrestrial and aquatic systems depend on the presence of suitable quality soils for their function; therefore, maintaining soil attributes, such as water holding capacity, texture, erosion potential, and slope, are important to BLM management decisions.

Soils are the result of complex interactions among parent material (geology), climate, topography, organisms, and time. Soils are classified by the degree of development into distinct layers or horizons and their prevailing physical and chemical properties. Similar soil types are grouped into soil orders, based on defining characteristics, such as organic matter and clay content, amount of mineral weathering, water and temperature regimes, depth, drainage, slope, particle size or base saturation that give soil its unique properties. Natural Resources Conservation Service (NRCS) soil surveys, which identify limiting factors and include interpretive ratings, help guide a variety of management decisions, such as placement of fencing for livestock grazing management, determining route designations (areas suitable for on- and off-road vehicle and OHV travel), and trail, road, and building/facility construction associated with BLM actions and BLM-authorized actions.

Detailed NRCS soil surveys are available for most of the Planning Area, however, these are too specific for analysis at the RMP scale. There are hundreds of individual soil map units in the Planning Area that will be used at project level planning.

The Bakersfield FO currently uses the Standards for Rangeland Health across the Decision Area to manage public lands so that soils exhibit functional biological and physical characteristics that are appropriate to soil type, climate, and land form. Best Management Practices (BMPs, see Appendix L) for soils are applied to BLM actions and authorizations to limit compaction and reduce the potential for accelerated erosion through minimizing surface disturbance and reclaiming disturbed sites.

Special soils that require attention for management include: those that support biological crusts, prime or unique farmland soils; serpentine soils; those identified as susceptible to compaction and accelerated erosion; and valley fever endemic soils.

3.7.1 Biological Crusts

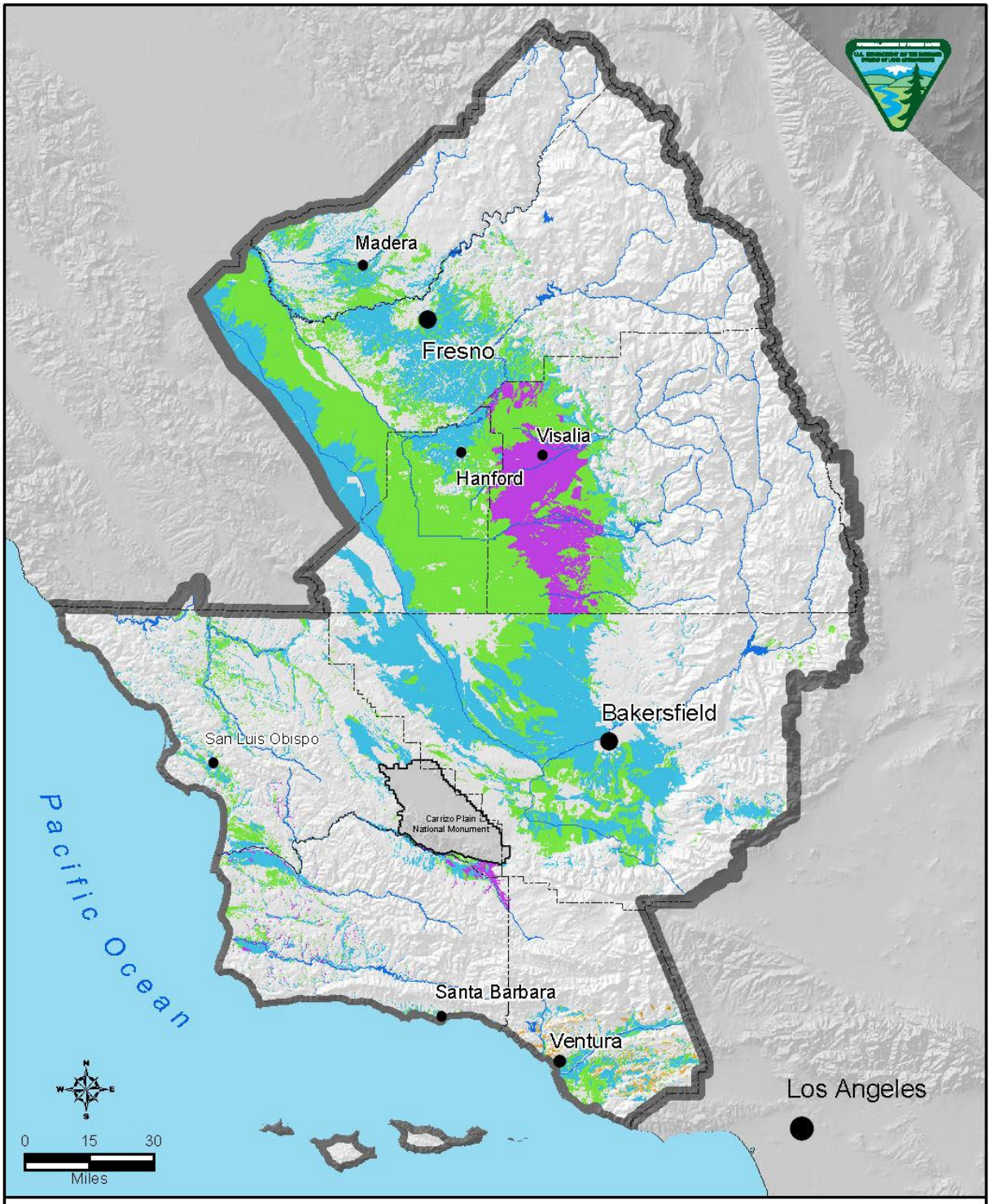
In arid and semiarid lands throughout the world, vegetation cover is often sparse or absent. Nevertheless, in open spaces between the higher plants, the soil surface is generally not bare of life but is covered by a community of highly specialized organisms (see Biological Resources Section). Biological soil crusts weave through the top few millimeters of soil, gluing loose particles together and forming a matrix that stabilizes and protects soil surfaces from erosive forces; increases soil fertility and moisture retention; and limits spread of nonnative plants. Crust integrity may be physically disturbed by various activities, including construction associated with energy and mineral development, fire suppression, livestock grazing, and recreation activities. When the integrity of the crust is broken, the soil is more susceptible to wind and water erosion.

3.7.2 Prime or Unique Farmland Soils

Prime farmlands are lands identified by the United States Department of Agriculture as having the best combination of physical and chemical characteristics for producing our nation's food, feed, forage, fiber, and oilseed crops. This land must also be available for these uses. The availability for these uses varies according to ownership and access. There are many soils on split-estate lands within the Decision Area that are designated as prime farmland, prime farmland, if irrigated, unique farmland, and/or soils of statewide importance. Most soils classified as prime farmland occur within the San Joaquin Valley (Map 3.7.1); however, generally public lands are not used for agricultural crops.

3.7.3 Serpentine Soils

Serpentine soils are derived from serpentine, a type of rock with high magnesium to calcium ratios that was pushed up onto the continent during the subduction of the oceanic crust from the west. Serpentine soils are often chemically different from the surrounding soils with high amounts of magnesium, nickel, cobalt, chromium, and iron, while being poor in other plant nutrients, such as nitrogen and phosphorus. Therefore, the plants found on serpentine soils vary from those found on the surrounding soils. While serpentine soils occupy only one percent of the land area in California, 10 percent of native plant species—known as serpentine endemics—are adapted to these soils. Many serpentine endemics are rare or endangered (see Biological Resources Section).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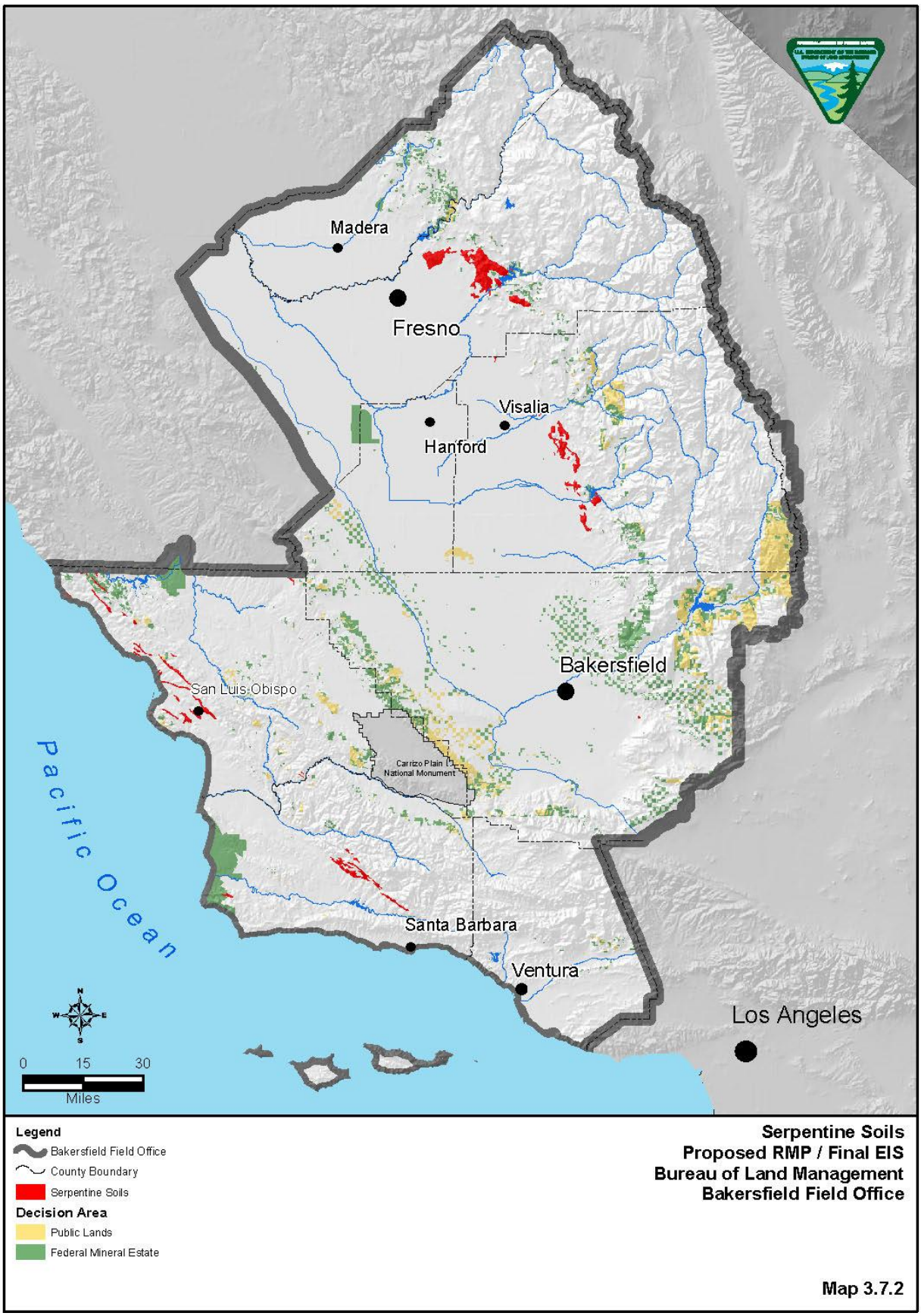
Bakersfield Field Office
County Boundary
Prime or Important Farmland
Farmland of statewide importance
Farmland of local importance
Prime farmland if irrigated
Prime farmland if irrigated and protected from flooding
Prime or Unique Farmland Soils
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.7.1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Bakersfield Field Office
County Boundary
Serpentine Soils
Decision Area
Public Lands
Federal Mineral Estate
Serpentine Soils
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.7.2

In California, these soils largely occur in the foothills of the Sierra Nevada and the Inner Coast Ranges from San Luis Obispo County north to the Oregon border in the Klamath Mountains (USDA 1980). Within the Bakersfield FO Planning Area serpentine soils occur on approximately 16,000 acres in the southern Sierra Nevada and Coast Ranges (Map 3.7.2); of which, approximately 900 acres occur on public lands.

Serpentine soils can pose a risk to public health and safety as a result of their potential to contain Naturally Occurring Asbestos (NOA) (see Public Health and Safety Section).

3.7.4 Soil Compaction

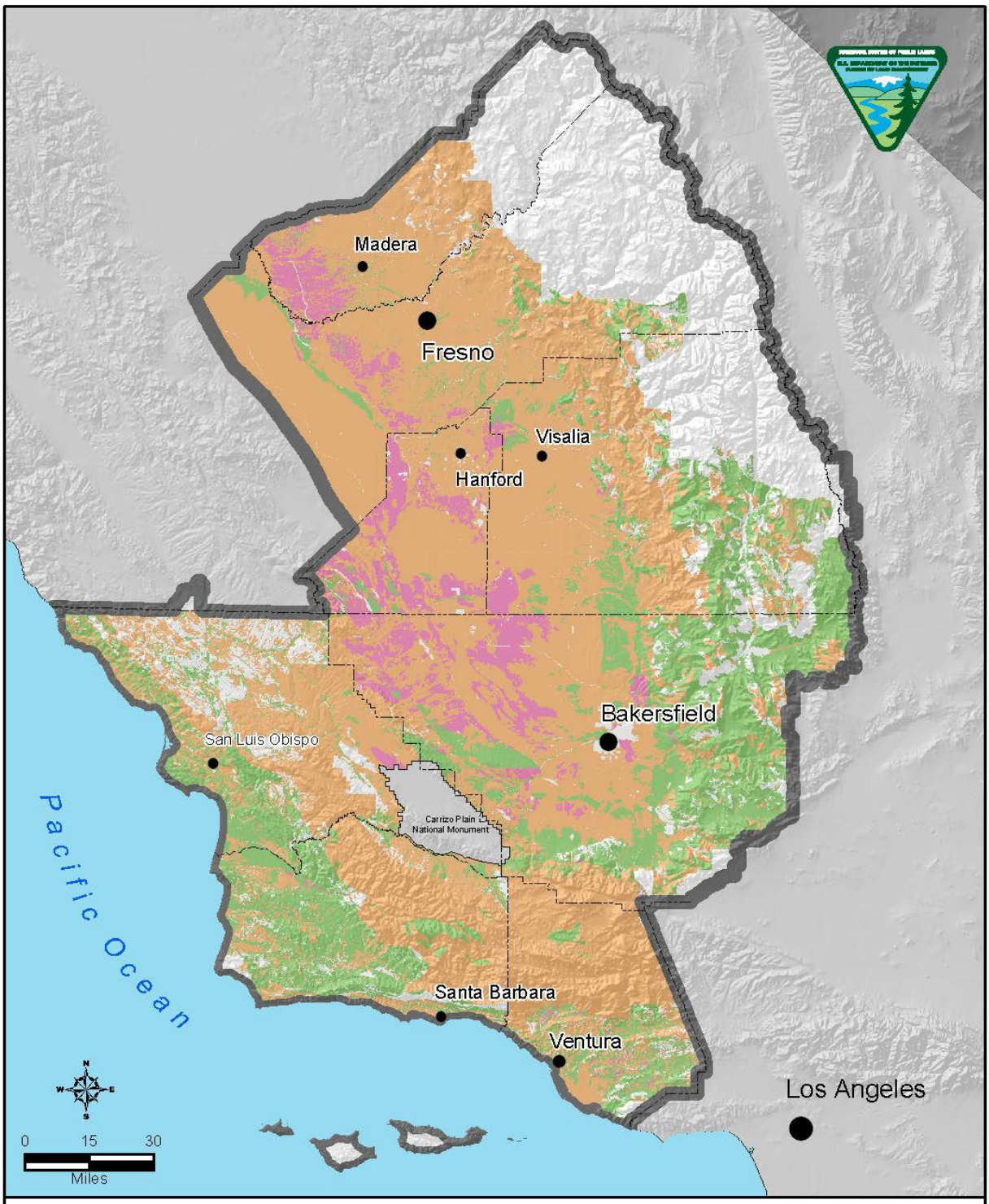
Soil compaction is a complex process that depends on various soil characteristics such as particle sizes and proportions, organic matter content, structure of the soil horizon. Soils with uniformly coarser textured particles (sands) tend to be less susceptible to compaction than finer-textured soils and soils with a diverse range of soils particle sizes. The risk for compaction is greatest when soils are wet. Soil compaction occurs in response to pressure exerted by machinery, animals, or pedestrian traffic. Compacted soil usually allows less water to infiltrate, resulting in greater overland flow of water for longer periods of time. Increased and intensified overland flow has greater energy to detach and transport soil particles, resulting in accelerated soil erosion and loss.

3.7.5 Soil Erosion

Soil erosion is a naturally occurring process that is influenced by climate, topography, soil properties, vegetative cover, and land use. Of concern, however, is accelerated erosion resulting in larger quantities of soil lost by water or wind erosion. Areas identified as having potential for accelerated erosion include those with slopes greater than 50 percent or soils interpreted as prone to erosion with slopes greater than 30 percent. These areas are mapped using the NRCS soil surveys that include data on erodibility (K factor) for some soils (Map 3.7.3).

3.7.6 Valley Fever Endemic Soils

Valley Fever (Coccidioidomycosis) is a disease caused by the inhalation of the spores of *Coccidioides immitis*, a fungus which inhabits soils of the southwestern Unites States. *C. immitis* is endemic in parts of Arizona, California, Nevada, New Mexico, Texas and Utah (Map 3.7.4), however their distribution and recognition throughout the entire endemic area is poorly known (Van Gosen and Clinkenbeard 2011).~~*USGS 2000).*~~ Portions of the Planning Area are known endemic areas for valley fever; in 1993 the Center for Disease Control and Prevention (CDC) declared valley fever an epidemic in portions of California (Kern County). *C. immitis* grows as mold in the upper 5-20 cm of the soil in endemic areas and upon maturity can be released into the air as spores during surface disturbing actions; including wind episodes (see *Public Health and Safety* Section). Some key factors that influence the growth of *C. immitis* include temperature, the amount and timing of rainfall and available moisture (humidity), soil texture, alkalinity, salinity, and the degree of exposure to sunlight and ultraviolet light. The risk of infection as a result of inhalation can be reduced by implementing dust control measures.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Bakersfield Field Office
County Boundary
Susceptibility to Erosion
High: K factor > .4
Moderate: K factor .24 - .4
Low: K factor .02 - .24
Soils Susceptible to Erosion
Proposed RMP / Final EIS
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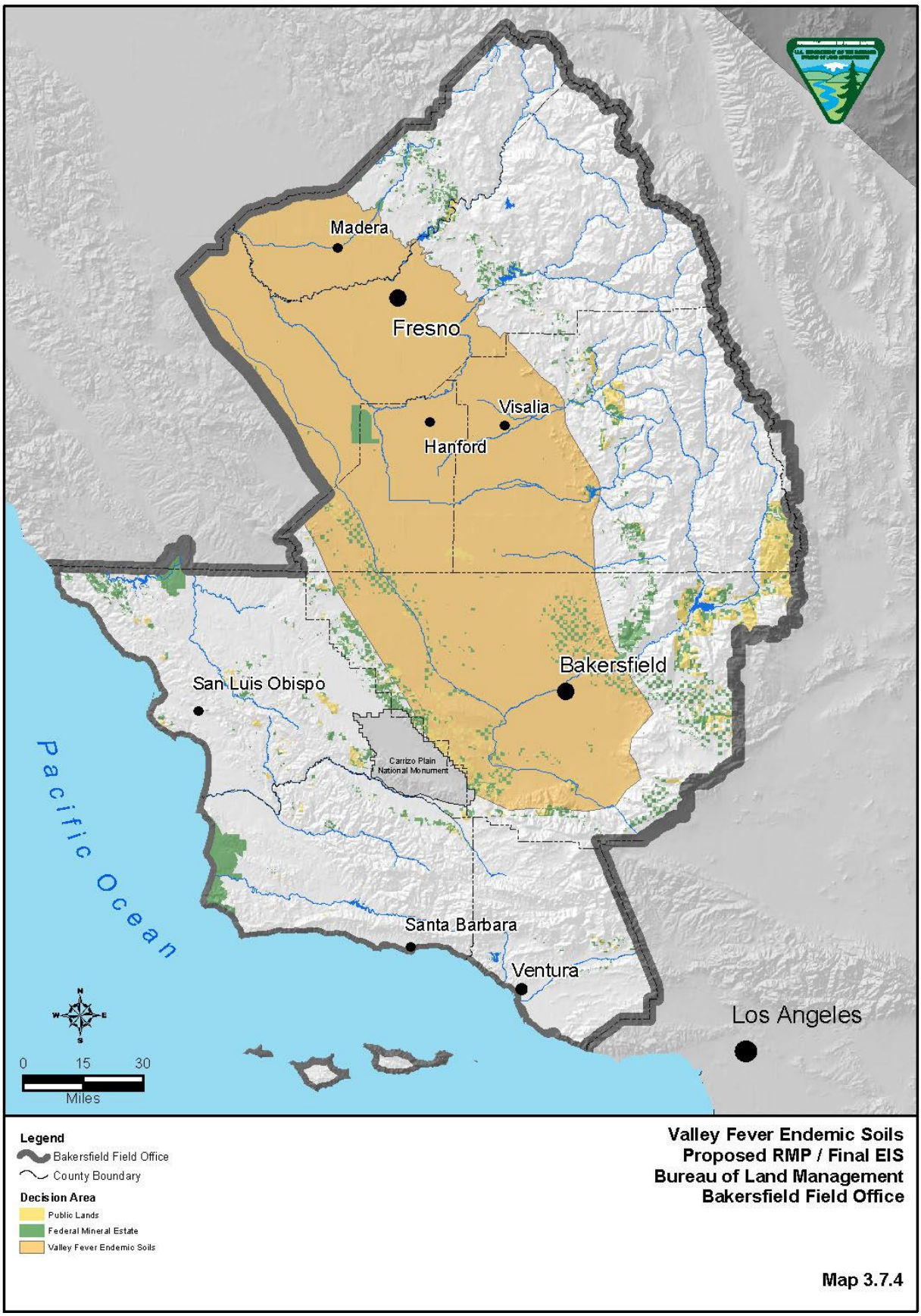
Bakersfield Field Office
Map 3.7.3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County Boundary
Decision Area
Public Lands
Federal Mineral Estate
Valley Fever Endemic Soils
Valley Fever Endemic Soils
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Bakersfield Field Office
Map 3.7.4

3.8 Visual Resources

Visual resources refer to the visible features and objects, natural, man-made, moving and stationary, which comprise the character of the landscape observed from a given location. These resources contribute to the scenic or visual quality/visual appeal of the landscape. Visual impact is the creation of an intrusion or perceptible contrast that affects the scenic quality of a landscape. A visual impact can be perceived by an individual or group as either positive or negative, depending on a variety of factors or conditions, such as personal experience, time of day, and weather/seasonal conditions.

3.8.1 Visual Resource Management System

The BLM's Visual Resource Management (VRM) System provides a way to identify and evaluate scenic values to determine the appropriate levels of management (BLM 1984d). It provides a way to analyze potential visual impacts, apply visual design techniques to ensure that resource uses and management activities are in harmony with their surroundings, and to meet the assigned VRM Class objectives. VRM is a tool to identify and map essential landscape settings on both public lands surface and federal mineral estate to meet public and community preferences and recreational experiences.

The VRM system consists of an inventory stage (visual resource inventory) and an analysis stage (visual contrast rating). The inventory stage involves identifying the visual resources of an area and assigning them to inventory classes using the BLM's visual resource inventory (VRI) process. The process involves rating the visual appeal of a tract of land, measuring public concern for scenic quality, and determining whether the tract of land is visible from travel routes or observation points. The process is described in detail in BLM Handbook H-8410-1, Visual Resource Inventory (BLM 1986a).

The area's visual resources are then assigned to management classes with established objectives (Table 3.8-1) in the RMP in conformance with other land use allocations made in the plan (Washington Office Information Bulletin Number 98-135, 1998). VRM classes may differ from VRI classes, based on management priorities for land uses. These area-specific objectives provide the standards for planning, designing, and evaluating future management projects.

The VRM Class assigned to an area provides the standard by which to measure proposed resource uses and management activities and determine if visual impacts would meet the management objectives, or if design adjustments (Best Management Practices for VRM) would be required. A visual contrast rating process is used for this analysis, which involves comparing the project features with the major features in the existing landscape using the basic design elements of form, line, color, and texture. This process is described in BLM Handbook H-8431-1, Visual Resource Contrast Rating (BLM 1986b).

Table 3.8-1
BLM Visual Resource Management Class Descriptions

VRM Class	Class Objective
I	Preserve landscape character. This class provides for natural ecological changes but does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.

II	Retain existing landscape character. The level of change to the characteristic landscape should be low. Management activities may be seen but should not attract a casual observer's attention. Any changes must repeat the basic elements of line, form, color, and texture found in the predominant natural features of the characteristic landscape.
III	Partially retain existing landscape character. The level of change to the characteristic landscape should be moderate. Management activities may attract attention, but should not dominate a casual observer's view. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.
IV	Provide for management activities that require major modification of the landscape character. The level of change to the characteristic landscape can be high. Management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repetition of the basic landscape elements.
Rehabilitation Areas	Areas in need of rehabilitation should be flagged during the inventory process. The level of rehabilitation is determined through the RMP process by assigning the VRM approved for that particular area.

Source: BLM 1986b

3.8.2 Current Conditions and General Visual Setting

The decision area includes parts of the Central Coast, parts of the San Joaquin Valley (the southern portion of the Central Valley), and western portions of the southern Sierra Nevada. These areas are in the Central Coast, the San Joaquin Valley, and Sierra bioregions.

Central Coast Bioregion

The Central Coast bioregion extends some 300 miles from just north of Santa Cruz to just south of Santa Barbara and inland to the floor of the San Joaquin Valley (California Natural Resources Agency 2009a.). The region includes many state parks and other recreational attractions. The geography offers coastal mountain ranges, including the Santa Lucia and Santa Ynez, and coastal sand dunes. Vegetation includes chaparral, mixed hardwood forests, and oak woodlands. The Los Padres National Forest covers much of the southern portion of the bioregion, and the Salinas and Cuyama Rivers feed the bioregion's two major watersheds. The Central Coast bioregion features coastal scenery, farmland, and vineyards and a climate that is mild, seasonally moist, and sometimes foggy.

San Joaquin Valley Bioregion

The San Joaquin Valley bioregion is a broad flat valley ringed by the Diablo and Coast Ranges on the west and the Sierra Nevada foothills on the east (California Natural Resources Agency 2009b). At its northern end, the San Joaquin Valley bioregion borders the southern end of the Sacramento Valley bioregion. Its eastern boundary joins the southern two-thirds of the Sierra bioregion.

The San Joaquin Valley bioregion is hot and dry in summer, with long sunny days (California Natural Resources Agency 2009b). Winters are moist and often blanketed with heavy fog. Habitat includes vernal pools, valley sink scrub and saltbush, freshwater marsh, grasslands, arid plains, orchards, and oak savannahs. Much of the historic native grassland, woodland, and wetland in the Central Valley have been converted to farmland. The major river is the San Joaquin, with tributaries of the lower Stanislaus,

Tuolumne, Merced, and Fresno Rivers. The southern portion of the bioregion includes the Kings, Kaweah, and Kern Rivers, which drain into closed interior basins. No significant rivers or creeks drain into the valley from the Coast Range.

Historically, millions of acres of wetlands flourished in the bioregion, but stream diversions for irrigation dried up all but about five percent (California Natural Resources Agency 2009b). Remnants of this vanishing habitat are protected in the San Joaquin Valley bioregion in publicly owned parks, reserves, and wildlife areas.

Sierra Bioregion

The Sierra bioregion is a vast and rugged mountainous area, extending approximately 380 miles along California's eastern side, and is largely contiguous with Nevada (California Natural Resources Agency 2009c). The bioregion extends from the northern edge of the Plumas National Forest south to Tejon Pass in the Tehachapi Mountains, about 30 miles southeast of Bakersfield. The northern half of the Sierra bioregion is bordered by the Nevada state line to the east and the Sacramento Valley floor to the west. The southern half of the Sierra bioregion extends westward from the Nevada state line and the western edge of the BLM's California Desert Conservation Area to the San Joaquin Valley floor.

Named for the Sierra Nevada range it encompasses, the Sierra bioregion includes forests, lakes, and rivers that generate much of the state's water supply (California Natural Resources Agency 2009c). It features eight national forests, three national parks, numerous state parks, historical sites, wilderness, special recreation and national scenic areas, and mountain peaks.

The climate varies with the elevation, offering cold snowy winters and cool summers at higher elevations and rainy winters and mild summers in the foothills (California Natural Resources Agency 2009c). Summers are dry. Mild dry mountain summers accommodate outdoor sports and activities, but when high pressure areas push temperatures upward and gusty winds blow, the Sierra bioregion is vulnerable to wildfires that consume thousands of acres of brush and timber every year.

The Sierra bioregion is rich in biodiversity, containing over half the plant species found in California and more than 400 of the state's terrestrial wildlife species (California Natural Resources Agency 2009c). The variety of habitat types include annual grassland, blue oak savannah, chaparral, ponderosa pine, black oak woodland, mixed conifer, red fir, riparian, alpine meadow, Jeffrey pine, sagebrush, and bitter brush. Animals that inhabit the Sierra bioregion include lodgepole chipmunk, mountain beaver, California mountain king snake, black bear, wolverine, California bighorn sheep, Pacific fisher, mule deer, and mountain lion. The California golden trout (the state fish) is native to the southern Sierra. Birds include the northern goshawk, mountain chickadee, pine grosbeak, California spotted owl, mountain quail, willow flycatcher, bald eagle, and great gray owl.

The Sierra bioregion is one of California's most popular year-round vacation attractions (California Natural Resources Agency 2009c). High tech has emerged as a significant growing industry in the Sierra, joining such established industries as hydropower, tourism, and recreation. Other industries include logging and cattle ranching.

3.8.3 Visual Resource Inventory Classes

In support of RMP preparation, the BLM prepared a visual resource inventory (BLM 2011a), which covers the Decision Area *as shown on* Map 3.8.1.

Table 3.8-2
Visual Resource Inventory Classes in the Decision Area

VRI Class	Surface Acres	Subsurface Acres	Percent of Decision Area
I	131,460	16,740	13%
II	42,160	49,903	8%
III	33,930	21,146	5%
IV	196,740	653,561	73%
N/A*	0	21,474	2%

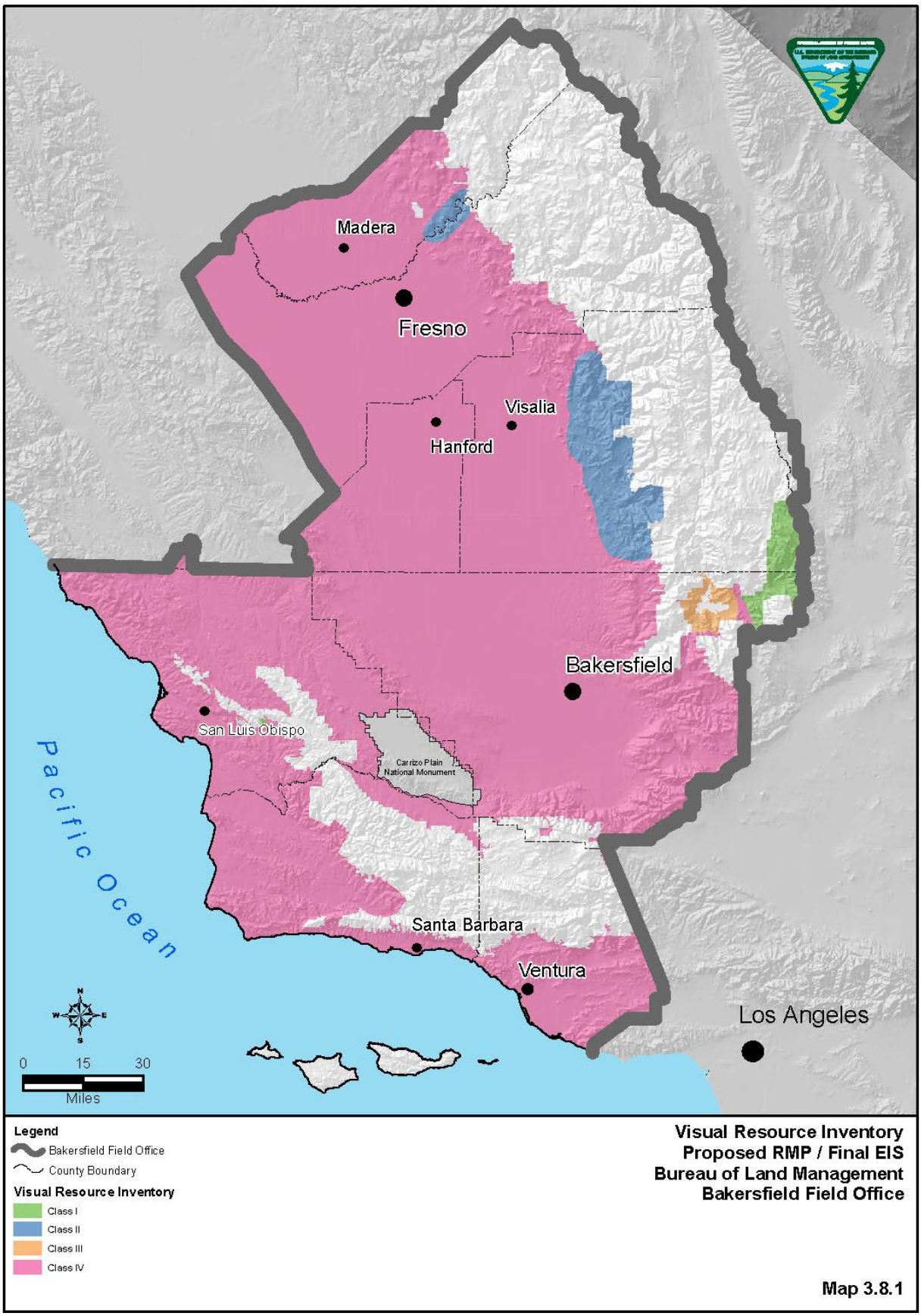
Source: BLM 2009b

* No VRI Class is given to Federal Mineral Estate Under USFS or National Park – In these cases visual resources are managed by the applicable entity.

3.8.4 Characterization

The Decision Area is highly fragmented, with a landscape experiencing a high degree of human modification due to urban development its associated infrastructure and uses, and energy development. In addition, tourism plays a major role in the economy of the area, and much of the Planning Area is viewed en route to or from major tourist destination areas, such as national parks. As the state's population grows, more visitors will be attracted to public lands for recreation in natural landscapes.

With increases in both resident populations and in tourism, scenic values and visual open space have become more important. Management direction aimed at preserving sensitive viewsheds will continue to compete with other land use allocation decisions and management activities for urban development infrastructure needs, energy development, recreation uses, and other surface-use activities.


Madera
Fresno
Visalia
Hanford
Bakersfield
San Luis Obispo
Carrizo Plain National Monument
Pacific Ocean
Santa Barbara
Ventura
Los Angeles
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
Visual Resource Inventory
Class I
Class II
Class III
Class IV
Visual Resource Inventory
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.8.1

3.9 Water Resources

Water resources include both surface water (rivers, lakes, *streams*, springs, *wetlands, and vernal pools*) and ground water (aquifers); the management of which addresses both availability and quality. This resource cannot be managed in isolation; the BLM cooperates on a landscape (watershed) level with other *land managers and agencies*, including the *U.S. Environmental Protection Agency (EPA), Army Corps of Engineers (ACOE), the State Water Resources Control Board (SWRCB)*, and *pertinent* Regional Water Quality Control Boards (RWRQCB).

Numerous factors can affect water quality within the Planning Area, including land management practices, road construction and maintenance, water consumption, pollution, and waste disposal practices. Nonpoint source pollution is the leading cause of water quality impairment in California. BLM programs and activities that are subject to state *and/or federal* review include oil and gas leasing, mineral exploration and development, livestock grazing management, recreation and travel management, riparian and wetland management, and chemical (herbicide, pesticide) use. The following federal water quality laws and regulations are pertinent in the Planning Area:

- The Clean Water Act and amendments (CWA)
- The Safe Drinking Water Act and amendments (SDWA)
- The Resource Conservation and Recovery Act (RCRA)
- Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund)

The EPA has granted primacy to the State of California to implement portions of the CWA and the SDWA. *BLM authorized activities that potentially result in the discharge of pollutants are generally regulated by three sections of the CWA: § 401, 402, and 404.*

The US EPA and ACOE recently issued new draft guidance for determining whether a waterway, water body, or wetland is protected by the CWA. The guidance clarifies protection and defines "waters of the United States" to include traditional navigable waters, interstate waters, tributaries, adjacent wetlands, and territorial seas (http://water.epa.gov/lawsregs/guidance/wetlands/upload/wous_guidance_4-2011.pdf). The final guidance submitted for interagency review reaffirms protection for wetlands that filter pollution and protect communities from flooding, and focuses on protecting smaller waters, including intermittent streams. If determined to be a jurisdictional water, a 404 permit will be required by the ACOE unless the activity is identified as exempt.

California state laws and regulations that are pertinent to water quality in the Planning Area include:

- The Porter-Cologne Water Quality Control Act
- The California Water Code
- The California Fish and Game Code
- The California Health and Safety Code

The Porter-Cologne Water Quality Control Act governs water quality in California; this law assigns responsibility for water rights and water quality protection to the State Water Resources Control Board (SWRCB), which directs nine Regional Water Quality Control Boards (RWQCBs) to develop and enforce water quality standards within each region. Regulatory agencies that have jurisdiction and oversight of BLM activities within the Planning Area include the U.S. EPA, *the ACOE*, the SWRCB, and four California

RWQCBs including the Central Coast Region (3), Los Angeles Region (4),Central Valley Region (5), and portions of the South Lahontan Region (6).

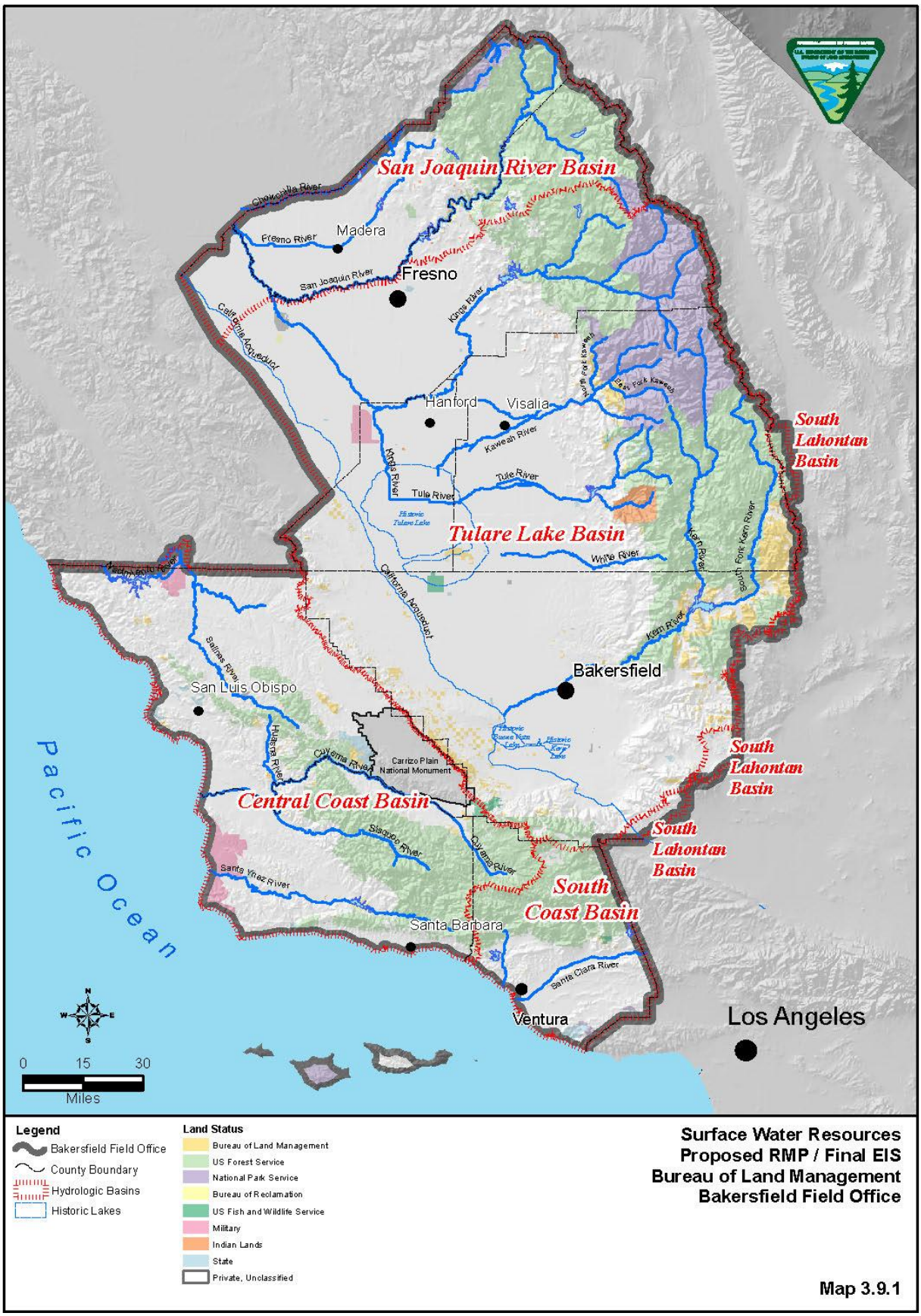
The Water Boards control and protect water resources by designating uses and by establishing water quality objectives. Water resource protection is achieved through the issuance of water rights, permits, and other authorizations by the Water Boards allowing for the extraction, diversion, consumption, and discharge, to and from both surface and ground water. Pollution control is managed statewide and regionally through a series of SWRCB and RWQCB plans and policies; nonpoint source pollution is managed through the implementation of ~~*BMPs (Management Measures, see Appendix L) to*~~ *measures that* reduce, prevent, or eliminate pollutant entry into waters~~*, whereas Water Quality Standards are used to restrict point sources of pollution*~~. *California's Management Measures for polluted runoff constitute the state's BMPs for controlling nonpoint source pollution.*

The BLM and the SWRCB currently cooperate through the 1993 MOU for Planning and Coordination of Nonpoint Source Water Quality Policies and Activities; this agreement clarifies each agency's responsibilities related to nonpoint source water quality issues and activities. The aforementioned RWQCBs have primary responsibility for permitting, inspecting, and enforcing actions regarding dischargers of waste in the Planning Area. The BLM has authority to incorporate and is responsible for implementing BMPs, Management Measures, and Non-Point Source measures to protect, maintain, or improve water quality (surface and ground) through this agreement. Examples of such measures are included in Appendix L.5. Furthermore, a Water Quality Management Plan that supports the State's Nonpoint Source Management Program is currently under development by the BLM California State Office and is forthcoming for use and implementation by BLM Field Offices.

The BLM is required to comply with the above laws and regulations, including compliance with State water rights reporting requirements for licenses and statements of diversion, in order to ensure that water is available for designated beneficial uses on public lands. Designated or beneficial uses in the Planning Area include wildlife habitat, agriculture, water contact recreation, and noncontact recreation. Currently, BLM manages water quality (surface and groundwater) to meet State objectives through the implementation of BMPs (Appendix L) that *avoid impacts*, minimize surface disturbance to riparian and wetland areas, control nonpoint pollutant runoff from BLM projects and authorizations (e.g. sediment), and limit or restrict development around water sources. In addition, BLM manages livestock grazing to meet the Standards for Rangeland Health for water quality and riparian areas.

3.9.1 Surface Water

The Planning Area is divided into the following Hydrologic Regions: Central Coast *Basin*, South Coast *Basin*, San Joaquin River *Basin*, Tulare Lake *Basin*, and portions of the South Lahontan *Basin*. These ~~*regions*~~ *basins* are defined by having a common occurrence, distribution, movement, drainage, and properties of water. The major drainages within the Planning Area include the Cuyama, Santa Clara, Kern, Kaweah, Kings, Tule, Fresno, Salinas, and San Joaquin Rivers *(Map 3.9.1)*.


San Joaquin River Basin
Tulare Lake Basin
South Lahontan Basin
South Lahontan Basin
South Lahontan Basin
Central Coast Basin
South Coast Basin
Madera
Fresno
Hanford
Visalia
Bakersfield
San Luis Obispo
Santa Barbara
Ventura
Los Angeles
Pacific Ocean
Chowchilla River
Fresno River
San Joaquin River
California Aqueduct
Kings River
North Fork Kaweah
East Fork Kaweah
Kaweah River
Tule River
Historic Tulare Lake
White River
Kern River
South Fork Kern River
Salinas River
Huasna River
Cuyama River
Carrizo Plain National Monument
Historic Buena Vista Lake
Historic Kern Lake
Santa Ynez River
Santa Clara River
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
Hydrologic Basins
Historic Lakes
Land Status
Bureau of Land Management
US Forest Service
National Park Service
Bureau of Reclamation
US Fish and Wildlife Service
Military
Indian Lands
State
Private, Unclassified
Surface Water Resources
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.9.1

Surface waters within the Planning Area are extensive; there are approximately 8,488 miles of perennial streams and 38, 890 miles of intermittent and ephemeral streams throughout the Planning Area.

The extent of surface waters in the Decision Area (public land surface) is, however, rather limited relative to that of the Planning Area:

- *Perennial waters - approximately 105 miles (1 percent of perennial waters within the Planning Area)*
- *Intermittent and ephemeral streams - approximately 2,128 miles (6 percent of those within the Planning Area)*

The most notable examples of perennial surface waters that cross public lands include: Chimney Creek (14 miles); the San Joaquin River (8 miles); the Cuyama River (8 miles); Spanish Needle Creek (5 miles); Salt Creek (4 miles); the lower Kern River (4 miles); the North Fork of the Kaweah River (3 miles); East Fork of the Kaweah River (2 miles); Erskine Creek (2 miles); Pine Creek (2 miles); Bodfish Creek (1 mile); and Caliente Creek (< 1 mile). There are approximately 84 springs known to occur on public lands in the Decision Area including Deer Spring and Frog Pond. In addition, there are approximately 27 acres of reconstructed wetlands at Atwell Island.

California has developed numeric and narrative standards for water quality, termed water quality objectives. Under Section 303(b) of the CWA, states are required to assess surface water bodies for various pollutants and their ability to support beneficial uses. Waters not meeting water quality objectives are identified as impaired under Section 303(d) of the CWA. Six rivers and streams are identified as impaired on the CWA 303(d) List (2010) that intersects public lands. Table 3.9-1 presents a list of Rivers and streams that intersect public lands and are identified as impaired on the 2010 CWA 303(d) List.

Table 3.9-1
Impaired Rivers and Streams

Water body Name	Pollutant	Source	Size Affected (miles)	Intersection with Public Lands (miles)	Listing Decision	Expected TMDL Completion Date
Fresno River (above Hensley Reservoir to confluence with Nelder Creek and Lewis Fork)	Low Dissolved Oxygen	Unknown	30	0.25	TMDL required	1/1/2021
Pole Creek (tributary to Santa Clara River Reach 3)	Sulfates, TDS	Nonpoint Source	9	0.25	TMDL required	1/1/2019
Las Tablas Creek, South Fork	Metals	Surface Mining	4.7	0.20	TMDL required	1/1/2021
Dairy Creek	Fecal Coliform	Confined Animal Feeding Operations	4.5	0.13	Being addressed by USEPA approved TMDL	US EPA TMDL approved 2004
	Low Dissolved Oxygen	Unknown	4.5	0.13	Being addressed by USEPA approved TMDL	US EPA TMDL approved 2004
Salinas River (upper, confluence of Nacimiento River to Santa Margarita Reservoir)	Chloride, Sodium	Agriculture; Pasture Grazing-Riparian and/or Upland; Urban Runoff/Storm Sewers	49	0.80	TMDL required	1/1/2021

Water body Name	***Pollutant***	***Source***	***Size Affected (miles)***	***Intersection with Public Lands (miles)***	***Listing Decision***	***Expected TMDL Completion Date***
Cuyama River (above Twitchell Reservoir)	*Boron, Chloride, Electrical, Conductivity, pH, Sodium*	*Agriculture; Grazing-Related Sources; Municipal Point Sources; Natural Sources; Resource Extraction*	*80*[34]	*8.0*	*TMDL required*	*1/1/2021*
	Fecal Coliform	*Agriculture; Grazing-Related Sources; Natural Sources;*	*80*[35]	*8.0*		

Data Source: http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml

[34] *Impaired length is below Highway 33 bridge (between Buckhorn Road and Highway 33)*

[35] *Impaired length is between Twitchell Reservoir and Highway 33 bridge*

Based on applicable water quality standards, the US EPA approved the listing, or continued listing, of these water bodies as water quality limited segments, requiring a TMDL for each pollutant. It is important to note the extent (mileage) of the intersection of impaired waters and public lands, compared to the affected size of the impaired segment. The extent of impaired waters in the Decision Area ranges from less than 1% to 10% of their affected size (miles).

BLM program and management actions do not contribute to the impairment of Dairy Creek, its impairment is attributed to confined animal feeding operations that are being addressed by an EPA established TMDL. TMDLs are expected to be completed in 2019 and 2021 for the listed segments that occur within the Planning Area.

Since the sources of pollutants for the Fresno River are unknown is it impossible to determine if BLM programs and management actions are contributing to its impairment. Likewise, pollutants impairing Pole Creek are identified as nonpoint source pollutant to which BLM programs and management action may or may not contribute.

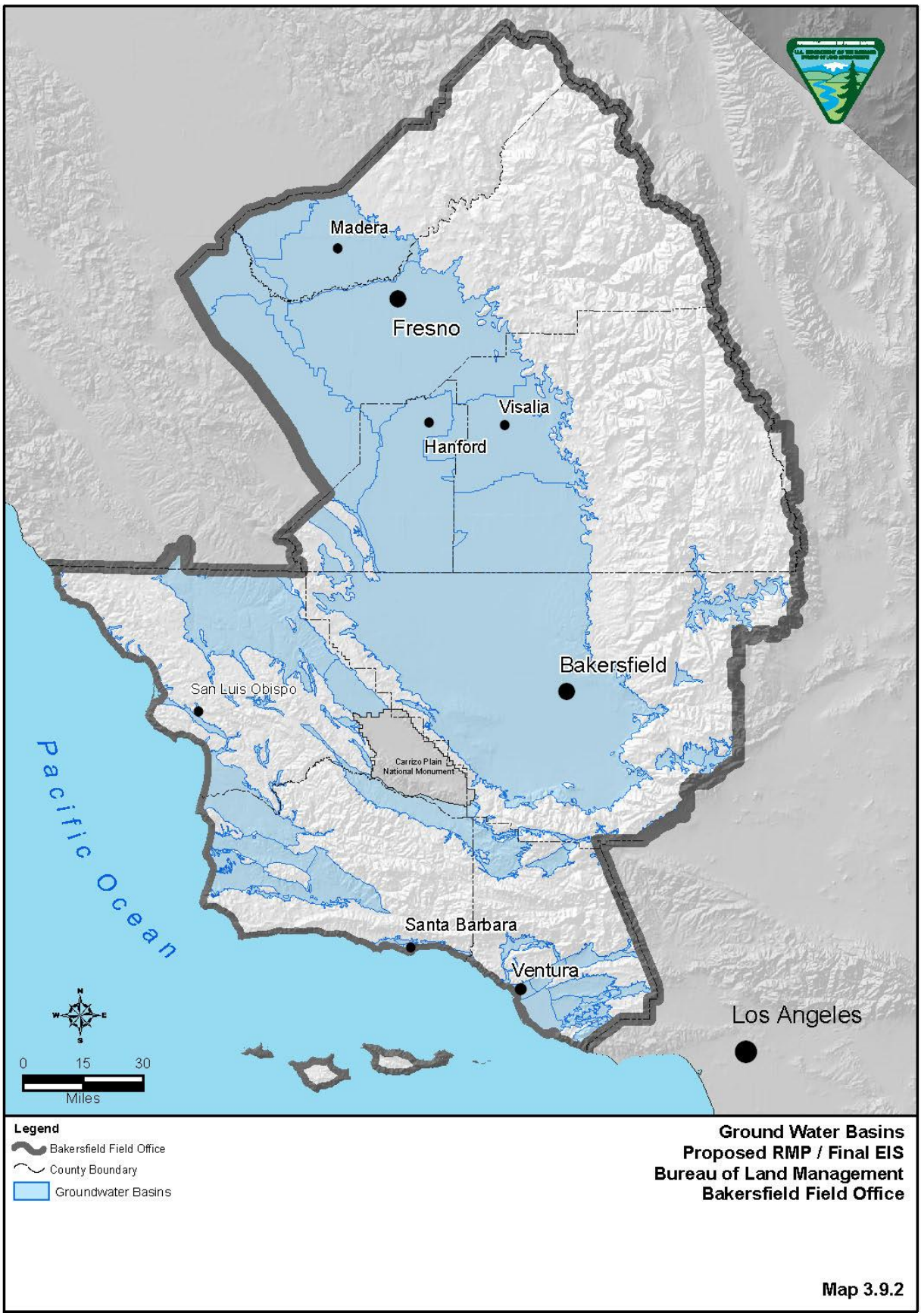
The BLM currently authorizes no surface mining activities within the Las Tablas Creek watershed, however historic surface mining could potentially continue to this rivers impairment. The BLM is currently working with the EPA to address hazardous materials associated with historic mining activity within this region.

The Salinas River (upper, confluence of Nacimiento River to Santa Margarita Reservoir) is listed as impaired by sodium and chloride. Pollution sources include, agriculture, pasture grazing in riparian and/or upland areas, and urban runoff and/or storm sewers. The discharges from the Santa Margarita Reservoir are upstream of public lands and outside the authority of the BLM. The Salinas River area is currently designated as unavailable for livestock grazing; therefore BLM management activities in the area do not contribute to its impairment.

The Cuyama River (above Twitchell Reservoir) is listed for a number of pollutants including boron, chloride, sodium, pH, electrical conductivity, and fecal coliform. Sources of this pollution include natural sources, agriculture, grazing related sources, municipal point sources, and resource extraction. BLM program and management activities potentially contribute to this impairment; however, through the implementation of the Central California Guidelines for Livestock Grazing Management, this contribution is minimized.

3.9.2 Groundwater

In California, groundwater has been delineated into 515 distinct systems (431 basins, 24 of these subdivided into 108 additional sub-basins); these underlie approximately 40 percent of the surface in the State. Approximately 70% of the Planning Area is underlain by distinct groundwater systems; Groundwater within the Planning Area occurs in the following hydrologic regions: Central Coast, South Coast, Tulare Lake, San Joaquin River, and portions of the South Lahontan. Based on groundwater basin maps, surfaces in the Planning Area that are not within groundwater basin boundaries are mainly located in the eastern portion of the San Joaquin Valley, in the Sierra Nevada Range, and the San Emigdio Range (Map 3.9.2).


Madera
Fresno
Visalia
Hanford
Bakersfield
San Luis Obispo
Carrizo Plain National Monument
Pacific Ocean
Santa Barbara
Ventura
Los Angeles
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
Groundwater Basins
Ground Water Basins
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.9.2

A large amount of groundwater resource data is collected each water year (October 1-September 30) by the US Geological Survey, in cooperation with Federal, State, and local agencies. Groundwater data includes wells (by County), springs, and available water-level or water-quality data, which are summarized annually. Current and historical data may be accessed through the USGS National Water Information Website (NWIS Website) at http://waterdata.usgs.gov. For counties within the Planning Area, there are approximately 402 wells for which there are water-level data and 135 wells for which there are water-quality data. The BLM cooperates with federal, state, and local agencies to identify monitoring needs.

Ground-water conditions are difficult to summarize because the geography and geology of California is so complex (Ray and Orlando, 2011). Groundwater levels (i.e., the depth of the water table) fluctuate as a result of natural environmental conditions and rates of extraction. *Throughout the Planning Area groundwater has historically been important for urban and agricultural uses (~~DWR~~ California Department of Water Resources 2003). The conjunctive use of groundwater and surface water has been a long standing practice in the San Joaquin River, Central Coast, and South Coast hydrologic regions. In the Central and South Coast regions, several reservoirs are operated primarily for purposes of surface water storage and groundwater recharge, while extensive recharge programs are employed by some cities and water districts in the southern portion of the San Joaquin Valley, where several million acre-feet have been banked for future use and transfer*. ~~*As a result of*~~ Extensive urban ~~*development and expansion of*~~ and agricultural groundwater uses ~~*over the last century*~~ *throughout the planning area have historically caused subsidence of the land primarily along the west side and south end of the San Joaquin Valley*.

Ongoing USGS groundwater studies within the Planning Area include the Kirschenmann Road Multi-Well Monitoring Site, Cuyama Valley, Santa Barbara County, California and the Evaluation of Groundwater Conditions and Subsidence in the San Joaquin Valley, California. Groundwater levels have declined in response to an increase in pumping; therefore, diminishing the abundance and *potentially* reducing groundwater availability. *In the San Joaquin Valley, the extensive withdrawal of groundwater has caused the loss of aquifer-system storage and resulted in widespread land subsidence (http://ca.water.usgs.gov/projects/2011-12.html). Groundwater resources are anticipated to continue to be overdrafted to compensate for insufficient surface-water deliveries.*

Groundwater quality is another major concern. *In general, groundwater quality throughout the Planning Area is suitable for most urban and agricultural uses, with local impairments. However, sea water intrusion poses a major problem in the Central and South Coast regions. In the Tulare Lake basin,* water quality has been deteriorating because of constant recycling and evaporation of irrigation water in the basin. The effects of high salt and trace element concentrations naturally occurring in the soils have been exacerbated by *poor drainage and* agricultural irrigation practices, which have dissolved these substances and accelerated their movement into shallow groundwater (Gilliom et al., 1989). *The primary constituents of concern within the Planning Area include TDS, nitrate, boron, chloride, calcium sulfate, arsenic, and organic compounds from industrial and agricultural activities (DWR, 2003).*

EPA has delegated primacy and permit authority to the State of California for groundwater protection; *Groundwater* programs in place statewide include the National Pollution Discharge Elimination System (NPDES) and the Underground Injection Control (UIC) program; *in addition, the State has federal authority to regulate the hydraulic fracturing process. The SDWA authorizes the UIC program, which focuses on the protection of underground drinking water sources by regulating the subsurface emplacement of fluid. The CWA authorizes the NPDES permit program, which regulates disposal of*

flowback (injected fluids that are produced back) into surface waters of the United States. Although the BLM does not hold any NPDES permits in the Planning Area (or the State),such permits may be held by federal oil and gas operators on existing *and/or future* federal oil and gas leases.

The BLM recognizes the importance of groundwater (aquifer) protection during fluid mineral exploration, development, and production and requires that federal oil and gas operators comply with federal and State program and permit requirements to protect groundwater. *Oil and gas operations on federal lands are governed by the Oil and Gas Operations Regulations (43 CFR 3160); Onshore Oil and Gas Orders implement and supplement these regulations. Pursuant to Onshore Oil and Gas Order Number 1, Section IV., General Operating Requirements federal oil and gas operators are required to conduct operations to minimize impacts to subsurface resources. Drilling and abandonment activities must adhere to the provisions and standards of Onshore Oil and Gas Order Number 2; Onshore Oil and Gas Order Number 7 provides the methods and approvals necessary to dispose of produced water associated with oil and gas operations. Drilling plans must include information including, but not limited to, the names, estimated tops, depths, and thickness of formations or zones that contain potentially usable water, oil, gas, and other mineral deposits, and describe the Operator's plans for protecting such subsurface resources.*

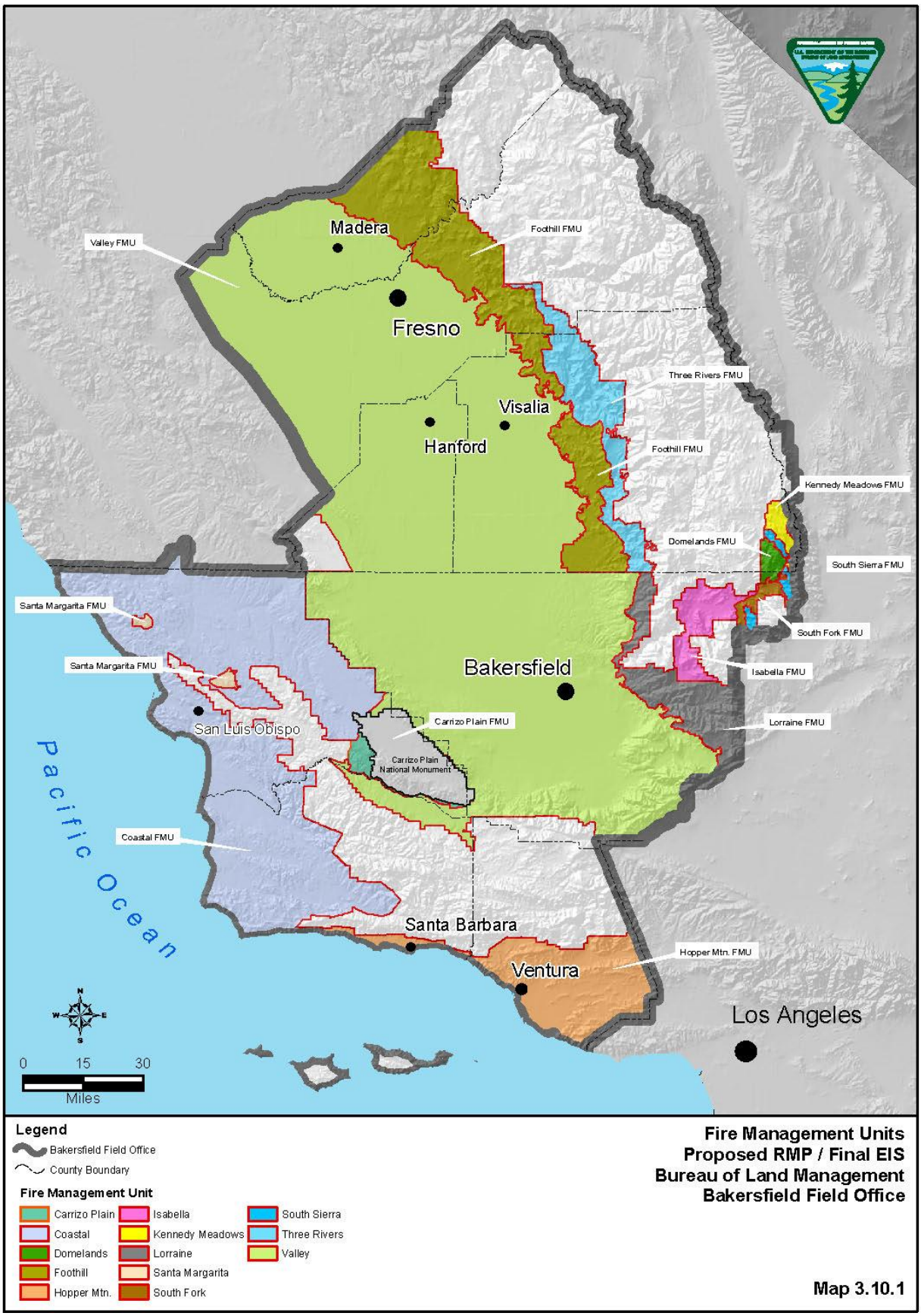
Although BLM does not have regulatory jurisdiction over groundwater, the agency follows *law, regulation, Onshore Oil and Gas Orders, and other* existing implementation guidelines, and includes Conditions of Approval (COA) for groundwater resource protection, *as applicable,* in its authorization *of applications for* permit to drill (APDs). *During the BLM's project level engineering review of an APD, a proposed well is evaluated to ensure that subsurface resources are protected. As described in Appendix L.7, COA specifically designed to protect groundwater include zone isolation, general casing depth and cement requirements, pressure testing, casing integrity testing, fluid surveys, and/or wellhead monitoring. Measures that specifically protect groundwater include those that pertain to secondary containment and chemical storage, consistent with the EPA's Spill Prevention, Control, and Countermeasure regulation (40 CFR 112). Additional BMPs that protect water resources (surface and ground) are listed in Appendix L.5.*

3.10 Wildland Fire Ecology and Management

Wildland fire management is one of the BLM's most important responsibilities. Whether using fire as a tool to achieve desired resource conditions, or managing vegetation to reduce the risk of fire to local communities, wildland fire management blends the sciences of fire behavior with the art of fire suppression to achieve desired objectives. Wildland fire ecology and management addresses the role of fire in the ecosystem, the use of naturally ignited fire for resource benefit, the use of intentionally set (or prescribed) fire as a management tool, and the suppression of unwanted fires.

3.10.1 Fire Management Planning

A single interagency policy for managing wildland fire on public lands was implemented in 1995 with the adoption of the Federal Wildland Fire Management Policy (FWFMP), as updated (USDI et al. 2001). The Secretaries of the USDI and USDA developed the FWFMP to respond to dramatic increases in the frequency, size, and catastrophic nature of wildland fires in the US. The FWFMP requires all federal agencies to develop fire management plans for all burnable acres within their jurisdictions.


Madera
Fresno
Visalia
Hanford
Bakersfield
San Luis Obispo
Santa Barbara
Ventura
Los Angeles
Pacific Ocean
Valley FMU
Foothill FMU
Three Rivers FMU
Foothill FMU
Kennedy Meadows FMU
Domelands FMU
South Sierra FMU
Santa Margarita FMU
South Fork FMU
Santa Margarita FMU
Isabella FMU
Carrizo Plain FMU
Lorraine FMU
Carrizo Plain National Monument
Coastal FMU
Hopper Mtn. FMU
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
Fire Management Unit
Carrizo Plain
Coastal
Domelands
Foothill
Hopper Mtn.
Isabella
Kennedy Meadows
Lorraine
Santa Margarita
South Fork
South Sierra
Three Rivers
Valley
Fire Management Units
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.10.1

Further guidance on consistent implementation of the fire policy was provided in February of 2009 with the release of the Guidance for Implementation of Federal Wildland Fire Management Policy (USDI et al. 2009). Under this new guidance there are two types of wildland fires: wildfires (unplanned ignitions) or prescribed fires (planned ignitions). A wildland fire can be concurrently managed for one or more objectives, and objectives can change as the fire spreads across the landscape.

The Bakersfield FO Fire Management Plan, (BLM 2004a) identifies resource values and conditions pertaining to fire management in the Decision Area and recommends strategies for wildland fire suppression, prescribed fire, and non-fire fuels treatment. Classification of lands in the fire management plan (FMP) is by fire management unit (FMU), which is any land management area definable by objectives, management constraints, topographic features, access, values to be protected, political boundaries, and other discernible features that set it apart from the management characteristics of an adjacent FMU. In this plan, portions of the Planning Area (excluding National Parks and Forests) were divided into thirteen FMUs (Map 3.10.1).

3.10.2 Fire History

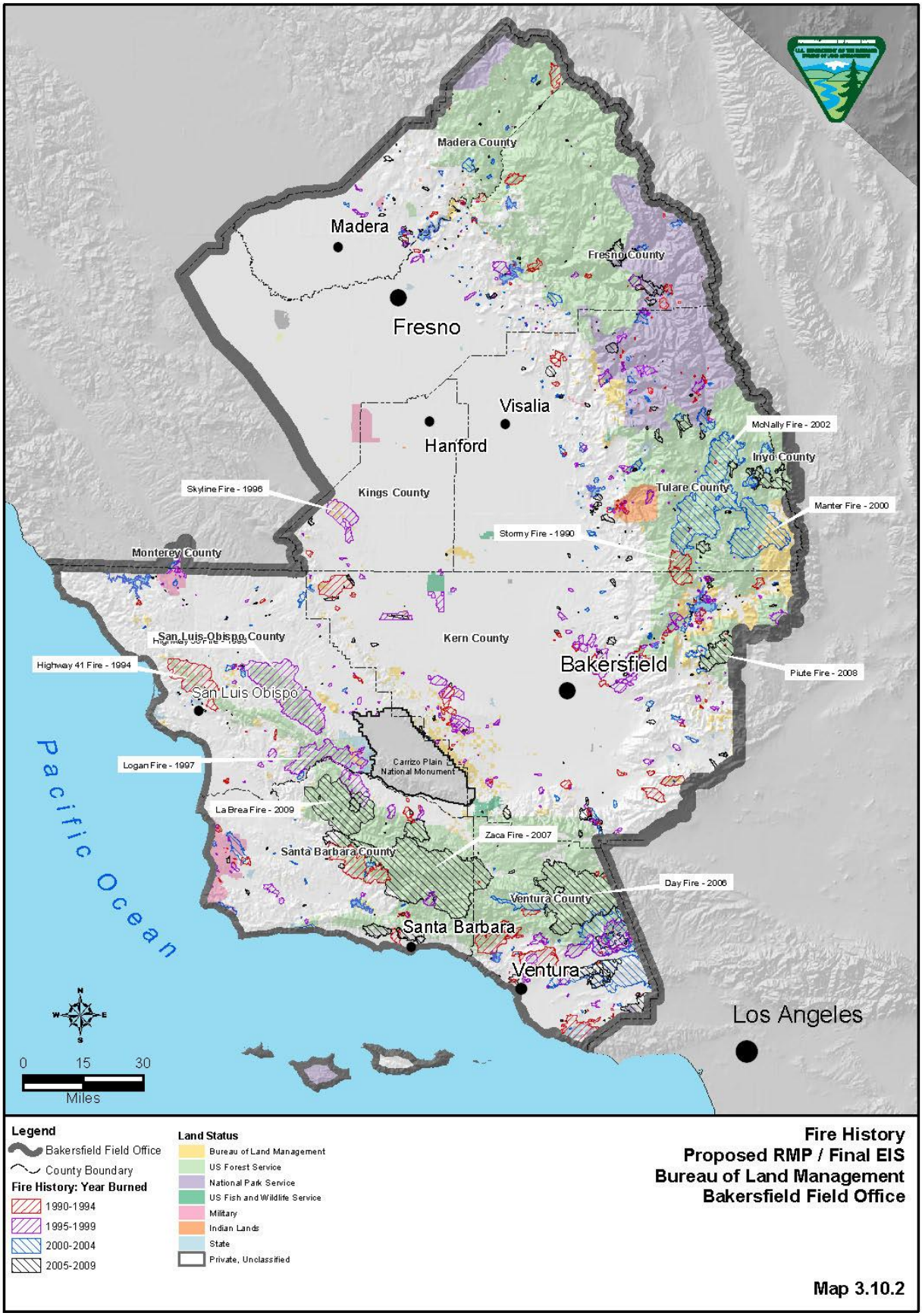
In terms of fire history in the overall Planning Area, the largest acreages burned have occurred on National Forest System lands (Map 3.10.2). Therefore the principally affected public lands are those adjacent to National Forests. Over the last decade (1997-2008) approximately 1.2 million acres have burned within the Planning Area. The majority of these acres burned throughout the Coast Range, largely attributed to large fires burning on National Forest Land. The majority of fire affecting public lands has occurred in the southern Sierra Nevada with approximately 30,000 acres of public land burned principally attributed to one fire (Manter Fire in 2000). The large scale and frequency of fires in these regions demonstrates the active fire regimes and shows the continued potential for large fires in these areas on a relatively short return interval.

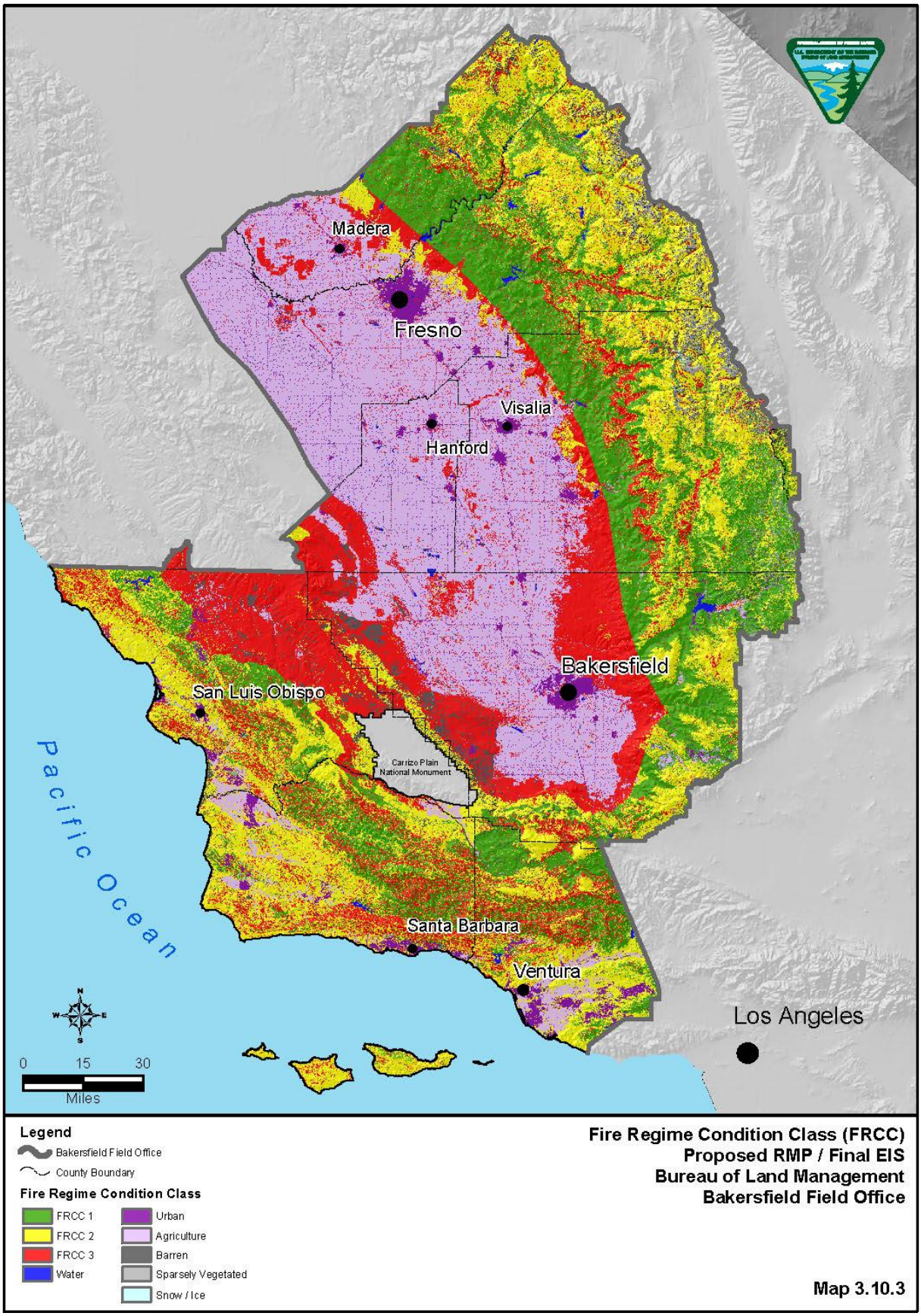
Over the last decade the southern San Joaquin Valley has had the fewest fires with approximately 64,000 acres burned; this, however, affected only approximately 2,000 acres of public land.

From 2000 to 2009, of the fires where a cause was recorded, a majority of fires were human-caused (72%), while lightning accounted for 28%. This includes all wildland fire ignitions and not just those that resulted in wildland fires greater than 10 acres.

3.10.3 Fire Ecology

Fire is a natural part of the ecosystem and important in maintaining vegetative communities and wildlife habitats. It is the return interval and severity of the fire (termed a natural fire regime) that influences these communities and habitats; deviation from the natural fire regime can result in vegetative structure that can contribute to unnatural fire severity or cause changes in the vegetative composition. These natural fire regimes are categorized and lands classified based on the role fire would play across a landscape in absence of modern human intervention but including the influence of aboriginal burning (fires intentionally started by native people). Within the Decision Area 25 percent of public lands are not classified due to its sparsely vegetated or barren nature. Another 25 percent is classified as Fire Regime Group I (0- to 35-year fire return interval, low and mixed severity). Twenty percent is classified as Fire Regime Group IV (35- to 200-year fire return interval, replacement severity) with the remainder spread between the other three groups.


Madera County
Madera
Fresno County
Fresno
Visalia
Hanford
McNally Fire - 2002
Inyo County
Tulare County
Skyline Fire - 1996
Kings County
Manter Fire - 2000
Stormy Fire - 1990
Monterey County
San Luis Obispo County
Kern County
Bakersfield
Highway 41 Fire - 1994
Piute Fire - 2008
San Luis Obispo
Pacific Ocean
Logan Fire - 1997
Carrizo Plain National Monument
La Brea Fire - 2009
Zaca Fire - 2007
Santa Barbara County
Day Fire - 2006
Ventura County
Santa Barbara
Ventura
Los Angeles
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
Fire History: Year Burned
1990-1994
1995-1999
2000-2004
2005-2009
Land Status
Bureau of Land Management
US Forest Service
National Park Service
US Fish and Wildlife Service
Military
Indian Lands
State
Private, Unclassified
Fire History
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.10.2


Madera
Fresno
Visalia
Hanford
Bakersfield
San Luis Obispo
Carrizo Plain National Monument
Pacific Ocean
Santa Barbara
Ventura
Los Angeles
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
Fire Regime Condition Class
FRCC 1
FRCC 2
FRCC 3
Water
Urban
Agriculture
Barren
Sparsely Vegetated
Snow / Ice
Fire Regime Condition Class (FRCC)
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.10.3

A fire regime condition class is a classification of the amount of departure from the natural fire regime. The classification is based on a relative measure described in terms of vegetation characteristics (such as species composition and structural stages), fuel composition, fire frequency, severity and pattern, and other associated disturbance (such as insects, disease, drought, or grazing). Three condition classes are assigned, with a Condition Class 1 indicating a low degree of departure, and Condition Classes 2 and 3 representing moderate and high departure from the natural fire regime.

Within the southern Sierra Nevada, 60 percent of the public lands are in a Condition Class 1. Conversely the public lands within southern San Joaquin Valley show the greatest departure from the natural fire regime with 42 percent of the area in Condition Class 3 (Map 3.10.3). Refer to Appendix D for a summary of Condition Class by Fire Management Unit.

3.10.4 Fuels Management

The Bakersfield FO has an active fuels management program, supporting both prescribed fire and non-fire fuel treatments. Fuels treatment emphasis has been in the Wildland Urban Interface (WUI). Fuels treatments are used in part to return areas to lower, more natural, fire regime Condition Classes 1 or 2 and to create defensible space around facilities, developments, and communities.

Prescribed fire treatments are planned to break up continuous fuel beds and concentrations of dead or decadent fuels. Prescribed fire is also used within the Atwell Island Land Restoration Project as a site preparation method to remove vegetation before seeding with native vegetation. A limited amount of prescribed burning has been conducted within the Case Mountain giant sequoia grove to reduce fuels and to return fire to its natural role in this fire-adapted ecosystem.

Non-fire fuel treatments are conducted in several areas, especially next to the WUI and within high visitor use areas, such as recreation areas and administrative sites. Treatments include mowing, cutting, and chipping vegetation, cutting and piling vegetation for future burning, and mechanically breaking down vegetation on-site.

3.10.5 Wildland Fire Suppression

In California, the five federal fire management agencies and CAL FIRE have entered into an agreement known as the California Master Cooperative Wildland Fire Management and Stafford Act Response Agreement (known as the CFMA). This agreement provides the framework for the mutual cooperation of the fire management agencies to suppress fires on intermingled private and public land within the state. Through this agreement and with oversight from the California Wildfire Coordinating Group (CWCG), the state has been divided into direct protection areas (DPAs), delineated by boundaries regardless of statutory responsibility, where fire protection is assumed by administrative units of either federal or state agencies. Therefore, in some areas the BLM is responsible for protecting lands other than public land, and in other areas another federal or state agency is responsible for suppression on public lands. Regardless of the actual responsibility for a specific area, the closest available fire suppression resources will respond to a given fire under the mutual aid agreements also included in the CFMA.

Where another agency provides suppression protection for the BLM, the agency responsible strives to protect the land in the way the jurisdictional agency would protect it. The agencies have local operating plans and meet annually to discuss fire suppression tactics and special suppression considerations for all

lands. For special areas, such as ACECs, the BLM often prepares a Modified Suppression Plan that outlines areas of special concern and the suppression tactics to use in these areas.

3.10.6 Response to Wildland Fire

The Bakersfield FO and cooperators provide a response to all wildland fires that occur on public lands, with primary emphasis on firefighter and public safety. Due to high percentage of WUI in the field office, in most cases the management response is full suppression, using existing control features, such as roads or natural fuel breaks, whenever possible, while protecting sensitive resources. The circumstances under which a fire occur, the consequences on firefighter and public safety, and natural and cultural resources to be protected dictate the management response for each fire.

3.10.7 Emergency Stabilization and Rehabilitation

Emergency stabilizations are planned actions taken to stabilize and prevent degradation of natural and cultural resources and to minimize threats to life and property resulting from the effects of a fire. Actions must be taken within one year following containment of the fire.

Fire rehabilitation actions are undertaken within three years of fire containment to repair or improve fire-damaged land unlikely to recover naturally to management approved conditions or to repair or replace minor facilities damaged by fire.

All fires will be assessed for emergency stabilization and rehabilitation (ESR) needs, and appropriate plans will be prepared and submitted for funding where applicable. ESR treatments will be implemented in a timely manner and monitored for success. While the need for ESR treatments will be assessed on a case-by-case basis, standard ESR practices may include monitoring for noxious weeds, removing hazard trees, and closing grazing allotments for a minimum of two years.

3.10.8 Fire Mitigation, Education, and Prevention

The Bakersfield FO participates in a number of activities to educate, prevent, and mitigate fire risk including participation on fire safe councils, distribution of printed materials, California campfire permit program, and other public awareness programs and events.

Resource Uses

3.11 Comprehensive Trail and Travel Management

Two of the BLM's greatest management challenges are providing reasonable and varied routes for access to public lands and providing areas for a variety of motorized and non-motorized recreation. The various landscapes, user interests, equipment options, weather conditions, transportation infrastructure, and resource constraints all must be considered. Travel and transportation are an integral part of virtually every activity that occurs on public lands, including recreation, livestock and wildlife management, commodity resources management, ROWs to private inholdings, and public land management and monitoring. Comprehensive Travel and Transportation Management (CTTM) is the planning, management, and administration of motorized and non-motorized roads, primitive roads, and trails to ensure that public access, natural resources, and regulatory needs are considered.

Comprehensive travel management planning should address all resource use aspects, such as recreational, traditional, casual, agricultural, commercial, and educational, and accompanying modes and conditions of travel on public lands, not just motorized or off-highway vehicle (OHV) activities. Traditionally, the BLM's travel management program focused primarily on motor vehicle use. Within the framework of CTTM, this program is significantly expanded to encompass all forms of travel, including travel by foot, horseback and other livestock, mechanized vehicles (such as bicycles), motorized vehicles (such as two-wheeled motorcycles and four-wheeled OHVs, cars, and trucks), and motorized and non-motorized boats.

There is considerable overlap of travel management and all BLM uses on public lands. For example, many users of public lands are there for recreation. For visitors, a route system may serve as either a route to a destination or as the recreation location itself. For destination recreation, vehicle routes are the means to get to a starting point to engage in the activity, such as a parking area or trailhead. The route itself also can serve as the focus of the activity, (e.g., pleasure driving, four-wheel vehicle driving, motorcycling, all-terrain vehicle (ATV; see definition below) riding, biking, horseback riding, hiking, snowmobiling, and cross-country skiing). To reduce the duplication of narrative between travel management and the other sections of this RMP, this section addresses only public travel and access concerns; discussion of how other resource programs use the BLM's transportation system are found in those programs' respective sections.

For the purposed of land use planning CTTM can be considered as two basic components, the designation of OHV Area allocations and the designation of individual routes. OHV Area designations represent the land use planning level decisions and can only be modified though a land use plan amendment or revision. The route designations are considered implementation level actions and occur in unison with many site-specific actions and projects. Route designations are presented in this RMP to establish a baseline upon which subsequent site specific activities can work from. The travel network resulting from the route designations should be viewed as dynamic with changes and modifications occurring with new authorizations throughout the life of the plan.

3.11.1 Linear Travel Features

In 2006, the BLM issued Instruction Memorandum No. 2006-173, which established policy for the use of terms and definitions associated with the management of transportation-related linear features. It also set a data standard and a method for storing electronic transportation asset data. According to the memorandum, all transportation assets are defined as follows:

> **Road:** A linear route declared a road by the owner, managed for use by low-clearance vehicles having four or more wheels, and maintained for regular and continuous use.
>
> **Primitive roads:** A linear route managed for use by four-wheel drive or high-clearance vehicles. Primitive roads do not normally meet any BLM road design standards.
>
> **Trails:** A linear route managed for human-powered, stock, or off-highway vehicle forms of transportation or for historical or heritage values. Trails are not generally managed for use by four-wheel drive or high-clearance vehicles.

3.11.2 Modes of Travel

Mode of travel refers to the mechanisms used to move across the land. It is broadly defined in three categories, those that use motors, those using some mechanical method and those reliant only the movements of the human (or animal) bodies. Examples are provided below.

Non-mechanized Travel—Non-mechanized modes of travel include cross-country skiing, snowshoeing, horseback riding, pack animal driving, hiking, boating, hang-gliding, paragliding, and ballooning.

Mechanized Travel—Mechanized vehicles include, primarily, mountain bikes and specialized equipment such as mountain skateboards.

Motorized Travel—Motorized travel includes standard passenger vehicles on maintained roads and OHVs on primitive roads and trails. OHVs include off-road motorcycles, ATVs, jeeps, specialized 4x4 trucks, and snowmobiles.

3.11.3 Off-Highway Vehicle Management Areas

OHVs are synonymous with off-road vehicles. As defined in 43 CFR, 8340.0-5 (a): Off-road vehicle means any motorized/battery-powered vehicle capable of, or designed for, travel on or immediately over land, water, or other natural terrain, excluding: 1) Any non-amphibious registered motorboat; 2) Any military, fire, emergency, or law enforcement vehicle while being used for emergency purposes; 3) Any vehicle whose use is expressly authorized by the authorized officer, or otherwise officially approved; 4) Vehicles in official use; and 5) Any combat or combat support vehicle when used in times of national defense emergencies. OHVs generally include dirt motorcycles, dune buggies, sand rails, jeeps, 4-wheel drive vehicles, snowmobiles, and ATVs.

A four-wheel drive vehicle (also called 4x4 or 4WD) is a passenger vehicle or light truck having power available to all wheels. An ATV is a wheeled vehicle other than a snowmobile, which is defined as having a wheelbase and chassis of fifty inches in width or less, steered with handlebars, generally having a dry weight of 800 pounds or less, three or more low-pressure tires, and a seat designed to be straddled by the operator. A motorcycle is defined as a motorized vehicle with two tires and with a seat designed to be straddled by the operator. Many of these routes are designed more for the off-highway type of motorcycles.

In accordance with 43 CFR 8342.1, the BLM's regulations for OHV management, "the authorized officer shall designate all public lands as open, limited, or closed to [OHVs]." As such, all public lands within the Planning Area have been designated in one of three OHV designation categories, as follows:

Open Area Designations are used for intensive OHV or other transportation use areas where there are no special restrictions or where there are no compelling resource protection needs, user conflicts, or public safety issues to warrant limiting cross-country travel.

Limited Area Designations are used where travel must be restricted to meet specific resource/resource use objectives. For areas classified as limited, the BLM must consider a range of possibilities, including travel that will be limited to the following:

- Types or modes of travel, such as foot, equestrian, bicycle, and motorized;

- Existing roads and trails;
- Time or season of use; limited to certain types of vehicles (OHVs, motorcycles, all-terrain vehicles, high clearance, etc.); limited to licensed or permitted vehicles or users;
- BLM administrative use only; or
- Other types of limitations.

The BLM must also provide specific guidance for those categories of motorized vehicle uses that are exempt from a limited area designation, such as authorized, permitted, or otherwise approved vehicles (43 CFR 8340.0-5 [a] [1] through [5]).

Closed Area Designations prohibit vehicular travel, both motorized and mechanized, transportation cross-country and on routes, except for where valid rights continue to allow access, such as within a designated wilderness area. Areas are designated closed if closure to all vehicular use is necessary to protect resources, promote visitor safety, or reduce use conflicts.

3.11.4 Overview of Travel System

All public lands within the RMP decision area are currently designated as either Closed to OHVs closed (139,448 acres) or OHV Limited (264,562 acres) areas; there are no OHV Open area designations in the RMP decision area.

3.11.4.1 Closed Area Designations

The areas that are specifically closed to all vehicles are Pt. Sal ACEC, Blue Ridge ACEC, designated Wilderness and WSAs, as stated in Table 3.11-1.

Table 3.11-1
OHV Travel Closures in the Decision Area

Location	Area Closed
Blue Ridge ACEC	3,195 acres
Pt. Sal ACEC	77 acres
Designated Wilderness	120,799 acres
WSAs	21,000 acres

Source: BLM 1983, 1997a

The Pt. Sal and Blue Ridge ACECs are closed to minimize damage to sensitive cultural and natural resources. Designated wilderness areas are administratively and statutorily closed to motorized travel (BLM 1983, 1988). WSAs are being managed to preserve their wilderness values according to the BLM Interim Management Policy for Lands Under Wilderness Review BLM Handbook H-8550-1 (BLM 1995). These WSAs will continue to be managed in that manner until Congress either designates them as wilderness or releases them for other uses. To that end, the Bakersfield FO manages WSAs as de facto closed areas.

3.11.4.2 Limited Area Designations

Most of the RMP decision area, 64 percent, is designated as an OHV Limited area, where management restricts use to designated routes. Generally a variety of categories of designation would exist, further

limiting use to specific modes of transport, periods of use, and types of user, such as authorized users. However, the manner in which routes were previously designated—that is, designating everything that appeared on USGS maps and aerial photographs as available for use—essentially made every route available to everyone. The exception to this was the identification of the PCNST to non-mechanized uses. Another issue created by the previous RMP's approach to route designation was that many routes on the ground did not appear on maps, and aerial photography was not of high enough resolution to distinguish these routes. As such, many widely used routes were not designated, essentially making it unlawful to use them.

Table 3.11-2 illustrates the extent of the designated route network. Undesignated routes represent both those that were missed, due to the nature of the previous designation attempt, and routes that have been created, either with or without authorization, that have failed to be tracked since the Caliente RMP was completed in 1997.

Table 3.11-2
Current Route Designations

Use	Miles
Available (Motorized)	937
Pedestrian and Livestock (Non-motorized)	41
Undesignated	985

Source: BLM 2010a

Beyond the issues created by the previous designation, the Limited OHV area designation harbors several other emerging issues, as follows:

- An inadequate framework is provided to address the rapid expansion of recreational vehicle use and visitation on public lands;
- The lack of planning for recreation travel in popular areas, such as Keyesville and Taft;
- The lack of legal access to public lands, ROWs, and easements, where public land is isolated within privately owned areas;
- Unauthorized creation and proliferation of routes causing impacts on other resources; and
- Growing conflicts among travel network users.

3.11.4.3 Motorized Travel

The increase in the use of motorized vehicles has created several issues on public lands in the Planning Area. First, the increasing capability of motorized vehicles allows easier access to remote parts of the Planning Area, thereby increasing the likelihood of impacts on otherwise protected resources. Second, as the popularity of recreational OHV use continues to grow, there could be conflicts with other public land users. Last, the expansion of unauthorized cross-country OHV use is creating additional resource damage in the RMP decision area.

The management of motorized activities within the RMP decision area includes monitoring and maintaining trails, maintaining a database of monitoring use, ongoing training of OHV-related issues, issuing citations and warnings for violations, and coordinating with user groups, local officials, and other agencies. The BLM is working with the Forest Service and local user groups, such as the Southern Sierra Fat Tire Association, City of Taft Motorcycle Club, and California Off-Road Vehicle Association, to keep

usable trails open and to designate other areas where there are safety concerns or the potential for resource damage.

3.11.4.4 Mechanized Travel

Mechanized travel, such as mountain biking, is becoming increasingly popular on public lands, and several areas in the Bakersfield FO are considered premium destinations. Throughout the RMP decision area, mechanized use is limited to designated routes, unless otherwise specified. Mechanized use is primarily occurring on old motorized routes, game trails, and user-created trails, as well as on planned single-track routes. Popular mountain biking areas in the Planning Area include parcels in the Coastal Management Area, the San Joaquin River Gorge, and the Keyesville area, which hosts the annual Keyesville Classic Mountain Bike Race.

3.11.4.5 Non-mechanized Travel

Hiking and horseback riding have been increasing on all of the public lands within the RMP decision area. The high rate of population growth and sprawl of communities in Southern California, including Los Angeles, Ventura, and Santa Barbara, have subsequently added overflow pressure to the public lands in the vicinity.

Horseback riding is common but dispersed throughout the decision area on trails and roads. No routes have been specifically constructed for equestrian use, but equestrian use occurs on routes that were constructed for other modes of travel.

The dunes at the Tierra Redonda ACEC and areas off designated routes in the Alkali Sinks, Goose Lake, and Piute Cypress ACECs are open only to foot travel. Sensitive areas, such as the riparian zone of Frog Pond Mountain SMA and the sequoia groves of Case Mountain ACEC, are also limited to foot travel.

Although hikers and equestrian users can travel cross country and on all routes, unless specifically prohibited only a few developed and maintained hiking trails exist in the Bakersfield FO, as follows:

- PCNST-Owens Peak segment;
- Lamont Peak Trail;
- Chimney Creek Trail;
- Long Valley River Access Trail;
- Rockhouse Trail;
- San Joaquin River Trail;
- Pa'san Ridge Trail;
- Wuh-ki'oh Trail.

The National Scenic Trail Act established the PCNST in 1968: a hiking and equestrian trail extending approximately 2,600 miles from Mexico to Canada. The Bakersfield FO manages 41 miles of the trail, known as the Owens Peak segment, in addition to several short spur trails. The Recreation Management Activity Plan for the PCNST has been developed, but management issues remain, such as maintaining the trailhead, providing adequate signage, and protecting the VRM designations, which is primarily VRM Class I. The PCNST, in addition to other trails, such as Chimney Creek, Lamont Peak, Long Valley, Rockhouse Basin, and Walker Pass, are managed in cooperation with the Ridgecrest Resource Area (refer to Section 3.4.3, National Trails).

Other hiking trail opportunities exist near the San Joaquin River Gorge. Hikers, mountain bikers, and horseback riders frequent the trails in the area, which include the Pa'san Ridge Trail (a six-mile loop trail), the four-mile Wuh-ki'oh Trail that connects with Millerton Lake State Recreation Area, and the San

Joaquin River Trail, which runs 14 miles to Sky Harbor. When completed, the San Joaquin River Trail will connect Highway 99 to the PCNST near Devils Postpile National Monument.

3.11.4.6 Popular Areas for OHV Travel and Recreation

The following areas are examined in greater detail due to their higher use and the number of prevalent issues.

Keyesville

Both motorized and non-motorized use has increased in the Keyesville area as a result of increased visitation from both local and destination visitors. The Keyesville area is adjacent to the Lake Isabella Reservoir (Isabella Lake), which contributes to the increased visitation of the area. A series of single-track routes in the Keyesville area are used by motorized and non-motorized bike users. Routes of all types in this area have proliferated in recent years. This area also provides public access to the Lower Kern River, which is a popular fishing and rafting area. The BLM manages three rafting launch areas for access to the lower Kern River.

Taft

The Taft area has become popular for OHV users in recent years. OHV users, prohibited from cross-country travel, have made a vast network of single-track and two-track routes. User conflicts are less common in this area, but resource damage from the creation of extensive and unauthorized routes is common. The issue of legal public access to public lands within this area is a problem, and conflict with private property owners and other legitimate uses of public land has occurred.

3.11.5 Route Inventory

The route systems within the decision area are widely scattered and disconnected; many parcels within the decision area have little or no legal or physical access. Routes in the decision area have been created and improved by trail and trailhead building, increased administrative access, campground and recreation facility construction, oil and mineral development, and various ROWs. Over the years, many of these routes have also become part of the roads and trail system frequently used by visitors who are engaged in mechanized and motorized recreation.

The 1997 Caliente RMP did not include a route inventory and limited travel to existing routes throughout most of the decision area. It qualified existing routes as those appearing on BLM surface management maps, aerial photographs, and USGS topographical maps at the time the plan was completed. This policy was largely ineffective in addressing the proliferation of user-created routes and mitigation of environmental and social impacts.. Although no complete single record of such routes exists, data extrapolated from the various sources indicate that approximately 937 miles of routes within the Bakersfield FO were designated as “limited to existing routes.” A separate decision continued the designation of approximately 41 miles of the PCNST to non-mechanized use only.

In 2009, the BLM completed an RMP decision-area-wide inventory that combined existing route information with updated inventories and new data. The completed 2009 Digital Inventory compared historic maps and GIS files, previously designated routes, route information from state and local governments, and current on-the-ground route inventories (completed as recently as December 2008), with recent aerial photographs and information provided by the public through a series of travel management workshops, to create the most complete and up-to-date route inventory possible. The

creation of the 2009 Digital Inventory GIS files included redrawing digital route representations to reflect on-the-ground conditions, addition of routes visible on aerial photographs in areas unable to be processed in the field due to time, budgets, and access constraints, and removal of routes that did not exist. *Throughout the RMP process the inventory has been updated to reflect new information provided by the public during scoping and comment periods and as the data has been made available.* Appendix E provides greater detail of the route inventory and designation process.

The complete route inventory consists of over 6,000 linear travel features amounting to approximately ~~*1,936*~~ 1,954 miles of routes within the RMP decision area. These numbers do not include routes within BLM rights-of-way and easements across other landowners' property. Considering the methods used in 1997 to designate routes, it is likely that a portion of the nearly 1,000 new miles of routes is attributed to those missed in the original designation, while another portion comes from new legitimately created routes. However, a fraction of this increase is attributed to unauthorized route creation.

Within the large-scale Decision Area-wide route inventory, two areas were of specific interest: the area around City of Taft and the public lands surrounding the communities of Lake Isabella. These two areas are known for heavy OHV use, which is why they were intensively inventoried in the field and highlighted for the travel management workshops. The field work, using GPS to collect accurate trail data, was completed in December 2008 and was included in the 2009 Digital Inventory. These two areas alone make up approximately 87 percent of the routes within the Decision Area, although the areas themselves account for less than a third of the public land. Table 3.11-3 lists the identified suitable mode of transport and surface type of inventoried routes within these two significant areas.

Table 3.11-3
Taft and Lake Isabella Route Information

Use	Miles
2-wheel-drive	455.6
4-wheel-drive technical	132.5
4-wheel-drive touring	978.8
ATV	30.2
Motorcycle	86.1
Surface Type	**Miles**
Natural	1204.5
Gravel	18.7
Paved	459.1

Source: BLM 2010a

3.11.6 Characterization

3.11.6.1 Indicators

Indicators to measure trends in travel management include the size of designated areas for motorized use (e.g., open, limited, or closed), miles of routes and trails in limited use areas, miles of routes and trails where motorized, mechanized, and non-motorized uses are allowed, restricted, or not allowed depending on resource and use considerations.

3.11.6.2 Trends

Research shows that the demand for OHV use rapidly increased in the 1990s and continued into the first few years of this decade (Cordell et al. 2008). In 1995, approximately 368,600 OHVs and ATVs were sold. By 2006, that number had almost tripled to approximately 1,034,966 OHVs. Over a 10-year period, the total number of OHVs grew from fewer than three million to more than eight million in 2003. Sales from 2004 through 2006 totaled almost 3.25 million vehicles. Assuming at least one million new vehicles were sold in 2007 and that 80 percent of all vehicles are still operable, there would be as many as 9.8 million ATVs and off-road motorcycles in the US as of January 1, 2008 (Cordell et al. 2008).

OHV use is expected to continue to increase, especially near Keyesville because of its proximity to southern and central California population centers and other popular recreation destinations. OHV use also is likely to increase in the SRMAs across the RMP decision area. Most receive heavy visitor use, with little law enforcement coverage and no developed facilities. These popular areas are thus subject to OHV overuse and visitor use conflicts. Use may become more concentrated in these areas as other places become more urbanized. Motorized users will likely look for areas with fewer recreation conflicts.

Non-motorized vehicle use close to urbanizing areas is expected to grow as population grows. Demand for hiking and mountain biking trails is expected to increase on public lands next to all of the municipalities in the Planning Area, as well as in areas close to major subdivisions outside of incorporated towns.

Nationally, the BLM is moving toward a system of limiting use to designated roads, primitive roads, and trails/areas and not encouraging extensive cross-country travel by motorized and mechanized vehicles. Current planning guidance requires identifying a defined travel management network system of areas, roads, primitive roads, and trails in all public land use plans (H-1601-1, Land Use Planning Handbook – Appendix C, Section D, attachment 2). The BLM expects that each RMP Record of Decision will include a system of designated routes for those areas in the limited category. Designations that are limited to existing roads and trails should be used only as an interim measure before the next scheduled RMP revision. Field managers may elect to add other additional limitations as necessary to achieve management objectives.

3.12 Lands and Realty

Within the Decision Area public lands are scattered or in a checkerboard pattern ranging in size from 0.1 acres to 125,000 contiguous acres. Much of the public land does not have legal public or administrative access.

The Lands and Realty program utilizes various tools to aid in effective management of these lands. The program is divided into several broad categories that support management of public lands, interests in land, and federal mineral estate. These categories include Land Tenure, Land Use Authorization, Land Classification and Withdrawal.

3.12.1 Land Tenure

Land tenure, or land ownership adjustment refers to those actions that result in the disposal of public lands and/or mineral estate and the acquisition of nonfederal lands or interests in nonfederal lands. The BLM has numerous authorities for “repositioning” or making adjustments to public land ownership to promote effective administration of public lands and serve best national interests. These land pattern

adjustments are completed primarily through the use of land purchase, donation, exchanges, and direct or competitive sales.

3.12.1.1 Land Disposals

Within the Decision Area approximately 216,000 acres of public land and all mineral federal mineral estate are identified (BLM 1997b) for disposal through sale, exchange, or repositioning to new managers. Lands identified for repositioning to new managers have been determined to be potentially suitable for management by an agency or organization other than BLM. A "New Manager" will be sought for these lands in order to increase management efficiency and enhance the properties contribution to other natural resource management initiatives. Processes to accomplish this would include administrative withdrawals to other Federal agencies, Congressional withdrawals through special legislation, R&PP Act conveyances, exchanges to other governmental entities such as State or County agencies, or exchanges to nonprofit conservation organizations.

Interest is expressed by nearby landowners and other members of the public through phone calls, e-mails and letters of interest, to acquire lands or interests in lands from BLM through sale or exchange. These types of disposals of federal lands or interests only occur when national interest is served (e.g., the parcels do not contain important resources or represent significant federal investment).

3.12.1.2 Land Acquisitions

Land acquisition is driven by the transfer of lands either from other government agencies or purchases, donations or approval of land exchange proposals from the private sector. Principle acquisitions over the last decade have included the transfer of Piedras Blancas Light Station; National Petroleum Reserve 2; and portions of Atwell Island from other federal agencies and the purchase and donation of lands in several areas within Cyrus Canyon, the San Joaquin River Gorge, Atwell Island and designated Wilderness. Title to some of the parcels acquired through donation is subject to deed restrictions limiting use and development of the properties.

Besides acquiring fee title to lands, the BLM seeks to acquire interests in lands, such as easements to provide public or administrative access. Under BLM guidance the least restrictive form of access (i.e., public access) would be acquired when possible.

3.12.2 Land Use Authorizations

Land Use Authorizations include a number of different types of approvals for use of public lands for private or other governmental purposes. These uses include wide variety of developments examples of which are pipelines, roads, transmission lines, apiary sites, commercial filming, large scale industrial sites, and communication sites. Types of authorization range from permits and leases (including Recreation and Public Purpose) to right-of-way grants. Authorizations generally are issued with a set of stipulations that prescribes allowable development with associated design features to address site specific resource values. Without authorization, use of public lands for these types of purposes is considered trespass.

Within the Decision Area, there are currently 950 active rights-of-way, over fifty percent of which are related to fluid mineral development. The Bakersfield FO completes approximately 40 right-of-way actions annually, including processing applications for new rights-of-way and amending, assigning, renewing, or terminating existing right-of-way grants. The number of active rights-of-way and other

authorizations changes weekly as new authorizations are issued and existing ones expire or are terminated.

3.12.2.1 Utility Corridors

The Bakersfield FO designated all existing and occupied utility corridors delineated in the Western Regional Corridor Study, completed by the Western Utility Group (Western Utility Group 1992) and updated in 2003, which identified priority utility corridors (Map 3.12.1). Future large scale utilities would be preferentially located in these areas.

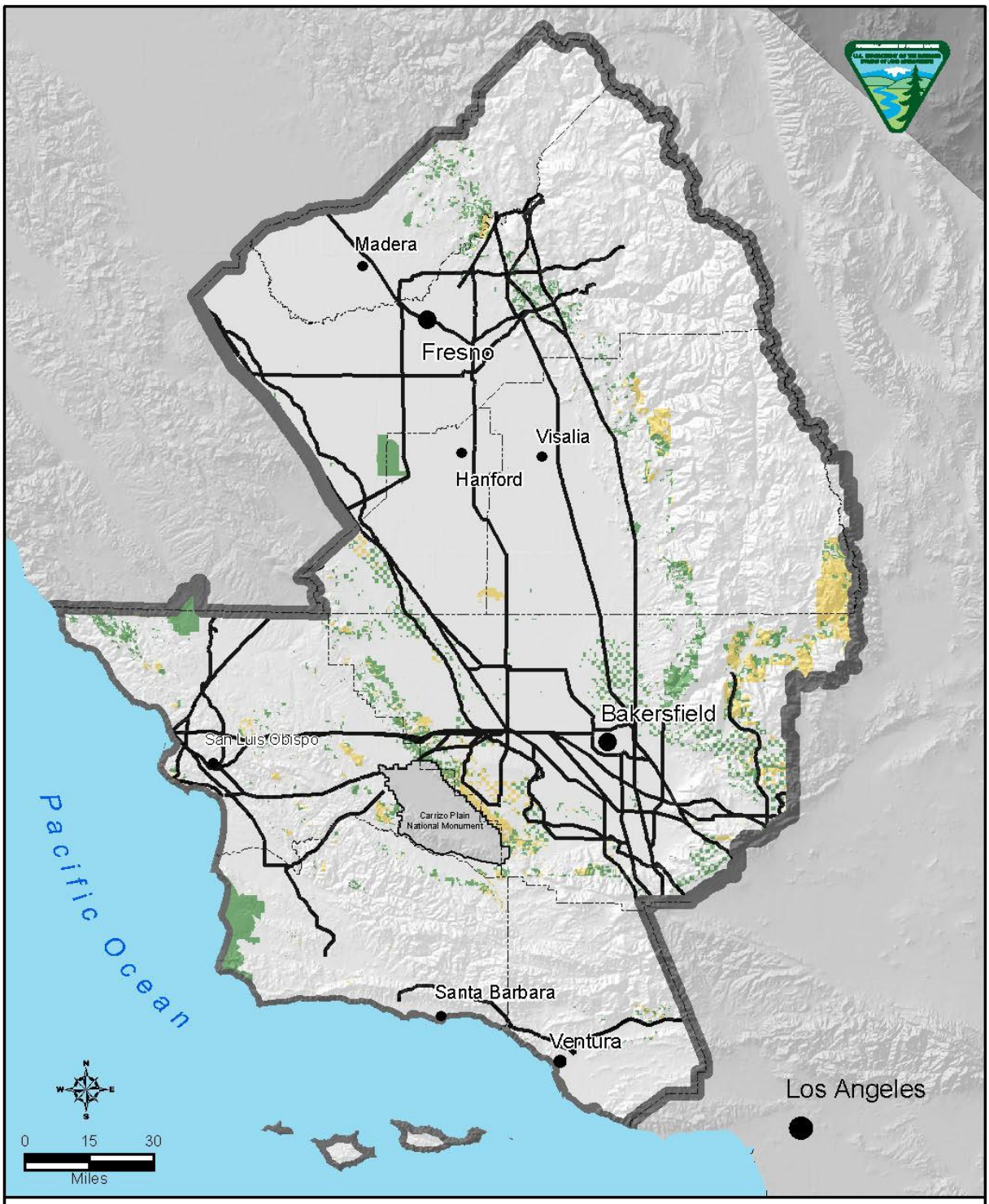
3.12.2.1 Renewable Energy

Renewable energy includes solar power, wind, and biomass resources. As demand has increased for clean and viable energy to power the nation, consideration of renewable energy sources available on public lands has come to the forefront of land management planning.

In cooperation with the National Renewable Energy Laboratory, the BLM assessed renewable energy resources on public lands in the western United States (BLM and DOE 2003). The Bakersfield FO reviewed this document to establish the potential for concentrated solar power (CSP), photovoltaic (PV), wind, biomass, and geothermal energy (Hydropower was not addressed) within the Planning Area and on public lands in the Decision Area. This report found that the Planning Area is not particularly well suited for development of solar (Map 3.12.2) or wind energy (Map 3.12.3), or biomass development at the utility scale (see Appendix M).

The BLM has developed a programmatic environmental impact statement at a nationwide level to address wind energy (*Programmatic EIS on Wind Energy Development on BLM-Administered Lands in the Western United States* [BLM 2005c]) and a similar programmatic environmental impact statement is in progress for solar energy (*Solar Energy Development Draft PEIS* [DOE/BLM, 2010]), these documents have or will amend, as appropriate, all existing land uses plans to adequately address the use of public lands for these purposes. Specific BLM guidance is provided for wind energy development in Instruction Memorandum No. 2009-043 (BLM 2009c), which requires the sensitive values of ACECs to be weighed against the potential for wind energy development and the need to restrict these utility scale wind energy projects for the protection of relevant and important values.

There are currently no wind applications or projects administered by the Field Office within the Planning Area. In the past several years ROW applications have been received for the following areas: east of Cholame, within the Temblor Range, near Lake Isabella, and within the Tehachapi Mountains; most of these applications, however, were dropped by the applicants.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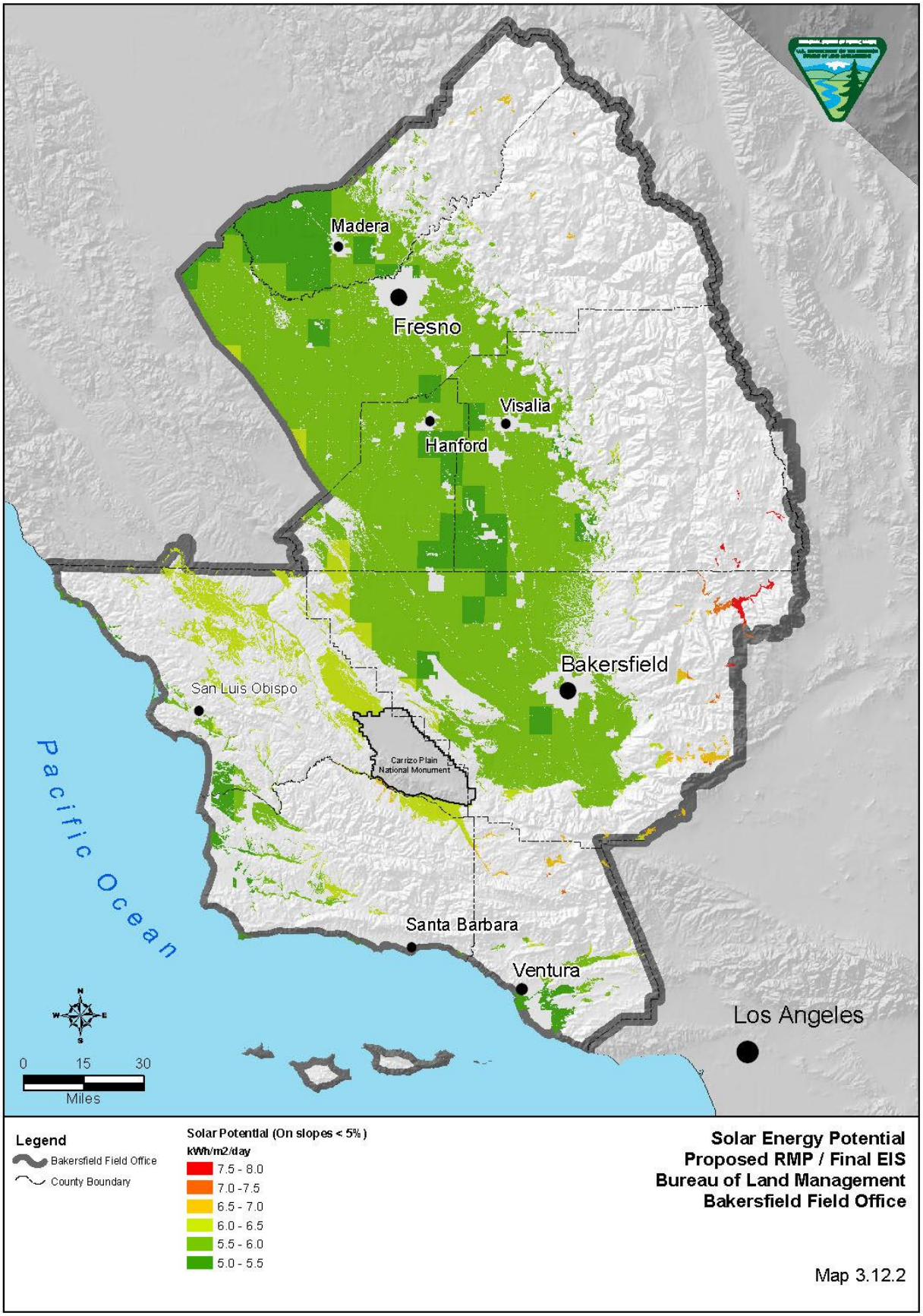
Hanford
Bakersfield
San Luis Obispo
Carrizo Plain National Monument
Pacific Ocean
Santa Barbara
Ventura
Los Angeles
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
Utility Corridors
Decision Area
Public Lands
Federal Mineral Estate
Designated Utility Corridors
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.12.1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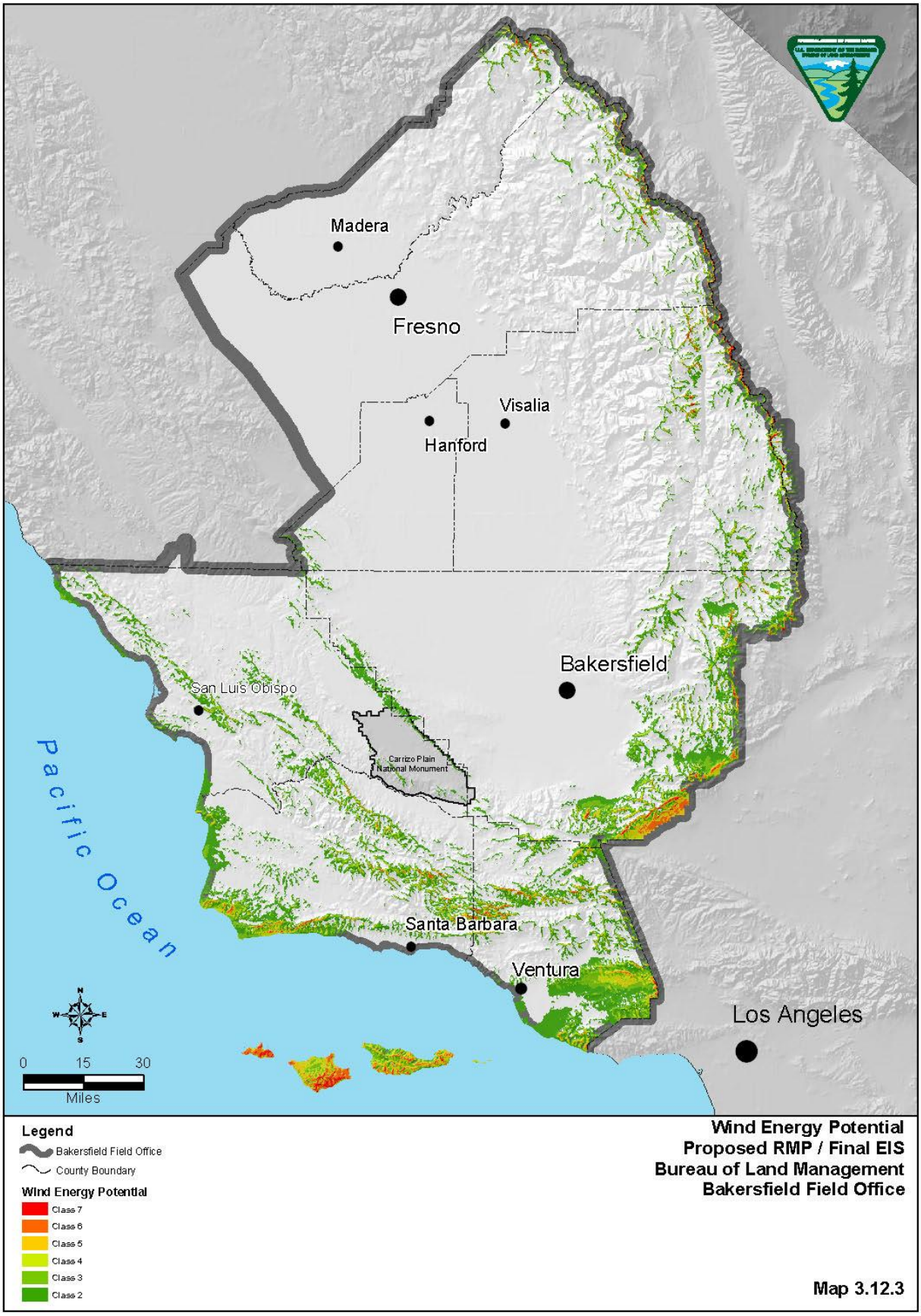
Carrizo Plain National Monument
Pacific Ocean
Santa Barbara
Ventura
Los Angeles
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
Solar Potential (On slopes < 5%)
kWh/m2/day
7.5 - 8.0
7.0 -7.5
6.5 - 7.0
6.0 - 6.5
5.5 - 6.0
5.0 - 5.5
Solar Energy Potential
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.12.2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Los Angeles
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Miles
Legend
Bakersfield Field Office
County Boundary
Wind Energy Potential
Class 7
Class 6
Class 5
Class 4
Class 3
Class 2
Wind Energy Potential
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.12.3

3.12.3 Classification and Withdrawals

Land classifications and withdrawals are for purposes such as establishing National Parks, National Forests, wilderness areas, Indian reservations, military installations, administrative sites, power sites, public water reserves, public roads, grazing districts, NCLWMAs, protection of natural areas, naval petroleum reserves, botanical areas, wildlife sanctuaries, and lighthouses.

There are numerous land classifications affecting the Decision Area. Many represent actions taken under outdated authorities and land management needs no longer current, having been replaced by other authorities.

As with land classifications, there are several existing withdrawals affecting the decision area; some of which are also outdated or have been superseded by current legislation. Of these withdrawals some are non-discretionary, such as, the withdrawal of designated Wilderness areas from the mineral entry and leasing, or the withdrawal from all forms of settlement, sale, location, or entry under the general land laws, including the United States mining laws, 30 U.S.C. Ch. 2 (1994), mineral leasing laws, 30 U.S.C. 181 *et seq.* (1994) and mineral material sale laws 30 U.S.C. 601-604 (1994), of Piedras Blancas Light Station (currently a 20 year withdrawal). Discretionary withdrawals include the withdrawal from application under the non-mineral public land laws and from disposition under the homestead, desert land entry and script selection laws for the Caliente, Monache-Walker Pass and Temblor National Cooperative Land and Wildlife Management Areas (NCLWMAs) and the withdrawal of the Piute Cypress Natural Area from all forms of appropriation under the public land laws, including the mining laws, but not from leasing under the mineral leasing laws.

In total, some form of withdrawal (mineral or non-mineral) affects approximately 176,000 acres of the Decision Area.

For withdrawals and classifications on BLM land, and with the exception of congressional withdrawals (such as National Parks, National Forests, and Indian reservations), the BLM has responsibility for administering (filing, recordation, etc) classifications and withdrawals on public lands administered by other federal agencies, such as the Forest Service and National Park Service; these are noted on the BLM official plats.

Under Section 204 of FLPMA, the BLM has been given the responsibility of reviewing all land classifications and withdrawals within the Decision Area.

3.13 Livestock Grazing

Livestock grazing has taken place in this part of California since the early 1800s during the establishment of the California missions and the settlement of the Sierra Nevada. Extensive livestock grazing during the 1800s and earlier part of the 1900s have contributed to the unique landscape seen today, including: presence of fencing and other rangeland improvements, introduction and establishment of nonnative plant species, and the traditional use of livestock grazing in the environment. As a result of the Taylor Grazing Act of 1934, livestock grazing operations (primarily for cattle, sheep, and horses) became more formalized through issuance of grazing leases and permits.

The BLM manages livestock grazing under 43 CFR 4100 its authority comes from several sources including;

- the Taylor Grazing Act of 1934, as amended (43 USC 315, 315a through 315r);
- the FLPMA of 1976 (43 USC 1701 et seq.), as amended by the Public Rangelands Improvement Act of 1978 (43 USC 1901 et seq.);
- Executive Orders that transfer land acquired under the Bankhead-Jones Farm Tenant Act of 1937, as amended (7 USC 1012), to the Secretary of Interior and authorize administration under the Taylor Grazing Act; Section 4 of the Oregon and California Grant Lands Act of 1937 (43 USC 118[d]);
- the Public Rangelands Improvement Act of 1978 (43 USC 1901 et seq.); and
- Public Land Orders, Executive Orders, and agreements authorizing the Secretary of the Interior to administer livestock grazing on specified lands under the Taylor Grazing Act or other authority, as specified.

Under this management, ranchers may obtain grazing permits or leases for an allotment of BLM-administered land, which has been allocated as available for livestock grazing in land use plans, on which a specified number of livestock may graze. An allotment is an area of land designated and managed for grazing livestock. The number of permitted livestock on a particular allotment is determined in part by how many animal unit months (AUMs) it supports. An AUM is the amount of forage needed to sustain a 1,000-pound cow, or the equivalent, for one month.

The vast majority of public lands grazing allotments in the Bakersfield FO are utilized in conjunction with intermingled private lands which act as the base for the livestock operations. In many cases, the use of public lands is an integral part of these operations; that are made viable, less complicated, or enlarged through the opportunities provided on public lands.

Within the Decision Area approximately 314,600 acres (78%) are allocated as available for livestock grazing and approximately 61,200 acres (15%) are allocated as unavailable for any livestock grazing. No previous allocation decision exists for approximately 26,900 (7%) acres in Fresno and Madera counties, the Atwell Island area, the Buena Vista Hills area, Cyrus Canyon and the Kennedy Meadows/ Lamont Meadow area that have been acquired or remain unallocated since the completion of the Caliente and Hollister RMPs. Interest has been expressed for authorized use of most of these unallocated lands and most are suitable for livestock grazing, with several being intermingled within existing allotments. Of the acres allocated as available for livestock grazing within the Decision Area, 295,400 acres have been divided into 116 grazing allotments. With some allotments being vacant and some permits or leases authorizing use on more than one allotment, the Bakersfield FO currently administers 78 active grazing permits and leases to 73 permittees/lessees. Currently 34,500 AUMs of active use could be authorized on the allotments within the Decision Area (see Map LG-A, in separate map packet and Appendix F-5 for allotment locations and specific authorizations). Lands currently allocated as available for livestock grazing but without a current authorization (20,800 acres) provide an estimated unused grazing opportunity in the amount of 3,100 AUMs for a total potential of 37,600 AUMs throughout the Decision Area.

Current issues on livestock grazing allotments include areas of concentrated recreation use, such as at Case Mountain, Fresno River, Keyesville, San Joaquin River Gorge and the Temblors, where surface disturbance associated with route proliferation and dispersed camping, harassment of livestock away

from desired grazing locations, and the need for increased fence maintenance is occurring, reducing allotment productivity.

Three allotments or pastures of allotments, whose boundaries are mostly outside the Decision Area but a portion of which lies within the Bakersfield FO, have livestock grazing managed through another approved RMP (Table 3.13-1).

Table 3.13-1
Management of Allotments Administered by Other RMPs

Allotment Number	Allotment (Pasture Name(s))	Acres in Bakersfield FO	Administering Office	Applicable RMP
#00015	North Temblor (Anderson, Recruit Grade, Sylvia, and Victoria pastures)	200	Bakersfield FO	CPNM RMP (2010)
#04309	Surprise Arroyo	1,300	Hollister FO	Southern Diablo Mountain Range and Central Coast of California RMP (2007)
#05008	Rudnick Common	7,000	Ridgecrest FO	California Desert Conservation Area RMP-West Mojave Plan Amendment of 2006

Conversely, four other allotments or pastures of allotments are mostly within the Bakersfield FO Decision Area but a portion of each falls within the Carrizo Plain National Monument. These allotments or pastures of these allotments have livestock grazing managed by the Bakersfield RMP (Table 3.13-2).

Table 3.13-2
Management of Allotments Extending Outside the Decision Area

Allotment Number	Allotment (Pasture Name(s))	Acres outside Bakersfield FO	Administering Office	Applicable RMP
#00015	North Temblor (American, Crocker Cyn., Santa Fe, Seventeen Cyn., and South pastures)	2,900	Bakersfield FO	Bakersfield RMP
#00039	Chimineas Ranch South	2,600	Bakersfield FO	Bakersfield RMP
#00096	Maricopa	1,200	Bakersfield FO	Bakersfield RMP
#03655	Wood Canyon	100	Bakersfield FO	Bakersfield RMP

3.13.1Standards for Rangeland Health and Guidelines for Livestock Grazing Management

Livestock grazing authorizations are managed to meet and maintain the fundamentals of rangeland health: (1) Watersheds are properly functioning; (2) Ecological processes are in order; (3) Water quality complies with state standards; and (4) Habitats of protected species are in order.

In 2000, the Secretary of the Interior approved the Central California Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1999a; see Appendix F-1), developed by the California State Director, in consultation with the public and with the BLM's Central California Resource Advisory Council. These standards and guidelines provide a clear statement of agency policy and direction for those who use public lands for livestock grazing and for those who are responsible for their management and accountable for their conditions. Rangeland health assessments are point in time assessments of rangeland health, as determined by an interdisciplinary team of experienced BLM staff specialists conducting an on-site analysis and using available information. These assessments are conducted and documented as described in Appendix F-1 to evaluate if grazing allotments are meeting the Standards for Rangeland Health.

Local guidelines were established to describe the types of livestock grazing management actions that are appropriate and commonly applied within the Bakersfield FO to ensure that the resource objectives and the standards for rangeland and ecosystem health could be met while authorizing livestock grazing (Appendix F-2). These local guidelines correlate with the Central California Guidelines for Livestock Grazing Management but are generally more specific or more stringent; for example, seasonal restrictions on livestock grazing in riparian areas or restrictions on livestock grazing where threatened and endangered species are present. Applying these guidelines to appropriate grazing allotments occurs with consultation of affected grazing lessees/permittees. These guidelines are incorporated into the terms and conditions of each authorization, as appropriate.

The Central California Guidelines for Livestock Grazing Management (Appendix F-1) establish minimum residual dry matter (RDM) levels for annual rangelands within the allotments of the Bakersfield FO unless the Bakersfield FO specific guidelines indicate a different level. These guidelines will be applied to applicable grazing allotments as terms and conditions on corresponding grazing authorizations. Before the beginning of the grazing season, allotments with annual forages may be checked for "range readiness" to determine if minimum mulch or RDM levels are present. During and toward the end of the grazing season, individual allotments may be visited to determine if the range is approaching minimum threshold levels. Grazing may be terminated for the season if key areas within these allotments show that the minimum RDM levels have been reached.

The Central California Guidelines for Livestock Grazing Management (Appendix F-1) also establish maximum use levels for perennial rangelands within the allotments of the Bakersfield FO. These guidelines will be applied to applicable grazing allotments as terms and conditions on corresponding grazing authorizations. Before the grazing season starts, allotments with perennial forages may be checked for "range readiness" to determine if sufficient growth has been initiated and rainfall and soil moisture conditions are adequate to maintain plant vigor throughout the scheduled grazing season. During and toward the end of the grazing season, individual allotments may be visited to determine use levels and form class criteria on key perennial plants. Grazing may be terminated for the season if key areas within these allotments show that the desired use levels and form classes have been reached.

Currently rangeland health assessments have been conducted on 97 allotments and 293,300 acres. Approximately 96% of the acres are meeting all rangeland health standards while 4% demonstrate some unhealthy conditions (Appendix F-3a).

3.13.2 Allotment Management Priorities

The BLM directs its funding, management and monitoring efforts to areas where they will be most effectively employed. As such, selective management categories are assigned to grazing allotments based on a specified set of criteria shown in Appendix F-4. This categorization results in either an Intensive, Moderate or Continue assignment.

The most emphasis is placed on "Intensive" category allotments. Currently, 21% of the allotted lands are in the Intensive category. In the "Moderate" category allotments, BLM provides a moderate level of effort to maintain condition or effect change. Currently, 67% of the allotted lands are in the Moderate category. In the "Continue" category allotments, BLM provides custodial management, while protecting existing resource values and conditions. Currently, 12% of the allotted lands are in the Continue category.

3.13.3 Rangeland Improvement Projects

Effective management of livestock grazing is dependent on the use of infrastructure to meet resource objectives. Range improvements are authorized physical modifications or treatments that are designed to improve production of forage; change vegetation composition; control patterns of livestock use; provide water; stabilize soil and water conditions; and restore, protect, and improve the health and productivity of public rangeland ecosystems to benefit livestock, fish, and wildlife. Within the Bakersfield FO they include fences, cattle guards, roads, water systems, prescribed burns, and exclosures, however, the inventory of range improvements is incomplete and some may be unauthorized.

3.14 Minerals Management

Mineral management programs include fluid minerals (oil, gas, and geothermal) and solid minerals (locatable, leasable, and salable). Fluid minerals are exclusively leasable; however, some solid minerals are also leasable such as phosphate and salt deposits that contain sodium or potassium. Calcium and carbonate salts are leasable or locatable, depending on their uses. The remaining solid minerals are generally locatable or salable. Locatable solid minerals are those such as metals and gypsum. Salable minerals are those such as common varieties of sand and gravel, clay, and rock.

The BLM manages oil and gas leases under Title 43 CFR, Part 3100, and geophysical exploration is covered under Part 3150. Geothermal leasing is managed under Part 3200, mineral materials under Part 3600 regulations, mining claims for locatable minerals under Part 3800 regulations, and solid leasable minerals, other than coal or oil shale, under Part 3500.

The authority for managing mineral resources comes from several sources including the;

- General Mining Law of 1872, as amended;
- Mineral Leasing Act of February 1920, as amended and supplemented;
- Mineral Leasing Act for Acquired Lands of 1947, as amended;
- Federal Oil and Gas Royalty Management Act of 1982;
- FLPMA, as amended;
- Mineral Materials Act of 1948;
- Surface Resources Act of 1955;

- Mining and Minerals Policy Act of 1970;
- Geothermal Steam Act of 1970 (30 USC 1004), as amended; and
- Energy Policy Act of 2005 (Oil and Gas).

In addition to the above authorities, where oil or gas is being drained from lands that are otherwise unavailable for leasing, whatever agency has jurisdiction over those lands is authorized to grant authority to BLM to lease those lands (43 CFR 3100.0-3(d). BLM would apply site specific stipulations provided by the surface management agency into any lease that falls into this category.

The decision area (acres) for mineral resources varies by the specific mineral or mineral group (i.e., for each specific acre the BLM may have interest in only fluid minerals, all leasable minerals, or all minerals). As such the decision area is presented separately for each mineral program. Adding to the complexity of mineral management and ownership, ongoing efforts to verify mineral estate ownership are showing that there are numerous federal parcels not shown in BLM records. These parcels are widespread and verification is only partially complete. The BLM expects that there are more yet to be discovered and recorded. *Maps of mineral potential are provided for the various mineral types. Mineral potential used historic mine data compiled by USGS, and also staff knowledge of mineral exploration and development trends in the Decision Area. Indirect impacts are described qualitatively, generally with regard to the reasonable foreseeable development scenario (Appendix M) and feasibility of new developments.*

The largest decision area for minerals is approximately 1.2 million acres (fluid minerals) whereas the decision area for solid minerals is approximately 200,000 acres less, regardless of surface ownership. This includes 571,160 acres of "split estate"(defined by federal mineral estate underlying non-federal surface ownership), 395,750 acres where the BLM manages the surfaces, and 195,300 acres of federal mineral estate where the surface is managed by other federal agencies (including Dept. of Defense, Army Corps of Engineers, and Bureau of Reclamation). The BLM also manages all of the federal fluid minerals where the surface is managed by the U. S. Forest Service (USFS), U. S. Fish and Wildlife Service (USFWS), and National Park Service (NPS). However, those agencies have their own Land Use Plans that determine the availability of their lands for leasing, so those minerals are not included in the Decision Area for this Plan. The mineral estate is the dominant estate meaning that the mineral owner has the right to access and develop the minerals. The current guidance and policy state that the surface owners are to be fully involved when decisions are being made that affect their use of the surface.

3.14.1 Leasable Minerals

Leasables are those minerals to which the rights to explore for and produce these minerals on public land may be acquired only through a mineral lease. They are divided into the subsets of fluid leasable and solid leasable minerals. Within the Bakersfield FO fluid leasable minerals include oil, gas, and geothermal resources; solid leasable minerals include phosphate, sodium, and potassium minerals. Oil and gas and geothermal resources are leased through a competitive bidding process to allow the public to receive fair market value for leasing the right to explore and develop these resources. If oil and gas are produced, the lease owners pay a 12.5% royalty to the federal government on that production. For geothermal energy, the royalty varies case by case, but it is usually significantly less than 12.5%. Solid Leasable minerals may or may not be leased through a competitive bid process depending on the volume of leasable minerals that are leased. Solid Leasable royalties are calculated on a case-by-case basis.

3.14.1.1 Fluid Minerals—Oil and Gas

Within the Planning Area the areas of highest mineral potential for oil and gas occur in the southern San Joaquin Valley, primarily in Kern County. This area has been explored and developed since the 1870's and is one of the oldest and most prolific oil/gas basins in the United States. In fact, 8 of the 20 largest oilfields in the lower 48 states are located in Kern County. Total federal production from BLM managed lands in California FY 2010 was 20 million barrels of oil (54,500 barrels per day) and 5.2 billion cubic feet (14.4 million cubic feet per day), valued at $1.4 billion.

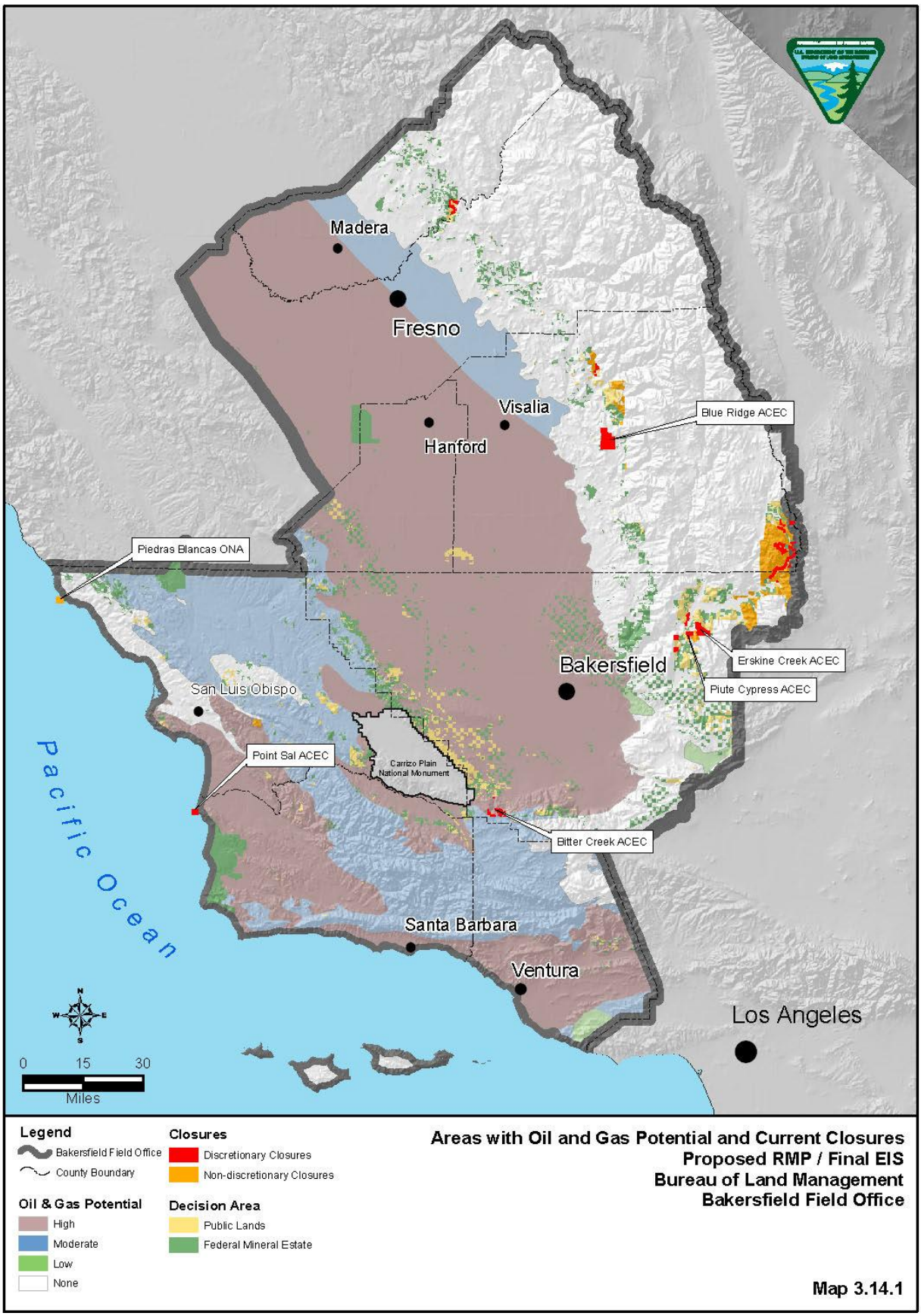
Moderate to high potential for fluid minerals exists outside the San Joaquin Valley region throughout the Coast Range; however, the southern Sierra Nevada Mountains are considered to have little to no potential for oil and gas (see Map 3.14.1). Other areas may still be considered to be high potential if certain criteria are met, even though they have not yet proven to be productive. In addition, because of the generalized nature of the maps, there are many smaller areas with little or no actual potential that are shown as areas of high potential. Within the Decision Area, 158,500 acres are considered to have high potential for oil and gas occurrence.

One of the ways that areas with potential for oil or gas are evaluated and discovered is through geophysical surveys. The most widely used geophysical surveys are seismic surveys. There are two primary methods of generating seismic data for these surveys - either through the use of large vehicles (vibroseis, or "thumper trucks") or by placing small explosive charges in shallow (5-25 feet deep) holes to generate sound waves which are monitored through a large grid of sensitive microphones.

Most of the production in the Decision Area comes from heavy oil that is found in shallow reservoirs. Heavy oil is very thick and cannot easily travel through the reservoir and requires more wells for extraction. To aid in the commercially viable production of this heavy oil, steam injection is often required to allow the oil to flow. These factors result in increased costs for production and also contribute to the large quantities of produced water that must be disposed of or else treated and turned back into steam. Typically, as much as 95 percent of the total produced fluid is water, not oil, and this water usually contains significant concentrations of dissolved solids, the disposal of which is regulated primarily by the California Regional Water Quality Control Board.

Virtually all oil fields in California are well past their peak production rates, with many nearing the end of the reserves that can be extracted economically. However, sustained higher oil prices and new technologies, such as enhanced oil recovery techniques and drilling microholes with less expensive rigs, and horizontal drilling, can significantly increase the percentage of oil recovered profitably. It is possible that with new technology, these fields will have many more years of useful life.

The pattern of development in the Planning Area is different from that of the rest of the country. From 1995 to 2008, only two percent of all wells drilled were on leases that were issued within the last 30 years. The remaining wells were drilled on leases that were more than 30 years old, and in most cases, on leases that are nearly 100 years old. From 1995 to 2008, 2,740 wells were drilled in the Decision Area, an average of nearly 200 wells per year, with a range of fewer than 100 to a high of 428. These trends are reasonably foreseeable and expected to continue as explained in the Reasonably Foreseeable Development Scenarios (Appendix M).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Carrizo Plain National Monument
Bitter Creek ACEC
Pacific Ocean
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Bakersfield Field Office
County Boundary
Oil & Gas Potential
High
Moderate
Low
None
Closures
Discretionary Closures
Non-discretionary Closures
Decision Area
Public Lands
Federal Mineral Estate
Areas with Oil and Gas Potential and Current Closures
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.14.1

An MOU exists with the California Division of Oil, Gas, and Geothermal Resources (CDOGGR) and the BLM to coordinate regulatory oversight. Under this MOU, BLM maintains the responsibility for *some* authorizations occurring that involve any federal mineral estate within the Decision Area. In order to prevent the need for dual or conflicting permitting, BLM has agreed to enforce the more stringent requirements between the two agencies. Although the BLM issues authorizations to drill the State may still need to permit portions of the well functions such as injection through the Underground Injection Control (UIC) program. These permits are primarily to ensure regulatory compliance with the Safe Drinking Water Act and protect ground water. EPA has delegated primacy and permit authority to the State of California for groundwater protection; the State has federal authority to regulate the hydraulic fracturing processes which involve the subsurface injection of fluids to stimulate oil and gas well production.

Within the Decision Area 1,011,360 acres are currently open for oil and gas development subject to varying restrictive surface use stipulations. There are currently about 540 leases covering more than 214,000 acres as of 2010. Approximately 290 leases are held by production (wells are actively producing thus continuing the lease term), while the remainder are mostly still in their primary lease term.

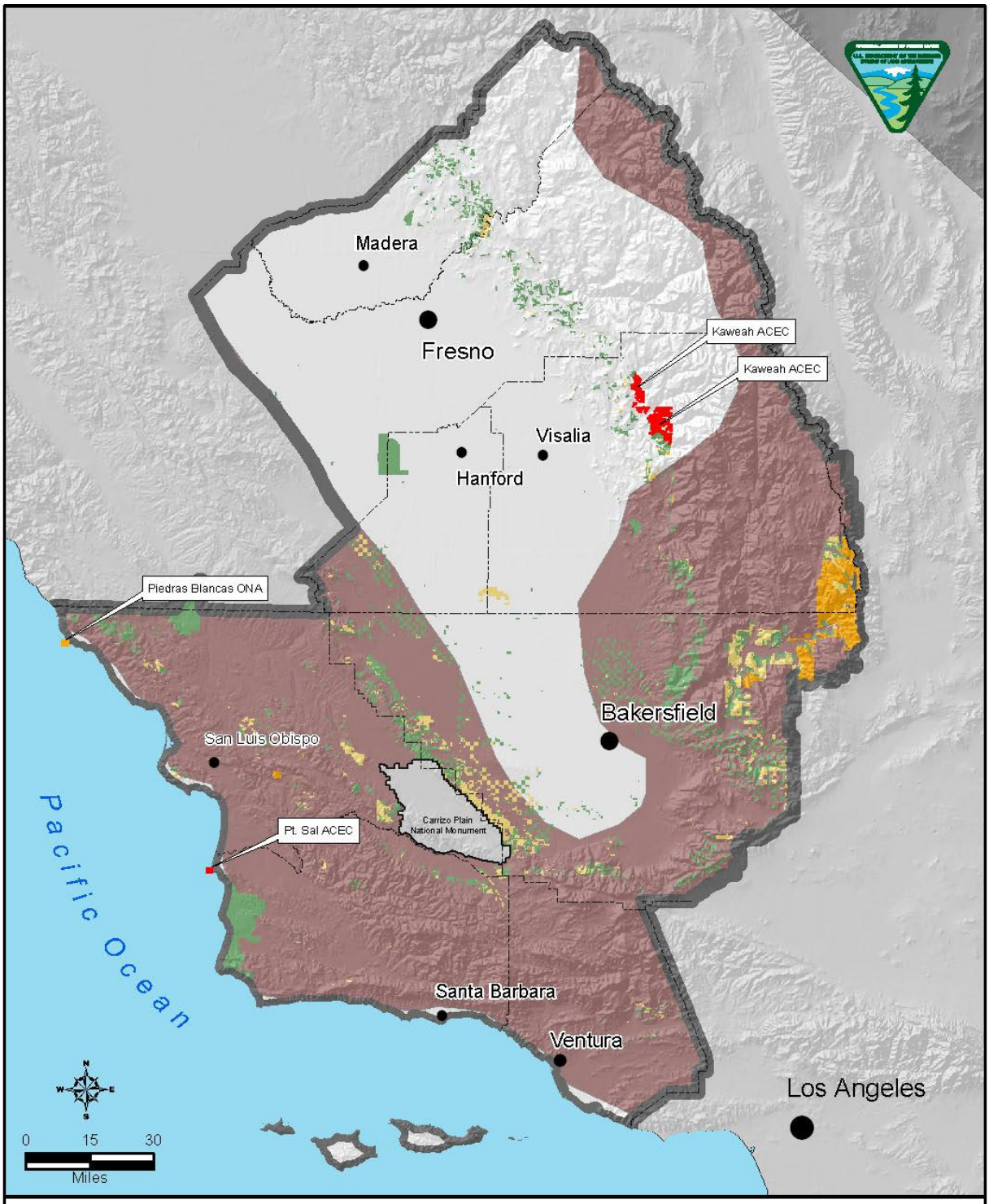
Currently the Bakersfield FO applies seven stipulations to new leases addressing issues such as special status species, critical habitat, lands under the jurisdiction of the Department of Defense, and raptor species. Since many of the existing leases predate the Caliente RMP, these stipulations were not attached to these leases. However, in practice, there is little or no difference in on the ground operations due to compliance with law, regulation, and policy (e.g., ESA and NHPA). Therefore these operators still provide the same level of mitigation/compensation, and follow all the same practices (SOPs and avoidance measures) as those specifically provided for in new lease stipulations. These same stipulations apply to both federal and split estate leases.

3.14.1.2 Fluid Minerals—Geothermal

Within the Planning Area potential for geothermal resources exists throughout the mountainous and coastal regions (see Map 3.14.2). Although there is known potential, the majority of areas are not hot enough or resources are not extensive enough to support utility scale geothermal development.

There are currently no federal geothermal leases in the Decision Area.

Within the Decision Area 992,860 acres are open to geothermal leasing and development. Often, geothermal leasing is restricted in conjunction with oil and gas leasing, however, the Case Mountain ACEC is specifically closed. In addition, all other ACECs were closed to geothermal leasing in the Record of Decision for the Geothermal PEIS (BLM 2008c) unless specifically determined otherwise in this RMP.


Madera
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Bakersfield
San Luis Obispo
Carrizo Plain National Monument
Pt. Sal ACEC
Pacific Ocean
Santa Barbara
Ventura
Los Angeles
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Miles
Legend
Bakersfield Field Office
County Boundary
Minerals. Closed to Geothermal Leasing
Non-discretionary Closures
Lands with Geothermal Potential
Decision Area
Public Lands
Federal Mineral Estate
Areas with Geothermal Potential and Current Closures
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.14.2

3.14.1.3 Solid (non-energy) Leasable Minerals

Within the Decision Area, approximately 35,000 acres (Map 3.14.3) of mineral estate are classified as being potentially valuable for solid leasable minerals (phosphate/sodium/potassium) that are open for exploration and development.

The BLM has classified several areas as potentially valuable for phosphates within the southern Coast Ranges. Three of these areas have small tracts of public lands within them, although two areas have large tracts of public land: the southern end of Morales Canyon northwest of New Cuyama and the east side of the Temblor Range, from just south of McKittrick Summit north to State Highway 46.

Phosphate has been prospected south of New Cuyama, east of Creston, at Pine Mountain and near Chico-Martinez Creek on the east side of the Temblor Range. Over the past 20 years, there have been about a dozen phosphate prospecting permits or leases within the Planning Area, most of which have been on lands administered by the US Forest Service. All of these permits are either dormant or expired.

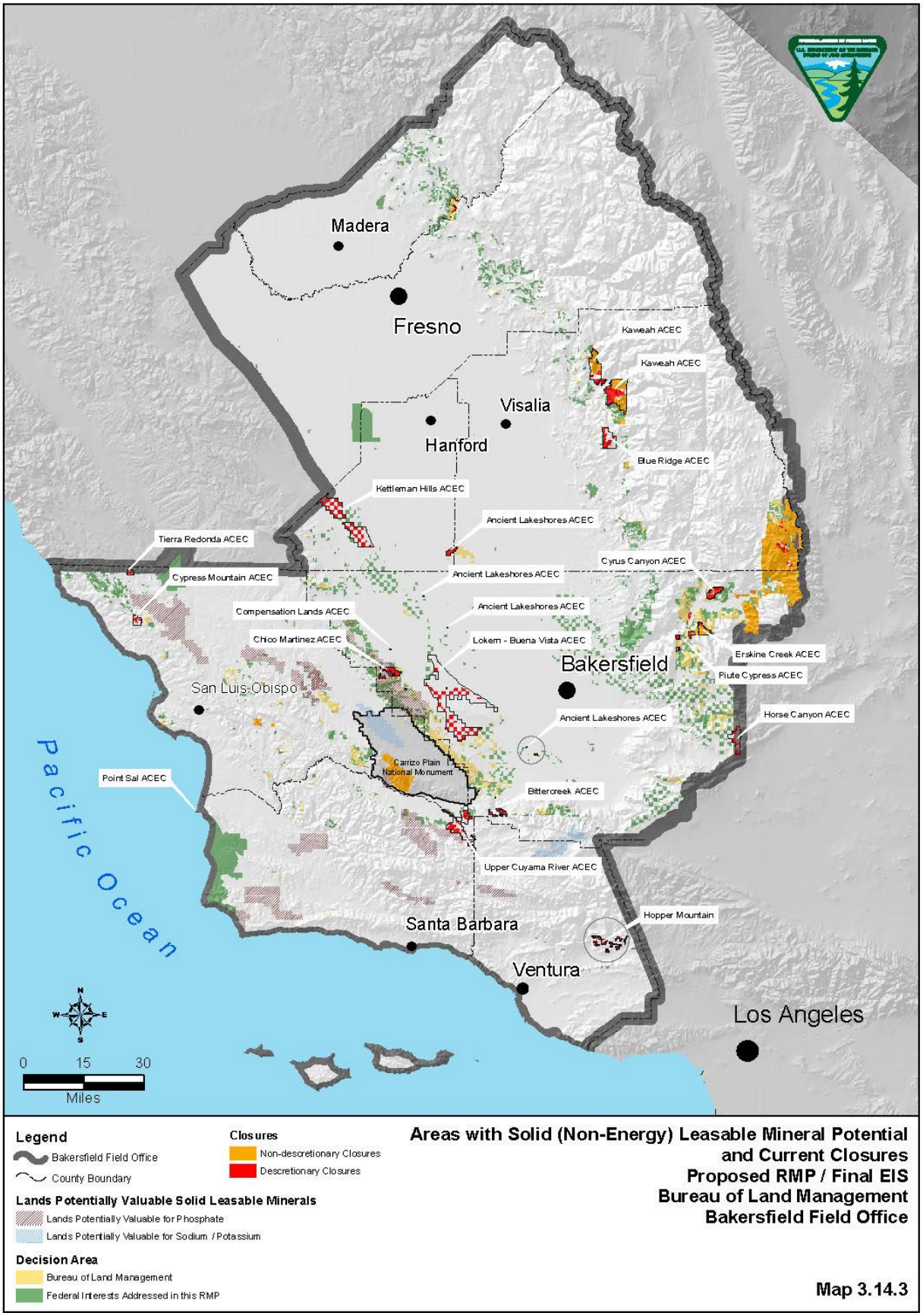
Within the Planning Area three areas have been classified as potentially valuable for sodium and potassium. Saline minerals have been produced from Soda Lake in the Carrizo Plain, Lockwood Valley near Mount Pinos, and Proctor Dry Lake near Tehachapi. Soda Lake (addressed in the CPNM RMP) was mined from the 1880s until about the 1920s for salt and sodium sulfate. Borate minerals were mined within the boundary of Los Padres National Forest in the Lockwood Valley early in the 1900s, and salt was produced from Proctor Lake, east of Tehachapi.

3.14.2 Locatable Minerals

Locatable minerals are those for which the right to explore, develop, and extract mineral resources on federal lands open to mineral entry is established by the location (or staking) of lode or placer mining claims, as authorized under the General Mining Law of 1872, as amended. An area withdrawn from the mining laws is no longer available for the staking of new claims; for all claims made prior to the withdrawal valid existing rights would be respected. A validity exam may be conducted by BLM at any time, and must be conducted before a plan of operations can be approved for locatable mineral development on that claim. The withdrawal from the General Mining Law does not impact the exploration and development of non-locatable minerals.

In general, metallic minerals are locatable, however, some nonmetallic minerals are also considered locatably. Locatable minerals found within the Planning Area include: gold, silver, copper, lead, zinc, tungsten, mercury, chromite, manganese, antimony, uranium, diatomaceous shale, diatomite, limestone, pumice, fuller's earth, barite, magnesite, and feldspar. Potential for locatable minerals exists throughout the mountainous and coastal regions (see Map 3.14.4).

Within the Decision Area, 924,700 acres are available for location of mining claims. The areas currently withdrawn from the location of mining claims include: the non-discretionary withdrawal of designated Wilderness Areas and Piedras Blancas Light Station; and the discretionary withdrawals of portions of the Piute Cypress ACEC (February 1965), the Keyesville SMA (1960s), and the San Joaquin River Gorge for a total of approximately 121 590 acres. Of these acres, approximately 21,000 acres are in areas of high locatable mineral potential for exploration and development.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Los Angeles
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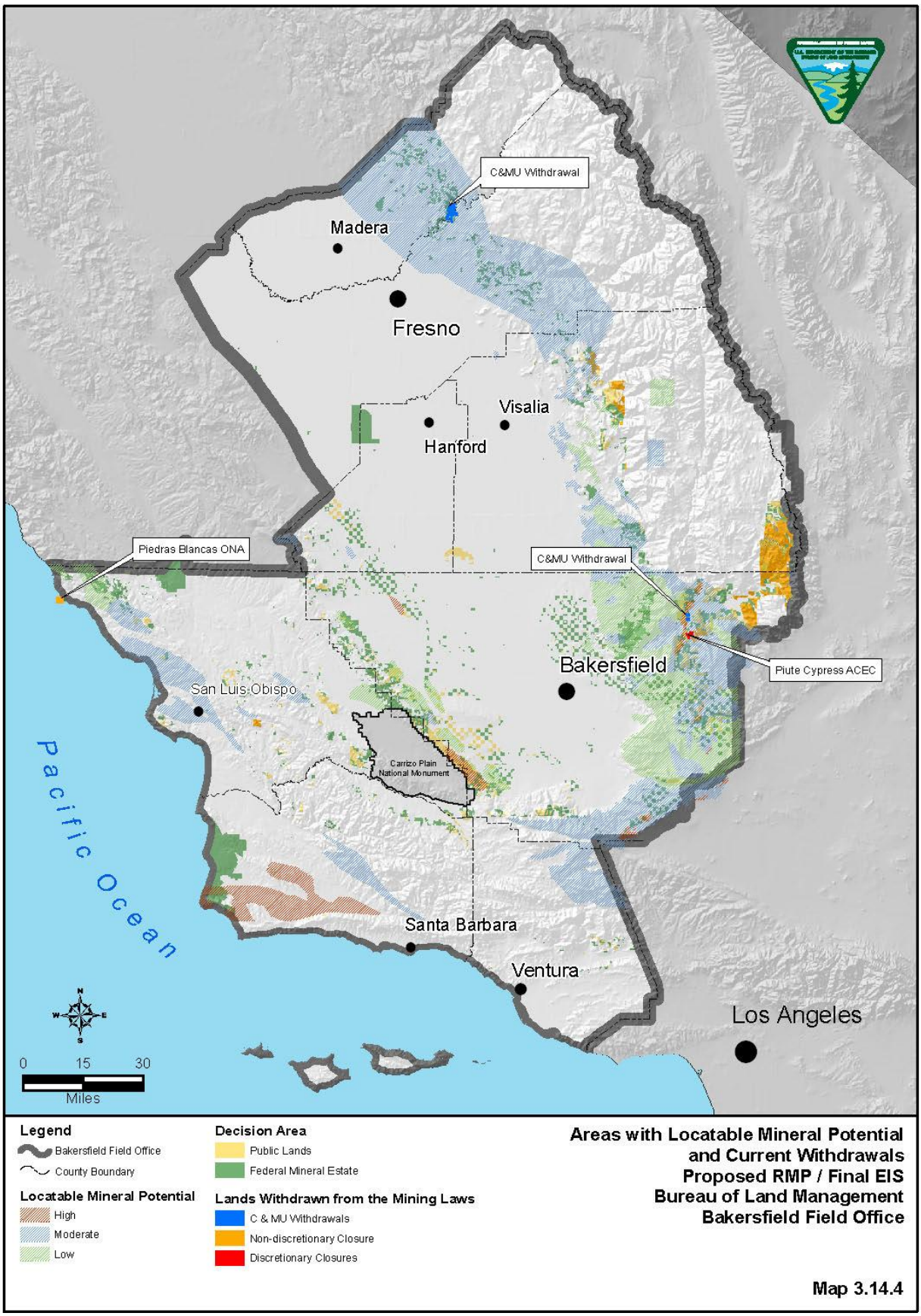
Kaweah ACEC
Kaweah ACEC
Blue Ridge ACEC
Kettleman Hills ACEC
Ancient Lakeshores ACEC
Tierra Redonda ACEC
Cypress Mountain ACEC
Ancient Lakeshores ACEC
Cyrus Canyon ACEC
Compensation Lands ACEC
Ancient Lakeshores ACEC
Chico Martinez ACEC
Lokern - Buena Vista ACEC
Erskine Creek ACEC
Plute Cypress ACEC
Ancient Lakeshores ACEC
Horse Canyon ACEC
Carrizo Plain National Monument
Point Sal ACEC
Bittercreek ACEC
Upper Cuyama River ACEC
Hopper Mountain
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
Lands Potentially Valuable Solid Leasable Minerals
Lands Potentially Valuable for Phosphate
Lands Potentially Valuable for Sodium / Potassium
Decision Area
Bureau of Land Management
Federal Interests Addressed in this RMP
Closures
Non-descretionary Closures
Descretionary Closures
Areas with Solid (Non-Energy) Leasable Mineral Potential and Current Closures
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.14.3


C&MU Withdrawal
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Fresno
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Piedras Blancas ONA
C&MU Withdrawal
Bakersfield
Piute Cypress ACEC
San Luis Obispo
Carrizo Plain National Monument
Pacific Ocean
Santa Barbara
Ventura
Los Angeles
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Miles
Legend
Bakersfield Field Office
County Boundary
Locatable Mineral Potential
High
Moderate
Low
Decision Area
Public Lands
Federal Mineral Estate
Lands Withdrawn from the Mining Laws
C & MU Withdrawals
Non-discretionary Closure
Discretionary Closures
Areas with Locatable Mineral Potential
and Current Withdrawals
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.14.4

In addition to the existing restrictions on locatable mineral development a number of factors contribute to the development of mines within the Decision Area including economic viability associated with the current price of the locatable minerals, location of the minerals (e.g., those within an ACEC require a plan of operations for any mining operations greater than casual use, 43 CFR 3809.11), and restrictions placed on the mining activity at the state and local level including permits required by Surface Mining Reclamation Act.

Currently there are 364 mining claims within the Decision Area; of these, there are four commercially active projects that have active Plans of Operation or Notices. Many of the remaining claims are held through maintenance (i.e., annually filing) and activities are primarily casual use. This activity is usually considered a recreational activity and managed under casual use regulations. BLM rules for casual use are found in 43 Code of Federal Regulations 3809 and non-commercial casual collection in 8365.1-5. BLM has authority under its planning regulations to further define casual use on selected parcels of land.

A lingering legacy of America's mining history is abandoned mine lands (AML), which present a significant health and safety issue on the western landscape as addressed in the Public Safety and Health section. Resolving these problems is becoming a national priority.

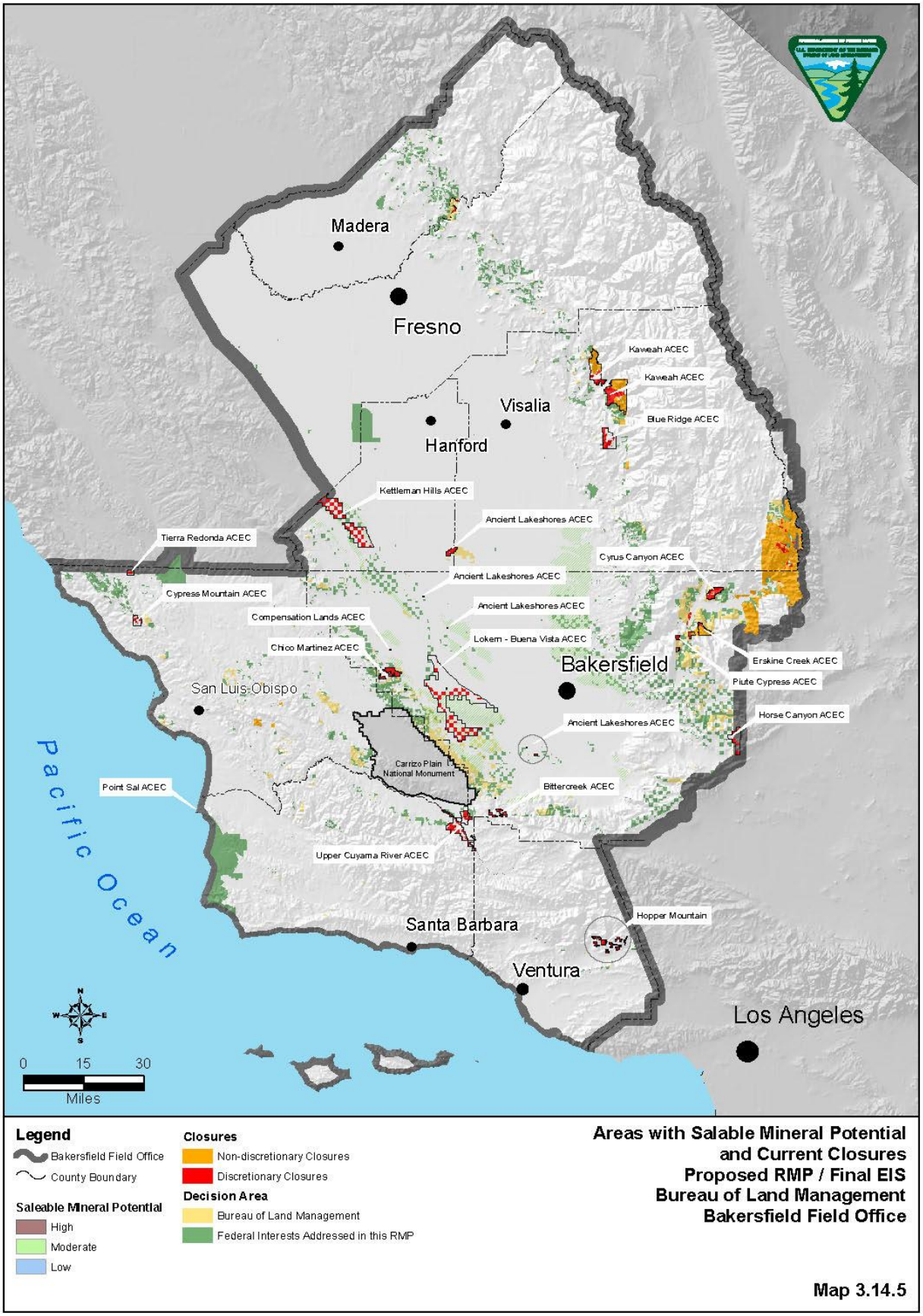
3.14.3 Salable Minerals

The BLM defines common varieties of sand, gravel, stone, pumice, pumicite, cinders, and ordinary clay as salable mineral materials. Salable minerals include materials used for building and construction, both commercially and privately. Sand, gravel, aggregate, lime (limestone), cinders, and building stone are the more common salable minerals in the Planning Area. Use of salable minerals from public lands requires either a negotiated sales contract or a free use permit from the BLM. The contract or permit may have stipulations to protect or mitigate impacts on non-mineral resources. Disposals of salable minerals from public lands are regulated by 43 CFR, Part 3600 and are completely discretionary.

Geology, proximity to areas of demand, and presence or absence of roads determines the suitability of potential salable mineral materials for exploration and development in the Planning Area. Within the Decision Area there are 51,280 acres with potential for salable mineral development (see Map 3.14.5). Generally, the most accessible sources for sand and gravel are along river channels and floodplains; whereas granitic and volcanic rocks (used to produce crushed stone products) are found in the mountainous regions of the southern Sierra Nevada and Coast Ranges. Other salable minerals are found sporadically throughout the Planning Area.

Within the Decision Area approximately 817,690 acres are open to salable mineral development. The areas closed include the non-discretionary closure of designated Wilderness Areas and Piedras Blancas Light Station, and a discretionary closure. Combined these area have approximately 8,000 acres of salable mineral potential.

Currently, six salable mineral extraction operations are active within the Decision Area. This includes: two mining operations for diatomaceous (siliceous) shale near the communities of Taft and Maricopa; a gypsum mine near Lost Hills; a basalt mine west of Atascadero; and three sand and gravel pits in the Kern River Valley area. In addition, expression of interest in mining limestone has been received for the Tehachapi area.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Discretionary Closures
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Map 3.14.5

3.15 Recreation and Visitor Services

Public lands in the Bakersfield FO provide opportunities for a variety of outdoor recreation and related benefits. While most users participate in dispersed recreation, either individually or in small groups, organized events with both participants and spectators occur routinely. Many of these visitors view public lands as an escape from their day-to-day routines and as places for individual challenge and exploration, along with social development and an appreciation for the natural world.

The many types of dispersed and organized uses provide for a diverse range of visitor needs and expectations. However, public land is not the sole source of recreational settings and opportunities, and many additional opportunities exist on other federal, state, and county lands and at facilities throughout the Planning Area. Other lands and facilities include parts of Sequoia/Kings Canyon National Parks, Sequoia, Sierra, Los Padres, and Angeles National Forests, and several California state parks and OHV areas.

3.15.1 Recreation Management Strategy

Until recently, management of the BLM recreation program has been based primarily on providing a diverse array of programs that focused on specific activities. This activity-based management style was in response to the rapid growth in public lands recreational use and generally achieved the desires of the public and the goals of the agency advocates. However, focusing on specific activities often caused the recreation program to function in isolation of other resources and interrelated functions. To counter this, the BLM is transitioning recreation program management to a benefits-based management style that focuses on outcomes to individuals, communities, economies, and the environment. Benefits-based management integrates the management of recreation settings with desired recreation opportunities and benefits to these sectors.

Several key BLM publications have moved the management style in this direction: Recreation 2000 Strategy (BLM 1990) and update (BLM 1995), the US Department of Interior's (DOI) Strategic Plan for Recreation, and the BLM's Priorities for Recreation and Visitor Services Work Plan (a.k.a., the Purple Book) (BLM 2003). The BLM is writing a recreation and visitor services handbook and updating Manuals 8300 and 8400 to reflect the changes in management style and to provide updated guidance to future recreation and visitor services planning.

3.15.2 Recreation Settings

To assist in implementing the benefits-based management style, recreation settings are characterized and organized in a system defined by Recreation Setting Characteristics Matrix (RSCM) (Appendix H). The RSCM first defines the current recreation setting and then allows for the prescription of a setting that would best facilitate the desired outcomes and benefits. This system considers the physical, social, and operational characteristics of six settings on a spectrum, from "Primitive" through "Urban," and gauges such variables as the amount of development, remoteness, potential for isolation, and visible management controls. The six settings and their primary characteristics are as follows:

> **Primitive.** An essentially unmodified natural environment of fairly large size with minimal evidence of others and very low interaction between users. Extremely high probability of isolation, independence, tranquility, and closeness to nature. Areas are essentially free from

evidence of human-induced restrictions and controls, and motorized and mechanized uses are not permitted.

Backcountry. A predominantly natural or natural-appearing environment of moderate to large size. Opportunities to experience isolation, independence, and tranquility exist to some degree. Interaction between users is low, with some evidence of other users. On-site controls and restrictions are minimal and subtle. Motorized use is not permitted.

Middle Country. A natural-appearing environment of moderate to large size. Low concentration of users with evidence of other users. Few opportunities to experience isolation and independence. On-site controls and restrictions are minimal and subtle. Motorized use is permitted.

Front Country. Predominantly natural-appearing environments with moderate evidence of the sights and sounds of man. Interaction between users is moderate with evidence of other users prevalent. Visible resource modification and use that generally harmonize with the natural environment. Conventional motorized use is provided for in facilities construction and design.

Rural. A substantially modified natural environment. Resource modification and use are visible and needed to protect resources from intensive use. Sights and sounds of humans are readily evident, and user interaction is moderate to high. Facilities are provided for special activities and are designed for large numbers of people and intensified motorized use, including parking.

Urban. A substantially urbanized environment with natural-appearing elements. Visible renewable resource modification and use. Large numbers of users, with sights and sounds of humans predominant. Facilities available for highly intensified motor use and parking, with mass transit often available to carry people throughout the site.

3.15.3 Existing Recreational Setting and Opportunities

The Decision Area provides the gamut of recreational settings, from primitive opportunities within one of seven congressionally designated Wilderness Areas to urban experiences at the Piedras Blancas Historic Light Station. However, generally, the dispersed public land can be categorized as Front Country and Rural, close to well-traveled routes and often exhibiting true multiple-use characteristics, combining industrial and commercial uses of public lands with efforts to protect and preserve sensitive resources.

The opportunities provided on public lands are as vast as the settings in which they occur. Commonplace is such activities as camping, hiking, hunting, OHV use, and shooting. In addition, some areas are especially known for their mountain bike and trail riding opportunities, while further still, opportunities for cultural exploration, causal use *(prospecting)/casual collection (rock hounding),* and white-water boating are tied to specific locations or resources within the Decision Area.

Table 3.15-1 shows the estimated percentage of participation by activity groupings during the 2009 reporting period. Estimates are derived from the Recreation Management Information System (RMIS), a BLM recreation information database. About three-quarters of visitors to public lands participated in camping and picnicking, while only one-fifth of visitors were reported as engaging in OHV activity. Although the information is somewhat useful, the accuracy of visitor numbers and the formula used to compute these figures is based on estimates and approximations that have been extrapolated across the Decision Area and are based on only a few survey points.

Table 3.15-1
Percentage Participation in Recreation Activities (2009)

Activity Groupings	Percentage Participation
Non-motorized boating	7%
Camping and picnicking	75%
Driving for pleasure	4%
Fishing	15%
Hunting	13%
Interpretation, education, and nature study	50%
Non-motorized travel	60%
OHV travel	21%
Specialized motor sports, events, and activities	<1%
Specialized non-motor sports, events, and activities	15%
Swimming and other water-based activities	13%

Data from BLM RMIS based on fiscal year 2009 reports and formula.

Although this use occurs and is reported across the Decision Area, several areas, specifically along the coast and within the Central Valley have limited opportunity for any recreation due to constraints on access, such as no public easements. Some use is anticipated to still occur on these areas, resulting from access across private property, either illegally or with permission from neighboring property owners. Conversely, a number of easily accessible and historically visited areas receive intense visitation and essentially comprise most of the reported activity and visitation.

In the Decision Area there are only few actual activity based restrictions on recreation opportunities (e.g., prohibitions or closures), some of these are a direct result of the existing land use plan, but more commonly these restrictions arise from supplementary rules or congressional legislations. Supplementary rules are currently in effect for; the length of time permitted to camp within the Decision Area; activity group size (before the requirement to get a permit); total public closure; and "Special Rules" for developed sites. Furthermore, all activity on public land has to occur in compliance with applicable local and state rules and regulations, for example, State laws restricting firearms use for safety in effect prohibit the activity on certain areas of public lands meeting these requirements. Table 3.15-2 summarizes the acres with activity prohibitions by opportunity.

Table 3.15-2
Recreation Opportunities Currently Restricted within the Decision Area

Opportunities	*Acres Prohibited*[36]	*Percent of Decision Area*
Equestrian use	*450*	*<1%*
Hunting	*0*	*0%*
Overnight camping	*2,890*	*<1%*
Shooting Sports[37]	*10,210*	*3%*

[36] *"Acres prohibited" includes areas closed to all forms of public access.*

[37] Includes non-discretionary restrictions at the Piedras Blancas Light Station.

3.15.4 Recreation Management Areas

All areas have intrinsic recreational value, however not all these areas require specific management of those values. As such, Recreation Management Areas (RMAs) are delineated to identify those areas with management needs and further refined between Extensive RMAs (ERMAs) and Special RMAs (SRMAs).

3.15.4.1 Areas Not Managed for Recreation

The decision to specifically identify areas not managed for recreation result from new direction contained in the Revised Recreation and Visitor Services Land Use Planning Guidance (BLM 2011c). These areas essentially replace the custodial level of management assigned previously to the ERMA designation. As such, custodial management is reactive to problems and issues that arise, as opposed to pro-actively providing opportunities and directly managing the recreation resource.

As these areas are not specifically managed for recreation, desired objectives for settings and targeted activities, benefits and outcomes are not identified or managed for.

The Decision Area currently contains no areas identify as not managed for recreation; although in areas where management focus is on other resources (e.g., heavily developed oilfields) or lands are not publically available (e.g., land locked by private property or closed to the public) this designation would be suitable.

3.15.4.2 Extensive Recreation Management Area

With the advent of the areas not managed for recreation the ERMA designation changed purpose from those areas receiving only custodial management to areas with identified recreation objectives, managed settings and specifically detailed management actions and allowable uses. Recreation management within these areas is no longer only responsive to adverse conditions, but pro-actively seeks to facilitate visitor participation in targeted activities, eliminate potential use conflicts and protect environmental resources.

Although these areas require increased level of financial support and personnel, they are not the focus of the BLM's recreation management objectives.

Currently all lands within the Decision Area except the identified SRMA are managed as either the Hollister or Caliente ERMA.

Many of the areas within the ERMA have no legal public access and support only recreation limited to those with permission to cross the private property or those who illegally trespass. Those areas with access support a variety of dispersed activities including; OHV riding, camping, hunting and fishing, sightseeing, pleasure driving, rock and mineral collecting, picture taking, picnicking, hiking, horseback riding, and mountain biking. Of the few dedicated facilities that exist, most address the basic needs for visitor health and safety (e.g., Restrooms etc.) and the provision of information to the public (e.g., kiosks etc.). These facilities include;

- Bert's Park, a wayside stop along California State Highway 178 in the southern Sierra Nevada, providing visitors with a scenic view, picnic tables, and barbeque grills;
- Walker Pass Campground and PCNST trailhead along California State Highway 178, providing a pit toilet and several designated sites with picnic tables and fire rings.

- Case Mountain, a trailhead and several user-created mountain bike trails within the Case Mountain ACEC;
- Atwell Island Project, a wildlife habitat restoration project undertaken jointly with the Bureau of Reclamation and the US Fish and Wildlife Service. A short trail and a network of roads provide opportunities for nature study and wildlife observation, and new facilities, including trails, are being developed;
- Piedras Blancas Historic Light Station is a historic light station on the California coast near San Simeon. In 2008 the light station was designated an Outstanding Natural Area as part of the NLCS. BLM staff and volunteers routinely provide light station tours. No public access is permitted unless as part of a tour or as permitted though a Special Recreation Permit (SRP). Further discussion of the Piedras Blancas Historic Light Station can be found in Section 3.4, Special Designations.

3.15.4.3 Special Recreation Management Areas

The SRMA designation is a management tool used to identify areas that require special prescriptive management and subsequent activity level planning to achieve desired outcomes. The management in these areas addresses concerns before they become issues and provides facilities and programs to meet the needs of the agency, public and recreational demand.

The reasons for designating an SRMA can vary, but generally these areas are already intensively used, or the recreation that occurs requires careful management to ensure that other resources are not impacted and the recreation opportunities persist.

The Hollister RMP (BLM, 1984) as it applies to the Decision Area identified one SRMA; the San Joaquin River Gorge. The area (4,036 acres), originally designated the Squaw Leap SRMA, is located near the rural town of Auberry and sits astride the San Joaquin River, between Millerton Lake and Kerckhoff Reservoir and the Sierra National Forest in eastern Fresno and Madera Counties.

The predominant features of the SRMA are the San Joaquin River Canyon and Squaw Leap (elevation 2,370 feet), a mesa for which the SRMA was originally named. Principal activities within the SRMA are hiking, environmental education, nature study, hunting, fishing, mountain biking, recreational prospecting, and camping. Facilities within the SRMA are a Cultural Heritage Learning Center, which consists of a replica Native American village site, simulated archaeological dig, authentic bedrock mortars, and a nature trail, focusing on plants and animals of cultural importance. It also includes a small visitor center, a walk-in campground, a group campground, and several pond sites used for aquatic investigations. In addition to interpretive programs, visitors have access to over 22 miles of hiking and equestrian trails, including a National Recreation Trail.

The Caliente RMP (BLM, 1997) did not adequately describe designation of any SRMAs and consequently didn't analyze the impact of these designations in accordance with applicable policy at the time of writing. It did however identify two Special Management Areas for the purposes of biological (North Fork) or cultural (Keyesville) resource protection, that identified recreation as a contributing and important use of these areas. In the descriptive guidance for recreation management within the RMP the Special Management Area boundaries were identified to be used for SRMA boundaries in addition to one other area (Chimney Peak). Consequently these areas have been managed as de facto SRMAs over

the life of the Caliente RMP. Table 3.15-3 identifies the SRMA and de facto SRMAs and their associated acreages.

Table 3.15-3
Acreages Managed as SRMAs

Special Recreation Management Area	Acreage[38]
San Joaquin River Gorge	4,036
De facto SRMAs	
Chimney Peak	123,476
Keyesville Special Management Area	7,029
North Fork Special Management Area	4,472

Source: BLM 2010a

Chimney Peak: The Chimney Peak area is 70 miles east of Bakersfield in the southern Sierra Nevada. It extends north of State Highway 178 to the Planning Area boundary, encompassing the Chimney Peak Wilderness and parts of the Domeland Wilderness, the Owens Peak Wilderness, and the Sacatar Trail Wilderness. The PCNST and the Chimney Peak Backcountry Byway bisect the area.

Principal recreation activities occurring within this area are hiking/backpacking, camping, hunting, pleasure driving, and wilderness exploring. Facilities include two improved campgrounds, Chimney Creek and Long Valley, along with the following identified trails:[39]

- Pacific Crest National Scenic Trail (41 miles);
- Lamont Peak Trail (1.8 miles);
- Chimney Creek Trail (1.7 miles);
- Long Valley River Access Trail (0.3 mile); and
- Rockhouse Trail (3 miles).

The Lamont Peak Trail and the PCNST both have established trailheads with informational kiosks. The Chimney Creek Trail leads up the creek from the Chimney Creek Campground; it is unimproved and has fallen into disrepair. Both the Long Valley River Access Trail and the Rockhouse Trail lead to the South Fork of the Kern River within the Sequoia National Forest. The Long Valley Trail is unimproved, while the Rockhouse Trail is an old road; both provide access to the river for fishermen. All the trails within the SRMA support only non-motorized/mechanized modes of transport due to overlapping wilderness designation.

Both campgrounds have designated individual sites, including picnic tables and fire rings with access to pit toilets. Long Valley Campground has 12 sites, while Chimney Creek Campground is much larger, with 32 designated sites. In the past, water has been provided at each site in season, but both original systems have fallen into disrepair. The water system at Chimney Creek has been replaced. Two water sources are also identified along sections of the PCNST within the area, but they are not tested for potability, and their condition, rates of flow, and general health vary.

[38]Acreages derived from GIS files and may not represent true measurements.
[39]Trails identified in RMIS from data collected for financial year 2008.

Historically, the Chimney Peak area received a large number of visitors to its improved campgrounds, but more recently deterioration of the main access roads, the Chimney Peak Backcountry Byway, and shifts in recreation use patterns and demand have resulted in a slowly declining level of visitation. In addition, more active and guided management of the congressional designated wilderness area has eliminated the need for special management of the recreational elements of the landscape.

Keyesville: The Keyesville Special Management Area is west of Isabella Lake and north of State Highway 178. It is divided by the Lower Kern River flowing from the Lake Isabella Dam and is crossed by State Highway 155 and Kern County's Keyesville Road. The area is bounded by the Sequoia National Forest to the north, east, and west.

Principal activities include dispersed camping, OHV riding (Section 3.3.4, Comprehensive Travel and Transportation Management), casual use prospecting, and kayaking, rafting, fishing, and water play. The area has a rich Gold Rush-era history, with the Keyes Gold Mine and Stamp Mill, the Walker cabin, and historic cemetery providing cultural exploration opportunities. The area is also widely used for horseback riding and mountain biking.

Summer is the season of heaviest use, when the area plays host to visitors from neighboring communities and Southern California, who camp in large family groups and use the site as an alternative to the nearby National Forest System campgrounds. During holiday weekends and periods of intensive use, Keyesville often finds itself acting as overflow for visitors to Lake Isabella.

Facilities within the Special Management Area include the raft launches at Slippery Rock, BLM South, and the Low Water Launch Site. A new site, Granite Launch, is being built to replace the Low Water Launch Site. These sites are available to all visitors, although commercial outfitting companies use them primarily. The area south of the Kern River has camping locations with fire rings, but, due to patterns of use, camping has overflowed these suggested sites, making them somewhat unrecognizable. Five vault toilets serve both north and south of the river around the launches and staging areas. Rented portable toilets are brought in to service crowds on three-day weekends.

Trails and routes that appeared on BLM surface management maps, aerial photographs, and USGS topographical maps at the time of the Caliente RMP (BLM 1997a) are considered designated, but many additional user-created routes exist. Many of these are widely accepted by the recreating public and have been given a variety of creative names. The BLM publishes a "Keyesville Special Management Area" brochure that identifies approximately 25 trails by name. In essence, all the trails within the area are user created and support the gamut of transportation modes, although OHV use is restricted south of Keyesville Road. Little to no signing of routes exists.

North Fork: Next to Sequoia National Park, north of the community of Three Rivers and about two hours north of Bakersfield, the North Fork Special Management Area provides public access to the North Fork of the Kaweah River. The area is accessed solely by the Tulare County road known as North Fork Drive. Principal activities in the area are water play, kayaking, fishing, and hunting.

Three sites service the area: Paradise, Advance Site, and Cherry Falls. A recent land survey showed that most of the Paradise site, including a constructed boardwalk, viewing platform, and stairs, is on private property. The remaining two sites provide parking, an informational kiosk, and pedestrian trails to access the river. *Although no visitation limits have been established the sites themselves are small and unsuited to the level of summer time visitation. Furthermore, opportunities to expand or add additional sites to increase carrying capacity are minimal as a result of the steep terrain.* All three recreation sites

were closed in 2007[40] to address resource concerns, *public safety* and gang activity in the area. As of this time, all three sites remain close, visitation has dropped, and management is essentially at a custodial level.

3.15.5 Visitor Use

Visitors to public lands primarily come from the local communities within the resource area. The region as a whole; including other ownerships, does receive a number of visitors from outlying areas, including international visitors attracted to the renowned Sequoia and Kings Canyon National Parks and the four National Forests within the Planning Area. Undoubtedly, the large visitor base to these other areas spills over to the National System of Public Lands.

Table 3.15-4 shows the total visitation to the Decision Area over six years by visits and visitor days. A visit is one person's trip to resource area public lands; a visitor day is one person engaging in an activity for any part of one day. Both visits and visitor days have steadily increased from 2004 through 2009.

Table 3.15-4
Trends in Visitation for the Decision Area (2004-2009)

	2004	2005	2006	2007	2008	2009
Visits	287,665	296,387	344,579	324,148[41]	344,899	377,208
Visitor Days	175,466	178,485	210,061	198,757	210,869	276,825

Source: BLM RMIS [2004-2008]

In the foreseeable future, recreation demand will continue to rise as it has done in recent years, and the anticipated visitor use will continue to increase. The driving force behind these increases beyond overall population growth is the increasing economic pressures, such as the cost of living increases and an unstable economy, that result in people seeking opportunities that meet their recreational needs and achieve their budgets.

Table 3.15-5 shows visitation estimates for the ERMA, SRMA and Special Management Areas (de facto SRMAs). An estimated 377,000 recreation users visited the Bakersfield FO Planning Area in 2009. The Keyesville Special Management Area accounted for over 58 percent of that total. The San Joaquin River Gorge SRMA had the next highest visitor count, at approximately 22 percent of total visitors counted, and is consistently increasing in popularity each year for residents and guests.

Table 3.15-5
Recreation Visitation (2009)

Recreation Area	Annual Visitors
Bakersfield FO ERMA	8,200
Chimney Peak	61,807
Keyesville Special Management Area	218,153
North Fork Special Management Area	0[42]
San Joaquin River Gorge SRMA	83,171

[40] *Federal Register*, Vol. 72, No. 160, Monday, August 20, 2007, Notices.
[41] Decrease in visitation most likely due to North Fork SRMA closure for public health and safety.
[42] North Fork SRMA was closed to public access in 2007 due to a number of resource concerns.

Piedras Blancas Light Station[43]	5,877

Source: BLM RMIS 2009

Table 3.15-6 illustrates the trends in visitation. Although visitation has increased overall for the RMP decision area since 2004, not all areas have experienced an increase in visitation over the past six years. The Chimney Peak and North Fork area have had a decrease in visitation, while the Keyesville and San Joaquin River Gorge area have generally increased.

Table 3.15-6
Trends in Visitation (2004-2009)

Name	2004	2005	2006	2007	2008	2009
Chimney Peak	74,221	74,992	69,500	73,200	72,563	61,807
Keyesville	142,590	147,551	164,556	166,700	173,559	218,153
North Fork	44,445	46,651	42,000	4,000	0	0
San Joaquin River Gorge	8,740	16,931	58,591	69,848	86,557	83,171

Source: BLM RMIS 2004-2009

Although not represented in these tables[44] there are areas of the dispersed use that has intensified, and the need for increased management exists. These areas are as follows:

- Case Mountain, whose basic facilities are inadequate for the recreational demand - Recreation use in the area has historically been from the local community, but more recently it has become a destination for more extensive mountain biking. As use and visibility have increased, the demand for access for other recreation has grown, including hunting, camping, and trail riding. Issues in this area are compounded by one legal public access and no parking and extremely sensitive biological resources.
- The Temblor Range, next to the Carrizo Plain National Monument and to the west of the community of Taft, has no facilities and no defined legal public access. However, approximately 24,000 acres of contiguous public lands are being used primarily for OHV activity. This alone would not warrant specific special management, but, due to recent closures of other off-road play areas, displaced users are relocating to the Temblor Range, and impacts of recreation on other resources are increasing.

3.15.6 Special Recreation Permits

A variety of commercial, competitive, and organized group uses occur within the RMP decision area. These uses are administered under SRPs, which allow specified recreational uses of public lands and related waters. The permits are issued to manage visitor use, protect natural and cultural resources, and provide a mechanism to accommodate commercial recreation.

[43]Data from recreation use permit receipts.
[44] As no specific visitor use data exists.

Only a handful of SRPs are requested of the Bakersfield FO and include several annual competitive events, a number of commercial outfitters, and permits for occasional events. Examples include permits for commercial whitewater rafting and equestrian enterprises, mountain bike races, and large group activities. In 2008, visitation resulting from SRPs accounted for less than five percent of total visits to the resource area.[45] Over the last ten years, the Bakersfield FO has issued 30 SRPs, many of which were issued for multiple years. Unfortunately, many activities that require SRPs occur without authorization, due to a lack of public knowledge about the program, and enforcement difficulty, due to the dispersed nature of BLM-managed public lands within the Planning Area.

3.16 Interpretation and Environmental Education

The description of interpretation and environmental education programs are discussed where appropriate under the resource giving rise to the interpretive or educational opportunity.

Special Designations

3.17 Areas of Critical Environmental Concern

FLPMA Section 103(a) defined an ACEC as an area within public lands where special management attention is required to protect and prevent irreparable damage to important and relevant historical, cultural, and scenic values, fish and wildlife and other natural systems or processes, and to protect life and safety from natural hazards. BLM regulations for designating and implementing FLPMA ACEC provisions are at 43 CFR 1610.7-2(a), and (b).

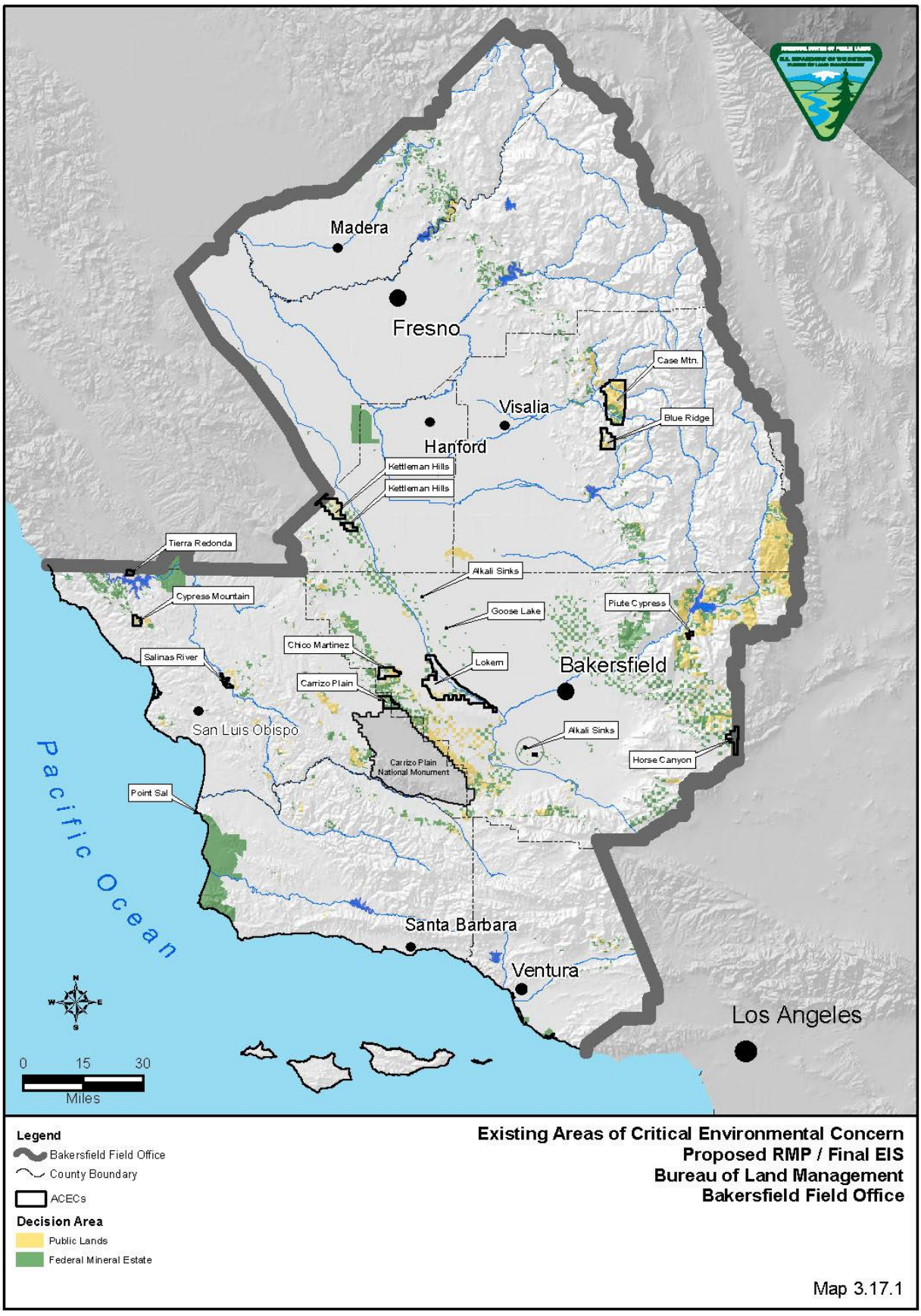
The Decision Area currently contains 13 designated ACECs (Map 3.17.1). In addition, through the public and internal scoping processes, a number of nominations for new or expanded ACECs were received. The BLM reviewed all such nominations to determine if they met the importance and relevance criteria required for consideration as an ACEC (BLM 2011a). Of the nominations received, nine new proposed ACECs met the criteria, as did additional areas to four existing ACECs. Although both existing and nominated ACECs have been determined to process relevant and import values, the need for special management of these areas is addressed through the land use plan.

[45]Data collected from RMIS for fiscal year 2008.

The size of each existing ACEC and the values it is designed to protect are listed in Table 3-17-1.

Table 3.17-1
Existing ACECs in the Decision Area

ACEC	ACEC Size (acres)	Values
Alkali Sinks ACEC (BLM 1997)	402	Rare iodine bush series vegetation and associated wildlife.
Blue Ridge ACEC (BLM 1984b)	4,758	California condor, a federally endangered species. The ACEC is within the Blue Ridge Critical Condor Habitat Zone, designated by the US Fish and Wildlife Service in 1976 (*Federal Register*, Vol. 41, No. 187, September 24, 1976).
Case Mountain ACEC (BLM 1997)	26,468	Sequoia groves and sensitive plant communities.
Chico Martinez ACEC (BLM 1984c)	4,607	Significant exposures of important paleontological resources and geologic rock type formations.
Cypress Mountain ACEC (BLM 1997)	1,080	Rare and unique plant communities and watershed values.
Goose Lake ACEC (BLM 1984c)	40	Unique cultural, plant, and wildlife communities, which are rare in the agricultural region of the valley.
Horse Canyon ACEC (BLM 1997)	2,830	Significant cultural values, traditional cultural practices, and natural resources.
Kettleman Hills ACEC (BLM 1997)	9,794	Significant paleontological resources and federally listed plant and animal species.
Lokern ACEC (BLM 1997)	6,632	Threatened and endangered species and associated habitats.
Piute Cypress ACEC (Public Land Order 3530)	1,104	Piute cypress grove and associated rare plant species.
Point Sal ACEC (BLM 1984c)	77	Unique cultural, visual, geologic, and biological resources, including rare, threatened, and endangered plant and animal species.
Salinas River ACEC (BLM 1997)	1,604	Exemplary riparian area.
Tierra Redonda ACEC (BLM 1997)	412	Paleontological resources, the unique sand dune formation, coast live oak woodland, and the type locality for the Tierra Redonda rock formation.
Total Bakersfield FO	**59,808**	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Fresno
Visalia
Hanford
Case Mtn.
Blue Ridge
Kettleman Hills
Kettleman Hills
Tierra Redonda
Alkali Sinks
Cypress Mountain
Goose Lake
Piute Cypress
Chico Martinez
Salinas River
Lokern
Bakersfield
Carrizo Plain
San Luis Obispo
Alkali Sinks
Horse Canyon
Carrizo Plain National Monument
Point Sal
Pacific Ocean
Santa Barbara
Ventura
Los Angeles
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
ACECs
Decision Area
Public Lands
Federal Mineral Estate
Existing Areas of Critical Environmental Concern
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.17.1

3.17.1 Existing Areas of Critical Environmental Concern

3.17.1.1 Blue Ridge ACEC (~~5,295~~ 5,281 acres[46])

The ACEC was originally designated for the protection of federally listed California condor, specifically roosting habitat, and continues to maintain these values. Located in central Tulare County nine miles north of Springville and 12 miles south of Three Rivers, the area encompasses the Blue Ridge Ecological Reserve and National Wildlife Refuge and contains all the public lands within the Blue Ridge Critical Condor Habitat Zone, designated by the U.S. Fish and Wildlife Service in 1976 (Map 3.17.1.1).

The Blue Ridge ACEC requires special management due to its importance in the recovery of the California condor. Management of the area is complicated by the land ownership patterns of the area; a mix of protected federal and state lands with private property where incompatible uses could occur.

3.17.1.2 Chico Martinez ACEC (4,607 acres)

The ACEC was designated originally for the protection of exposed paleontological and geological formations. It also contains habitat for state and federally listed wildlife species (San Joaquin kit fox, blunt-nosed leopard lizard, San Joaquin antelope squirrel) and sensitive plant species (Temblor buckwheat). The area is important because it is includes the type locations for named geologic formations (Zemorrian Stage). Furthermore, recent discovery of important cultural resources adds to the relevant values of this area.

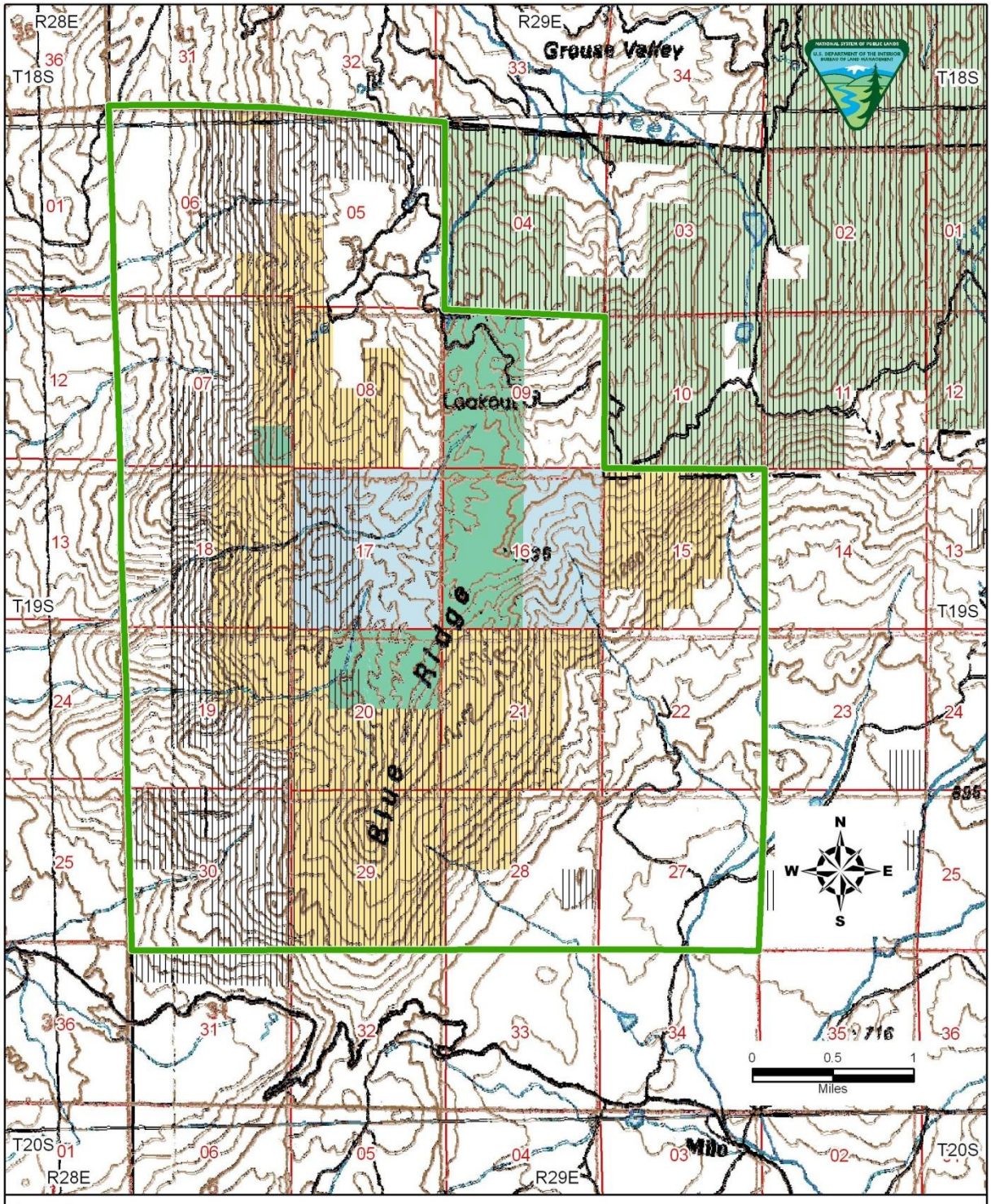
The Chico Martinez area requires special management for the protection of its unique geological formations. These type localities are recognized by the scientific community as the defining examples for specific geological strata. Management of the area also helps conserve and aid in the recovery of a number of rare species.

3.17.1.3 Cypress Mountain ACEC (1,080 acres)

The ACEC was designated due to the presence of two rare vegetation types: serpentine chaparral and northern interior cypress forest. The Sargent cypress populations on this public land are considered one of the two finest examples of this rare vegetation and the best in public ownership.

The Cypress Mountain area requires special management for the protection of the Sargent cypress groves and the conservation of the rare serpentine vegetation. As many as 11 rare plant species may occur within the ACEC boundaries.

[46] This acreage change reflects a correction due to a mapping error in the Draft RMP/EIS.


R28E
R29E
T18S
T19S
T20S
Grouse Valley
Lookout
Blue Ridge
Mile
N
S
E
W
0
0.5
1
Miles
Legend
ACEC Boundary
US Mineral Estate
Land Status
Bureau of Land Management
US Forest Service
US Fish and Wildlife Service
State
Private/Other
Blue Rdge
Area of Critical Environmental Concern
Bureau of Land Management
Bakersfield Field Office
Map 3.17.1.1

3.17.1.4 Horse Canyon ACEC (2,830 acres)

The ACEC was designated because of the high number of sensitive cultural resources. The area also supports several sensitive plant species and important paleontological resources.

Horse Canyon requires special management because the area contains significant cultural resources, *including specific locations* that are ~~*valued and*~~ sacred to living Kawaiisu people, which gives it special worth and consequence. It is also distinctive because it lies somewhat at an interface between several Native American groups and likely yield important information about trade, resource procurement, and prehistoric lifeways ~~*especially compared to any similar resources*~~. The cultural resources, sensitive plants, and paleontological resources also have qualities that make them fragile, sensitive, and exemplary and are vulnerable to adverse change from subdivision and development of the adjacent private land. *Significant deposits of agates occur throughout the area that has been the focus of both commercial and private collectors for the past fifty years. Due to the likely co-occurrence of prehistoric stone tool material quarries with the agate deposits, the cumulative impacts of mineral specimen collecting in this area threatens the integrity of these sensitive cultural sites. The agate collecting locations occur on both private and BLM administered lands. There is currently no legal public access to the public land agate sources in this area.*

3.17.1.5 Point Sal ACEC (77 acres)

The ACEC was established due to the presence of notable cultural resources. ~~*The archaeological sites are unique and among the premiere cultural resources along the southern coast region of California.*~~ The *ACEC contains the Point Sal Ataje National Register* District ~~*is on the National Register of Historic Places*~~. This *National Register of Historic Places listing* gives the archaeological district special worth, consequence, meaning, and distinctiveness, especially compared to any similar resources. The archaeological district also has qualities or circumstances that make it fragile, rare, irreplaceable, exemplary, unique, and vulnerable to adverse change. The ACEC also provides habitat for protected marine mammals and rare plants and contains good examples of coastal vegetation.

The Point Sal area requires special management to protect irreplaceable cultural resources, to help in the conservation of marine mammals and rare plants, and to preserve a vegetation type rapidly disappearing in other parts of coastal California.

3.17.1.6 Salinas River ACEC (1,604 acres)

The ACEC contains two rare plant species (*Cammissonia hardhamiae* and *Chorizanthe rectispina*) and a riparian system containing several rare plant communities such as central coast live oak riparian forest, central coast arroyo willow riparian forest, sycamore alluvial woodland and central coast riparian scrub. In addition, critical habitat for the South Central California Coast Steelhead ESU occurs within the ACEC on non-BLM land. Western pond turtle, a BLM California sensitive species also is present and this ACEC provides critical migratory and nesting habitat for Neotropical Migrating Birds.

The Salinas River area requires special management because the riparian zone along the river harbors a diversity of plants and animals, including rare and special management species, many of which are not found elsewhere in the Bakersfield Field Office. The sensitive plant and animal species and riparian habitats are fragile, sensitive, and vulnerable to adverse change.

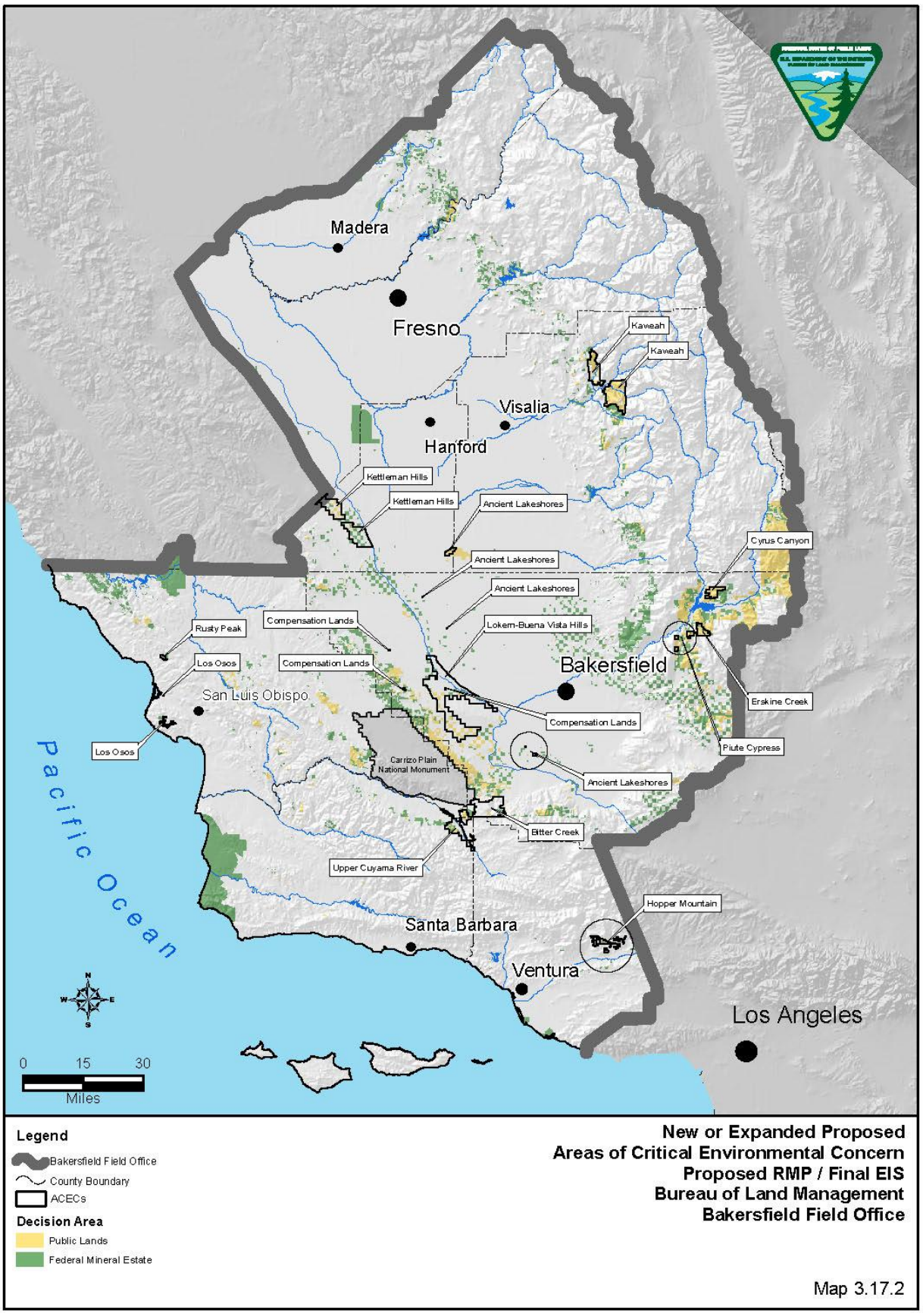
3.17.1.7 Tierra Redonda ACEC (412 acres)

The ACEC is notable for a variety of botanical and geological resources. The site contains sensitive plant species, and is one of the largest concentrations of species of the native herb, *Chorizanthe*. It is the type locality for the Tierra Redonda formation and contains an excellent example of the Vaqueros formation, some unusual sand dunes (geological formations), and paleontological resources.

The Tierra Redonda ACEC requires special management to conserve habitat for sensitive plants and to preserve the conditions responsible for the presence of so many *Chorizanthe* species. Focused management is also needed to protect the type locality for the Tierra Redonda formation and the scientifically important example of the Vaqueros formation. Very little land administered by the Bakersfield FO within the Coast Ranges is underlain by the Vaqueros or Tierra Redonda Formations. This site provides students and scientists the opportunity for continued study of the geology, stratigraphy and paleontology of these rocks.

3.17.2 Proposed and Expanded Areas of Critical Environmental Concern

The proposed and expanded ACECs are displayed on Map 3.17.2.


Madera
Fresno
Visalia
Hanford
Bakersfield
San Luis Obispo
Santa Barbara
Ventura
Los Angeles
Pacific Ocean
Kaweah
Kaweah
Kettleman Hills
Kettleman Hills
Ancient Lakeshores
Ancient Lakeshores
Ancient Lakeshores
Cyrus Canyon
Compensation Lands
Compensation Lands
Compensation Lands
Rusty Peak
Los Osos
Los Osos
Lokern-Buena Vista Hills
Erskine Creek
Piute Cypress
Carrizo Plain National Monument
Ancient Lakeshores
Bitter Creek
Upper Cuyama River
Hopper Mountain
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
ACECs
Decision Area
Public Lands
Federal Mineral Estate
New or Expanded Proposed
Areas of Critical Environmental Concern
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.17.2

3.17.2.1 Ancient Lakeshores (1,985 acres)

This proposed ACEC combines Alkali Sink and Goose Lake ACECs and is expanded to include the Sand Ridge portion of Atwell Island that shares similar relevance values and exhibits the same importance criteria. It includes five locations in the southern San Joaquin Valley to protect both prehistoric cultural resources and habitats that developed on the lakeshores of the Tulare, Buena Vista, Goose, and other lakes that once dominated the area.

The Sand Ridge portion of Atwell Island contains significant archaeological sites indicating the area's occupancy as far back as the late Pleistocene. A number of these sites are eligible for inclusion in the National Register of Historic Places.

The habitats present exhibit prime examples of rare alkali sink communities and iodine bush series vegetation. The parcels also contain potential habitat for federally listed endangered species (San Joaquin kit fox and Tipton kangaroo rat) and a number of BLM sensitive plant species. The rare communities and vegetation types have largely been extirpated from the Central Valley by development such as conversion to agricultural fields and urbanization. This is exacerbated by pressure from competing plant species (perennial pepperweed and salt cedar) which have heavily infested portions of the area.

Portions of the proposed ACEC are considered to have high potential for the occurrence of oil and gas, and a portion is currently under lease. Development of which could put further pressure on the relevant values. In addition, illegal dumping and encroachment from adjacent agricultural activities continues to be a problem.

3.17.2.2 Bitter Creek (6,121 acres)

This proposed ACEC lies within ~~*and adjacent to,*~~ the Bitter Creek National Wildlife Refuge *Approved Acquisition Boundary*; which serves as a release and capture site for the southern California population of the federally listed California condor. The area contains Headwall Oaks, an important roosting area; supplemental feeding stations and is within the Southwestern Kern County essential condor area. Supplemental feeding in the Bitter Creek and nearby areas are particularly important for encouraging condors to forage away from the nesting areas at Hopper Mountain National Wildlife Refuge in Ventura County where there are hazards associated with the recreational activities, communication sites and oilfields. The Bitter Creek National Wildlife Refuge is closed to the public to protect refuge resources. *In addition, National Wildlife Refuges are closed to oil and gas leasing unless Secretarial approval and specified circumstance require leasing*. For these reasons, the area has more than local significance, when compared to other condor habitat.

The condor roosting and foraging habitat requires special management attention because condors are particularly vulnerable to interactions with humans and even other wildlife. California condors are also one of the world's rarest and most imperiled vertebrate species. Currently, the most serious sources of human related mortality are lead poisoning, shooting, collision with powerlines, and the ingestion of small pieces of garbage. Recently, three condors have been lost to a mountain lion in the area.

The area is currently managed as the Bitter Creek Special Management Area, which closes the area to any fluid mineral leasing. *This closure is consistent with the closure to oil and gas leasing on National Wildlife Refuges and ensures all federal mineral estate within the Congressionally Approved Acquisition boundary for the Bitter Creek National Wildlife Refuge remains unleased*.

3.17.2.3 Compensation Lands (283 acres)

This proposed ACEC would contain and assimilate all lands acquired as compensation for *third-party* habitat disturbance. *Compensation land may be donated to BLM or contributed funds may be provided to BLM to acquire compensation lands*. It is the nature of compensation lands that they possess important wildlife resources and natural systems that have been identified for the conservation and recovery of threatened and endangered species. *These lands have been identified in Recovery Plans (e.g., Recovery Plan of Upland Species of the San Joaquin Valley) as important to conserve*. The acquisition and management of compensation lands *may also* fulfill a permit requirement under the Federal Endangered Species Act ~~*or California Endangered Species Act*~~. As these lands have been specifically acquired for the protection of ~~*these*~~ *certain* values they are distinctive and more than locally significant.

The lands may also have qualities or circumstances resulting from the acquisition transaction[47] (e.g., deed restrictions) that require special management attention to ensure that these lands are managed over the long term consistent with the purposes for which they were acquired.

3.17.2.4 Cyrus Canyon (5,374 acres)

This proposed ACEC, located to the southeast of Kernville, contains a significant population of Kelso Creek monkeyflower, *Mimulus shevockii*, as well as other rare plant species. This is the northern most extent of this diminutive, narrowly distributed and rare monkeyflower. The area is important in the conservation of the monkeyflower since many of the other populations of this rare plant occur on private land and are subject to impacts from development. The species is known from only 10 populations and has a total range of only 70 square miles in the Kelso Creek and Cyrus Canyon drainages.

The Kelso Creek monkeyflower habitat in Cyrus Canyon has been degraded by urban encroachment, livestock grazing, wildfire, and motorized vehicle travel. A road through one large population was previously closed by BLM, but a subsequent illegal bypass has resulted in continued camping and target shooting activities in the area, with concurrent habitat destruction. Most of the proposed ACEC is currently available for livestock grazing, except for the land recently acquired *which has not been allocated for livestock grazing*. Livestock grazing has contributed to soil disturbance within the main monkeyflower population. Therefore, this area requires special management to conserve habitat for these rare plant populations and help minimize the need to list this species as federally threatened or endangered.

Because the small population of M. shevockii in Cyrus Canyon is distant from the larger population in Kelso Valley, it is especially important to be conservative with its management. Even without scientific studies for this plant, we have basic biological and ecological knowledge that we can base our management prescriptions on. While some native annual plants can benefit from grazing, these tend to be more widespread ruderal species, not uncommon species with limited habitat and distributions like M. shevockii. Grazing typically disturbs soil structure and may crush very small plants like M. shevockii. Furthermore, grazing can promote exotic annual grasses and Erodium (filaree) that may compete with M. shevockii. To subject this very uncommon plant to these pressures seems unlikely to allow the population to expand to its fullest extent. Since M. shevockii occurs on gravel soils in the bottom areas of the canyon, natural water-related disturbances may be important to maintain the population.

[47] Any such circumstances were made in conformance with FLPMA and Department of Justice title standards.

Furthermore, like all annual plants, its location and extent is variable among years dependent on the timing and magnitude of climatic events. For these reasons, protecting the surrounding watershed from the impacts of surface disturbing activities, including livestock grazing, is most likely to allow the species to succeed.

Some of the Kelso Valley populations, managed by the Ridgecrest BLM Field Office, may be grazed by livestock and they are considering a future study. That area has several populations of M. shevockii and is likely to be more resilient to any negative impacts that may occur. Many of the Kelso Valley populations are found in areas supporting more perennial forages than Cyrus Canyon which lend themselves to more opportunities for a variety of grazing scenarios. Bakersfield BLM Field Office will continue to collaborate closely with the Ridgecrest biologists to determine whether livestock grazing on those populations has a positive, neutral or negative impact on the species.

3.17.2.5 Erskine Creek (4,019 acres)

This proposed ACEC; located approximately three miles southeast of the town of Lake Isabella, and adjacent to the Sequoia National Forest, is identified for protection of wildlife, natural systems and processes, including sensitive plants (Kern county larkspur, Piute Mountain jewelflower) and animal species (Townsend's big-eared bat), a riparian plant community and rare geologic features contained in marble/limestone outcrops. Several vertical caves are known to occur in the area, of which there are few examples within the Planning Area, giving the area more than local significance. The location of these public lands; adjacent to communities of Lake Isabella and Bodfish, puts these sensitive values at risk urban encroachment.

The majority of the area is within the Monache-Walker Pass National Cooperative Land and Wildlife Management Area (NCLWMA) established on January 26, 1962, by Public Land Order 2594 and approximately two thirds occur within the Piute Cypress Wilderness Study Area (WSA).

The Erskine Creek area requires special management to preserve important geological features and to conserve important habitat for sensitive plants and animals The area is currently managed as the Erskine Creek Special Management Area, which closes the area to any fluid mineral leasing, recommends the proposal of a portion of the area for withdrawal from the mining laws and restricts grazing within the riparian area if resources concerns can be met.

3.17.2.6 Granite Cave (42 acres)

This proposed ACEC, located on the northern slopes of the Piute Mountains overlooking the community of South Lake, contains significant cultural resources and is considered an important location for Traditional Cultural Practices by local Native Americans. In addition the cave itself is rare geologic feature within the landscape with more than local significance. The area is currently managed as the Granite Cave Special Management Area, which imposes a No Surface Use stipulation on any fluid mineral leasing.

3.17.2.7 Hopper Mountain (4,974 acres)

This proposed ACEC, located adjacent to three important California condor areas; the Sespe Condor Sanctuary; Hopper Mountain Wildlife Refuse; and Sespe-Piru Critical Condor Area, and provides roosting and nesting habitat for the federally listed species. Considered to be the only area used by the southern California condor population for nesting gives the area distinction and greater than regional significance.

In addition, the area includes one of the last remaining intact stands of black walnut in southern California.

The nesting habitat also has qualities that make it sensitive and vulnerable to adverse change. Noise could cause adult birds to repeatedly flush from, or eventually abandon a feeding site, an active nest or prevent them from choosing an otherwise suitable habitat as nest site. General human activity could discourage condor use of habitat that may otherwise be suitable for nesting, perching roosting or foraging. Condors have been known to ingest small items such as bottle caps, nails, screws, nuts, washers, rags, electrical components and wire. Sixteen of the recent condor chicks hatched in the wild have been determined to have microtrash in their digestive tracts, eight have died, two were removed from the wild for recuperation, and two had emergency surgery and were returned to the wild.

The Hopper Mountain area requires special management to protect important habitat for the endangered California condor. The area is currently managed as the Hopper Mountain Special Management Area, which imposes a Limited Surface Use stipulation on any fluid mineral leasing, for protected species and recommends proposal of the area for withdrawal from the mining laws.

3.17.2.8 Irish Hills (1,654 acres)

This proposed ACEC, located approximately six miles southwest of the city of San Luis Obispo and southeast of Montana de Oro State Park, is identified for the protection of natural systems, including rare and endemic plant species and communities. The numbers of rare plant species and extent of their populations is considered unique and exemplary, giving the area more than local significance.

The Irish Hills area requires special management to conserve important coastal habitat for a suite of rare species. This is especially important in light of ongoing development and loss of native habitat in coastal California. Protection of this area is consistent with efforts by State and local government to preserve natural areas in this part of California.

The area is currently managed as the Irish Hills Special Management Area, which imposes a Limited Surface Use stipulation on any fluid mineral leasing.

3.17.2.9 Kaweah ACEC (27,041 acres)

The proposed ACEC expands and renames the Case Mountain ACEC to include the North Fork of the Kaweah River (and surrounding lands) which share similar relevance values and exhibit the same importance criteria. *Although these areas are geographically separated, the underlying karst geology and presence of caves extends throughout both areas*. The area includes several large parcels of public lands, including two WSAs, and is highlighted for the protection of special status species and natural systems and process, including several giant sequoias groves and extensive cave systems occurring in the karst formations present.

In addition to the giant sequoia groves, a number of special status species occur in the *Case Mountain* area. California spotted owls and pileated woodpeckers have been observed in the mixed conifer and sequoia groves. Habitat is considered to be in excellent condition for the habitation of these two bird species. Pacific fisher has been documented along Salt Creek Road and several bat species, including four BLM-sensitive species, long-eared myotis, fringed myotis, western small-footed myotis, and spotted bat make use of the area. Southwestern pond turtles occur along Salt Creek with high numbers of juvenile pond turtles occur in the associated ponds. Two plant species, Kaweah brodiaea (state-listed as

endangered) and Sequoia gooseberry (a BLM-listed sensitive species), are found growing in the area, and several hundred acres of suitable habitat exist for both.

The North Fork area contains the Advance Colony site, a part of the Kaweah Colony, a socialist utopian society formed in the 1880's. In 1886 they established Advance, a construction camp along the North Fork of the Kaweah, to access timber lands about eight miles to the east. Road construction began about three miles to the north of Advance and terminated in untouched forests of sequoia and other conifers. After four years of hand-labor, the road was finished and a lumber mill erected. By 1892 the settlements were abandoned.

Visitor use of these two areas differs greatly with Case Mountain historically receiving low visitation in part due to its restricted public access. In contrast the North Fork of the Kaweah contains three specifically developed recreation sites (currently closed) and has historically high visitation in excess of the carrying capacity of recreation developments. The North Fork area has also been prone to issues with vandalism, trash, and other resource damage and public safety concerns.

There are no known mines within the proposed ACEC; however there are prospects for uranium, feldspar and tungsten. The potential for economic development of these minerals is considered low. There are no oil and gas leases within the proposed ACEC.

The Kaweah ACEC requires special management to protect habitat for sensitive plant and animal species, to insure the conservation of important groves of giant sequoias, and to protect the integrity of karst formations and associated cave systems.

3.17.2.10 Kettleman Hills ACEC, (13,695 acres)

The proposed ACEC expands the existing 9,794-acre Kettleman Hills ACEC to include the Kettleman Middle Dome area, which contains similar values of relevance and importance. The areas have important wildlife resource and natural system values as they contain occupied habitat for several San Joaquin Valley federal/state listed plant and animal species (including the San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, LeConte's thrasher, and San Joaquin wooly-threads). The areas provide a large scale remnant where the ecological process of the Valley upland habitats maintains ecological function and processes. The area forms a habitat linkage along the west side of the Valley for most of the assessed species and has been identified as a core recovery area. In addition, the area is known to contain significant paleontological resources that meet the relevant and importance criteria.

Some habitat damage has occurred due to sheep grazing and OHV trespass. Off highway vehicle activity and hill climbs have increased in recent years where access is not controlled. Saltbush populations have disappeared across a large portion of the landscape or been depressed in some locations because of wildfire and grazing. The loss of shrubs has eliminated habitat for shrub-dependent species such as LeConte's thrasher and sage sparrow. Oil was first successfully produced here in 1928, and has since produced over 440 million barrels of oil from Eocene, Oligocene, and Miocene reservoirs. The area has seen a recent increase in oil development. There has also been some mining of clay and gypsite from the area.

The Kettleman Hills ACEC requires special management to protect important habitat for listed and sensitive species and to preserve the integrity of the area as a habitat corridor in the San Joaquin Valley.

This is especially important because much of the native habitat in the Valley has been lost to agriculture and other development.

3.17.2.11 Lokern – Buena Vista (15,465 acres)

The proposed ACEC expands the existing Lokern ACEC to include the Buena Vista area, which contains similar values of relevance and importance. The proposed area would be divided between two units; the Lokern Unit – located in western Kern County, east of the Temblor Mountain Range, north of the Elk Hills Range, and southwest of the town of Buttonwillow, and the Buena Vista Unit – directly southwest west of the Lokern Unit and northeast of the City of Taft.

These units are identified for the protection of both wildlife and natural systems. The area forms one of the largest relatively undeveloped remnants of the San Joaquin Valley natural habitats that sustain populations of the federally listed San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, Tipton kangaroo rat, and State listed San Joaquin antelope squirrel. The area is also noted for its populations of the federally listed Kern Mallow along with several other BLM-sensitive plant species.

The Lokern Unit is considered to have high potential for the occurrence of oil and gas. Several oil and gas leases have been issued for the area, which is adjacent to several major oil fields. Interest in the area continues as demonstrated by several large scale geophysical exploration projects and recent exploration wells.

Two existing grazing leases occur in the Lokern Unit. Several rights-of-ways for pipelines, transmission lines and roads occur in the area. There has been recent interest in potential solar development due to the flat terrain and proximity to existing electric transmission lines. There are no active mining claims. Wide-spread damage from unauthorized use, theft, vandalism, and trespass occur within the Lokern Unit. Household dumping has occurred on a regular basis.

The Buena Vista unit is known to have high potential for the occurrence of oil and gas. There are current and long-existing oil and gas operations in portions of the area. In some sections containing long-existing oil field development, habitat disturbance exceeds the 10 percent objective for reserves. Habitat restoration has been initiated to reduce the habitat disturbance in excess of the 10 percent objective. Continued exploration and development is expected in the area and large scale geophysical exploration surveys have been proposed.

The Lokern-Buena Vista ACEC requires special management to preserve listed and sensitive species as well as to preserve an important large remnant of natural habitat in the San Joaquin Valley. The area is more than locally significant as it has been identified by the U.S. Fish and Wildlife Service as reserve areas for endangered species management to promote the conservation and recovery of endangered species.

3.17.2.12 Los Osos (5 acres)

The proposed ACEC is located within the town of Los Osos; it is contiguous with Morro Bay State Park and comprises a portion of the “greenbelt” connecting the area to Montana de Oro State Park. The area is identified for the protection of significant cultural values, wildlife and natural systems. The archaeological sites present display qualities that indicate eligibility for inclusion to the National Register of Historic Places; adding to their importance is the fact that many similar local sites have been lost due to urbanization and residential development. Biological values in the area include habitat for two

endangered species (Morro Bay kangaroo rat, and Morro shoulderband snail) including designated Critical Habitat for the Morro shoulderband snail; a threatened plant species (Morro Manzanita); along with several sensitive plant species (San Luis Obispo wallflower and sand almond); and several rare and endemic plant communities (coastal dune scrub, central maritime chaparral, and pygmy oak forest). The proximity to the adjacent urban area and associated pressures from unmanaged use, places these sensitive, fragile and vulnerable values at risk.

3.17.2.13 Piute Cypress ACEC (2,517 acres)

The proposed ACEC expands the existing Piute Cypress ACEC boundary to include several parcels of non-contiguous public lands containing similar resource values. *These areas, on Hobo Ridge, were discovered to contain groves of Piute Cypress during fieldwork associated with the post-fire recovery planning in 2010*. The existing ACEC is identified for the protection of natural systems, specifically the rare Piute Cypress plant community. The Piute Cypress community present is the largest and oldest colony comprising 50 percent of the total known range of the species.

The Piute Cypress area was identified through Public Land Order 3530 (30 FR 1193) on January 29, 1965 as a Natural Area [Secretarial designation] withdrawn from all forms of appropriation under the public land laws, including the mining laws, except the mineral leasing laws. Guidance provided in BLM Manual 1613 (BLM, 1988) indicates that overlapping ACEC designation is appropriate where special management provided by the ACEC is required to protect resources values in addition to the protection provided by the previous designation. The area is adjacent the USFS Piute Cypress Botanical Area and within the Monache-Walker Pass National Cooperative Land and Wildlife Management Area (NCLWMA) established on January 26, 1962, by Public Land Order 2594.

The area has moderate potential for *gold, silver*, tungsten and associated locatable minerals. It also has moderate potential for geothermal resources.

3.17.2.14 Rusty Peak (787 acres)

The proposed ACEC, located approximately eight miles west of Atascadero, and six miles north of Morro Bay in San Luis Obispo County, is identified for the protection of natural systems. Specifically the area contains rare plant communities and species (BLM Sensitive) endemic to the serpentine soils found in the area that are unique to the Decision Area and in limited extent on public lands nationwide.

Small amounts of chromite were produced from two mines within the area; in addition, there is a copper prospect with low to moderate potential for the occurrence of additional chromite. The potential for economic deposits of copper is extremely low. There are no oil and gas leases or mining claims and no land use authorizations.

The area is currently managed as the Rusty Peak Special Management Area, which imposes a Limited Surface Use stipulation on any fluid mineral leasing.

3.17.2.15 Upper Cuyama Valley (8,935 acres)

The proposed ACEC, located near the intersections of Santa Barbara, San Luis Obispo, Ventura, and Kern Counties (including acreage in each county), is identified for the protection of wildlife and natural systems. The area contains important habitat for blunt-nosed leopard lizard, Kern primrose sphinx moth, California jewelflower, and San Joaquin kit fox and has been identified in the *Recovery Plan for Upland*

Species of the San Joaquin Valley as being critical for the protection of these species. Accumulation of these factors gives the area a distinct nature from surrounding lands and regional significance to protection efforts.

The Cuyama Valley has largely been converted to irrigated farmland (crops, vineyards and orchards); as such, the remnants of habitat found in the proposed area are increasingly susceptible to adverse change and encroachment from these land uses.

3.17.3 Areas Dropped From Further Consideration

The areas dropped from further consideration are displayed on Map 3.17.3.

3.17.3.1 Atwell Island (7,145 acres)

The area was nominated through the public scoping process. After examination, the area has been determined to meet the relevance criteria for wildlife resource and natural systems because it contains habitat for threatened and endangered wildlife species and permanent and seasonal wetlands. The area does not however, meet the importance criteria as it does not present more than locally significant populations of these species and is not particularly vulnerable to adverse change as the area receives specific project management through an agreement with BOR.

3.17.3.2 Carrizo Plain Natural Area ACEC (121 acres)

The majority of the ACEC was incorporated into the Carrizo Plain National Monument (CPNM); therefore managed though a separate RMP (BLM, 2010b); the remainder of the ACEC is still subject to Bakersfield FO management. After review this area does not exhibit the significant historic, cultural, or scenic values, nor the same wildlife values or natural process and systems that occur within the larger portion of the original ACEC now managed as the CPNM. Therefore, it is determined this area no longer meets the relevance and importance criteria for designation as an ACEC.

3.17.3.3 Chimineas Ranch (6,594 acres)

This area was nominated through the public scoping process. After examination, the area has been determined to meet the relevance criteria for wildlife resource because it contains habitat for endangered and threatened wildlife species. The nomination also suggested the area contributes to a corridor linking Los Padres National Forest and CPNM. The area does not however, meet the importance criteria as it does not present more than locally significant assemblages of threatened and endangered species habitat and is not particularly vulnerable to adverse change as it is surrounded by CDFG Ecological Reserve and USFS lands.

3.17.3.4 East Temblor Range (16,380 acres)

This area was nominated through the public scoping process. After examination, the area has been determined to meet the relevance criteria for wildlife resource and natural systems because it contains habitat for threatened and endangered wildlife species, including known occurrences of the federally listed giant kangaroo rat, San Joaquin kit fox and blunt-nosed leopard lizard, and California listed San Joaquin antelope squirrel. The habitat present is considered marginally suitable for many of the San Joaquin suite of species due to the steep terrain and is not identified in the *Recovery Plan for Upland Species of the San Joaquin Valley* as a reserve or corridor area. A rare plant association (*Ericameria linearifolia) occurring within the upper Sonoran sub-shrub scrub community* also occurs through portions

of the area; however these populations are not considered important on a regional scale. *Specifically, the upper Sonoran sub-shrub scrub association extends from "The arid hills around the head of the San Joaquin Valley from Adobe Canyon northeast of Bakersfield southwest through the Tehachapi Mountains and the San Emigdio Range, thence northwest along the east side of the Temblor Range" (Twisselmann 1956). Additionally, Holland (1986) indicates the community extends "north along the rain shadow of the Inner South Coast Ranges to Alameda County. The Tucker Oak woodland is also found in the Temblor and San Emigdio ranges of Kern County (Twisselmann 1956). Holland (1986) gives the distribution as "Inner South Coast Ranges from the Salinas Valley area south into the Tehachapi Mountains and northern Los Angeles County".*

While the area serves as a linkage between the CPNM and the western San Joaquin Valley, it lacks the importance criteria because it is not identified in the SJV Recovery Plan as a reserve or core area. The area is, however, exposed to increasing off-highway vehicle use and route proliferation and localized surface mining, but standard management practices are deemed adequate to protect these resources.

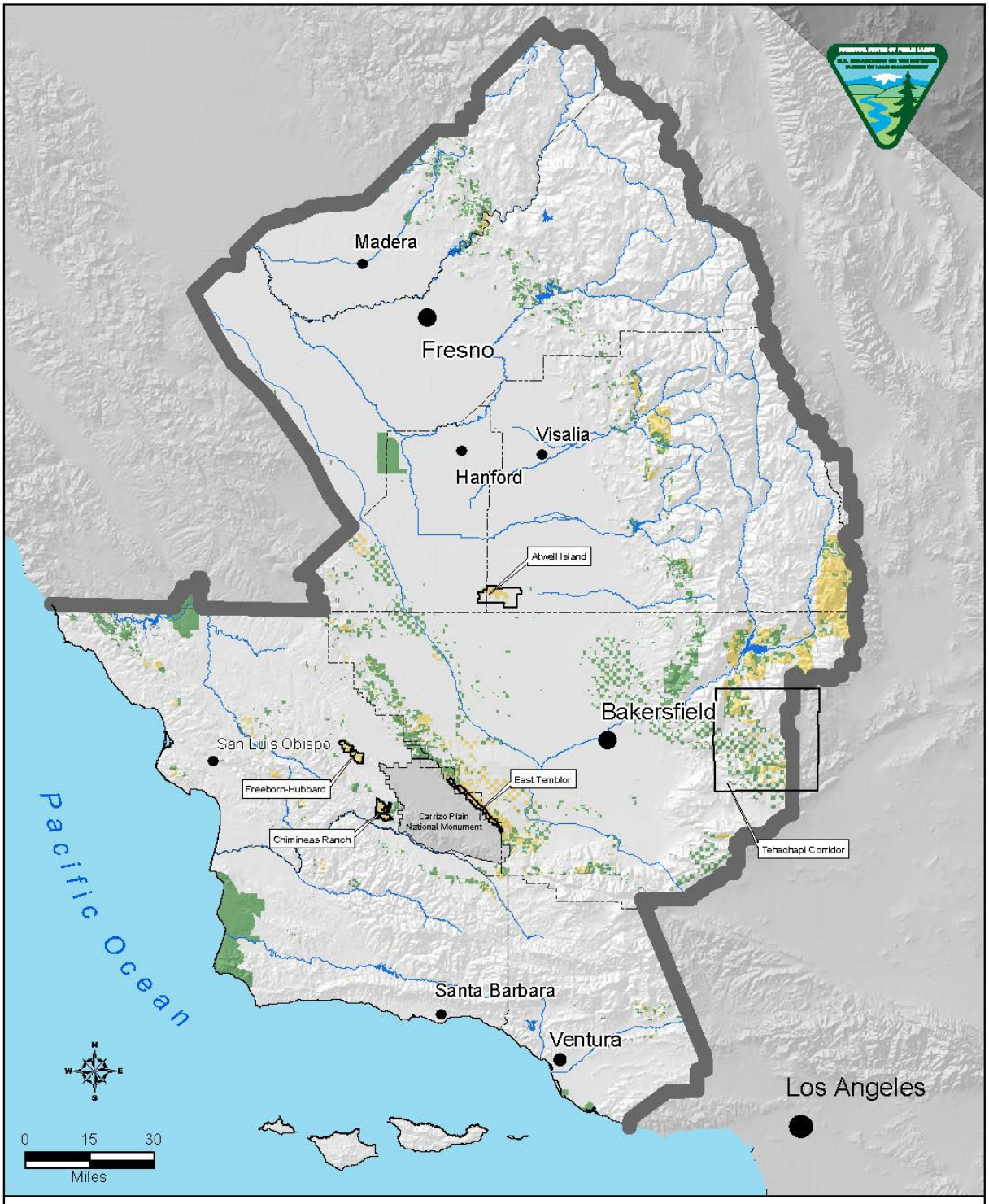
3.17.3.5 Freeborn Mountain-Hubbard Hill (6,986 acres)

This area was nominated through the public scoping process. After examination, the area has been determined not to meet the relevance and importance criteria for significant scenic values, natural systems or processes. While these mountain peaks are closer to the valley floor and are therefore prominent in the middle-ground view, they are similar to the adjacent Los Padres National Forest backdrop. The mixed chaparral-blue oak woodlands present are not unique or exemplary when compared to other plant communities of the same type and the area is not considered to be a unique or rare geologic feature. Of the values present none are determined to be vulnerable to adverse change.

3.17.3.6 Tehachapi Corridor (201,234 acres)

This area was nominated through the public scoping process. After examination, the area has been determined to meet the relevance criteria for wildlife resource and natural system because it contains rare plant and animal species (*including Kern Primrose Sphinx Moth and California condor)* and habitat that are essential for maintaining species diversity and genetic linkages. *In addition, the Tehachapi area demonstrates a high level of biodiversity attributed to the unique conjunction of geography, geology, and climes*. The nomination suggests important corridor linkages between Coast, Transverse, and Sierra Nevada Ranges, and the Mojave Desert.

While the area contains rare species and important habitat, it does not meet the importance criteria as it does not have more than locally significant qualities when compared to other similar resources within the Tehachapi corridor region. The wildlife resource and natural system on public land is not particularly rare or vulnerable to adverse change as BLM can control uses that would decrease the contribution of public lands to a functioning corridor.


Madera
Fresno
Visalia
Hanford
Atwell Island
Bakersfield
San Luis Obispo
Freeborn-Hubbard
East Temblor
Carrizo Plain National Monument
Chimineas Ranch
Tehachapi Corridor
Pacific Ocean
Santa Barbara
Ventura
Los Angeles
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
ACECs
Decision Area
Public Lands
Federal Mineral Estate
Proposed ACECs Dropped from Further Consideration
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.17.3

3.18 Outstanding Natural Areas

The Decision Area contains one Outstanding Natural Area: the Piedras Blancas Historic Light Station designated by Congress under the Consolidated Natural Resources Act and signed by the President on May 8, 2008. With this designation, Congress also added the Piedras Blancas Light Station to the BLM's National Landscape Conservation System. Furthermore, the following eight congressional findings were made to guide future management of the ONA:

> (1) The publicly owned Piedras Blancas Light Station has nationally recognized historical structures that should be preserved for present and future generations.
>
> (2) The coastline adjacent to the Light Station is internationally recognized as having significant wildlife and marine habitat that provides critical information to research institutions throughout the world.
>
> (3) The Light Station tells an important story about California's coastal prehistory and history in the context of the surrounding region and communities.
>
> (4) The coastal area surrounding the Light Station was traditionally used by Indian people, including the Chumash and Salinan Indian tribes.
>
> (5) The Light Station is historically associated with the nearby world-famous Hearst Castle (Hearst San Simeon State Historical Monument), now administered by the State of California.
>
> (6) The Light Station represents a model partnership where future management can be successfully accomplished among the Federal Government, the State of California, San Luis Obispo County, local communities, and private groups.
>
> (7) Piedras Blancas Historic Light Station Outstanding Natural Area would make a significant addition to the National Landscape Conservation System administered by the Department of the Interior's Bureau of Land Management.
>
> (8) Statutory protection is needed for the Light Station and its surrounding Federal lands to ensure that it remains a part of our historic, cultural, and natural heritage and to be a source of inspiration for the people of the United States.

Piedras Blancas is on California's central coast, north of San Simeon. The area is named for white rock outcrops just off the end of the point. In the early 1870s, this location was chosen to fill the gap between the lighthouses at Point Conception and Point Sur. Prior to the construction of the lighthouse, Piedras Blancas had cultural significance to Native Americans; these values are present in the form of archaeological sites and the desire for access from Native American communities for traditional cultural and religious purposes.

The lighthouse and a two-story Victorian dwelling were completed in 1875. The original tower was 110 feet tall and housed a first-order Fresnel lens. A fog signal building and an additional keeper's dwelling were added in 1906. Employees of the US Lighthouse Service operated the facility until 1939, when the Coast Guard assumed control. New automated technology eventually replaced many of the functions of the lighthouse keepers. The Coast Guard relinquished control and management of the Piedras Blancas Light Station to the BLM on October 12, 2001.

The light station is currently managed in accordance with several activity level plans: the Piedras Blancas Historic Light Station Management Plan (BLM 2007c), the Piedras Blancas Business Plan 2009-2013 (BLM 2008d), and the Piedras Blancas Interpretative Plan (BLM 2008e); however this RMP will serve as the land use plan for this area. Through these plans the Light Station historic structures are being restored, repurposed, and rebuilt with the goal of presenting the area in its early twentieth century appearance. All work is subject to SHPO concurrence through an existing Memorandum of Agreement (2007).

The interpretive program provides routine public access through guided tours of the Light Station. These tours currently run three times a week with annual attendance of approximately 5,000 visitors. In addition to the educational experiences provided by the historic setting, an accessible trail circumvents the site providing wildlife viewing opportunities.

The Light Station is adjacent to lands managed by California State Parks whom through an agreement provide access for administrative purposes and public tours.

3.19 Back Country Byways

The BLM developed the Back County Byway Program to complement the National Scenic Byway Program established by the US Secretary of Transportation. Back County Byways highlight the spectacular nature of the western landscapes. These routes vary from narrow graded roads that are passable only during a few months of the year to two-lane paved highways with year-round access.

The Bakersfield FO maintains one Back County Byway, Chimney Peak (Map 2.6.4)[48]. The Byway passes through more than 50,000 acres of designated Wilderness in a transition zone between the Mojave Desert and the Sierra Nevada. The predominant pinyon-juniper woodlands provide habitat for black bear, bobcat, mountain lion, and mule deer. The remoteness and solitude found in the area lends a feeling of the old west and provides a glimpse into a past era. Along this Byway are numerous examples of the diverse resources found on public lands, including wildlife habitat, wilderness, cultural resources, and outdoor recreation opportunities. The Byway offers a unique opportunity to drive a seldom traveled route through the southern Sierra Nevada. Along the way visitors may enjoy scenic views, picnicking, camping, hiking, or simply traveling along the backcountry route.

The Byway provides the only access to both the Chimney Peak and Long Valley campgrounds. Other facilities along the route include the trail head and kiosk for the Lamont Trail, a kiosk and small turnout for parking at the Rockhouse Basin Trail, and identification/directional signs for the Byway itself. The Byway also provides access from California State Highway 178 to the Chimney Peak Fire Station, a seasonal BLM-operated facility, the Kennedy Meadows area, and the eastern side of the Kern Plateau.

The 38.5-mile Byway is classified as a Type II byway as it is mostly made up of narrow, slow speed, secondary roads and is recommended for high-clearance vehicles (i.e., vehicles with axles and transfer-cases above average distance from the ground). The Byway is considered to have a Middle Country administrative setting and a Back Country social setting as defined by the Natural Resource Recreation Setting Matrix (Appendix H).

The BLM maintains the road and associated facilities as part of its normal operations, however, parts of the road are washboard-like at times and some sections may be impassable in winter and early spring due to snow. In 2001, a *one-mile* section of the byway was washed out *and completely obliterated*

[48] Segment shown as "Route to be restored" is the currently impassable section of the Byway.

during ~~*inclement weather*~~ *a flood event*, which effectively ~~*closed*~~ *prevented* the Long Valley Loop section *from completing its loop*. The washed out area is on a public easement on private property, which has ~~*prompted a review of the route and delayed repairs*~~ *complicated efforts to restore connectivity of this route. Furthermore, the extent of the damage would require construction of the route along a new alignment for which funds have not been made available*.

3.20 National Trails

The National Trails System is a network of scenic, historic, and recreation trails created by the National Trails System Act of 1968. These trails provide outdoor recreation; promote the enjoyment, appreciation, and preservation of open space and historic resources.

The Decision Area contains the Pacific Crest National Scenic Trail (PCNST) and the Wu Ki' Oh National Recreation Trail.

The PCNST zigzags its way from Mexico to Canada through California, Oregon, and Washington. It boasts the greatest elevation changes of any of America's National Scenic Trails and passes through six of a possible seven of North America's ecozones, including high and low desert, old-growth forest, and arctic-alpine country.

Overall administration of the PCNST is the responsibility of the Secretary of Agriculture, through the U.S. Forest Service, and various planning documents have been developed for its management. A trail-wide restriction limits all use to non-motorized and non-mechanized uses.

Approximately 116 miles of the trail are within the Planning Area, entering near Tehachapi from the Ridgecrest FO and exiting north into the Bishop FO. Within the Planning Area, the trail crosses public lands managed by the BLM, the USFS, and NPS, including several co-managed wilderness areas. Of the total mileage, approximately 41-miles, the Owens Peak segment is within the Decision Area and managed by the Bakersfield FO. An agreement exists for portions of the trail occurring on public lands south of the Kiavah Wilderness to be managed by the Ridgecrest FO. Each year volunteers from the Pacific Crest Trail Association, Backcountry Horsemen of America, and American Hiking Society augment the trail maintenance performed by the BLM.

The Wu Ki' Oh (formally the Squaw Leap) National Recreation Trail, within the San Joaquin River Gorge SRMA, provides opportunities for backpackers, equestrian use, and mechanized use (mountain bikes) on a 10.5-mile-long trail. This trail is managed to exclude motorized use.

Prior to 1984, a trail was proposed from Millerton Lake to the Sierra National Forest that would cross through the San Joaquin River Gorge SRMA, and require cooperation from the State, US Forest Service, Fresno County, and numerous private property owners. Since this initial proposal, the proposed San Joaquin River Trail corridor has been extended to travel from State Route 99 on the San Joaquin Valley floor to Devil's Postpile National Monument, making this the first trail to extend from the San Joaquin Valley across the Sierra Nevada Mountains. While this trail is not a part of the National Trails System, a desire for such a designation has been expressed.

3.21 Wild and Scenic Rivers

Wild and Scenic Rivers (WSRs) are rivers or river sections designated by Congress under the authority of the Wild and Scenic Rivers Act of 1968 (Public Law 90-542, as amended; 16 United States Code [USC] 1271-1287) to protect outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values and to preserve the river or river section in its free-flowing condition. The WSRs Act purposefully strives to balance dam and other construction at appropriate sections of rivers with permanent protection for some of the country's most outstanding free-flowing rivers. To accomplish this, it prohibits federal support or approval for actions such as the construction of dams or other instream activities that would harm the river's free-flowing condition, water quality, or outstanding remarkable values (ORVs)[49].

Once designated the river or river segment is added to the National Wild and Scenic River System (NWSRS). The NWSRS consists of three types of rivers:

Recreation – rivers or sections of rivers that are readily accessible by road or railroad, that might have some development along their shorelines, and that might have undergone some impoundments or diversion in the past.

Scenic – rivers or sections of rivers free of impoundments with shorelines or watersheds still largely undeveloped, but accessible in places by roads.

Wild – rivers or sections of rivers free of impoundments and generally inaccessible, except by trails, with essentially primitive watersheds or shorelines, and unpolluted waters.

Regardless of classification, rivers are administered with the goal of protecting and enhancing the ORVs that lead to their designation and maintaining their free flowing characteristics. Designation does not, however, affect existing water rights or the existing jurisdiction of states and the federal government over waters as determined by established principles of law. Designation places no additional Federal authority over private lands within the corridor.

There are currently no Wild and Scenic Rivers within the Decision Area, however a number exist within the Planning Area including portions of the: Kern River, Kings River, Piru Creek, Sespe Creek and Sisquoc River.

3.21.1 Wild and Scenic River Evaluation Process

In accordance with the Wild and Scenic Rivers Manual (8351), the BLM evaluates identified river segments for their eligibility and suitability for WSR designation through its RMP process. Once complete the ARMP and ROD allows the BLM to make recommendations, as appropriate, for legislative actions to accomplish WSR designations. Ultimately Congress decides whether to include a waterway segment in the NWSRS. In the interim, until the ROD is signed, protective management is afforded to all eligible river segments as necessary to ensure that the existing qualities upon which their eligibility is based are not degraded.

[49] Also referred to as Outstanding Resource Values (http://www.rivers.gov).

3.21.1.1 Eligibility

In order to be eligible for inclusion in the NWSRS, a river segment must be free flowing and contain at least one river-related ORV (BLM 1993). Eligible segments are preliminarily classified as wild, scenic, or recreational and then carried forward and studied in more detail to determine if they are suitable for inclusion in the NWSRS.

The Bakersfield FO office reviewed a total of seven waterways in the Caliente RMP (BLM, 1997). This inventory was updated to include an additional three river segments (within the area originally covered by the Hollister RMP). Of the total 10 rivers studied for eligibility, eight were determined to have free flowing characteristics, and possess at least one ORV (BLM 1997a, 1997b, 2011a). Table 3.21-1 identifies these waterways, total miles of river; total miles studied; ORV(s) present; and tentative classification given to each.

3.21.1.2 Suitability

All waterways that met the eligibility criteria were reviewed to determine if they were also suitable for inclusion in the NWSRS (Map 3.21.1). The Wild and Scenic River Act and BLM Manual 8351 list a number of factors that should be considered when assessing the suitability of waterways for inclusion in the NWSRS including, status of land and mineral ownership along the river corridor, reasonably foreseeable use which would be enhanced, foreclosed or curtailed and ability to manage (either as a WSA or to protect ORVs in lieu of designation).

Of the eight eligible waterway segments, two were found to be suitable for designation; the North Fork of the Kaweah and the San Joaquin River (Segment 1).

Several factors caused eligible waterways to be recommended as not suitable for inclusion in the NWSRS. These factors included management conflicts and/or challenges, the effectiveness of current non-WSR management in protecting the identified ORVs, and determinations that the segments were not worthy of WSR designation. The examination of each eligible river, determination of suitability, and rationale are included in the Bakersfield FO Wild and Scenic River Report (BLM 2011a).

Within this document, through the alternatives and identification of environmental consequences the resulting impact of suitability determinations is discussed, including where proposed overlapping management may eliminate the need for a WSR designation. The suitability determinations vary by alternative in accordance with BLM policy (H-8351) to ensure a full range of alternatives is considered in analysis, including all suitable and none suitable alternatives. The preferred alternative however, reflects the finding in the suitability report.

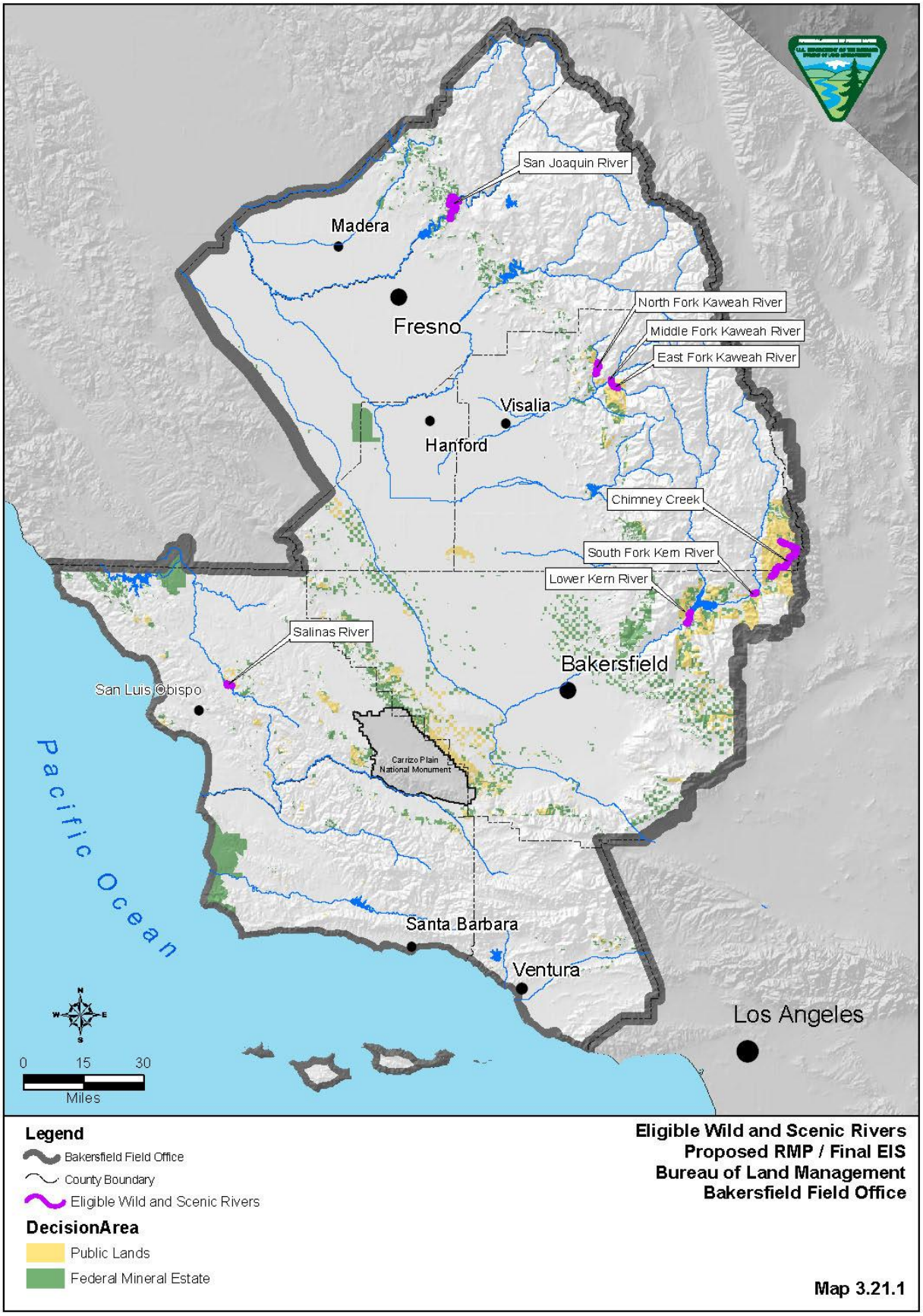

San Joaquin River
Madera
Fresno
North Fork Kaweah River
Middle Fork Kaweah River
East Fork Kaweah River
Visalia
Hanford
Chimney Creek
South Fork Kern River
Lower Kern River
Salinas River
Bakersfield
San Luis Obispo
Carrizo Plain National Monument
Pacific Ocean
Santa Barbara
Ventura
Los Angeles
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
Eligible Wild and Scenic Rivers
DecisionArea
Public Lands
Federal Mineral Estate
Eligible Wild and Scenic Rivers
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.21.1

Table 3.21-1
Eligible Stream Segments in the Bakersfield FO

River or Creek	Planning Unit	Total River Length (miles)	Length Studied for Eligibility (miles)	Preliminary Classification	ORVs
Chimney Creek	Sierra	21.5	15.5	Wild/Recreational	Scenic, Wildlife, Botanical
East Fork of the Kaweah River	Sierra	21.8	2.3	~~*Recreational*~~[50] Scenic	Ecological, Visual
Middle Fork of the Kaweah River	Sierra	18.8	0.12	Recreational	Botanical, Visual
North Fork of the Kaweah River	Sierra	20.7	2.5	Scenic~~*/Recreational*~~	Wildlife, Cultural, Visual
Lower Kern River	Sierra	39.1	3.2	Recreational	Recreational, Wildlife, Historic
South Fork of the Kern River[51]	Sierra	85.0	0.7	Recreational	Ecological, Wildlife, Visual
Salinas River	Coast	75.6	0.8	Scenic	Botanical ,Ecological, Wildlife, Scenic
San Joaquin River (Segment 1)[52]	Sierra	186.9	8.0	Wild/Scenic	Scenic, ~~*Wildlife,*~~ Cultural

Sources: BLM 1997a, 1997b

[50] ~~*The preliminary classification for the East Fork of the Kaweah River was identified as scenic in the 1997 Caliente RMP (BLM 1997a). However, when the BLM interdisciplinary team reviewed this classification during this suitability study, it changed the preliminary classification to recreational due to the presence of a road that parallels most of the segment.*~~

[51] In addition to those ORVs listed here for the South Fork of the Kern River, the Caliente Resource Management Plan Record of Decision also identified historic and prehistoric ORVs (BLM 1997b). When the BLM interdisciplinary team reviewed these ORVs during this suitability study, it was found that ranching, the historic ORV, is not outstandingly remarkable in the region. Additionally, the prehistoric sites are not on BLM land within the study area corridor.

[52] An additional segment of the San Joaquin River was found eligible for inclusion in the NWSRS, but it is on lands withdrawn by Reclamation to the BLM, in accordance with a 1968 agreement between Reclamation and the BLM. As such, any suitability determination for that stretch of river will be made in conjunction with or in whole by Reclamation. Segment 2 is not studied for suitability in this report.

3.22 Wilderness and Wilderness Study Areas

The Wilderness Act of 1964 established a national system of lands to preserve a representative sample of ecosystems in a natural condition for the benefit of future generations. Until 1976, lands considered for and designated as wilderness were managed by the National Park Service, the USFS, and the USFWS. With the passage of FLPMA in 1976, Congress directed the BLM to inventory, study, and recommend those public lands under its administration that should be designated wilderness. The BLM's authority to conduct these wilderness studies, including the establishment of new Wilderness Study Areas (WSAs), expired in 1991, pursuant to Section 603 of FLPMA. The BLM has however, retained authority under Section 201 of FLPMA to inventory public lands for wilderness characteristics and to consider such information during land use planning (see *Lands with Wilderness Characteristics Section*).

The Wilderness Act broadly defines wilderness as areas possessing; natural, undeveloped and untrammeled characteristics, and providing opportunities for solitude or primitive and unconfined recreation, with or without the presence of unique or supplemental values. These character elements are described as follows.

Natural: Where ecological and evolutionary systems are substantially free from the unintentional effects of modern civilization.

Undeveloped: Where minimal evidence of modern human occupation or modification exists. It is "land retaining its primeval character and influence"; "without permanent improvements or human habitation"; "with the imprint of man's work substantially unnoticeable" and "where man himself is a visitor who does not remain."

Untrammeled: Where unhindered and free from modern human control or manipulation. The Wilderness Act defines wilderness as "an area where the earth and its community of life are untrammeled by man," and is "affected primarily by the forces of nature."

Solitude or Primitive and Unconfined Recreation: Provides opportunities for people to experience natural sights and sounds, solitude, freedom, risk, and the physical and emotional challenges of self discovery and self reliance. It "has outstanding opportunities for solitude or a primitive and unconfined type of recreation" and "shall be administered…in such manner as will leave them unimpaired for future use and enjoyment as wilderness."

Unique or Supplemental: Areas "may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value." Though these values are not required, but where present they are part of that area's wilderness character, and must be protected as rigorously as any of the four required qualities. These values may or may not overlap with the other four qualities.

3.22.1 Wilderness

Wilderness areas are managed according to several internal policies, including BLM Manual 8560, Management of Designated Wilderness Areas (BLM 1983), and Handbook H-8560-1, Management of Designated Wilderness Areas (BLM 1988), in addition to 43 CFR 6300, Wilderness Management, and Principles for Wilderness Management in the California Desert (Desert Managers Group 1995).

The Decision Area contains all or portions of seven designated Wilderness areas (Table 3.22-1 and Map 3.22.1). Some of these designated areas not only extending outside the Decision Area, but also outside the Planning Area. These areas were designated by one of three legislative acts: Endangered American Wilderness Act of 1978, California Wilderness Act of 1984, or the California Desert Protection Act of 1994.

Table 3.22-1
Legislative Acts Designating Each Wilderness and its Date of Inception

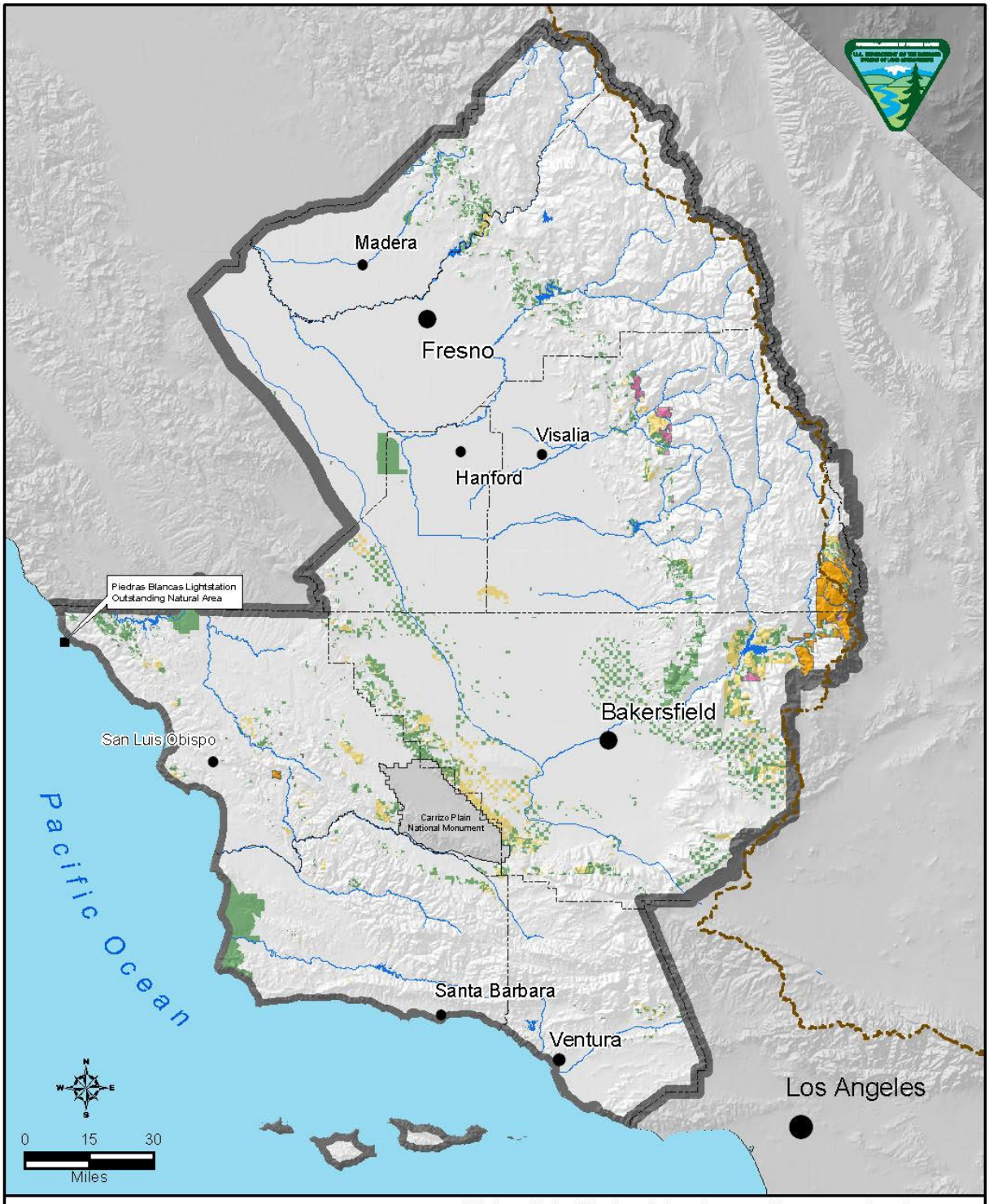
Wilderness Name	Legislative Act	Public Law	Date
Chimney Peak	California Desert Protection Act	103-433-11	10/31/1994
Domeland Addition	California Desert Protection Act	103-433-19	10/31/1994
Kiavah	California Desert Protection Act	103-433-31	10/31/1994
Machesna Mountain	California Wilderness Act	98-425-38	9/28/1984
Owens Peak	California Desert Protection Act	103-433-45	10/31/1994
Sacatar Trail	California Desert Protection Act	103-433-56	10/31/1994
Santa Lucia	Endangered America Wilderness Act	95-237-3	2/24/1978

Where a Wilderness area extends outside the Decision area and is not exclusively managed by the Bakersfield FO, it falls either into the jurisdiction of the US Forest Service (USFS) or the BLM Ridgecrest FO. Table 3.22-2 identifies the Wilderness acres under each management jurisdiction.

Table 3.22-2
Wilderness Area Acreages Managed by each Entity

Wilderness Name	USFS Acres	BLM Ridgecrest Acres	BLM Bakersfield Acres[53]	Total Wilderness Acres
Chimney Peak	0	0	~~*13,134*~~ *13,153*	13,134
Domeland Addition	90,755	0	~~*39,326*~~ *40,100*	130,081
Kiavah	50,728	18,282	~~*22,651*~~ *20,435*	91,661
Machesna Mountain	19,760	0	~~*120*~~ *123*	19,880
Owens Peak	0	47,112	~~*26,655*~~ *25,457*	73,767
Sacatar Trail	0	33,382	~~*17,101*~~ *16,410*	50,483
Santa Lucia	18,600	0	~~*1,812*~~ *2,025*	20,412
Total	179,843	98,776	~~*120,799*~~ *117,721*	399,418

[53] Acreages reflect 2012 data and include the correction of mapping errors and new acquisitions occurring since publication of the Draft RMP/Draft EIS.


Madera
Fresno
Visalia
Hanford
Piedras Blancas Lightstation
Outstanding Natural Area
Bakersfield
San Luis Obispo
Carrizo Plain
National Monument
Pacific Ocean
Santa Barbara
Ventura
Los Angeles
0 15 30
Miles
Legend
Bakersfield Field Office
County Boundary
Pacific Crest Trail
Wilderness Study Areas
Wilderness
Public Lands
Federal Mineral Estate
Units of the National Landscape Conservation System
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.22.1

Allowable uses in wilderness fall into two categories: those that conform to the intent of the Wilderness Act or those "grandfathered in" uses that do not conform. Allowable uses include non-mechanized activities, such as backpacking, hiking, and horseback riding, and may also include temporary nonconforming uses, such as the control of fire, insects, and disease. Those grandfathered in nonconforming uses can include access to private inholdings, and exploration and development of existing mining claims.

Although the Wilderness Act withdraw these areas from all forms of appropriation under the mining laws and from disposition under all laws pertaining to mineral leasing eight unpatented mining claims are recognized within Wilderness areas consistent with Section 3(d)(3) of the Wilderness Act. There are no leases within any of the wilderness areas.

Grazing activities and routes to access various features are present within the wilderness areas. These uses are consistent with exceptions to the prohibited activities provided in Sections 4(c), 4(d), and 5 of the Wilderness Act.

The five wilderness areas designated as part of the California Desert Protection Act are managed according to the Southern Sierra (West Side) Management Plan (BLM 1999b). There is current no wilderness plan addressing the remaining areas.

3.22.2 Wilderness Study Areas

To fulfill the direction from Congress, after the passage of the FLPMA, the BLM established its wilderness review process. This process was carried out by first inventorying public lands to determine which lands had wilderness characteristics; this was done with extensive public involvement. Lands found to have wilderness characteristics were administratively designated as Wilderness Study Areas (WSAs). In California, a final wilderness inventory report was issued for BLM-administered lands outside of the California Desert Conservation Area (BLM 1979).

Upon identification as WSA analysis of their suitability for wilderness designation was completed. In California, this analysis included the preparation of a statewide wilderness EIS, the California Statewide Wilderness Study Report (BLM 1991). This report provided Congress recommendations as to which areas were suitable for designation as Wilderness. Although some time has passed since these recommendation were presented Congress has not yet acted on all of those recommendations; however the California Desert Protection Act of 1994 designated additional Wilderness from these WSA recommendations (Table 3.22-1) and released some from WSA status.

The Decision Area contains approximately 21,000 acres within 11 WSAs identified through the 1979 final wilderness inventory report (Map 3.22.1). Determinations of suitability of all or portions of the identified acreage were made in the 1991 Wilderness Study Report on all but three areas (Black Mountain, Moses and Scodie WSAs). Table 3.22-3 identifies those acreages found unsuitable.

All WSAs are being managed so not to impair the suitability of the area for preservation as designated Wilderness and prevent unnecessary or undue degradation, in accordance with the BLM Interim Management Policy for Lands Under Wilderness Review BLM Handbook H-8550-1 [BLM 1995]), and will continue to be managed in that manner until Congress either designates them as Wilderness or releases them for other uses.

Table 3.22-3
Wilderness Study Area Acreages Found Unsuitable

Wilderness Study Area	Total Acres	Unsuitable Acres
Black Mountain	150	Not studied
Garcia Mountain	80	80
Machesna	70	70
Milk Ranch/Case Mountain	8,970	8,970
Moses	558	Not studied
Owens Peak	310	310
Piute Cypress [ISA]	5,213	3,453[54]
Rockhouse	130	130
Sacatar Meadows	140	140
Scodie	420	Not studied
Sheep Ridge	5,102	5,102
Total	**21,143**	**18,000**

As with designated Wilderness, existing rights (i.e., those conducted or established prior to October 21, 1976) are grandfathered in, and allowed to occur provided they do not unnecessarily or unduly degrade the lands. These uses include grazing, mining, and mineral leasing. The Federal Onshore Oil and Gas Leasing Reform Act of 1987 closed lands within WSAs to fluid mineral (oil, gas, and geothermal) leasing (30 USC 226-3[a]2). Consistent with Sections 0.06D and 0.06E of BLM Manual 8550, Interim Management Policy and Guidelines for Lands under Wilderness Review (BLM 1995), six unpatented mining claims are recognized.

Some of the many activities that are allowed in WSAs include hunting, fishing, travel with motorized vehicles on inventoried ways (unless otherwise restricted through land use planning), camping, hiking, and horseback riding.

A brief description of each WSA is provided in Table 3.22-4.

[54] Remaining acreage was determined to be suitable.

Table 3.22-4
Description of WSAs

Name	Natural Values	Current Uses	Management Prescriptions
Black Mountain	• Exposed basalt rises approximately 1,900 feet from the desert floor. • Fine-grained Holocene dune sand at southeastern corner of the WSA is a sharp contrast to the black basalt of Black Mountain. • Elevations range from 2,100 feet to 4,000 feet. • State-threatened Mohave ground squirrel and the federally and state-threatened desert tortoise are present.	• Limited public access	• As outlined in the BLM Interim Management Policy for Lands Under Wilderness Review
Garcia Mountain	• Stands of blue oak and live oak.	• Limited public access	• As outlined in the BLM Interim Management Policy for Lands Under Wilderness Review
Machesna	• Steep terrain and thick vegetation.	• Limited public access	• On boundary of Machesna Mountain Wilderness • Managed to be compatible with adjoining Wilderness
Milk Ranch/Case Mountain	• Varied landscape, from rocky, rounded steep slopes to low rounded hills and steep forested slopes cut by gorges. • Numerous intermittent creeks transect the area. • Giant sequoia in the Case Mountain parcel. • Area contains critical winter range for the Mineral King deer herd.	• Hiking • Hunting	• Partially within the Case Mountain ACEC • Partially within the North Fork SRMA • No motorized use • Mechanized use on existing trails • ACEC areas day use only • SRMA areas closed to public access

Table 3.22-4
Description of WSAs

Name	Natural Values	Current Uses	Management Prescriptions
Moses	• Moderate to steep slopes. • Dense growth of chaparral and oak woodland. • Intermittent creek areas.	• Limited public access	• As outlined in the BLM Interim Management Policy for Lands Under Wilderness Review
Owens Peak	• Unique ecosystem formed by the convergence of five vegetation types. • Outstanding examples of Joshua tree woodland, big sage/rabbitbrush, and mixed conifer. • Portion of the PCNST traverses the unit. • Eleven candidate plant species occur in the unit.	• Hiking • Hunting • Access to PCNST	• Within the Chimney Peak SRMA • On boundary of Owens Peak Wilderness • Managed to be compatible with adjoining Wilderness
Piute Cypress ISA	• Dense grove of dwarf piute cypress. • Three candidate threatened and endangered species occur in the area. • Contains an example of Sierran forest/juniper-pinyon woodland ecosystem.	• Hiking • Hunting • OHV trespass	• As outlined in the BLM Interim Management Policy for Lands Under Wilderness Review
Rockhouse	• Contains an example of Sierran forest/juniper-pinyon woodland ecosystem.	• Hiking • Hunting	• Within the Chimney Peak SRMA • On boundary of Domeland Wilderness • Managed to be compatible with adjoining Wilderness

Table 3.22-4
Description of WSAs

Name	Natural Values	Current Uses	Management Prescriptions
Sacatar Meadows	• Slopes reach elevations over 8,000 feet. • Contains one known population, and potential habitat, for Nine Mile Canyon phacelia (*Phacelia novenmillensis*), a BLM sensitive plant species. • A migration route for the Monache deer herd crosses through the northern and western portions of the area.	• Hiking • Hunting	• Within the Chimney Peak SRMA • On boundary of Sacatar Trail Wilderness • Managed to be compatible with adjoining Wilderness
Scodie	• Mountain foothills, with steep rocky terrain with a few interior drainages and canyons. • Elevations range to 5,800 feet. • Pinyon and scatter gray pine with sagebrush understory in the north, Joshua tree and mixed desert shrub in the south.	• Hiking • Hunting • OHV trespass	• On boundary of Kiavah Wilderness • Managed to be compatible with adjoining Wilderness
Sheep Ridge	• A rugged steep ridge dominates the area. • Small canyons are found along the flanks of the ridge. • A small creek runs across the middle of the unit. • Contains an example of Sierran forest/California oak woods ecosystem.	• Limited access due to closure of nearby public lands	• As outlined in the BLM Interim Management Policy for Lands Under Wilderness Review

Social and Economic Considerations

3.23 Social and Economic Resources

Certain defining features of every area influence and shape the nature of local economic and social activity. Among these are the local populations, the presence of or proximity to large cities or regional population centers, types of longstanding industries such as agriculture, oil and gas, predominant land and water features, and unique area amenities. The BLM operates as a steward of many of these area resources and opportunities and thus plays a role in the community. This discussion gives further insight on the character and extent of these community connections.

The economic analysis focuses on changes in demand for goods and services from public lands within the Planning Area. These lands contribute a wide range of economic values to people. Market goods such as minerals, livestock, and recreation generate employment and income as well as payments to local communities and some revenue for the federal treasury. Non-market goods such as unique ecosystems and habitats generate value everyone reaps but do not necessarily pay for. Other goods such as outdoor recreation and scenery are valued by the people who use them but only a portion of this value is represented in market purchases.

While a value for ecological or recreational goods may exist, they are difficult to quantify. Direction provided in the Land Use Planning Handbook (Appendix D; pages 6, 7 and 10) suggests the use of "benefit transfer" to evaluate the effects of these non-market values. The benefit transfer method is used to estimate economic values for ecosystem services by transferring available information from studies already completed in another location and/or context. For example, values for recreational fishing in a particular state may be estimated by applying measures of recreational fishing values from a study conducted in another state.

In order to accurately portray the relationship of current BLM management and the community, the social and economic geographic scope of analysis must be defined. The social and economic effects from changes on public lands feasibly extend beyond the immediate vicinity of the action. In addition, the role of public lands within the larger region must be addressed while not masking change within smaller counties and communities in the Planning Area. A multidimensional approach is thus appropriate examining both the role of public lands at a broad regional scale and smaller county level scale.

At the broad scale, all Planning Area counties combined are used to examine social and economic conditions, trends and contributions from BLM. Analysis at only this scale would mask social and economic relationships with BLM in smaller communities within the Planning Area. Consequently social and economic conditions and trends are also presented for individual counties within the Planning Area.

3.23.1 Population and Demographic Change

Population change in the eight-county Planning Area increased by 77 percent (1.7 million persons) between 1980 and 2010 outpacing the state which increased by 57 percent (13.6 million persons). Population change specific to individual counties for the period between 1980 and 2010 is displayed in Table 3.23-1 below. The largest absolute increase occurred in Kern County (436,542 persons) while Madera County increased the most in percentage terms (139 percent). Kings and Santa Barbara

counties saw the smallest population increases in terms of absolute (79,244) and percent change (42 percent), respectively (U.S. Department of Commerce 2011).

Table 3.23-1
Population Change for Counties within the Planning Area

Location	1980	1990	2000	2010	1980-2010 Percent Change
Fresno County	514,229	667,490	799,407	930,450	81%
Kern County	403,089	543,477	661,645	839,631	108%
Kings County	73,738	101,469	129,461	152,982	107%
Madera County	63,116	88,090	123,109	150,865	139%
San Luis Obispo County	155,435	217,162	246,681	269,637	73%
Santa Barbara County	298,694	369,608	399,347	423,895	42%
Tulare County	245,738	311,921	368,021	442,179	80%
Ventura County	529,174	669,016	753,197	823,318	56%
Planning Area Total	2,283,213	2,968,233	3,480,868	4,032,957	77%
State of California	23,667,565	29,760,021	33,871,648	37,253,956	57%

The population in the Planning Area has slightly aged since 1990 as the median age in 2000 was up from 1990 in all Planning Area counties except Tulare, where the median age stayed the same. Between 1990 and 2000 age groups between 35 and 64, which include the baby boomer population, showed increases in their shares' of total population. The age group that increased the most was 45 to 49, which rose by 77,073 persons, while those aged 25 to 29 showed the largest decreases which decreased by 22,438 persons (U.S. Department of Commerce 2000).

The 2011 census indicates that many of the Planning Area counties contained shares of racial and ethnic groups that exceeded shares in the state (Table 3.23-2 below)[55]. Within the Planning Area all counties contained at least one minority group at higher concentrations than their respective shares statewide, except San Luis Obispo County. Seven counties within the Planning Area contained larger shares of those identifying themselves as Hispanic than the state (see Table 3.23-2 below). Tulare County had the largest percent where 61 percent of the population was Hispanic while 21 percent of San Luis Obispo County's population was Hispanic (U.S. Department of Commerce 2011b).

[55] Race and ethnicity are separated since Hispanics can be of any race.

Table 3.23-2
Racial and Hispanic Composition of 2010 Population

Location	White Alone	American Indian and Alaska Native Alone	Black or African American Alone	Asian Alone	Native Hawaiian and Other Pacific Islander Alone	Some Other Race Alone	Two or More Races	Hispanic Origin
Fresno County	55.4%	5.3%	1.7%	9.6%	0.2%	23.3%	4.5%	50.3%
Kern County	59.5%	5.8%	1.5%	4.2%	0.1%	24.3%	4.5%	49.2%
Kings County	54.3%	7.2%	1.7%	3.7%	0.2%	28.1%	4.9%	50.9%
Madera County	62.6%	3.7%	2.7%	1.9%	0.1%	24.8%	4.2%	53.7%
San Luis Obispo County	82.6%	2.1%	0.9%	3.2%	0.1%	7.3%	3.8%	20.8%
Santa Barbara County	69.6%	2.0%	1.3%	4.9%	0.2%	17.4%	4.6%	42.9%
Tulare County	60.1%	1.6%	1.6%	3.4%	0.1%	29.0%	4.2%	60.6%
Ventura County	68.7%	1.8%	1.0%	6.7%	0.2%	17.0%	4.5%	40.3%
Planning Area Total	63.0%	3.8%	1.4%	5.8%	0.2%	21.4%	4.4%	46.5%
State of California	57.6%	6.2%	1.0%	13.0%	0.4%	17.0%	4.9%	37.6%

3.23.1.1 Economic Specialization and Employment

Employment within the Planning Area is distributed amongst industry sectors as displayed below in Figure 3.23-1. Employment and income are reported by economic sector, which are a set of local businesses by industry, grouped together according to similarities in the goods and services they offer. Economic sectors are reported according to 2-digit North American Industry Classification System codes (NAICS). This is a system developed by the United States government for grouping establishments into industries based on the primary activity with which they are engaged. Assessing employment and income by sector helps identify industries important in the Planning Area, and those which could be impacted under the alternatives. The Government, Agriculture, and Retail Trade sectors were the largest components of employment in the Planning Area in 2009 (IMPLAN 2009).

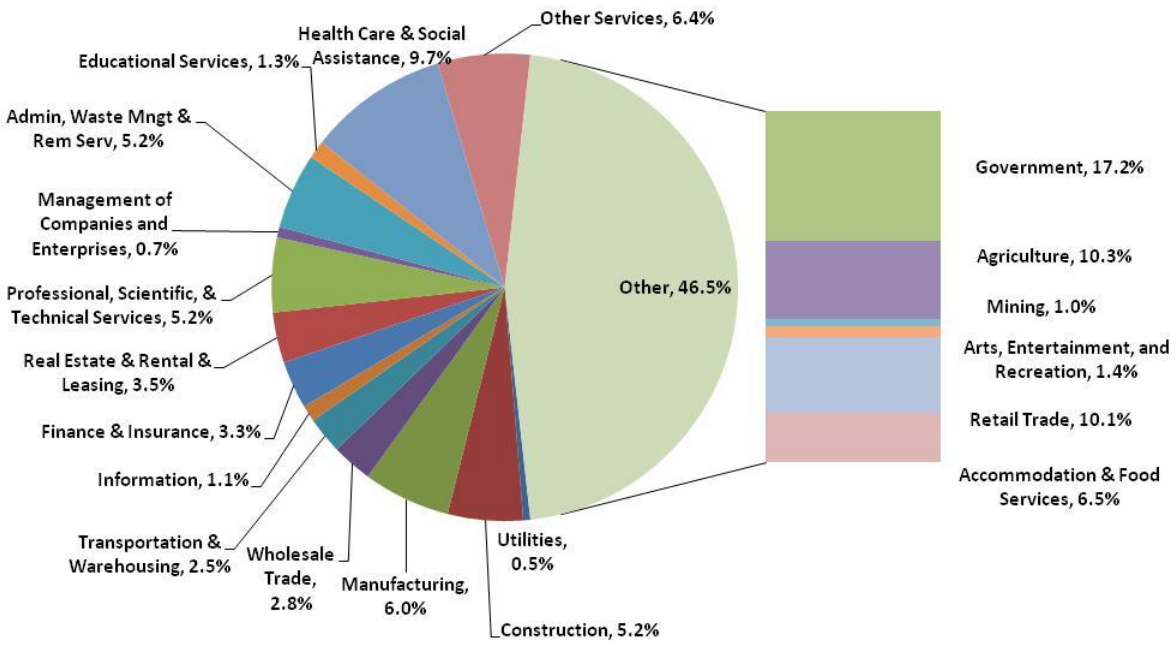


Figure 3.23-1 – Planning Area Industry Employment Distribution, 2009 (IMPLAN 2009)

Communities that are specialized with respect to employment were identified here using the ratio of the percent employment in each industry in the Planning Area to an average percent of employment in that industry for the state of California. For a given industry, when the percent employment in the Planning Area is greater than in the state of California, local employment specialization exists in that industry (U.S Department of Agriculture 1998). Using this criterion applied with 2009 data, the Planning Area can be characterized as most specialized with respect to employment in the Agriculture, Mining (which includes oil and gas), and Utilities sectors (Figure 3.23-2).

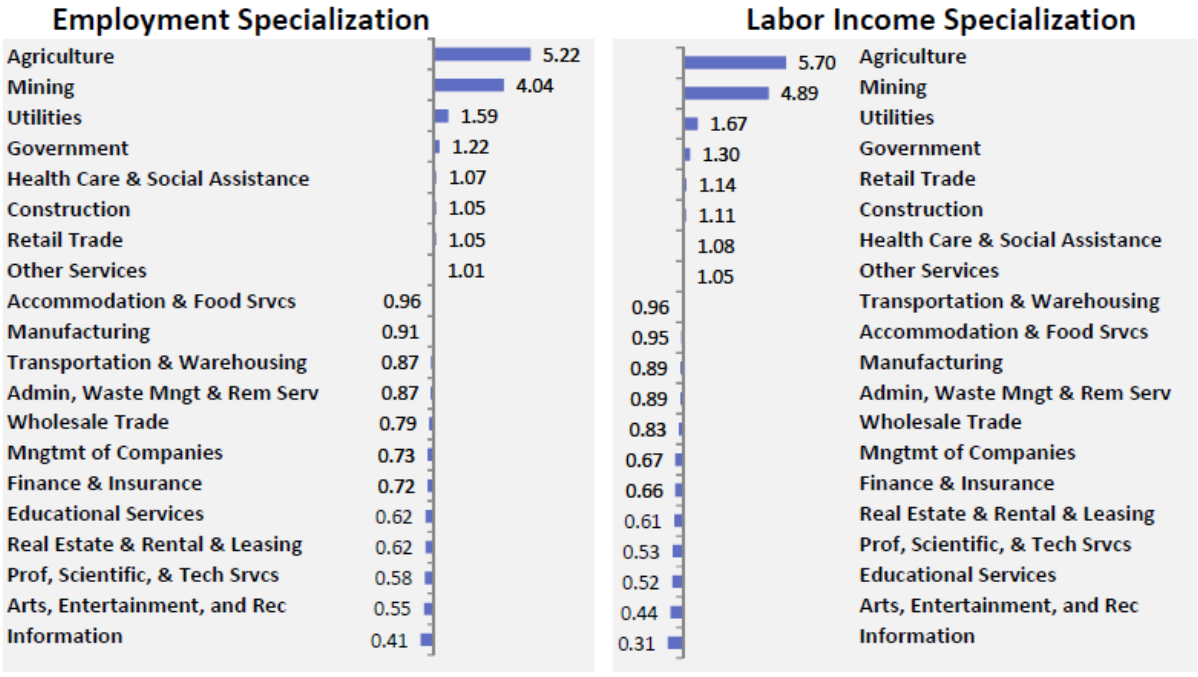


Figure 3.23-2 – Employment and Income Specialization in the Planning Area Relative to the State of California (IMPLAN 2009)

From 1970 to 2000, total employment in the Planning Area increased by 185 percent (from 352,906 to 1,005,432 jobs classified as full and part-time employment). This growth was largely due to increases in service related sectors; between 1970 and 2000 employment in Service related sectors (includes Retail Trade, Finance, Insurance & Real Estate, and the combined Services sector) increased by 199 percent. In addition, the share of total employment attributable to this sector increased by 9.3 percent; from 40.0 to 49.3 percent (Figure 3.23-3). Thus, the Service related sectors have been an important and increasing part of area employment (U.S. Department of Commerce 2010) [56].

[56] These shares are based on numbers which are not directly comparable to the IMPLAN numbers in Figure 3.22-3 since IMPLAN data include farm and proprietor employment in addition to wage and salary employment. Similarly the IMPLAN data also includes estimates for non-disclosures that similarly include farm and proprietor employment in addition to wage and salary employment

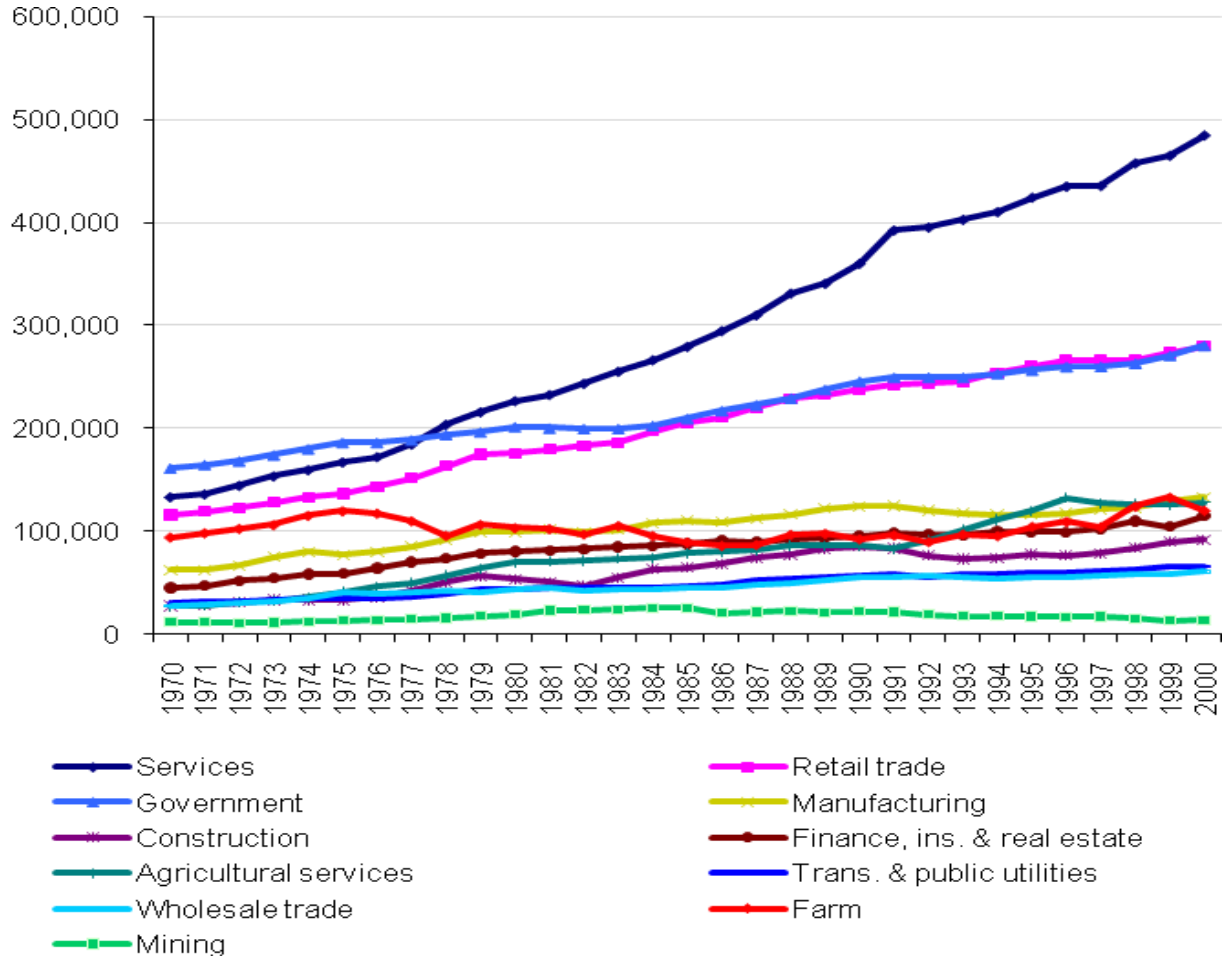


Figure 3.23-3 – Employment History of the Planning Area (U.S. Department of Commerce 2000; EPS 2009)

Employment changes in the Farm (includes livestock grazing), Mining, and Manufacturing sectors translated into smaller portions of total employment in 2000, decreasing by 6.0, 0.8 and 1.0 percent, respectively (from12.8 to 6.7, 1.6 to 0.8 and 8.4 to 7.4 percent, respectively). Between 2001 and 2008 Farm and Manufacturing sectors percent of total employment continued to decrease by 1 percent while the Mining sector (which includes oil and gas) increased by 0.2 percent. These natural resource related sectors have provided a small and sometimes decreasing portion of total area employment while the Service related sector has maintained a steady increase and continued to increase between 2001 and 2008 (its share of total employment increased by 2.6 percent) (U.S. Department of Commerce 2010).

3.23.1.2 Economic Well-Being and Poverty

As noted above, the Service related sectors increased in their share of total employment while the Farm, Mining, and Manufacturing sectors experienced decreases between 1970 and 2000. The private sectors examined can be lumped into Goods- Producing sectors (Natural Resources, Construction, and Manufacturing) and Service-Providing sectors (Trade, Information, Finance, Professional Business

Services, Education, Health, etc.). In general the Service-Providing sectors do not pay as much as the Goods- Producing sectors, thus increases in the percent of total employment attributable to these sectors could decrease area economic well-being. Within the Planning Area the Service-Providing and Goods-Producing sectors paid average annual wages of $37,724 and $38,779, respectively in 2009 (U.S. Department of Labor 2010). Thus, increases in employment in sectors associated with lower wages alongside decreases in sectors associated with higher wages could indicate a decrease in area economic well-being. However, we cannot say that decreases in economic well-being have resulted from increases in service-related sector employment, since higher labor force participation in the Service sector between 1970 and 2010, by groups such as women and minorities, could increase the overall importance of certain sectors over others. In addition, people might move to the area to take a service sector job but exchange the lower wage they may receive for the unique natural and cultural amenities. In this manner some may benefit from a "non-market benefit" not provided by their place of employment but by the benefits they gain from living in the area.

Total personal income (TPI) and per capita personal income (PCPI) are useful measures of economic well-being. From 1970 to 2008, annual TPI in the Planning Area increased by $100 billion to $141 billion, and annual PCPI increased from $22,776 to $36,321 (all measures adjusted for inflation to 2010 dollars) (U.S. Department of Commerce 2010b).

While PCPI is a useful measure of economic well-being it should be examined alongside changes in real earnings per job. Since PCPI includes income from 401(k) plans as well as other non-labor income sources like transfer payments, dividends, and rent, it is possible for per capita income to rise, even if the average wage per job declines over time. While PCPI rose between 1970 and 2008, average earnings per job rose from $41,581 to $48,098 (values adjusted for inflation to 2010 dollars) indicating a possible increase in area economic well-being (U.S. Department of Commerce 2010b). While data indicate increases in area economic well-being over the period discussed, data over the period covering the recent nation economic downturn is not yet available thus local changes in economic well-being have likely occurred that are not reflected in this depiction. As indicated in recent unemployment data below, decreases in labor force participation signal changes not reflected in data presented up to this point.

Between 1990 and 2009, the annual unemployment rate within the Planning Area (all counties combined) ranged from a low of 6.3 in 2006 to a high of 12.9 in 1993 (Figure 3.23-4). In 2009, Tulare County, CA had the highest unemployment rate (15.3 percent), and Santa Barbara County, CA had the lowest (8.4 percent) while the Planning Area (all counties combined) had an unemployment rate of 12.6 percent (U.S. Department of Labor 2010b). If unemployment remains high, new jobs are likely to be filled by local area residents; however, if unemployment is persistently low, new jobs are more likely to be filled by new area residents.

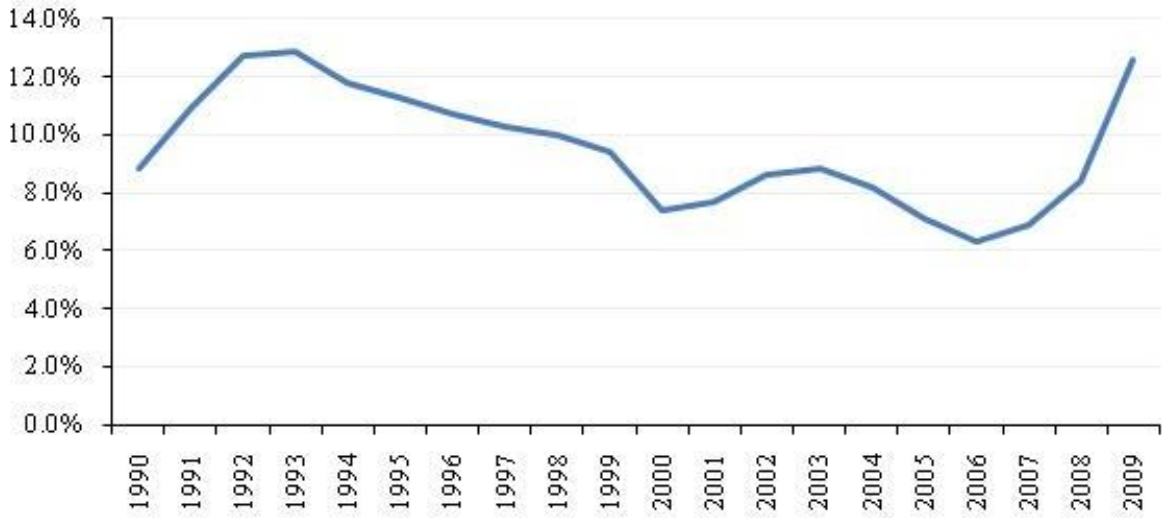


Figure 3.23-4 – Average Annual Unemployment Rates of the Planning Area (All Counties Combined)

Changes in the number of people living in poverty between 2000 and 2009 remained within the upper and lower bound of the 90 percent confidence limits, for the state of California and all individual counties, except San Luis Obispo and Santa Barbara Counties. This suggests levels of those living in poverty remained stable in these counties while in San Luis Obispo and Santa Barbara counties shares increased by 2.5 and 2.6 percent, respectively. Regardless of these changes, Table 3.23-3 shows that all counties within the Planning Area, except San Luis Obispo and Ventura counties, contained greater shares of those living in poverty than the state in 2009 (U.S. Department of Commerce 2011b).

Table 3.23-3
Persons Living Below Poverty Level and Change

	Persons Living in Poverty 2000	Share of 2000 Population	Persons Living in Poverty 2009	Share of 2009 Population
Fresno County	164,786	20.6%	192,638	21.5%
Kern County	119,920	18.6%	170,614	22.2%
Kings County	22,992	20.5%	24,546	19.5%
Madera County	24,688	20.9%	28,710	20.6%
San Luis Obispo County	25,292	10.7%	33,198	13.2%
Santa Barbara County	48,031	12.4%	58,700	15.0%
Tulare County	85,424	23.2%	97,542	23.0%
Ventura County	67,425	8.9%	83,323	10.5%
Planning Area Total	558,558	16.0%	689,271	17.6%
State of California	4,304,909	12.7%	5,132,640	14.2%

3.23.1.3 Components of Personal Income

Further examining trends within personal income provides insight to the area economy and its connection to the lands administered by the BLM. There are three major sources of personal income: (1) labor earnings or income from the workplace, (2) investment income, or income received by individuals in the form of rent, dividends, or interest earnings, and (3) transfer payment income or income received as Social Security, retirement and disability income or Medicare and Medicaid payments.

Labor earnings were the largest source of income in the Planning Area accounting for 67 percent of all income in 2009. The Government and Health Care & Social Assistance sectors were the largest components of labor income in 2009 in the Planning Area (Figure 3.23-5 below). It should be noted that the contributions from the BLM represent only a portion of the economic activity reflected in industry sectors seen in Figure 3.23-5.

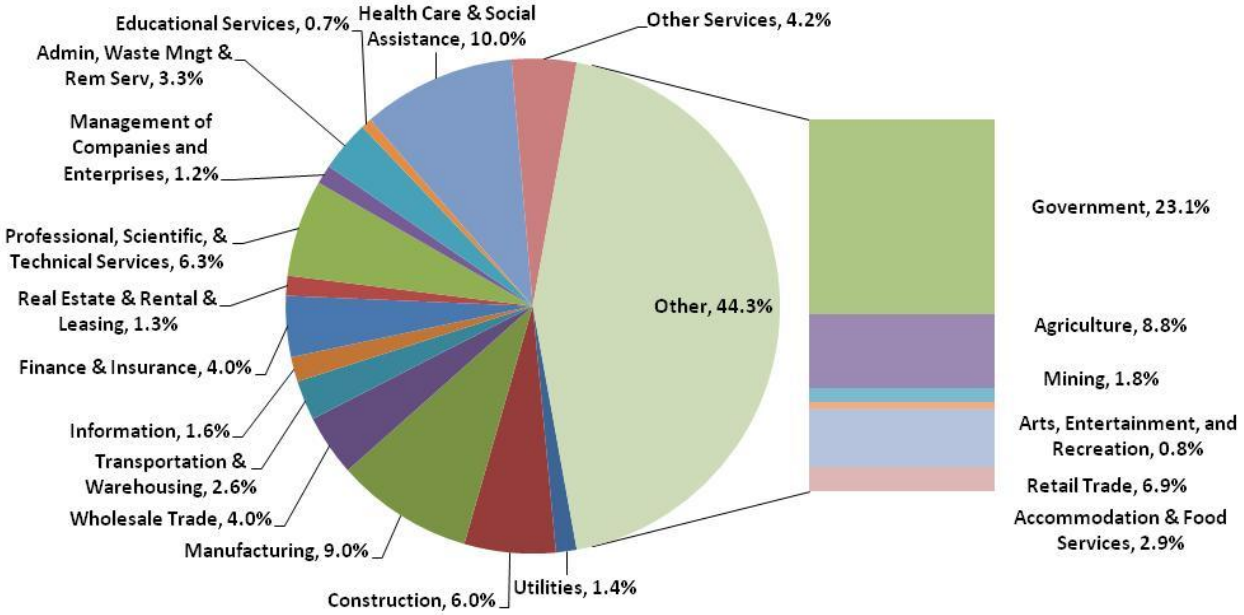


Figure 3.23-5 – Planning Area Labor Income Distribution, 2009 (IMPLAN, 2009)

Labor earning's share of TPI has decreased from 1970 to 2008 (from 74 to 65 percent), and the share of non-labor income has risen (from 26 to 35 percent). As a share of TPI, investment income and transfer payments rose from 15 to 19 and 11 to 16 percent, respectively, over this 38-year time period. The increase in transfer payments are not entirely due to increases in welfare or unemployment related payments. Data shows the share of transfer payments from income maintenance decreased from 3.6 to 3.3 percent. In 2008, the largest component of transfer payments were the age related payments (classified as Old Age, Survivors, and Disability Insurance and Medicare Benefits) accounting for 32 percent of total transfer payments (U.S. Department of Commerce 2010c).

These patterns reflect the importance of the aging population noted above, who are more likely to have investment earnings than younger adults. As the population of the area continues to age, the share of income from these non-labor sources should continue to rise as long as residents continue to stay in the area after retirement or new retirees move in. Rural county population change, the development of

rural recreation and retirement-destination areas are all related to natural amenities (Knapp and Graves 1989, Clark and Hunter 1992; Treyz et al. 1993, Mueser and Graves 1995, McGranahan 1999, Lewis et al. 2002). Many of the natural amenities in the area are managed by the BLM and thus, indirectly contribute to area labor and non-labor income.

3.23.2 Contributions to the Area from BLM Management

BLM administered lands in the Planning Area contribute to the livelihoods of area residents through traditional and cultural uses as well as through market-based economic production and income generation. Public lands provide products of value to households at no or low cost such as recreation opportunities and livestock grazing. Additional products with traditional cultural value may include fish, game, plants, berries, and seeds. Use of these products is often part of traditions that sustain local culture.

Contributions to the area economy through market-based production can be measured using the IMPLAN input-output model. Input-output models describe commodity flows from producers to intermediate and final consumers. The total industry purchases are equal to the value of the commodities produced. Industries producing goods and services for final demand purchase goods and services from other producers. These other producers, in turn, purchase goods and services. This buying of goods and services continues until leakages from the region stop the cycle. The resulting sets of multipliers describe the change of output for regional industries caused by a change in final demand in an industry. The IMPLAN database describes the economy in 440 sectors using federal data from 2009[57]. These sectors are further aggregated (see Figure 3.23-1 above) to better identify areas relevant to BLM management activities.

Using the most recent data available, IMPLAN response coefficients[58] were applied to BLM outputs and expenditures to estimate the economic contribution of the BLM within the Planning Area. While the discussion above examines the current situation, this analysis examines the linkages and interdependencies among businesses, consumers, and the Planning Area resources on which some area economic activity depends. IMPLAN allows a more complete examination of these linkages.

IMPLAN not only examines the direct contributions from the Planning Area but also indirect and induced contributions. Indirect employment and labor income contributions occur when a sector purchases supplies and services from other industries in order to produce their product. Induced contributions are the employment and labor income generated as a result of spending new household income generated by direct and indirect employment. The employment estimated is defined as any part-time, seasonal, or full-time job. In Table 3.23-4 and Table 3.23-8, direct, indirect and induced contributions are included in the estimated BLM contributions.

[57] IMPLAN data is derived from a variety of sources included the Bureau of Economic Analysis, Regional Economic Information System, Bureau of Labor Statistics, U.S. Census, etc.
[58] Rates of change in employment and labor income as final demand changes.

Table 3.23-4
Estimated Annual Employment and Labor Income Contributions

Resource Program	Jobs (Full and Part-time)	Labor Income (Thousands 2011 $)
Recreation[59]	249	$9,457
Livestock Grazing	~~3~~ *88*	~~$83~~ *$2,559*
Solid Minerals	0.7	$7
Fluid Minerals	2,871	$179,539
Externally Funded Projects	15	$458
Payments to Counties (min)	518	$27,253
Payments to Counties (max)	803	$42,267
BLM Expenditures	177	$9,158
Total BLM Management (low)[60]	~~3,832~~ *4,203*	~~$225,955~~ *$243,445*
Total BLM Management (high)	~~4,117~~ *4,706*	~~$240,970~~ *$270,240*

Source: IMPLAN 2009

3.23.2.1 Tourism and Recreation

BLM land within the Planning Area provides a variety of recreational opportunities. Field office staff estimate that there were 355,866 recreational visits to the Planning Area on an average annual basis between October 2007 and September 2010. On their way to the Planning Area, and once they arrive, these visitors spend money on goods and services they would spend elsewhere if these opportunities did not exist. In this manner the opportunities on BLM contribute to the local economy by attracting these visitors.

Analyses of expenditures reported by national forest visitors show the primary factor determining the amount spent by a visitor was the type of trip taken and not the specific activity or forest visited (Stynes and White 2005). Since expenditure information for the type of trip taken on BLM is not yet available, National Visitor Use Monitoring (NVUM) data from the Sequoia National Forest will serves as a proxy. These six trip type segments are defined below:

- Visitors who reside greater than 30 miles from visited BLM:
  1. Non-local residents on day trips
  2. Non-local residents staying overnight on BLM
  3. Non-local residents staying overnight off BLM
- Visitors who live within 30 miles of the visited BLM:
  4. Local residents on day trips
  5. Local residents staying overnight on BLM
  6. Local residents staying overnight off BLM

[59] Expenditures by local residents for recreation on BLM do not introduce "new" money into the economy. If local residents could not recreate on BLM, they would likely find other forms of recreation in the area and continue to spend their recreation dollars in the local economy. Therefore, these portions of employment (and labor income below) are not necessarily dependent on the existence of the opportunities provided by BLM.
[60] Totals may not add due to rounding.

A seventh category of trip types was not included, non-primary visits, since we are only interested in visitors who's primary activities are on public lands. The visitation proportions for the Sequoia National Forests (Stynes and White 2005) were used to characterize recreation use for the visitor segments above within the Decision Area. This process indicates approximately 25 percent of all visits to the public lands were wildlife related and the largest trip-type segment was non-wildlife related local day trips which numbered 101,422.

While providing recreation opportunities to local residents is an important contribution, the recreation expenditures of locals do not represent new money introduced into the economy. If public land-related opportunities were not present, residents would likely participate in other locally based activities and their money would still be spent in the local economy. After separating the contributions made from local residents[61], Recreation contributes 249 jobs and $9.5 million in labor income to the Planning Area (Table 3.23-4).

3.23.2.2 Livestock Production

Within the Planning Area, agriculture plays an important economic and social role; area residents identify with the tradition, land-use and history. However, from 1970 to 2000, employment in the Farm sector (which includes livestock grazing) as a share of total employment decreased by nearly half (from 12.8 to 6.7 percent) (U.S. Department of Commerce 2010).

The estimated potential grazing opportunity[62] in the Planning Area is currently 37,600 AUMs. However, it is estimated that 25,200 AUMs were actually used in 2010 due to factors such as drought, changes in active permit holders, financial limitations on operators and market conditions. The cattle inventory which could be supported by estimated actual use on BLM can be compared to the total cattle inventory within Planning Area counties. The 2010 authorized use level provided approximately 0.1 percent of the forage required for the 2,496,865 cattle inventoried within the Planning Area counties in the most recent agricultural census (U.S. Department of Agriculture 2007). While forage on BLM provides a relatively small portion of forage necessary to feed livestock in Planning Area counties it is more important on smaller scales within the Planning Area.

A thin profit margin often separates these livestock producers from negative net earnings. Often, employment outside the ranch augments livestock producer income. Federal grazing land is ~~*particularly valuable*~~ *more desired by some* because of the low grazing fees charged for use of this land. Fees charged by BLM for grazing are calculated using the formula required under BLM grazing regulations found at 43 CFR 4130.81(a)(1) and are considerably less than those charged for private grazing land. In 2009 the statewide average AUM price for private land was $16.40 (U.S. Department of Agriculture 2010). The BLM formula yielded a fee of $1.35 per AUM in 2010 which is down from $1.56 in 2006. This federal land is ~~*the least expensive grazing land available*~~ *often less expensive*, hence use and access is *valued* ~~*sometimes pursued*~~ by area ranchers even though *many* additional costs are usually incurred to use these lands. Additional costs *to livestock operations that use public grazing lands* include poor water availability, lower forage quality, seasonal use *or other restrictions which cause operational inefficiency*, fencing costs and possessory interest taxes. Consequently, the benefit to area ranchers from BLM grazing cannot be assumed to be equal to *just* the price difference between the competitive forage price and the BLM grazing fee. Regardless, additional value accrues to area ranchers above the

[61] Local residents recreating on BLM contribute 53 jobs and $2.2 million in labor income on an average annual basis.
[62] This is the total of authorized AUMs and projected future authorized AUMs, under the assumptions that 75 percent of acres available for application would be authorized with a stocking rate of 5 acres per AUM.

price paid *per AUM* and the additional costs described previously. A portion of this value is reflected in private property values for properties that have preference for a permit or lease of BLM grazing allotments. This value is particularly critical in the Bakersfield FO where many livestock operations rely on intermingled and unfenced BLM land to complete their operations, without which they would manage fragmented parcels, sometimes not capable of supporting a livestock operation on their own.

In addition, to the value of forage supplied by BLM, livestock grazing on BLM provides local area employment and income. Using the IMPLAN input-output model described above, estimates of the BLM employment and income contribution are calculated from actual forage use on BLM in 2010. This number represents total employment and income from direct, indirect and induced contributions. In terms of local area contributions from BLM supplied forage, current actual use levels of grazing on BLM support approximately ~~3~~ *88* jobs and ~~$83,000~~ *$2.6 million* in *total* labor income on an average annual basis (Table 3.23-4).

Direct contributions from Decision Area grazing to the agricultural sector accounts for 36 jobs in the impact area. While ~~these~~ *this* number *may* appear small, it must be remembered that these employment and income estimates account for the portion attributable to use on BLM and not the entire job, thus multiple permittees could be included in the estimate of a single job. While BLM allotments often provide only a portion of a permittee's forage these allotments provide an important complement to ranching operations that also occur on adjacent national forest and intermingled and unfenced private land. *If we assume the 36 direct jobs are attributable to the 73 permittees that operate in the Decision Area (Chapter 3. Section 3.13 - Livestock Grazing) then approximately 2 people are included in each direct job provided by Decision Area grazing.*

3.23.2.3 Mining

From 1970 to 2000, estimated mining employment (which includes oil and gas) as a share of total employment decreased by 0.8 percent in Planning Area counties (U.S. Department of Commerce 2010). Given the small number of firms in the area within the industry, data are not disclosed by the U.S. Department of Commerce for 2009 however, similar IMPLAN data depicted in Figures 3.23-1 and 3.23-5 show that mining made up 1.0 percent of employment and 1.8 percent of labor income in 2009 within Planning Area counties (IMPLAN 2009).

Planning Area counties are a significant source of oil in the state and the nation. In 2009, Planning Area counties provided 83 percent of state oil production. Most oil and gas activity takes place in Kern County where 75 percent of state production (State of California 2009) and 8 percent of national production occurred in 2009 (U.S. Department of Energy 2011).

In 2009, extraction and drilling of oil and gas within Planning Area counties accounted for 0.5 and 1.1 percent of employment and labor income within these counties. In addition, 0.33 and 0.5 percent of employment is attributable to support activities associated with oil and gas operations. Oil and gas activity is thus responsible for 88 percent of mining employment and 91 percent of mining income within the Planning Area counties (IMPLAN 2009). Most oil and gas activity on federal mineral estate occurs in Kern County where extraction, drilling and support activities for oil and gas make up 1.4, 0.3 and 1.5 percent of all employment and 3.6, 0.5 and 2.2 percent of all labor income in the county (IMPLAN 2009).

Oil and gas fields on BLM-managed mineral estate within the Bakersfield FO have been active for over a century and are well developed. The number of oil and gas wells on BLM in the Field Office changes

based on energy market conditions and other factors. While 362 applications for permits to drill were issued in the field office in 2010 about 100 to 400 APDs are issued annually depending on energy prices and other market conditions. Currently about 7,400 wells can be found on BLM in the Planning Area which produced approximately 5,000,000 thousand cubic feet of gas (MCF), 19 million barrels (bbl) of oil and 2 million gallons of natural gas liquids in 2010. Direct employment and labor income in oil and gas related sectors from this BLM activity accounts for about 7 percent of employment and 6 percent of labor income in Planning Area counties (1,132 jobs and $87 million in labor income). Total direct, indirect and induced employment and labor income are 2,871 jobs and $175 million in income on an average annual basis (IMPLAN 2009). It is anticipated that recent levels of oil production in the Planning Area are near the top of anticipated production levels (19 million bbls) while historically lows of 15 million bbls have been produced and can be anticipated with changing future market conditions The range of price evaluated ranges from a low of $85.89 per barrel (bbl) which corresponds to the California onshore price in January of 2011 and $110 which was the price in April (U.S. Department of Energy 2011b) consequently the value of potential production from BLM ranges from $1.3 to $2.1 billion dollars.

In addition, locatable and saleable mineral materials are removed from the Planning Area. One salable mineral community pit (Kelso) provides sand and gravel and one ~~*solid leasable*~~ *salable* mineral project also provides Gypsum from federal mineral estate. Saleable ~~*and solid leasable*~~ mineral removed from the Decision Area includes about 2,000 tons of sand and gravel of construction grade and 5,000 tons of gypsum. Locatable mineral material removed includes approximately 100 ounces of gold and 200 ounces of silver. These activities on public land in the Decision Area support less than one job and $7,000 in labor income on an average annual basis (Table 3.23-4). A portion of the revenues received by BLM from the sale of materials and the lease of land is distributed back to counties in the Planning Area. The contributions to area employment and income from these payments are discussed below under revenue sharing.

3.23.2.4 Externally Funded Projects

A portion of the management activities occurring on public lands in the Decision Area are performed with funds not accounted for under general BLM expenditures discussed below. These funds often come from external sources such as stewardship grants. Examples within the Planning Area include road decommissioning and closures funded by State of California OHV Commission Grants (also referred to as “Greensticker grants”). In addition, the Bureau of Reclamation provides funding for habitat restoration activities at Atwell Island, which is adjacent to the community of Alpaugh. Activities funded by the BOR for this effort include weed treatment, prescribed burning and other restoration projects. In addition, BLM works with the community providing contracting opportunities and environmental education partnerships with the schools. As a result of these externally funded projects 15 jobs and $458,000 in labor income are supported in the Planning Area economy on an average annual basis (Table 3.23-4).

3.23.2.5 Revenue Sharing

In 1976, Congress passed legislation to provide funding to counties through Payments in Lieu of Taxes (PILT) in order to compensate for tax revenues not received from Federal lands. These taxes would typically fund various services that are provided by counties (road maintenance, emergency services, and law enforcement). The PILT payments are determined using a formula which accounts for the county acreage of federal land, county population and the previous year’s revenue sharing from resource uses on federal land (timber, range, mining etc.). In November of 2008 additional payments

were authorized by the Emergency Economic Stabilization Act of 2008 (Public Law 110-343). The law authorized counties to receive their full entitlement level payment from 2008 through 2012. Table 3.23-6 below depicts 2010 payments along with BLM entitlement acreage per county. The last column on the right is the average payment attributable to the share of BLM entitlement acreage from each county's total entitlement acreage (Table 3.23-5).

Table 3.23-5
PILT Entitlement Acreage and Payments by County

	BLM Entitlement Acreage	Total Federal Entitlement Acreage	BLM Entitlement Acreage Share	2010 Payment	BLM Share of Payment
Fresno County	157,178	1,524,212	10.31%	$1,952,456	$201,339
Kern County	703,334	1,081,528	65.03%	$2,386,461	$1,551,952
Kings County	7,646	8,190	93.36%	$18,677	$17,436
Madera County	3,453	506,338	0.68%	$701,345	$4,783
San Luis Obispo County	240,895	437,569	55.05%	$1,035,330	$569,981
Santa Barbara County	7,462	716,555	1.04%	$1,683,688	$17,533
Tulare County	121,701	1,532,012	7.94%	$2,724,727	$216,449
Ventura County	1,928	578,470	0.33%	$1,356,147	$4,520
Planning Area Total	**1,243,597**	**6,384,874**	**19.48%**	**$11,858,831**	**$2,309,773**

Source: U.S. Department of the Interior 2011b

In addition to PILT, counties receive a share of livestock grazing revenues under the 1934 Taylor Grazing Act. Fifty percent of section 15 grazing lease fees and 12.5 percent of section 3 grazing permit fees are distributed back to counties where the livestock grazing authorization occurs. In addition, possessory interest taxes are paid by federal grazing permittees and lessees (approximately 1.1 percent of grazing fee payments) to counties in place the property tax counties would normally receive on privately held land. These payments amount to about $16,000 across all Planning Area counties based on 2009 authorized use levels and the $1.35/AUM grazing fee. Using the IMPLAN input-output model described above, estimates of the BLM employment and income contribution are calculated from PILT and grazing payments. These payments account for 27 total jobs (direct, indirect and induced) and $1.4 million in labor income on an average annual basis.

Royalties from oil and gas revenues are shared with the state of origin (49 percent of revenue is returned to states and 51 percent is retained by the federal government). States determine how to spend their share of federal mineral royalties within broad federal guidelines (priority must be given to areas socially or economically impacted by mineral development for planning, construction/maintenance of public facilities, and provision of public services). California distributes 50 percent of royalties directly to counties where extraction and leasing activities take place (the county of origin) (personal communication with California State Controller's Office April 2011). The price of natural gas was $3.95 per thousand cubic feet in 2010 (MCF) while the first purchase price for oil ranges from a low of $85.89 per barrel (bbl) which in January of 2011 and a recent high of $110 in April (U.S. Department of Energy 2011b). Conservative estimates of annual production from the field office suggest that 5,000,000 MCF of gas and from 15 to 19 million bbls of oil can be anticipated with changing future market conditions. Consequently, of the 12.5 percent royalty rate, counties in the Planning Area could expect to receive 3.06 percent (12.5 * .49 * .5 = 3.06 percent of gas and oil sales, $19.8 and from

$1.3 to 2 billion, respectively) which amounts to $606,375 and from $39 to 64 million, respectively. In addition to royalty revenue, 49 percent of lease fees and bonus bids are returned to California of which 50 percent are returned to counties. Lease rental is $1.50 per acre per year for the first five years and $2.00 per acre per year thereafter. Typically, oil and gas leases expire after 10 years unless held by production. Annual lease rentals continue until one or more wells are drilled that result in production and associated royalties. These lease payments contribute $2.1 million on an average annual basis, in addition to payments to counties from royalties. These mineral related payments made up less than one percent of general government revenue in all Planning Area counties (Table 3.23-6). As noted above most oil and gas activity on BLM occurs in Kern County, and if all minerals related payments were returned to Kern County these payments would constitute approximately 3 percent of general government revenue.

Table 3.23-6
General Government Revenue

	Thousands of 2010 dollars
Fresno County	$1,324,512
Kern County	$1,852,573
Kings County	$215,642
Madera County	$489,295
San Luis Obispo County	$990,890
Santa Barbara County	$789,469
Tulare County	$1,709,489
Ventura County	$195,347
Planning Area Total	$7,567,216

Source: U.S. Department of Commerce 2009

As noted above and in the Reasonably Foreseeable Development Scenarios developed for this plan (Appendix M) oil and gas are worldwide commodities and events that occur globally may have effects on production in the U.S. and in the Planning Area. In addition, the US and worldwide economic conditions have changed dramatically within the last couple of years, causing further uncertainty. Therefore, a range of oil production and price is evaluated here and in Chapter 4 to provide context within a range of possible scenarios for payments to counties. Based on the range of oil and gas price depicted above, employment and income effects to Planning Area counties from royalty payments would amount to approximately 491 to 776 jobs and from $26 to $41 million in labor income on an average annual basis.

Together, contributions to counties from PILT payments, livestock grazing revenues and mineral related activities provide between 518 and 803 jobs and up to $42 million in labor income on an average annual basis within Planning Area counties (Table 3.23-4).

3.23.2.6 BLM Expenditures and Employment

BLM management in the Planning Area provides a direct contribution to the area economy by employing people who reside in the area and by spending dollars on project related goods and services throughout the Planning Area. In addition to 78 Full time employees (FTE), 30 seasonal staff work and live in the area (other than permanent – OTP). After inflating annual salary and non-salary expenditures it is apparent that Bakersfield FO expenditures have risen since 2006 (Table 3.23-7).

Table 3.23-7
Field Office Expenditures

	Salary (2010 dollars)	Non-Salary (2010 dollars)
2006	$5,036,308	$2,538,876
2007	$5,344,287	$4,286,540
2008	$5,358,323	$4,009,302
2009	$5,257,865	$3,436,861
2010	$6,014,612	$3,907,096

Source: Field office Staff 2011

Project related expenditures are attributable to project work for all BLM program areas listed in Table 3.23-4. The contributions from the specific resource programs listed in each respective row of Table 3.23-4 do not include these BLM expenditures. Thus, program related expenditures accrue to the area in addition to program specific contributions in the form of products, such as grazing forage and recreation opportunities. Program related expenditures do not include expenditures associated with emergency fire suppression since these cannot be considered consistent contributions to the area economy. On an average annual basis, BLM expenditures and employment support 177 jobs and $9.1 million in labor income (Table 3.23-4).

3.23.2.7 Renewable Energy Development

Wind generation has become part of the California landscape and economy. Local businesses and counties are benefiting from the influx of resources and tax revenue from these projects. However, it remains to be seen whether BLM land can contribute to the Planning Area economy and community well-being through provision of energy ROWs.

Community/Cooperative Projects sell power through Power Purchase Agreements with regulated utilities. These projects are attractive because they can become community revenue generators, involve schools and local interests, and help supplement future power growth. Large Commercial Projects are sited in areas of strong winds, transmission access, and market demand. As suitable windy land becomes more saturated with development, the availability of leases on federal land may play a larger role in the industry.

Installed wind power capacity in California has increased from 1,616 megawatts (MW) of power in 2000 to 3,177 MWs as of December 31st, 2010 (U.S. Department of Energy 2011c). The state ranked 3rd in the nation in installed wind power capacity and projects are currently under construction off of public lands within the Planning Area (American Wind Energy Association 2011). Currently no public land in the Planning Area has been granted ROWs for wind projects; however, in the past several years ROW applications have been received for wind testing and access across public land. If actual wind energy development were to occur on public land in the Planning Area, employment and labor contributions would result. For every 1.5 MW turbine 9 FTE jobs and $580,000 in labor income would result during construction and about a third of an FTE and $21,000 labor income would be provided annually during normal operation and maintenance (U.S. Department of Energy 2011d).

Within the Planning Area, there are currently no federal geothermal leases; however, several areas of high potential exist. Similarly, the Bakersfield FO has never had any solar installation projects; however, there are several pending wind and solar ROW applications, thus future ROW across public land may be

granted and thus support renewable energy projects off of public land. For example, currently one solar ROW application is pending and two more were recently received by the Bakersfield FO.

3.23.2.8 Decision Area Contributions by Industry

Table 3.23-9 shows the estimated employment and labor income by industry, generated by activities in the Decision Area. As previously discussed, the Planning Area related employment and labor income contributions listed here exclude those made from local resident recreation. In total, Bakersfield FO management activities in Planning Area counties account for 0.2 percent of jobs and 0.02 percent labor income on an average annual basis (Table 3.23-8).

The two largest employment and labor income contributions from activities in the Decision Area, in absolute value, would occur in the Mining (which includes oil and gas) and the Government sectors. The industry sector with the highest percent of employment and labor income dependent on BLM contributions is the Mining sector; relying on BLM for 7.2 percent of employment and 6.0 percent of labor income. Employment and income generated by activities on public land account for less than a half of a percent of Planning Area totals in all other industry sectors (Table 3.23-8).

Table 3.23-8
Current Role of Field Office Contributions in the Planning Area Economy

Industry	Employment (Jobs)			Labor Income (Thousands of 2011 Dollars)		
	Area Totals	BLM Related	% of Total	Area Totals	BLM Related	% of Total
Agriculture (includes livestock grazing)	189,623	44	0.02%	$8,396,005	$1,409	0.02%
Mining	17,539	1,264	7.21%	$1,670,936	$100,895	6.04%
Utilities	8,971	14	0.16%	$1,292,493	$2,049	0.16%
Construction	95,984	223	0.23%	$5,695,125	$12,877	0.23%
Manufacturing	111,225	82	0.07%	$8,579,144	$5,714	0.07%
Wholesale Trade	51,834	111	0.21%	$3,819,836	$8,168	0.21%
Transportation & Warehousing	46,871	100	0.21%	$2,480,247	$5,125	0.21%
Retail Trade	186,382	289	0.16%	$6,610,497	$10,058	0.15%
Information	20,720	32	0.16%	$1,545,240	$2,411	0.16%
Finance & Insurance	60,953	143	0.23%	$3,796,488	$7,824	0.21%
Real Estate& Rental & Leasing	64,083	124	0.19%	$1,240,335	$3,336	0.27%
Prof. Scientific, & Tech. Services	95,079	306	0.32%	$6,046,025	$19,874	0.33%
Mgmt. of Companies	13,433	53	0.40%	$1,185,441	$4,708	0.40%
Admin., Waste Mgmt. & Rem.	96,336	172	0.18%	$3,181,003	$5,528	0.17%
Educational Services	23,069	33	0.14%	$655,150	$928	0.14%
Health Care & Social Assistance	178,500	244	0.14%	$9,584,686	$13,337	0.14%
Arts, Entertainment, and Rec.	26,158	54	0.21%	$748,113	$1,394	0.19%
Accommodation & Food Services	119,893	308	0.26%	$2,790,694	$7,647	0.27%
Other Services	117,855	140	0.12%	$4,039,454	$5,186	0.13%
Government	316,128	380	0.12%	$22,040,312	$22,500	0.10%

Total	**1,840,636**	4,117	0.22%	**$95,397,223**	$20,586	0.02%

Source: IMPLAN 2009

While these contributions by industry appear small, the labor income and employment generated from BLM activities in the Decision Area may be more important to smaller communities within the Planning Area. For example, specialization in the Mining and Agriculture sectors was noted above. BLM contributions to these sectors make up seven and less than one percent of the employment in these sectors across all Planning Area counties (Table 3.23-9) and likely make larger shares of employment at smaller scales within the Planning Area. Thus individual counties and communities may be more susceptible to changes within the Planning Area if they are specialized in sectors connected to BLM actions.

3.23.3 Non-market Economic Value

The value of resource goods traded in a market can be obtained from information on the quantity sold and market price; however, markets do not exist for some resources, such as recreational opportunities and environmental services. Measuring their value is important, since without estimates, these resources may be implicitly undervalued and decisions regarding their use may not accurately reflect their true value to society. Because these recreational and environmental values are not traded in markets, they can be characterized as non-market values.

Non-market values can be broken down into two categories, use and non-use values. The use-value of a non-market good is the value to society from the direct use of the asset; within the Planning Area this occurs through activities such as recreational fishing, hunting and bird watching. The use of non-market goods often requires consumption of associated market goods, such as lodging, gas, and fishing equipment.

Non-use values of a non-market good reflect the value of an asset beyond any use. These can be described as existence, option and bequest values. Existence values are the amount society is willing to pay to guarantee that an asset simply exists. An existence value of BLM lands within the Planning Area might be the value of knowing that undisturbed archeological sites or San Joaquin Kit Fox habitat exists on BLM lands. Other non-use values are thought to originate in society's willingness to pay to preserve the option for future use; these are referred to as option values and bequest values. Option values exist for something that has not yet been discovered, such as the future value of a plant as medicine. In the Planning Area bequest and option values might exist for numerous plant species.

Non-market use and non-use values can be distinguished by the methods used to estimate them. Use values are often estimated using revealed preference methods or stated preference methods while non-use values can only be estimated using hypothetical methods. While use and non-use values exist for the Planning Area, evaluation is not always feasible during the planning process. However, this does not preclude their consideration in the planning process.

3.23.4 Environmental Justice

Environmental justice refers to the fair treatment and meaningful involvement of people of all races, cultures and incomes with respect to the development, implementation and enforcement of

environmental laws, regulations, programs, and policies. Executive Order 12898 requires Federal agencies to "identify and address the disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."

According to the Council on Environmental Quality's (CEQ) Environmental Justice Guidelines for NEPA (1997) "minority populations should be identified where either: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis." Table 3.23-2 above shows that many Planning Area counties have shares of their population identified as Hispanic or of other minority groups that were greater than the state's share in 2010. Thus, the US Census data suggest minority populations within the Planning Area meet the CEQ's Environmental Justice criterion.

CEQ guidance on identifying low-income populations states "agencies may consider as a community either a group of individuals living in geographic proximity to one another, or a set of individuals (such as migrant workers or Native Americans), where either type of group experiences common conditions of environmental exposure or effect." The discussion above on poverty noted the share of those living below the poverty line was greater than the state in many Planning Area counties (Table 2.23-3). Thus, the census data indicate low income populations, as defined by CEQ, exist within the Planning Area.

3.24 Public Safety and Health

The BLM has responsibility to address known public health and safety concerns on public lands to reduce risks to visitors and employees. Potential dangers may include abandoned mine lands, explosives and munitions, hazardous materials, industrial hazards, and naturally occurring hazards. There are inherent risks to visiting public lands beyond these identified potential dangers such as trips and falls while hiking, altercations with other public land users, use of OHV equipment, travel on primitive and unmaintained routes, presence of wildlife and poisonous plants, and heat and cold exposure.

Public health and safety responsibilities are shared amongst several federal and state agencies including: U.S. Environmental Protection Agency, Occupational Safety and Health Administration (OSHA), and California environmental regulatory agencies such as the Department of Toxic Substances Control, Integrated Waste Management Board, Air Pollution Control Board and the Regional Water Quality Control Board.

These agencies implement a variety of regulations, including the Toxic Substances Control Act of 1976 (TSCA) (40 CFR 700-750, 760's, 790-799), the Resource Conservation and Recovery Act (RCRA) (40 CFR 260-263, 264-270), the Occupational Safety and Health Act (OSH Act) (29 CFR 1910), the Comprehensive Environmental Response, Compensation, and Liability Act and Amendments (CERCLA) (40 CFR 300's), the Superfund Amendments and Reauthorization Act of 1986 (SARA), and the California, regional and local jurisdictional equivalent of these laws and regulations.

The proximity of the Planning Area to major population centers in central and southern California, along with the accelerated growth and use of public lands, has put considerable user pressure on these lands, emphasizing the need for BLM to develop and implement additional strategies for protecting the health and safety of visitors.

3.24.1 Abandoned Mine Lands

California has a long and distinguished mining history and a legacy of abandoned mines. These areas contain extreme physical hazards that are not always apparent, which may result in serious injury or death. These hazards include: mine openings (known as a portals, adits, or shafts), explosives and toxic chemicals, dangerous gases, spoils (overburden and mill tailing) piles, and discarded equipment and buildings. Visitors to public lands are often attracted to these abandoned facilities which present very real physical and toxic hazards to the public.

Within the Planning Area many of the abandoned mines are located within historic mining districts. Current inventories, although not complete, have located 712 abandoned mine land features within the Decision Area. This inventory includes sites either identified as, or under consideration for, the national Priorities List or Superfund List such as the Amalie; Buena Vista, Big Blue, Kings, and Rinconada mines. The greatest concentration of physical abandoned mine hazards in the Decision Area, however, are located in the Keyesville Historic Mining District. The greatest concentration of toxic abandoned mine hazards in the Decision Area are located in the Santa Lucia Mountains and in the Parkfield Mining District.

Remediation of these sites includes removal of hazardous materials, stabilization or demolition of equipment and buildings, and closure of mine openings based on site-specific analysis and needs. This work has generally been achieved in partnership with the California State Abandoned Mine Program, the United States Environmental Protection Agency, and the United States Forest Service, and on average has resulted in six closures annually. Remediation and closure is complicated by the need to protect wildlife habitat (in particular shafts and adits which have become roosting locations for bats) and historic resources (including abandoned buildings and equipment); however, potential impacts to these resources identified through the NEPA process have been addressed through biological monitoring, design and installation of closure mechanisms, and recordation or historical resources.

3.24.2 Explosives and Munitions

The potential for unexploded ordnance (UXO) in most of the Decision Area is fairly low. However, the potential increases toward the coast given the military history throughout the area. UXO is most likely to occur either on public lands adjacent to military installations or where military activities have occurred. Although none have been reported, there is also a possibility UXO may be washed ashore and deposited on public lands at either Point Sal or Piedras Blancas. Routine staff patrol of the shoreline at Piedras Blancas addresses the public safety concern at this location. Public visitation to Point Sal is minimal and concerns over UXO would be addressed when reported. If UXO is discovered on public lands the BLM would alert the appropriate authorities and may temporarily restrict public access until the issue is resolved.

3.24.3 Hazard Materials

Bureau-wide, BLM engages in hazardous material emergency response actions, site evaluations, and prioritization of cleanups in accordance with federal, state and local laws and regulations. BLM works with the EPA, State environmental health departments, counties, and potentially responsible parties (public and private) to fund and provide oversight in the cleanup of hazardous materials sites. Sites that are an imminent threat to public health and safety as well as sites under a regulatory administrative order are a priority for BLM.

Sources of hazardous materials on public lands include negligent and illegal activities, as well as authorized operations. The principal known sources within the Decision Area include: hazardous materials releases from oil and gas exploration and production operations; landfills and burn dumps; illegal domestic and industrial dumping; the disposal of clandestine drug lab wastes, and the cultivation of marijuana on public lands. Routine patrol and investigation by BLM Law Enforcement Rangers and Special Agents addresses these issues as they relate to public health and safety and resource concerns.

3.24.4 Industrial Hazards

Areas of intensive industrial development (e.g., heavily developed oil and gas fields) (Map 3.24.1) and mineral production sites) pose specific risks in addition to the presence of hazardous materials and chance for spillage. These include presence of methane and hydrogen sulfide (naturally occurring gasses released during production), dangers associated with production equipment, subsidence due to oil, gas, or produced water production, and risks posed by the interaction of public and industrial vehicular traffic.

To reduce these risks to both BLM and industry employees, specific training programs addressing personal protective equipment, hydrogen sulfide monitoring, and defensive driving are required. In addition, Onshore Order #6 addresses requirements for operations in areas known or with the potential to produce hydrogen sulfide gas for the protection of human health and safety and to protect the environment. The public visiting these areas are exposed to the same risks without the benefit of awareness training or provision of personal protective equipment.

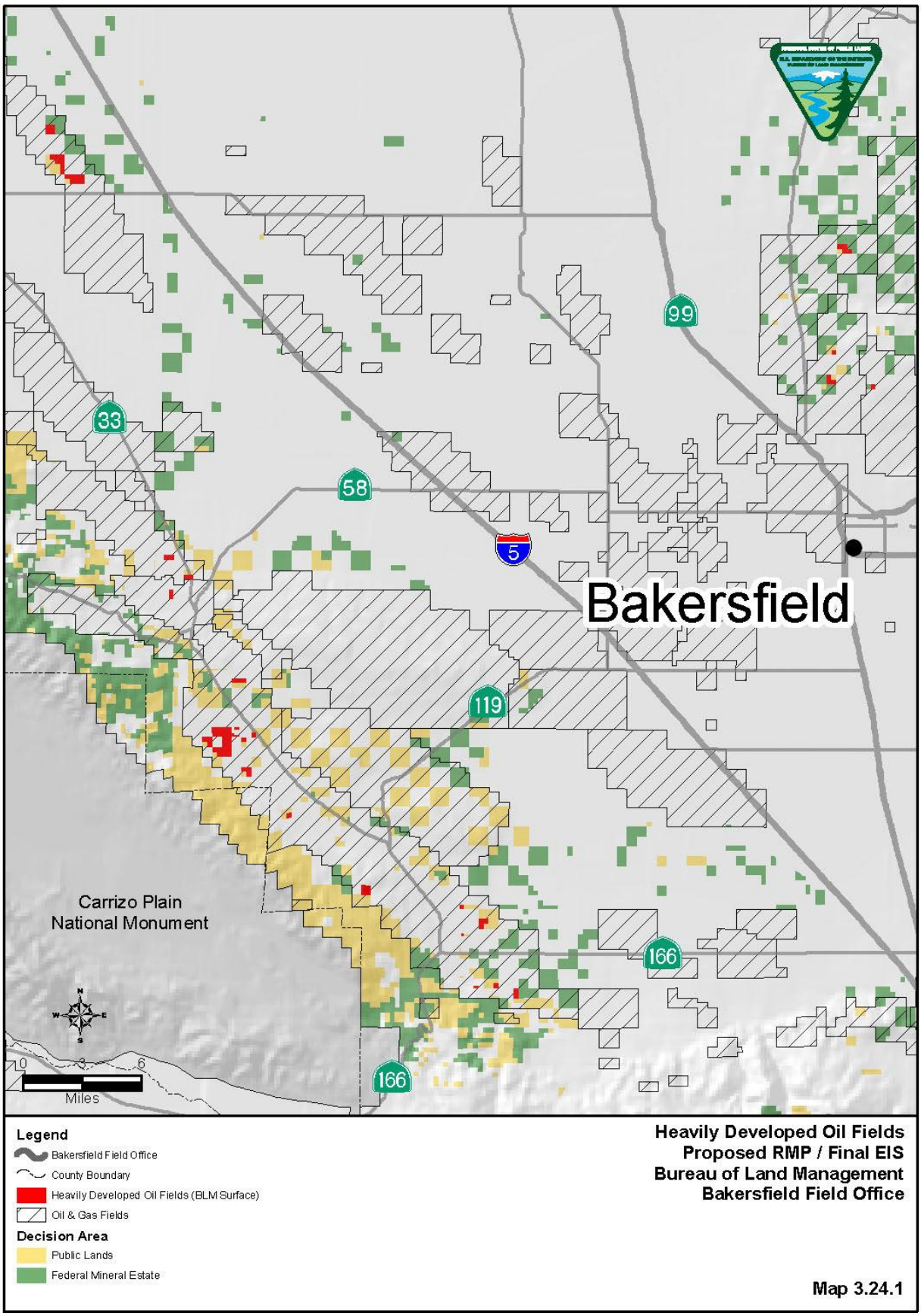
3.24.5 Naturally Occurring Hazards

Natural hazards include active fault or seismic zones; areas prone to landslides; caves, potentially toxic minerals and assemblages such as arsenic, asbestos, and mercury, and presence of certain organisms (including dangerous plants, wildlife, fungi and micro-organisms). Of specific concern to BLM in the Decision Area are the occurrence of asbestos-bearing soils and presence of *Coccidioides immitis* that causes valley fever.

3.24.6 Asbestos-bearing Soils

Portions of the Planning Area have small areas of asbestos-bearing serpentine and ultramafic rocks. The asbestos can be a hazard to public health, since exposure to asbestos may result in asbestos fibers being inhaled or ingested, which over time and in some cases may result in damage to the lungs or membranes that cover the lungs, leading to illness or even death.

Locations of serpentine soils are considered in fire response planning to protect firefighter health and safety. In addition, consideration of these areas is given during travel and recreation planning. Some construction and development activities that may cause disturbance to these soils are subject to the California EPA Air Resources Board Asbestos Airborne Toxic Control Measure (California Code of Regulations Title 17 Public Health, Section 93105).


99
33
58
5
Bakersfield
119
Carrizo Plain
National Monument
166
166
0
3
6
Miles
Legend
Bakersfield Field Office
County Boundary
Heavily Developed Oil Fields (BLM Surface)
Oil & Gas Fields
Decision Area
Public Lands
Federal Mineral Estate
Heavily Developed Oil Fields
Proposed RMP / Final EIS
Bureau of Land Management
Bakersfield Field Office
Map 3.24.1

3.24.7 Valley Fever

Coccidioides immitis, the fungi that causes valley fever, thrives in the alkaline desert soils of Arizona, California, Nevada, New Mexico, Texas and Utah including parts of the Planning Area. These fungi grow in soils as mold with long filaments that break off into airborne spores when soils are disturbed (see Soils Section). It is then swept into the air by anything that disturbs the surface. This includes earthquakes, storms, farming, and construction. In California, the risk is highest during summer months, usually June through August.

For more than half the people infected, this poses no problem; their immune system effectively fights off the fungus and they never develop symptoms. Others have varying degrees of symptoms such as chest pain, weakness, fever, chills, night sweats, and joint aches. In some cases, the illness progresses to severe pneumonia or spreads beyond the lungs and may ultimately prove fatal.

3.25 Tribal Interests

There are ~~*eight*~~ nine[63] federally recognized tribes and several non-recognized Native American tribes and groups that have interests in and historical ties to lands within the Planning Area. These include the Salinan, Chumash, Esselen, Costanoan, Yokuts, Kawaiisu, Mono, Shoshone, Paiute, Kitanemuk, Tubatulabal, *and Tejon* peoples. The federally recognized tribes include the following:

- Santa Ynez Band of Chumash Indians
- Tachi Yokut Tribe of the Santa Rosa Rancheria
- Big Sandy Rancheria
- Cold Springs Rancheria
- North Fork Rancheria of Mono Indians
- Table Mountain Rancheria
- *Tejon Indian Tribe*
- Tule River Reservation.
- Picayune Rancheria of the Chukchansi Indians

There are no existing treaty rights with regard to Native American resource uses within the Planning Area. However, several authorities require BLM to consider potential impacts to places of traditional cultural or religious importance to Native American people during the planning process these areas are discusses and impacts addressed in *Cultural Resources*, Chapters 3 and 4. Efforts are made through consultation to insure that potential impacts to these places are given proper consideration and any concerns are addressed. Native American people have previously identified several locations to be of particular cultural significance on public lands within the Planning and Decision Areas. Due to the cultural sensitivity associated with this information, in most cases, the nature and location of these places remains confidential. Additional areas of interest or cultural significance may be determined through the RMP/EIS Native American consultation process, which is ongoing.

[63] Additional Tribe; Tejon Indian Tribe, was formally recognized in January 2012.

4 Chapter Four

Introduction

The following analyses addresses impacts from BLM management of public lands surface and federal minerals, which would occur through the implementation of each of the alternatives described in Chapter 2.

The analysis presents the direct, indirect, and cumulative impacts on the human and natural environment in terms of environmental, social, and economic consequences. Separate sections describing cumulative effects, irretrievable or irreversible commitment of resources, and unavoidable adverse impacts are presented at the end of the chapter.

GENERAL ASSUMPTIONS FOR ANALYSIS

The methods and assumptions listed below, and for each resource in Chapter 4, are disclosed to provide a basis for the conclusions reached in environmental assessments. Assumptions common to all alternatives and all resources are listed below, whereas assumptions unique to specific resources and resource uses are listed under *Methods and Assumptions* in the appropriate resource section.

- Sufficient funding and BLM personnel would be available for implementing the final decision.
- Implementing actions from any of the RMP alternatives would comply with all valid existing rights, federal statutes, regulations, BLM policies, and other requirements.
- All alternatives are implemented in compliance with standard operational procedures (SOPs), best management practices (BMPs), design features, guidelines for surface-disturbing activities, and mitigation guidelines (Appendix L).
- The analysis of impacts focuses on the anticipated future incremental and meaningful impact of management actions and allowable uses proposed for each alternative. The impact of past and present actions is encompassed within the description of existing conditions (Chapter 3, Affected Environment).
- Projections of the level of activity for land uses are based on historical trends, existing land use agreements such as leases or permits, and statements of interest in land use by individuals and industry organizations. Reasonably foreseeable development scenarios to express these projections have been completed for mineral and energy development (Appendix M).
- Where a management decision restricts or prohibits an activity, a supplementary rule allowing for the enforcement of such a decision would be created with associated penalties and punishments (e.g., prohibition of public access to industrialized areas assumes the creation of an enforceable supplementary rule prohibiting public access to the specific areas identified on a map or through legal description). Throughout the analysis where the impact of a restriction or prohibition decision is discussed, this serves as the analysis of the impact of the creation of the supplementary rule for that action. Examples of the specific wording for supplementary rules for Alternative B are presented in Appendix N.

- Appropriate maintenance will be carried out to maintain the functional capability of all developments (e.g., roads, fences, and other projects).
- Acreage figures and other numbers used in the analyses are approximate projections for comparative and analytic purposes only. Readers should not infer that they reflect exact measurements or precise calculations. These figures were calculated using GIS technology, and there may be slight variations in total acres between resources. These variations are negligible and do not affect analysis.
- Mineral and right-of-way development is projected to result in 18,000 acres of surface disturbance through the life of the RMP.
- Disturbance created by utility scale renewable energy projects generally occurs at a landscape scale and impacts are more widespread than those associated with smaller scale rights-of-way/land use authorizations (e.g., communication towers etc.) and therefore are independently addressed.
- Illegal activities including dumping, trespass, route proliferation etc., will continue to occur.
- Education, interpretation and the establishment of a stewardship ethic in all public lands users will benefit all resources and programs.
- Climate change analyses are comprised of several factors, including greenhouse gases (GHGs), land use management practices, the albedo effect, etc. The tools necessary to quantify climatic impacts are presently unavailable. As a consequence, impact assessment of specific effects of anthropogenic activities cannot be determined. Additionally, specific levels of significance have not yet been established. Therefore, climate change analysis for the purpose of this document is limited to accounting and disclosing of factors that contribute to climate change. Qualitative and/or quantitative evaluation of the potential contributing factors within the planning area is included where appropriate and practicable.
- Additional livestock management strategies (such as herding or the installation of fencing) will be needed to implement allocations of unavailable for livestock grazing. These actions may be subject to additional environmental review and approval. Periodic unauthorized grazing may still occur, especially on isolated, scattered parcels.
- *In excess of 1,000 miles of fence would need to be installed to implement the Unavailable allocations made for livestock grazing in Alternative D.*
- Range improvements may be removed or allowed to remain in areas made Unavailable and these actions may be subject to site-specific assessments to comply with NEPA.

INCOMPLETE OR UNAVAILABLE INFORMATION

The Council on Environmental Quality (CEQ) established implementation regulations for NEPA requiring that a Federal agency identify relevant information that may be incomplete or unavailable for an evaluation of reasonably foreseeable significant adverse effects in an EIS (40 CFR 1502.22). If the information is essential to a reasoned choice among alternatives, it must be included or addressed in an EIS. Knowledge and information is, and would always be, incomplete, particularly with infinitely complex ecosystems considered at various scales.

The best available information pertinent to the decisions to be made was used in developing the Bakersfield RMP/EIS. Considerable effort was taken to acquire and convert resource data into the most useful format for the analysis conducted.

Certain information was unavailable for use in developing this plan. In the absence of quantitative data, impacts are described based on the professional judgment of the interdisciplinary team of technical specialists using best available information. Impact analysis based on incomplete or unavailable information is identified in each resource section, however, no incomplete or unavailable information was deemed essential to reasoned choice among the alternatives analyzed in this chapter.

Resources

4.1 Air and Atmospheric Values

Air resources in the Planning Area are subject to regulation under Federal and State Clean Air Acts ~~*(CAA)*~~ and actions affecting air quality must conform to applicable air plans (*non-attainment* plans, SIPs, attainment demonstration plans, etc.). These plans, developed for criteria pollutants in *Federal* non-attainment areas, are designed to meet NAAQS by established dates. The EPA must approve these plans, and when approved, these plans become part of the State Implementation Plan. As noted in Chapter 3, all potential sources of emissions are considered in these plans, and include contributors across the Planning Area. BLM activities and programs are a minor source *of emissions*. This section will discuss criteria pollutant emissions associated with BLM activities and programs proposed in the Plan, *including: Prevention of Significant Deterioration (PSD); General Conformity;* ~~*Prevention of Significant Deterioration (PSD),*~~ and cumulative effects and climate change. ~~*In addition, this section includes a conformity analysis for nonattainment pollutants, where applicable.*~~

This analysis is based upon various activities' potential to emit *pollutants*. ~~*In the case of the Bakersfield RMP, there are certain pollutants that have the potential to be emitted.*~~ The activities and programs associated with the ~~*Plan*~~ *Bakersfield RMP* that would have a potential to emit *regulated* pollutants and impact air quality include energy development (oil and gas), minerals development, vehicle use on unpaved roads (including OHV activities and wind erosion from disturbed areas), fire management, and livestock grazing. ~~*The analysis is also limited by the need to look at changes in emissions that would occur as a result of activities associated with various alternatives.*~~ All of these activities currently occur on BLM managed lands and result in pollutant emissions. This existing level of activity is the no action alternative. *The analysis is focused on changes in emissions that would occur as a result of activities associated with various alternatives*. Emissions from activities not impacted or changed by the proposed alternatives will not be addressed in this analysis.

Of the proposed activities, energy development has the largest potential to emit pollutants. The USEPA lists the following steps in Oil and Gas operations: Exploration and production, Processing, Combustion, Storage and transport, and Wastewater. These activities currently occur on BLM lands and result in emissions of NOx, *ROGs*/VOCs, and particulates. Changes in OHV activities, vehicle routes and designations, and livestock grazing use could result in changes in disturbance rates to soil surfaces which could result in changes in PM_{10} and $PM_{2.5}$ emissions. Fire management activities including wild fire control, prescribed fire and managed fire all result in emissions of a number of criteria pollutants and air toxics. Based upon the potential to emit and emissions that are likely to be affected by the Plan, the analysis will primarily address particulate emissions (PM_{10} and $PM_{2.5}$) and ozone precursor emissions (NOx and *ROG*/VOC). In addition, these pollutants are important because large portions of the Planning

Area are classified as Federal non-attainment areas for ~~*PM10*~~ ozone and $PM_{2.5}$, *and maintenance for* PM_{10}.

Impacts would be in the form of gaseous and particulate matter that is emitted into the air as a result of the activities and programs being analyzed. All of the pollutants subject to analysis are addressed in Federal, State and local laws, statutes, regulations and rules. The Federal and State ambient air quality standards define the criteria pollutants emissions that are typically analyzed and are the focus of this analysis.

METHODS OF ANALYSIS

The air quality impact analysis for the Bakersfield RMP starts with regional (District level) emission inventories ~~*included*~~ *submitted for inclusion to* ~~*in*~~ the statewide emission inventory, which is maintained by the California Air Resources Board (CARB). These inventories include data on emissions of *ROG*/VOCs, NOx, PM_{10} and $PM_{2.5}$ from known sources, including the oil and gas industry (energy development), fire, and vehicle use on unpaved roads by air district~~s~~. In many instances, emissions data by district is divided and reported by county. Examples of source categories identified as applicable to potential BLM emissions are detailed in Appendix A.

There are problems in directly using some of the data in that the inventory areas do not always correspond to the BLM Planning Area. In addition, some of the information included in the data is not always comparable. As an example, the category of fire emissions for one geographic area may be wildland fires; while in another area, emissions data includes car and structure fires. Most existing emissions inventories do not contain data on emissions from range livestock grazing, since grazing is not considered a substantial source for criteria pollutant emissions. In this EIS, BLM has estimated the emissions from existing and proposed BLM activities. Where emissions cannot be quantitatively estimated, qualitative descriptions of potential impacts are used. Quantifications for emission estimates are included in Appendix A.

As part of the inventory information provided by the CARB there is information on the methodology used to estimate the inventory data. The ideal would be to have actual measurements of all sources; *but* in reality this is impossible. As a result, much of the information is generated from models. The general equation for emission estimation is:

$$E = A \times EF \times (1-ER/100)$$

where:

E = emissions,
A = activity rate,
EF = emission factor, and
ER= overall emission reduction efficiency, %.

ER is further defined as the product of the control device destruction or removal efficiency and the capture efficiency of the control system. When estimating emissions for a long time period (e. g., one year), both the device and the capture efficiency terms should account for upset periods as well as routine operations.

An emission factor is a representative value that attempts to relate the quantity of a pollutant released to the atmosphere with an activity associated with the release of that pollutant. These factors are usually expressed as the weight of pollutant divided by a unit weight, volume, distance, or duration of the activity emitting the pollutant (e. g., kilograms of particulate emitted per *metric ton* ~~*megagram*~~ of coal burned). Such factors facilitate estimation of emissions from various sources of air pollution. In most cases, these factors are simply averages of all available data of acceptable quality, and are generally assumed to be representative of long-term averages for all facilities in the source category (i.e., a population average).

To determine the extent of BLM's contribution to air quality impacts, relevant source categories were identified using applicable district and statewide emissions inventories. Baseline emissions were calculated to reflect the magnitude and impact of current management. In conjunction with the RFD scenario for fluid mineral development, a number of references were utilized to estimate projected emissions. These include 2011 Public Land Statistics, national trends in federal oil and gas development, and the California Department of Oil, Gas, and Geothermal Resources (CDOGGR) well inventory by District (December 2011). The CDOGGR dataset includes Federal oil and gas well statistics, which are in turn provided to the CARB for inclusion to the statewide emission inventory for use in establishing emission budgets.

In order to identify significant impacts from actions *potentially* affecting air quality, the following criteria are used:

- Exceed any air quality standard, contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase of any criteria pollutant for which the geographic area is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);
- *Exceed de minimis threshold values for pollutants in nonattainment or maintenance areas;*
- Conflict with or obstruct implementation of an applicable air quality plan;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Affect long-term air quality as a result of operation and/or maintenance activities.

Management actions ~~*would*~~ *could* result in impacts ~~*that could contribute*~~ to climate change if they ~~*would*~~ conflict*ed* with any applicable plan, policy, regulation, or State goals adopted for the purpose of reducing the emissions of GHGs, *which contribute to climate change*.

ASSUMPTIONS:

- State Implementation Plans (SIPs) are prepared for the Federal non-attainment/maintenance areas. These SIPs are designed to result in compliance with the NAAQS by Federal deadlines. The SIPs are implemented through a series of rules. In addition, air quality within the Planning Area is highly regulated by a number of Federal, State and regional regulations and rules. These regulations and rules apply to many of the activities that are proposed in the Plan alternatives. This is especially true in the oil and gas industry which is highly regulated and requires Air Quality Permits through NSR, ISR, etc. It is *mandatory* ~~*assumed*~~ that ~~*the*~~ *all* activities ~~*would*~~ be conducted in compliance with *law and* applicable regulations and rules. In addition, it is

assumed that the progress on reducing the emission levels would continue, resulting in attainment/maintenance of the NAAQS.

- Emissions from route designation come from the number of miles traveled and the amount of disturbed surfaces. Changes in emissions under the proposed alternatives would occur from Comprehensive Trails and Travel Management (CTTM) decisions that result in changes to the number of designated vehicle routes (mileage) and the amount of disturbed lands available for wind erosion. Direction from the US EPA indicated that as a site rests after disturbance, the amount of PM emissions decline as the fine particles are blown away and the soils stabilize. The data indicated that the half-life of the emissions is only a few minutes during wind events and that unless the site is re-disturbed, the source goes away (US EPA 2003).
- *Any project that is anticipated to result in emissions that constitute a "major source" would be reviewed for potential impacts to sensitive receptors, including mandatory Class I areas. This would be completed at the site-specific NEPA stage.*

4.1.1 Impact of Alternative A (No Action)

Alternative A maintains the current management situation as the No Action alternative required by NEPA. It would continue current management under the existing 1997 Caliente RMP and 1984 Hollister RMP, as amended. Management of resources and sensitive habitats would remain at current levels but would not address emerging issues concerning public lands. This alternative also would not address the use of lands acquired after the signing of these RODs, including public lands at Atwell Island, Piedras Blanca Light Station, and portions of the San Joaquin River Gorge. When no specific management actions are described in the No Action alternative, management of lands and resources has been guided by BLM policy and interim management strategies.

All these emissions represent the base line emissions as described in existing air quality inventories and are accounted for in relevant air quality management plans (SIPs). All proposed alternatives are analyzed in terms of deviation from the baseline emissions either as quantitative numbers or more qualitative estimates when the necessary data is not available or is incomplete. The CARB and the local air districts are responsible for maintaining emission inventories of important sources of air pollution. These inventories can be accessed by source category and region through the CARB web site (http://www.arb.ca.gov/ei/emissiondata.htm). These inventories are exhaustive for the important sources of emissions. In addition to the actual emission inventory data, the web site includes information on methodologies used to estimate emissions.

4.1.2 Impacts Common to All Action Alternatives

Several of the activities and sources of emissions are proposed to have the same activity level throughout all of the action alternatives (B-E). Fire management and the energy development RFD remain the same between all proposed action alternatives, so the impact will remain constant between Alternatives B through E. The proposed alternatives include a number of *other* activities which would generate emissions. Anticipated emissions include direct emissions of NO_x, SO_x and *ROG/*VOC (which are precursor emissions for ozone and $PM_{2.5}$), CO, PM_{10} and $PM_{2.5}$. These emissions are associated with combustion sources such as diesel drill rig engines, drill pad construction equipment (i.e., dozers, backhoes, graders, etc.), temporary production flaring, remedial well work, equipment trucks, hauling of liquids, drill rig crew trucks/vehicles, portable lift equipment, portable testing equipment and temporary

production facilities. In addition, PM_{10} will be released during the drill pad construction phase and from the daily ingress and egress of vehicles on unpaved access roads. The primary emission sources during any new construction at the drill sites and on Rights of Ways would be from heavy equipment exhaust and fugitive dust generation. Other emission sources will occur during the operation and maintenance of these leases and Rights of Ways. These sources include oil facilities, gas facilities, operator vehicle traffic, and any gas powered oil well pumping units.

~~*The expected emissions from the proposed oil and gas RFD would be low both in relation to the overall activity in the region, and by itself. As most wells are drilled over a period of days, the emissions would be short lived from this source. The proposed action is projected to result in an estimate of 4,000 wells over the next 10 year period or an average of 400 wells per year. The number of wells authorized has varied considerably over the last 10 years. In 2010, there were approximately 360 approvals issued. It should be noted that not all wells authorized in a given year are drilled in the same calendar year, and some never get drilled. For air analysis purposes, approximately 5% of the wells are projected to be in the South Central Air Basin while the remaining 95% would be in the San Joaquin Valley Air Basin. This is an increase of 40 wells per year (10%) over the no action alternative. Based upon existing estimates for oil and gas development, the proposed action to drill an additional 40 new wells per year would generate an estimated 7.4 tons per year of PM10 emissions and 112.3 tons of NOx per year in the SJVAB and 0.5 tons per year of PM10 and 8.2 tons per year of NOx in the South Central Coast Air Basin. These calculations are included in Appendix A. SOx emissions associated with energy development come from sulfur in diesel fuel; the use of low sulfur diesel nearly eliminates these emissions.*~~

BLM requires that the lessee/operator must ~~*has the responsibility for*~~ ensur*e* ~~*ing*~~ that all operations are properly permitted with the appropriate air management agencies, and that the operations are in compliance with all mobile and stationary source guidelines. Required control measures include such items as dust control using application of water or pre-soaking and limiting traffic speed on unpaved roads. They also include measures such as use of low-emission construction equipment, use of low sulfur fuel, and/or use of the existing power transmission facilities, where available, rather than temporary power generators.

The expected emissions from the proposed oil and gas RFD would be low both in relation to the overall activity in the region, and by itself. As most wells are drilled over a period of days, the emissions would be short lived from this source. Currently there are 7,259 (December 2011) active wells on BLM in the plan area. BLM currently approves approximately 360 new applications to drill per year. Based on the RFD scenario, the proposed action is projected to result in an estimated 4,000 wells over the next 10 year period or an average of 400 wells per year. This would result in 40 new wells annually, which is an increase of 0.55% beyond the current baseline of 7,259 wells. The number of wells authorized has varied considerably over the last 20+ years. An analysis of data contained in the Public Lands Statistics (PLS) shows that over the last 5 years, of the wells approved, 89% were drilled and 50% of them became predictable wells in the inventory. During the last 28 years, the PLS data also shows that the oil production has remained nearly static from federal lands. Based upon the data, BLM believes that the estimates of emissions as a result of the proposed action, which is based on approvals, is likely overestimated. It should be noted that not all wells authorized in a given year are drilled in the same calendar year, and some never get drilled. Based upon existing estimates for oil and gas development, the proposed action to approve an additional 40 new wells per year would generate an estimated 0.34 tons per year of PM_{10} emissions and 2.06 tons of NO_x per year in the SJVAB and 0.007 tons per year of PM_{10} and 0.06 tons per year of NO_x in the Ventura County nonattainment area. These calculations are

included in Appendix A. SO_x emissions associated with energy development come from the sulfur content in diesel fuel; the use of low sulfur diesel fuel nearly eliminates these emissions.

Fire management is a very unpredictable activity in terms of area burned, acres burned, burning conditions and when fires may occur. The use of prescribed fire in place of wildland fire would result in fewer emissions because the activity would occur under permit from the respective air districts (title 17 permits). Title 17 permits would have environmental reviews and prescriptions such as burning at certain fuel moisture, seasons, and burning on days when atmospheric conditions are conducive to smoke dispersal. Emission estimates from this prescribed fire cannot be estimated at this time because of the uncertainty of needs, and unpredictability of burn parameters. The smoke analysis will be completed as part of the permitting process for prescribed fires. Wildfire timing, location, size and emissions cannot be estimated in advance, and therefore estimates of emissions from this source cannot be determined.

Calculated emissions for the activities proposed in the PRMP indicate that total direct and indirect emissions from BLM management and activities are below de minimis threshold values. As a result, no conformity determination is required.

4.1.3 Conformity

~~*A general conformity analysis is required for any federal action within any federal nonattainment and/or maintenance area. There are six geographic areas within the Planning Area that meet these criteria. These include the San Joaquin Valley, Ventura County and Eastern Kern County ozone planning areas; the East Kern and the San Joaquin Valley PM10 planning areas; and the San Joaquin Valley PM2.5 planning area. . The Clean Air Act and its implementing rules (40 CFR part 93) state that federal agencies must make a determination that proposed actions in federal nonattainment and maintenance areas conform to the applicable implementation plan before the action is taken. In addition, the action cannot cause or contribute to any new violation of the NAAQS, cannot increase the frequency or severity of any existing violation of any NAAQS, or delay timely attainment of any standard or any required interim emission reduction or other milestones.*~~

~~*The BLM has developed a ten-step process to comply with the federal conformity requirements. These ten steps are: (1) Determine spatial and jurisdiction applicability, (2) Describe SIP status and content, (3) Develop any necessary background information, (4) Develop air quality impact analysis, (5) Compare activity to applicable SIP provisions and rules, (6) Develop conclusion statement, (7) Prepare a formal determination, (8) Conduct an agency/public review, (9) Submit the determination to appropriate regulatory agencies and (10) Archive the results. Steps 1-6 have been completed as part of this EIS. In accordance with (40 CFR 93.153 (b)(1&2)), Steps 7-10 of this process will not be completed for the preferred alternative for ozone, prior to issuance of the Record of Decision because the total direct and indirect emissions are less than de minimis levels.*~~

~~*Analysis and Conclusion:*~~

~~*Alternative A (No Action) represents the baseline emissions against which all of the other alternatives are compared. All of the SIP requirements for the six federal nonattainment/maintenance areas are met by the Plan alternatives.*~~

~~*Ozone: For Ozone, the analysis shows that precursor emissions would increase slightly under all alternatives in the San Joaquin Valley and Ventura County air basins. Based on the RFD scenario for oil*~~

~~*and gas development, ozone precursor emissions would increase approximately 10% 0.55% from BLM authorized actions under all alternatives. This increase equates to a 0.9 % increase in emissions for the Oil and Gas emission source category. However, this increase represents less than 0.09% of the regional emission inventory. These emissions are based upon projected population growth in the region. Ozone precursor emission levels for oil and gas development in the San Joaquin Valley under Alternatives B-E are estimated above below de minimis levels (10 2 tons per year) as such, no formal conformity determination is required. An exceedance of a de minimis threshold value triggers the need for publication of a formal conformity determination, in compliance with EPA rules (40 CFR 9300). As a result, a formal conformity determination is required for this pollutant in the San Joaquin Valley 8-hour ozone nonattainment area. A Conformity Determination will be completed for the Proposed Plan concurrent with the Proposed RMP/Final EIS and prior to the Record of Decision.*~~

~~*PM10: The analysis shows that all of the action alternatives result in reductions of PM10 emissions. The largest reductions in PM10 would occur under Alternative D, with the smallest reductions occurring in Alternative E. These emission reductions are achieved as a result of reductions in livestock grazing use and route designations. Emissions reductions will primarily occur in the San Joaquin Valley planning area with minor amounts occurring in the East Kern planning area. Estimated PM10 emissions are consistent with the SIPs and represent conformity. Since the calculated emissions of PM10 do not exceed de minimis threshold values for designated maintenance areas, no formal conformity determination is required.*~~

~~*PM2.5: Oil and gas development proposed under Alternatives B-D will result in increased PM2.5 emissions in the SJV. Estimated PM2.5 emissions are clearly de minimis and therefore no further analysis is required.*~~

As described in Chapter 3, a general conformity analysis is required for any federal action within any federal nonattainment and/or maintenance area. There are six geographic areas within the Planning Area that meet these criteria. These include the San Joaquin Valley, Ventura County and Eastern Kern County ozone planning areas; the East Kern and the San Joaquin Valley PM_{10} planning areas; and the San Joaquin Valley $PM_{2.5}$ planning area. The Clean Air Act and its implementing rules (40 CFR part 93) state that Federal agencies must make a determination that proposed actions in Federal non-attainment and maintenance areas conform to the applicable implementation plan before the action is taken. In addition, the action cannot cause or contribute to any new violation of the NAAQS, cannot increase the frequency or severity of any existing violation of any NAAQS, or delay timely attainment of any standard or any required interim emission reduction or other milestones.

The BLM has developed a ten-step process to comply with the Federal conformity requirements. These ten steps are: (1) Determine spatial and jurisdiction applicability; (2) Describe SIP status and content; (3) Develop any necessary background information; (4) Develop air quality impact analysis; (5) Compare activity to applicable SIP provisions and rules; (6) Develop conclusion statement; (7) Prepare a formal determination; (8) Conduct an agency/public review; (9) Submit the determination to appropriate regulatory agencies; and (10) Archive the results. Steps 1-6 have been completed as part of this EIS. In accordance with (40 CFR 93.153 (b)(1&2)). Steps 7-10 of this process will not be completed for the RMP because the total direct and indirect emissions from plan alternatives are less than de minimis levels.

Ozone: For Ozone, the analysis shows that precursor emissions would increase slightly under all alternatives *throughout the Planning Area.* ~~*in the San Joaquin Valley and Ventura County air basins.*~~ Based on the RFD scenario for oil and gas development, ozone precursor emissions would increase

approximately ~~10%~~ 0.55% from BLM authorized actions under all alternatives. ~~This increase equates to a 0.9 % increase in emissions for the Oil and Gas emission source category. However, this increase represents less than 0.09% of the regional emission inventory~~. ~~These emissions are based upon projected population growth in the region.~~ Ozone precursor emission levels for oil and gas development in the San Joaquin Valley ~~under Alternatives B-E~~ are estimated ~~above~~ below *de minimis* levels (~~10~~ 2 tons per year of NO_x). NO_x *emissions for oil and gas in Ventura, San Luis Obispo, and Santa Barbara Counties are estimated at 0.06 tons per year; as such, no formal conformity determination is required*. ~~An exceedance of a de minimis threshold value triggers the need for publication of a formal conformity determination, in compliance with EPA rules (40 CFR 9300). As a result, a formal conformity determination is required for this pollutant in the San Joaquin Valley 8-hour ozone nonattainment area. A Conformity Determination will be completed for the Proposed Plan concurrent with the Proposed RMP/Final EIS and prior to the Record of Decision.~~

PM_{10}: PM_{10} *emissions for oil and gas will slightly increase throughout the Planning Area; the projected increase in* PM_{10} *emissions in the San Joaquin Valley and coastal counties (San Luis Obispo, Santa Barbara, and Ventura Counties) is 0.336 tons per year and 0.006 tons per year, respectively.* ~~Tthe analysis shows that all of the action alternatives result in reductions of PM10 emissions. The largest reductions in PM10 would occur under Alternative D, with the smallest reductions occurring in Alternative E.~~ ~~These~~ *However,* PM_{10} emission reductions are achieved as a result of ~~reductions in livestock grazing use and~~ route designations *through the reduction of miles available for motorized travel*. *For management of the travel network,* ~~E~~ *emissions* reductions will primarily occur in the San Joaquin Valley planning area with minor amounts occurring in the East Kern planning area. Estimated PM_{10} emissions *from vehicle travel on unpaved roads is 5.2 tons per year, which is* ~~are~~ consistent with the SIPs and represents conformity. Since the calculated emissions of PM_{10} do not exceed *de minimis* threshold values for designated maintenance areas, no formal conformity determination is required.

$PM_{2.5}$: $PM_{2.5}$ *emissions for oil and gas will slightly increase throughout the Planning Area; the projected increase in* PM_{10} *emissions in the San Joaquin Valley and coastal counties (San Luis Obispo, Santa Barbara, and Ventura Counties) is 0.336 tons per year and 0.006 tons per year, respectively.* ~~Oil and gas development proposed under Alternatives B-D will result in increased PM2.5 emissions in the SJV.~~ *However,* $PM_{2.5}$ *emission reductions are achieved as a result of route designations. Estimated* $PM_{2.5}$ *emissions from vehicle travel on unpaved roads is 0.5 tons per year. Since the calculated emissions of* $PM_{2.5}$ ~~Estimated PM2.5 emissions~~ are clearly *de minimis,* ~~and therefore~~ no further analysis *or conformity determination* is required.

CO: *Since applicable oil and gas production source categories do not recognize or include carbon monoxide in existing emission inventories, CO was not estimated for these program activities. CO emissions associated with fire management activities would be considered at the project level (e.g. wildland fire management, prescribed burn). Fire management activities conducted in compliance with an approved Smoke Management Plan (SMP) would be considered in compliance with the SIP and General Conformity requirements.*

4.1.3.1.1 Prevention of Significant Deterioration

As indicated in Chapter 3, there are no major stationary sources within 50 km of designated Class I areas. Nor does the BLM Bakersfield FO anticipate actions or project(s) that would require a PSD permit. However, proposed BLM authorized actions that would result in substantial attainment emissions would be reviewed for PSD requirements and would need to secure all relevant air quality permits before operating.

4.1.3.1.2 Climate Change

The Council on Environmental Quality (CEQ) issued draft guidance on February 18th, 2010 which states that "if a Proposed Action would be reasonably anticipated to cause direct emissions of 25,000 metric tons or more of CO_2-equivalent GHG emissions on an annual basis, agencies should consider this an indicator that a quantitative and qualitative assessment may be meaningful to decision makers and the public" (CEQ 2010). The CEQ does not propose this as a threshold of significant effects, but rather as an indicator of a minimum level of GHG emissions that may warrant some description in the NEPA analysis.

Secretarial Order 3289 outlines the Department of the Interior's approach for managing resources in light of the uncertainty surrounding climate change. The BLM has responded to this order by developing a multifaceted program to assess conditions across public lands at multiple scales. Although still early in strategy and operational development, this program can guide implementation of activities authorized by BLM resource management plans (http://www.blm.gov/wo/st/en/prog/more/climatechange.html). Once finalized, both Departmental and CEQ guidance are anticipated to be forthcoming.

While global and national GHG inventories are established, regional and State specific inventories are in varying levels of development. Quantification techniques are in development. For example, there is a good understanding of climate change emissions related to fuel usage. Analytical tools necessary to quantify climatic impacts at the project level are presently unavailable. As a consequence, impact assessments of specific effects of anthropogenic activities are difficult to determine. The U.S. Global Change Research Program recognizes that further work is needed on how to quantify cumulative uncertainties across spatial scales, and the uncertainties associated with complex intertwined natural and social systems *(U.S. Global Change Research Program 2009).~~Karl et al. 2009).~~*

It is not possible to discern whether global climate change is affecting resources in the analysis area of the plan. For example, an analysis of the Bakersfield, CA temperature data from 1938 to 2009 shows that average annual temperature has remained about 1.19 degrees of the mean (one standard deviation) nearly every year for the period of record. Regular fluctuations occur every year. Figure 3.1-3 illustrates there is already great variation in temperatures within the region. It is important to note that projected changes are likely to occur over several decades to a century. Therefore many of the projected changes associated with climate change may not be measurable within the reasonably foreseeable future or within the lifespan of this plan. As noted in Chapter 3, the predicted temperature changes are less than the existing year to year variations *of* ~~*in*~~ the average annual temperatures.

Existing climate prediction models are global or continental in scale and there are no tools available to estimate potential impacts to climate change within the planning area, or potential impacts of a single GHG emission source on global climate change. Under this RMP, GHG emissions are anticipated from vehicle fuel usage, public access and OHV use, prescribed burning, livestock grazing, and oil and gas production. The primary sources of greenhouse gases from existing and proposed BLM management are carbon dioxide (CO_2) and methane (CH_4), resulting mainly from continued oil and gas development. In addition, nitrous oxide (N_2O) and VOCs are indirect air pollutants from oil and gas production that contribute to ozone formation and aid in prolonging the life of methane in the atmosphere. GHGs are produced and emitted by various sources during phases of oil and gas exploration, well development, production, and site abandonment.

Direct and indirect GHG emissions may occur from various sources during each phase of oil and gas exploration and development. During exploration and development, emissions are generated from well pad and access road construction, rigging up/down, drilling, well completion, and testing phases. GHG

emissions for these phases are mainly CO_2 emissions from fuel in internal combustion engines of diesel trucks, equipment, and rigs. As Zahniser (date unknown) noted in the Characterization of Greenhouse Gas Emissions Involved in Oil and Gas Exploration and Production Operations, Review for the California Air Resources Board, an additional one-time and potentially long term effect could include carbon sinks lost due to surface and vegetation disturbance associated with well site development.

In absence of final Departmental and/or CEQ guidance, the Bakersfield RMP analysis relies on the continued development of local or regional policy and guidance addressing GHG impacts under CEQA. The BLM will encourage the integration of design features and consider the application of BMPs to reduce project level GHG emissions. Consistent with the SJVAPCD guidance (SJVAPCD 2009b) on addressing GHGs under CEQA, if Best Performance Standards (BPS) are implemented, then no quantification is required. Based on conformance with this guidance, GHG contributions resulting from proposed plan implementation would be undetectable on a nationwide basis and would be expected to have a very minor influence on global climate change.

4.1.4 Impact of Alternative B

Alternative B (preferred alternative) balances resource conservation and ecosystem health with the production of commodities and with public use of the land. This alternative places importance on collaborative arrangements with landowners, permit holders, and other land managers to provide opportunities to produce commodities from natural resources and to use the land for public purposes on a sustainable basis while maintaining key ecological, cultural, and recreational values. Alternative B would result in the following changes from baseline emissions under current management:

- Reduction in the miles of routes available for motorized vehicle use;
- Reduction in the amount of nonenergy minerals activity; and
- Slight increase in livestock grazing activity.

Alternative B would result in a decrease in available *motorized* routes from the current ~~*1895*~~ *1,954* miles to ~~*770*~~ *1,589* miles. This represents a ~~*59%*~~ *16%* decrease in routes and the associated disturbed surfaces which contribute to PM10 emissions. *Although the mileage of routes may be reduced this is not an indication that vehicle usage (i.e., total miles travelled) would diminish.* ~~*Based upon the methodology used by the USEPA (2003), this represents a decline from 6.2 tons per year (tpy) of PM10 to 2.55 tpy. PM2.5 emissions would likewise decline from 1.7 tpy to 0.67tpy.*~~ *Based upon the methodology used by the USEPA (2003), the reduction in routes represents a decline from 6.2 tons per year (tpy) of PM10 to* ~~*2.55*~~ *5.2 tpy of PM10. PM2.5 emissions would likewise decline from 1.7 tpy to* ~~*0.255*~~ 0.*5 tpy. Unless these routes are surfaced they have the potential to general dust which may result in air quality issues for sensitive receptors in the adjacent communities. Where route maintenance and improvement occurs (such as in the Temblor and Keyesville SRMAs) these impacts would be lessened.*

Minerals activities (nonenergy) are projected to decline from 332 projects under current management to 203 projects as a result of Alternative B. This represents a 39% decline in activity. Although it is not known how much the change in emissions this represents, it is assumed that there would be a corresponding decline in PM10 emissions.

Livestock grazing use is projected to increase from 34,500 AUMs to a potential ~~*40,000*~~ *40,200* AUMs as a result of Alternative B. This represents a *potential* ~~*14%*~~ 7% increase in ~~*use by allocating acquired acreage*~~ *livestock grazing activity*. Again, although it is not known how much the change in emissions

this represents, it is assumed there would be a corresponding increase in PM10 emissions. PM10 emissions from rangeland livestock grazing activities are considered minor; state and regional air inventories do not identify or quantify rangeland livestock grazing as a significant source of PM10 emissions. As a result, any increases due to potential increases in rangeland grazing are expected to be clearly *de minimis*.

4.1.5 Impact of Alternative C

Alternative C emphasizes conserving natural resources, maintaining functioning natural systems, and restoring natural systems that are degraded. Management would focus on protecting sensitive resources while limiting or excluding certain resource uses in sensitive areas. The changes proposed under Alternative C would result in the following changes from baseline emissions under current management:

- Reductions in the miles of routes available for motorized vehicle use;
- Reduction in the amount of nonenergy minerals activity; and
- Slight increase in livestock grazing activity.

Alternative C would result in a decrease in available routes from the current 1,895 miles to 656 miles. This represents a 65% decrease in routes and the associated disturbed surfaces which contribute to PM10 emissions. Based upon the methodology used by the USEPA (2003), this represents a decline from 17.2 tpy of PM10 to 6 tpy. ~~*PM2.5 emissions would likewise decline from 1.7 tpy to 0.56 tpy.*~~ *PM2.5 emissions would likewise decline from 0.62 tpy to 0.212 tpy.*

Minerals activities (nonenergy) are projected to decline from 332 projects to 137 projects as a result of Alternative C. This represents a 59% decline in activity. Although it is not known what change in emissions this represents, it is assumed that there will be a corresponding decline in PM10 emissions.

Livestock grazing use is projected to increase from 34,500 AUMs to 37,800 AUMs. This represents a potential 9% increase in livestock grazing use. Again, although it is not known how much change in emissions this represents, it is assumed there would be a corresponding increase in PM10 emissions. Any increase in PM10 emissions from rangeland livestock grazing activities is considered minor since state and regional air inventories do not identify or quantify it as a significant source of PM10 emissions. As a result, any increases due to potential increases in rangeland livestock grazing are expected to be clearly *de minimis*.

4.1.6 Impact of Alternative D

Alternative D mimics Alternative C in all aspects except livestock grazing. This alternative eliminates livestock grazing for the life of the plan from the public lands where the Bakersfield RMP provides administrative direction for the livestock grazing program. The changes proposed under alternative D would result in the following changes from baseline emissions under current management:

- Reductions in the miles of routes available for motorized vehicle use;
- Reduction in the amount of nonenergy minerals activity; and
- Elimination of livestock grazing activity.

Alternative D would result in a decrease in available routes from the current 1,895 miles to 656 miles. This represents a 65% decrease in routes and the associated disturbed surfaces which contribute to

PM10 emissions. Based upon the methodology used by the USEPA (2003), this represents a decline from 17.2 tpy of PM10 to 6 tpy. ~~*PM2.5 emissions would likewise decline from 1.7 tpy to 0.56 tpy*~~. *PM2.5 emissions would likewise decline from 0.62 tpy to 0.212 tpy.*

Minerals activities (nonenergy) are projected to decline from 332 projects to 137 projects as a result of Alternative D. This represents a 59% decline in activity. Although it is not known what change in emissions this represents, it is assumed that there will be a corresponding decline in PM10 emissions.

Livestock grazing use is projected to eliminate all 34,500 AUMs of current grazing use on lands within the Decision Area administered by the Bakersfield FO as a result of Alternative D. This represents a 100%decline in authorized use. Again, although it is not known how much the change in emissions this represents, it is assumed there would be a corresponding decline in PM10 emissions. Since state and regional air inventories do not identify rangeland livestock grazing as a significant source of PM10 emissions, emissions from these activities are considered minor and expected to be clearly *de minimis*.

4.1.7 Impact of Alternative E

Alternative E emphasizes the production of natural resources commodities and public use opportunities. Resource uses such as recreation, livestock grazing, mining, oil/gas leasing and development, consistent with BLM guidance and constraints, would be emphasized. Potential impacts on sensitive resources would be mitigated on a case-by-case basis. The changes proposed under Alternative E would result in the following changes from baseline emissions under current management:

- Reductions in the miles of routes available for motorized vehicle use;
- Reduction in the amount of nonenergy minerals activity; and
- Slight increase in livestock grazing activity.

Alternative E would result in a decrease in available routes from the current 1,895 to 1,683 miles. This is an 11% decrease in routes and the associated disturbed surfaces which contribute to PM10 and PM2.5 emissions. Based upon the methodology used by the USEPA (2003), this represents a decline from 17.2 tpy of PM10 to 15.2 tpy. ~~*PM2.5 emissions would likewise decline from 1.7 tpy to 1.4 tpy under this alternative.*~~ *PM2.5 emissions would likewise decline from 0.62 tpy to 0.55 tpy under this alternative.*

Minerals activities (nonenergy) are projected to decline from 332 projects to 227 projects as a result of Alternative E. This represents a 32% decline in activity. Although it is not known how much the change in emissions this represents, it is assumed that there will be a corresponding decline in PM10 emissions.

Livestock grazing use is projected to increase from 34,500 AUMs to 42,300 AUMs which represents a 23% increase in use. Again, although it is not known how much change in emissions this represents, it is assumed there would be a corresponding increase in PM10 emissions. Any increase in PM10 emissions from rangeland livestock grazing activities is considered minor since state and regional air inventories do not identify or quantify it as a significant source of PM10 emissions. As a result, any increases due to potential increases in rangeland livestock grazing are expected to be clearly *de minimis*.

4.2 Biological Resources

Biological resources include the plant and animal species and populations, natural communities, and ecosystem processes that occur within the Decision Area. A diversity of vegetation, habitats, plant and animals, including numerous special status species, are known to occur on public lands.

Effects on biological resources, including special status species and riparian habitat, from other management programs include short term and long term habitat degradation, loss, and fragmentation. Surface-disturbing activities would damage and remove vegetation, destroy habitat features used by wildlife, injure or kill wildlife, and alter soil surface and water flow patterns, which can modify species composition and population levels. Interactions between biological resources, humans, and domestic animals would result in consumption of vegetation, mechanical damage to vegetation, displacement and harassment of wildlife, disruption of behavior patterns, and competition for space and other resources.

METHODS OF ANALYSIS

The analysis of direct and indirect effects is focused on species, populations and habitats within the Decision Area. Direct and indirect impacts to biological resources result from actions that physically alter, damage, or destroy habitat; disrupt essential behaviors such as feeding, breeding, and sheltering; or result in injury or mortality to plants or animals. Direct impacts occur as a direct result of management actions, at the same time and place. Indirect impacts occur later in time or in a different location than the original action.

Certain programs, such as livestock grazing, minerals, recreation, trails and travel, and lands and realty, have the greatest potential to modify habitat and affect species at both the local level and across the landscape. ACEC and biological resources management implement the greatest number of actions to restore, protect, and conserve biological resources, including special status species and riparian habitats. Such programs as air quality, geology, soils, cultural resources, and paleontological resources have limited to negligible effects on biological resources, including incidental protection of biological resources. Some programs have mixed effects. For example, the cave and karst program protect cave species and habitats but have little effect on other biological resources. Other programs, such as wildland fire ecology, may have short-term adverse effects on individual plants and animals, but result in long-term beneficial effects on biological communities and populations.

Potential effects of decisions and management actions to species, populations and habitats were identified by a team of biologists. A metric which best reflected the scale and magnitude of these effects, such as acres, miles or number of species, was selected whenever possible. A GIS data set and overlays of resources and resource uses was used to quantify effects. In the absence of quantitative data, best professional judgment was used to provide detailed qualitative information.

ASSUMPTIONS

Assumptions used in this impact analysis include the following:

- All actions undertaken as part of this RMP would be assessed in accordance with NEPA and the Endangered Species Act. If required, consultation with the U.S. Fish and Wildlife Service (USFWS) would be completed. SOPs, mitigation measures, and terms and conditions in this RMP and subsequent NEPA documents and biological opinions will be applied and followed.

- Valid existing rights, such as existing oil and gas leases, private mineral rights, and existing land use authorizations, would be honored, but SOPs, stipulations, mitigation measures, and terms and conditions in this RMP and subsequent NEPA documents and biological opinions will be applied and followed.
- If additional special status species or critical habitat were designated or discovered, the objectives and decisions in this plan would extend to such species as well.
- Over time, species distribution may change. Management action locations would change accordingly.
- Impacts on special status species would be similar to those discussed for species with no special status. Special status species may be more restricted in distribution, reducing the likelihood that certain activities would interact with them. However, impacts on special status species could be more pronounced due to reduced population sizes and ranges and increasing threats. More emphasis would be placed on avoiding or minimizing project effects on special status species since their populations are already in decline. Similarly, more emphasis would be placed on implementing conservation actions for special status species.
- Incomplete information includes undiscovered locations of special status species that may occur on public land and federal mineral estate. *A complete survey of the Decision Area has not been conducted and is not feasible; however, it is still possible to make informed decisions regarding impacts to special status species in spite of a lack of complete information based upon an understanding of impacts that are known to affect species in general*.
- All areas within VRM Class I and Class II would be managed to meet VRM Class I or Class II objectives, regardless of visibility from a key observation point.
- Generalized impacts from certain programs (Livestock Grazing, Wildland Fire Ecology, Fluid Minerals, Solid Minerals, Trail and Travel Management, Lands and Realty, and Recreation) are common to all alternatives. These generalized impacts are presented below. The impact discussion presented for each alternative focuses on the particular impacts of that alternative and builds on the discussion of generalized impacts that occur under all alternatives.
- Proposed management of the following resources or programs would provide incidental protection of biological resources because they limit surface disturbance and human uses that affect species, populations and habitat, or have negligible adverse effects on Biological Resources: Air and Atmospheric Values, Cave and Karst Resources, Cultural Resources, Paleontological Resources, Soil Resources, Visual Resources, Water Resources, Outstanding Natural Areas, Backcountry Byways, National Trails, Wild and Scenic Rivers, Lands with Wilderness Characteristics, Wilderness Study Areas, and Interpretation and Environmental Education. These resources and programs are not analyzed further.

Generalized Impacts that Occur under All Alternatives

Livestock Grazing. Direct impacts on vegetation, including special status species, resulting from livestock grazing management include disturbing soils and biological soil crusts, removing and trampling vegetation, depositing urine and manure, and dispersing seeds. *Jones (2000), in a quantitative review of 54 grazing studies in the arid west, reported that 11 of 16 variables examined showed significant detrimental effects of livestock grazing. Examples of variables impacted included rodent species diversity*

and richness, shrub cover, grass cover, seedling survival, cryptogamic crust cover, soil/water infiltration rate, soil erosion, and liter biomass. Consumption and trampling affects the amount, physical structure, and vigor of grazed plants, which would have a long-term effect on species composition, distribution, and diversity in the grazed area. Grazing reduces seed production by removing plant parts, including reproductive structures, and has long-term impacts on the native seed bank. The deposition of urine and manure increases nitrogen and moisture levels, generally favoring ~~*weedy*~~ *nonnative* invasive species. *Kimball and Schiffman (2003), in a study on the Carrizo Plain National Monument, concluded that cattle grazing harms native species and promotes alien plant growth. A much larger study undertaken by BLM (Christian, in prep.) concluded that the cover and richness of native annual forb species decreased with grazing while exotic annual grasses increased.* Livestock transport and introduce ~~*weed*~~ *nonnative* seed clinging to their fur and in their manure. Livestock hooves break and trample soil crusts and create germination sites for weedy species. Movement of livestock across non-level landscapes results in a generalized net movement of soil down slope; even moderate slopes are likely to suffer soil erosion under moderate grazing pressure (Mwendera et al. 1997). Impacts to riparian areas include loss of vegetation, soil disturbance, sedimentation, changes in water quality, and changes in channel morphology (Hoorman and McCutcheon 2005).

By altering vegetation composition, structure, and diversity, grazing alters wildlife habitat and animal species composition in the grazed area which usually occurs at varying levels across the landscape. *Germano et al (2001) hypothesize that livestock can be used to manage arid grasslands and that negative effects will be outweighed by a general improvement of habitat conditions for populations of declining target species.* Livestock also compete with wildlife for food, water, and space. Some animals avoid areas when livestock are present, while others are attracted to areas when livestock are present. *Deer spend more time feeding and less time resting with increased cattle stocking rates (Kie et al. 1991) and change habitat preferences when cattle are present (Loft et al. 1991)*. Livestock hooves can collapse burrow entrances. Urine and manure affect water chemistry, which would influence aquatic species composition. Livestock trails alter water flow patterns and erode steep terrain. Concentrated and repeated livestock hoof action compacts soil, such as that around water troughs or under shade trees.

Removing vegetation, especially persistent herbaceous material, reduces fine fuels that can carry wildfires that kill native shrub species that are not fire adapted. Removing persistent herbaceous material also creates an open habitat structure favored by certain wildlife species. On the other hand, grazing spreads the weedy nonnative grasses that form the bulk of the fine flashy fuels.

Infrastructure associated with grazing also alters habitat. Fences create travel barriers for some species and provide perches for predators. Water developments provide water for wildlife but may also divert water from natural channels and riparian habitat. Installation and repair of range improvements results in short- and long-term disturbance to habitat. Infrastructure affects livestock movement and creates heavily used areas near troughs and along fences and influences trail development by livestock, which, in turn, creates areas of heavy impacts on vegetation over the long term.

The effects of grazing tend to be related to the intensity and timing of grazing. Higher levels and grazing during the plant reproductive season tends to have greater impacts on plant species. Riparian areas are more susceptible during the hot season, when livestock congregate in the cooler, moister, riparian area. Soil crusts are more susceptible to long-term damage during the dry season, when dormancy prevents their growth and repair and results in more potential for soil erosion by wind.

Due to the widespread nature of grazing, a number of special status species are affected. Blue elderberry, the host plant for the valley elderberry longhorn beetle, can be grazed or mechanically damaged by livestock. Similarly, *Cammissonia* species, the food plant for larva of the Kern primrose sphinx moth, can be trampled or consumed. Kern primrose sphinx moth adults and larva can be trampled by livestock.

Livestock can consume water from vernal pools that provide habitat for the vernal pool fairy shrimp, spadefoot toad, succulent owl's clover, and other special status vernal pool species. Fecal material and urine alter pool chemistry and nutrient levels. Livestock can trample individual vernal pool plants and animals. Grazing can remove weedy vegetation that can decrease vernal pool habitat quality.

Ponds constructed and maintained for livestock water provide breeding habitat for special status amphibian species, such as the California tiger salamander and California red-legged frog.

Grazing can remove vegetation and create an open habitat structure that is preferred by some special status species, such as the blunt-nosed leopard lizard and mountain plover. In annual grasslands, these benefits are usually short term and vary from year to year, depending on precipitation.

Livestock can consume and trample special status plant species. Livestock hooves can compact soils or disrupt cryptogamic crusts, favoring germination of weedy nonnative species over special status plant species. Grazing is considered a threat to many rare plants. Kelso Creek monkeyflower populations have been impacted by livestock, and Springville clarkia is readily eaten by cattle. Although larkspur are poisonous to cattle, the plants are occasionally eaten and are easily damaged by trampling. Larkspur is readily eaten by sheep, which experience no ill effects. Habitat for short-statured species, such as the Kelso Creek monkeyflower, is degraded when livestock disturb the soil, degrade cryptogamic crusts, and create opportunities for the invasion of nonnative weedy species. Impacts from livestock grazing continue to be a problem for the monkeyflower populations in Cyrus Canyon.

Grazing prescriptions that take into consideration special status species requirements will generally minimize impacts on known populations. Populations or occurrences that have not been discovered may not be protected.

Grazing tends to promote weedy species. Livestock disturb soils, create nitrogen-rich habitat conducive to ~~*weeds*~~ *invasive species*, and act as vectors for the introduction and spread of ~~*weeds*~~ *nonnative species*. Many of the nonnative species infesting California grasslands are European species that evolved under grazing.

Wildland Fire Ecology. Fire consumes vegetation and litter, altering habitat structure, and soil nutrients, temperature and physical properties. Plant species composition following a fire typically goes through a series of successional assemblages. Some plant species are fire intolerant, and other plant species require fire for rejuvenation or reproduction. Removal of vegetation can create germination sites for weedy species to become established. Burned areas may eventually return to the original plant community or may become permanently altered.

By altering vegetation structure and plant species composition, fire modifies wildlife species composition in an area. As vegetation structure and species composition change over time, so do the assemblages of wildlife that make use of the area. Certain species are attracted to recently burned areas by food, such as insects and herbaceous vegetation; other species that require more habitat structure remain absent from the area for several years. Although fire removes dead woody material that

provides habitat for certain species, it also creates snags and downed wood that can be used by wildlife. Wildlife can also be killed or injured by fire as a result of burning or smoke inhalation. The impacts from prescribed fire can result in short term degradation or improvement of habitat, depending on the habitat requirements of individual species. Fuels treatments and prescribed fires usually have short term effects at the local scale while large wildfires have long term effects at the landscape scale.

Construction of fire lines to control fires removes vegetation and exposes the soil surface. Fire lines on steep slopes can result in erosion. Personnel and equipment can introduce ~~*weed*~~ *nonnative* seed, and fire lines provide germination sites for weedy species. Off-road travel during fire suppression can collapse dens and burrows, and wildlife can be injured or killed by being struck by vehicles or from being inside collapsed features. Fire lines are typically stabilized with water bars or other erosion practices once the fire has been controlled. Dropping fire retardant can add nitrogen and phosphorus to the system and promote the establishment of invasive plants at the expense of native plants. Fire lines may be constructed to protect plant species that are eliminated by fire. In such cases the long-term benefits of preserving established plants may outweigh any short-term impacts associated with line construction.

Reducing fuels by cutting, masticating, mowing, and trimming often targets certain plant groups. Typically, shrubs and the lower limbs of trees are removed. Herbaceous material is mowed. Removed material may be chipped and left in place, altering the amount of litter, which influences plant species germination. Treatment that disturbs the soil may provide sites for noxious and invasive ~~*weeds*~~ *species* to become established. Mechanical treatment may be used to reduce fuels so that prescribed fire can be applied to meet biological resource objectives. In such cases the long-term benefits of the prescribed fire may outweigh any short-term impacts associated with mechanical treatment.

Prescribed fire generally includes objectives for improving plant species composition and vigor and wildlife habitat structure. Timing, intensity, and burn patch size can be designed to minimize unnecessary impacts on plants and animals. Prescribed fires can return fire intervals to the natural occurrence that is appropriate for a community and can prevent catastrophic fires which often have longer term impacts at the landscape scale.

Impacts on listed plant and animal species are the same as described above. MIST would be implemented to avoid or minimize impacts on listed species and habitats. Fire suppression would protect plant communities or plant species that provide habitat for listed species. Prescribed fire and mechanical treatments would be used to reduce the risk of catastrophic wildfires and improve habitat quality for some listed species. Thus, the BLM lands would continue to support populations of special status species, which would contribute to their conservation and recovery.

Fluid Minerals. Oil and gas leasing would have short term and long term indirect effects on biological resources if new leases were developed. Development of existing oil and gas leases would also have effects on biological resources.

Impacts on biological resources, including special status species, from oil and gas activities could occur either on habitat or on plants and animals themselves. Oil and gas development results in both short term and long term habitat loss from installing roads, pipelines, power lines, drilling pads, sumps, and production facilities, from contouring surface profiles, and from making other surface modifications. Habitat quality can be affected by oil and gas development. Roads, pads, and pipelines fragment habitat, and construction can damage vegetation or destroy burrows and dens. Surface disturbance and travel on dirt roads create dust, which reduces photosynthesis and reproduction in plants. Oil spills or leaks

can coat vegetation and soil, or can entrap animals. Animals can also become entrapped in trenches, sumps, well cellars, valve boxes, pipe segments, and collapsed burrows or dens. Vehicles and equipment can crush or strike animals. Human activity can displace wildlife from the area and introduce trash. Wildlife can consume or become entangled in trash. Geophysical exploration would result in many of the same impacts as other oil and gas activities but generally results in short-term impacts on biological resources.

Preliminary data suggest that ecological communities in San Joaquin Valley saltbush scrub remain relatively intact up to medium oil field development levels (Fiehler and Cypher 2010). Animal communities appear to become altered at high levels of oil field development. Although the wildlife, assemblages are more diverse at high levels of development, the wide-spread common species appear to replace the arid endemic species.. At high levels of oil field development, greater structural diversity due to facilities and plantings, greater amount of edge habitat, and the availability of water create habitat that is colonized by these opportunistic nonendemic species. High intensity oil fields are generally localized on a few BLM parcels and leases. Low to moderate levels of oil and gas activities occur on most BLM lands in oil fields. Thus, most BLM oilfields retain wildlife populations typical of the natural communities where the oil fields occur.

Within the RMP decision area most of the oil and gas activity is projected to occur in the San Joaquin Valley. Between 100 and 300 wells are forecast to be drilled per year. This correlates well with the 191 wells drilled per year over the past decade. The RFD estimates that between 100 and 265 acres of surface disturbance would occur annually as a result of existing and new federal oil and gas leases. Only a portion of the disturbance would be within habitat. Between July 1996 and September 2009, approximately 500 acres of habitat were disturbed as a result of federal leases within the decision area. Disturbance by year ranged from about 20 acres per year to about 90 acres in 2007-2008. This is an average of 40 acres per year.

Within the San Joaquin Valley, for every habitat acre permanently disturbed, three acres are set aside as compensation. For temporary disturbance, 1.1 acre is set aside. In addition, if an acre of public land that has been identified as part of the reserve and corridor system were disturbed, temporarily or permanently, an additional replacement acre would be set aside to compensate for the additional disturbance. Between July 1996 and September 2009, approximately 1,300 acres of compensation and replacement habitat was set aside for the approximately 500 acres of habitat disturbed. This yielded an overall compensation ratio of about 2.5 acres of compensation for every acre disturbed. These measures are implemented to maintain listed species habitats at the landscape scale.

Measures to minimize impacts on species and habitat, including special status species and riparian habitat, would also continue to be applied to project authorizations. Examples of these measures are contained in Appendix L - Best Management Practices and Standard Operating Procedures.

Geothermal exploration and development would result in short term and long term habitat loss from installing roads, pipelines, power plants, transmission lines, and drilling pads, from contouring surface profiles, and from making other surface modifications. Habitat quality can also be affected by geothermal exploration and development. Roads and pipelines can fragment habitat, and construction can damage vegetation or destroy burrows. Animals can become entrapped in collapsed burrows or dens, trenches, and pipe segments. Animals are also crushed by moving vehicles and equipment and can be displaced by human activity and equipment noise.

High geothermal potential is limited to public lands in the vicinity of Lake Isabella in the Sierra Nevada. If exploration and development were to occur, between 53 and 367 acres could be disturbed over the life of the plan. Such impacts would be considered localized and not likely to result in impacts at the landscape scale.

Oil, gas, and geothermal development can occur at night, which introduces artificial light that can either attract or displace wildlife and can disrupt normal behavior patterns. These impacts range from localized in low intensity developed oil fields to being more wide-spread across the landscape in large and highly developed oil fields. Animals that are active at night may be less habituated to human activity. Vehicles may be more likely to strike wildlife at night when visibility is reduced.

Oil and gas activities would continue to affect special status species, especially in the San Joaquin Valley and in the Sespe-Hopper Mountain area..

The general impacts of oil and gas activities on the San Joaquin Valley suite of listed species and their habitats are described above. These species are Kern mallow, Bakersfield cactus, San Joaquin woolly-threads, California jewelflower, San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, Tipton kangaroo rat, and San Joaquin antelope squirrel. Species-specific surveys and species avoidance and habitat protection measures would result in oil and gas activities that minimize impacts on these species. Low and moderate levels of development would sustain suitable habitat for these animals, while the high density oil well areas would become unsuitable or largely avoided (Spiegel 1996; Cypher 2000; Fiehler and Cypher 2010). In the past, projects have been located to avoid listed plant populations. Development of BLM surface within reserves and corridors would also be subject to a disturbance limit of 10 percent (reserves) and 25 percent (corridors). Implementation of measures to minimize impacts, together with development limits in reserves and corridors, would maintain species populations and habitats on BLM lands within the San Joaquin Valley oil fields and would contribute to special status species conservation and recovery over the long term and at the landscape level..

Condors can be harmed by ingesting oilfield materials, including oil, vehicle coolant, chemicals, and trash. Condors can collide with structures and power lines. Habituation to humans can increase the likelihood of human-condor interactions. Noise from activities can disrupt roosting and nesting behavior, and place chicks at risk. Condors can become coated with oil from well cellars, leaks, and spills or become entangled in equipment or fences. Oilfield roads provide access for hunting and other recreation, which produces trash that condors ingest. Certain measures have reduced the risk of oil-related impacts on condors in the Sespe-Hopper Mountain area, such as aggressively removing trash, fencing well pads frequented by condors, installing perching deterrents and bird deflectors on power lines, seasonally restricting certain oil field activities and public access, and replacing rubber lines with steel ones. While these impacts may occur at a local scale, they may impact Condor populations across the larger landscape where these birds occur. The impacts may be short term or long term depending on Condor population levels and population trends.

Soil disturbance associated with oil field development can promote weedy species. In addition, ~~*weed*~~ *nonnative invasive species* can be introduced and spread by oil field workers and equipment.

Solid Minerals. Solid mineral exploration and development would result in habitat loss from test pits, overburden removal and storage, material extraction, roads, pipelines, power lines, production facilities, contouring of surface profiles and other surface modifications. Vegetation can be destroyed outright or impacted by dust created by mining. Habitat quality can also be affected by solid mineral exploration

and development. Weedy species can be introduced and spread by personnel, vehicles, and equipment. Roads and pipelines can fragment habitat, and construction can damage vegetation or destroy burrows and dens. Surface disturbance and travel on dirt roads creates dust, which reduces photosynthesis and reproduction in plants. Animals can become entrapped in trenches, pits, pipe segments, and collapsed burrows or dens. Vehicles and equipment can crush or strike animals. Human activity can displace wildlife from the area and introduce trash. Wildlife can consume or become entangled in trash. Due to the location of the deposits, sand and gravel extraction could result in surface disturbance to stream channels, floodplains, and riparian habitat.

Surface disturbance associated with exploration and testing would be localized and small scale. Surface disturbance associated with extraction for salable minerals and solid leasable minerals, where larger pit mines are necessary, would be localized but at a larger scale. Extraction of locatable minerals generally results in scattered, small-scale, localized impacts. These impacts may be short term or long term depending on the duration of mining activities.

Extraction of salable and solid leasable minerals can include nighttime activities, which introduce artificial light that can either attract or displace wildlife and can disrupt normal behavior patterns. Animals that are active at night may be less habituated to human activity. Vehicles may be more likely to strike wildlife at night when visibility is reduced.

Mines that result from locatable mineral extraction provide habitat for wildlife species, such as bats. Complete closures of mines that are public safety hazards can remove habitat used by wildlife. Gating mines can increase the quality of habitat over the long term by protecting wildlife that use mines from human disturbance.

The general effect on special status species from solid mineral management is described above. Species-specific surveys and species avoidance and habitat protection measures would result in solid mineral activities that minimize impacts on these species. Listed plant populations usually would be avoided by development. Although there may be localized effects on special status species, especially annual plant species whose population boundaries are not always evident, adjacent BLM lands would continue to support populations of these species, which would contribute to their conservation and recovery.

Trail and Travel Management. The general effects of travel and transportation management on vegetation and wildlife, including special status species, would be habitat fragmentation, direct damage to or mortality of plants and animals, vegetation alteration, habitat disturbance, disturbance from vehicle noise/human interaction, noxious ~~*weed*~~ *nonnative species* or undesired nonnative species introduction, soil compaction and erosion, and dust, which could decrease plant reproduction and photosynthesis.

Route proliferation, due to both authorized and unauthorized off-route travel, can trample vegetation, cause burrow collapse, strike wildlife, and create new routes. Unauthorized route proliferation removes habitat and creates access to new areas, further degrading vegetation and fragmenting habitat. This is especially harmful to the San Joaquin Valley suite of special status species that have experienced an extensive loss of historic habitat. Diurnal blunt-nosed leopard lizards and San Joaquin antelope squirrels are susceptible to the higher speed recreational trail riding, road use, and unauthorized cross-country travel.

Lands and Realty. Impacts on biological resources, including special status species, from land use authorizations can occur either to habitat, or to plants and animals themselves. Authorizations that

include surface disturbance results in habitat degradation, loss, and fragmentation. These impacts may be short term or long term, but usually occur at the local scale. Surface disturbance can damage vegetation or destroy features used by wildlife, such as burrows and dens. Linear features that require surface disturbance, such as roads, or installation of structures that act as barriers, such as aboveground pipelines, can fragment habitat. Vertical structures, such as poles, towers, and buildings, provide perches and nesting structures for predators. Animals can collide with towers, aerial lines, guy wires, and other structures with vertical components. Wind turbines are known to kill large numbers of birds and bats. Surface disturbance and travel on dirt roads creates dust, which reduces photosynthesis and reproduction in plants. Animals can be entrapped in trenches, pipe segments, and collapsed burrows or dens. Vehicles and equipment can crush or strike animals. Human activity can displace wildlife from the area and introduce trash. Wildlife can consume or become entangled in trash. The soil disturbance associated with these activities increases the amount of weedy habitat. ~~*Weeds*~~ *Nonnative species* can be introduced and spread by personnel, vehicles, and equipment.

Retention and acquisition of lands or mineral estate indirectly affects biological resources by maintaining or establishing BLM control. Lands under BLM control are subject to compliance with protective laws, regulation, and policies, such as NEPA and the Endangered Species Act. Retained and acquired lands would also be subject to the protective management measures of this RMP.

Conversely, disposal of lands and mineral estate indirectly affects biological resources by relinquishing BLM control. Disposed lands and mineral estate could no longer be subject to compliance with protective laws, regulations, and policies to the same degree. The protective management measures of this RMP would no longer apply.

Maintaining and providing public and administrative access would have effects similar to Comprehensive Travel and Transportation Management and Recreation Management.

~~*Resolving unauthorized occupancy would have effects similar to other land use authorizations or disposal, depending on the method of resolution. If the resolution is to issue a land use authorization, the effects would be similar to other land use authorizations. If resolution was to dispose of the area to the user, the effects would be similar to other disposals.*~~

The general effects of lands and realty management on special status species are described above. Species-specific surveys and species avoidance and habitat protection measures would result in land use authorizations that minimize impacts on these special status species. Listed plant populations usually would be avoided by development. Although there may be localized effects on special status species, adjacent BLM lands would continue to support populations of these species, which would contribute to their conservation and recovery. The impacts on special status species from retention and acquisition would be the same as described above. Federally listed species would be subject to a higher level of protection on BLM lands than on private lands because the Endangered Species Act establishes a higher standard for impact minimization, conservation and recovery for federal agencies. This is especially so for federally listed plant species that have limited protection outside areas of federal jurisdiction.

Recreation. Direct impacts from recreation management actions include loss or modification of habitat from constructing recreation facilities, including roads and trails. Repeated and concentrated use of facilities that results in frequent human presence would have long-term localized impacts on biological resources.

Recreation that results in occasional human presence would have temporary localized impacts on biological resources. Recreation that results in repeated human presence, surface disturbance, or refuse (e.g., litter, spent ammunition, human and pet waste) could have a long-term impact. These activities include hiking, rafting, kayaking, swimming, horseback riding, mountain biking, motorized trail riding, camping, fishing, hunting, target shooting, playing paintball and air-soft, geocaching, rock hounding, prospecting, rock climbing, and sightseeing.

Hunting would have effects on certain species. Individual animals are killed or injured and population demographics are altered. Animals would alter use patterns in response to hunting.

Larger scale visitation, such as commercial, competitive, and group activities, would have greater impacts due to the increased number of people and acres impacted and the concentration of these impacts. Effects from larger scale visitation would be reduced through restrictions on permits or authorizations.

Human-wildlife interactions could cause animals to alter behaviors and habitat use patterns. Pets can harass and even kill wildlife. Many animals avoid using areas near people. Maintenance and development of water-based recreation sites would result in impacts on aquatic and riparian habitats through visitor use. Repeated human use, including camping, near water degrades aquatic and riparian habitat and displaces wildlife.

Generally, recreational OHV activities that result in increased human presence would have localized impacts on biological resources. Impacts would vary by frequency of motorized travel in a particular area and could include displacement of animals, increased stress during critical periods, and degraded habitats. OHV use can alter seasonal use patterns of many wildlife species. Travel off existing routes would destroy and degrade botanical resources, including sensitive species. Besides outright destruction of plants by vehicles, dust created by motorized activity interferes with photosynthesis and reproduction. The disturbed soils also provide habitat for weed*y species*, and OHVs act as vectors to introduce and spread ~~*weeds*~~ *nonnative plants*. Of particular concern is the potential of transporting Sahara mustard seed from OHV areas in the Mojave Desert to areas within the RMP planning area.

Overnight use of areas would have impacts due to the longer stay and nighttime use. Collecting wood for fires reduces the amount of woody material available for wildlife habitat or to protect the soil surface. In the absence of sanitation facilities, human waste could alter soil nutrient levels and water chemistry, which would affect habitat and water quality. More trash would be generated. Multiple meals would generate food smells and waste that could attract wildlife. Tent or trailer placement could damage vegetation or compact soils. Night lighting can either attract or displace wildlife and disrupt normal behavior patterns. Continuous human and pet activity would displace wildlife for long periods and have a greater effect than transient day use activities.

Public education and outreach could foster behavior that minimizes impacts on biological resources. Repair and revegetation of use areas would restore natural processes and improve habitat quality.

The general impacts of recreation management on special status species are described above. Recreation would be especially disruptive to certain special status species. Equestrians, hikers, pets, paintball and air-soft users can create trails that fragment and eventually destroy habitat for the Morro shoulderband snail and Morro manzanita at Los Osos. Visitation at Pt. Sal could disrupt the secluded nature of shore and beach use by northern sea lion, California least tern, and western snowy plover, altering reproduction and habitat use. Recreational vehicle use in the lower hills of the San Joaquin

Valley habitats can result in new routes that destroy vegetation and fragment and degrade habitat for the San Joaquin Valley suite of special status species.

4.2.1 Impacts of Alternative A

Actions to conserve, restore, and enhance biological resources, including special status species and riparian habitat, would continue to be implemented. These proactive measures include direction to retain and acquire important native habitat, especially for listed species; to implement recovery plans and secure areas important for recovery (e.g., compensation lands); to maintain, enhance, and restore native habitat and native populations, including riparian and sensitive species; to maintain linkage between areas of natural habitat; to improve the knowledge base of the species and lands under BLM management; and to manage all public lands appropriately. In addition, the designation of special areas with high biological value as ACECs and SMAs would establish management objectives and use restrictions that would help protect important biological resources from human activities and would result in the long-term maintenance of high-quality habitat across the landscapes where BLM lands occur.

Weeds would not be managed beyond law, policy and agency guidance.

Restrictions on certain activities to minimize impacts on biological resources (including special status species and riparian habitat) would continue to be imposed. These include such protective measures as SOPs for oil, gas, geothermal, and other development; the closure of sensitive areas to oil, gas, or geothermal development; the withdrawal of specified lands from mining law; Guidelines for Livestock Grazing Management, the establishment of ROW avoidance areas; and restrictions on campfires and wood or vegetation collecting. All of these actions would benefit native populations and habitats at the local and landscape scales by eliminating or reducing negative impacts stemming from development.

Release of un-retrieved nonnative animals would be allowed and may result in negative effects (such as competition, predation, habitat destruction, disease transmission, and hybridization) from nonnative species to native plants and animals.

Approximately 59,808 acres of ACEC in 13 areas would continue to be designated. This includes 52,473 acres in 12 ACECs specifically to protect biological resources, including habitat for 93 special status species. This includes six federally listed animal species and eight listed plant species. Two ACECs with 28,072 acres include riparian objectives.

Use restrictions, such as closing 3,850 acres to camping and campfires, 7,140 acres to the discharge of firearms, and 2,080 acres to cross-county horse travel would reduce damage to vegetation and soils, fragmentation of habitat, disruption of essential animal behaviors, wildfire ignitions, and loss of woody materials which would help maintain suitable habitat to conserve species and populations in Special Management Areas and ACECs.

Prescribed fire treatments would emphasize hazardous fuels reduction, and vegetation and wildlife habitat objectives. In areas treated for fuel reduction, species diversity would be reduced since vegetation structure would be simplified to create firebreaks and defensible space. Fire treatments to implement biological resource objectives mimic natural fire cycles and would improve plant composition and wildlife habitat structure. In addition, the potential for catastrophic wildfires that remove large expanses of habitat would be reduced.

Approximately 139,490 acres would be closed to OHV use, including the Blue Ridge and Pt. Sal ACECs, designated wilderness areas, Wilderness Study Areas, and the Pacific Crest National Scenic Trail corridor. This would protect biological resources in these areas over the long term. The remainder of the decision area (264,590 acres) would be designated as limited to OHV use, with impacts occurring on existing routes. No acres would be designated as open to OHV use.

There would be 844 miles of routes inventoried and designated as available for vehicle travel within habitat reserves and corridors for the San Joaquin Valley suite of special status species. These routes contribute to the habitat disturbance within these zones but are a minor proportion of the overall habitat disturbance. The amount of existing routes poses a risk to exceeding disturbance thresholds of 10 percent for reserves and 25 percent for corridors. This is especially true in the Buena Vista reserve and adjacent corridors, where routes have greatly proliferated. The amount of routes in the Lokern and Kettleman Hills reserve areas also contribute to the total amount of habitat disturbance. Existing roads, road proliferation, and related habitat disturbance could reduce the conservation and recovery value of the public lands in the reserves and corridors. Exceeding these thresholds may preclude recovery of some of the San Joaquin Valley listed species.

There would be 310 miles of inventoried routes in special management areas and 92 miles of inventoried routes in ACECs designated for biological resources. Areas such as Irish Hills, Tierra Redonda, Rusty Peak, Frog Pond Mountain, Cypress Mountain, Chimineas Ranch, Bittercreek, Hopper Mountain, Chico Martinez, Salinas River, Alkali Sink, and Goose Lake would experience little impacts from existing routes within their boundaries and would likely have a small amount of route proliferation beyond existing routes because these areas are not accessible to the public due to private lands blocking legal access or BLM control of access. Road proliferation and habitat loss could occur in the Lokern and Kettleman Hills ACECs, where public access is not controlled by private lands. However, such areas as the Temblor-Caliente and Monache-Walker Pass NCLWMAs, North Fork of the Kaweah River, and Piute Cypress ACEC (outside of the groves) are generally accessible by the public and may be subject to route proliferation. The Temblor-Caliente NCLWMA and portions of the Monache-Walker Pass NCLWMA around Isabella Lake would continue to experience extensive route proliferation, reducing habitat quality for biological resources. These impacts are becoming more extensive across these landscapes.

Lands and realty management actions could result in impacts to species, populations and habitats due to surface disturbance and potential interactions between authorized activities and biological resources. Lands with biological values or that contribute to regional conservation strategies could be disposed, which could compromise success of regional conservation and recovery strategies.

All mineral estate is potentially available for disposal. Disposed mineral estate would no longer be subject to the BLM's protective laws, regulations, and policies which protect biological resources.

Approximately 110,400 acres would be land use authorization (including ROW) avoidance areas, which would limit surface disturbance and reduce habitat degradation, fragmentation, and loss within ACECs and SMAs excluding NCLWMAs.

Approximately 314,600 acres would be available for livestock grazing, 61,200 acres would be unavailable and 26,900 acres are unallocated. Livestock grazing in areas available for such use would be conducted in a manner as to meet the minimum Standards of Rangeland Health. This management would result in the maintenance or attainment of healthy rangelands by ensuring that the four fundamentals of

watersheds, ecological processes, water quality, and habitats for special status species are functioning and in order.

Livestock grazing would continue within the boundaries of Cyrus Canyon and continue to impact populations of Kelso Creek monkeyflower. Plants and habitat would be subject to trampling and other negative impacts from livestock, soil crusts would continue to be degraded, and weedy species would have a chance for establishment and spread.

Specific livestock grazing management guidelines would prescribe minimum annual mulch levels and seasonal restrictions for saltbush scrub and riparian areas within the grazed areas of the planning area. These guidelines help protect and maintain biological resource habitats and sensitive communities in support of achieving minimum standards of rangeland health. These standards would be applied to BLM lands across the landscape and would influence habitat quality over the long term.

Specific livestock management guidelines that allow livestock grazing in areas known to contain federally listed species would take into account specific species requirements. The locations of most federally listed animals are generally known within the decision area; thus, implementing this special livestock management guideline would conserve federally listed animal populations on public land. In contrast, the locations of federally listed plant populations are not as well known due to a lack of inventory and the difficulty in detecting many species. This is especially true for annual species because their ephemeral nature makes them difficult to detect, and population densities vary year to year. As a result, implementing this special guideline may not protect all federally listed plant populations since their locations are not well known, and livestock grazing has been identified as a threat to most species. In addition, it can be difficult to identify a rare annual species in an area where the vegetation has been grazed.

Approximately 150,850 acres would be closed to oil and gas leasing which would eliminate surface disturbance and potential for interactions between oil field activities and biological resources in these areas. This includes the Bitter Creek, Blue Ridge, Deer Spring, Erskine Creek, and Piute Cypress areas which would eliminate surface disturbance and potential for interactions between oil field activities and biological resources, including condors, in these areas.

All new oil, gas, and geothermal leases would be issued with CSU stipulations to protect special status species and critical habitat. Important nesting, wintering, and roosting areas in the Case Mountain and Kettleman ACECs would be protected from fluid mineral development by a CSU stipulation that allows relocation and seasonal activity restriction to minimize disruption of important raptor behaviors. Cypress Mountain, Frog Pond, Irish Hills, and Rusty Peak would be leased with an CSU stipulation to protect biological resources. These CSUs would allow the BLM to move, delay, and even prohibit surface-disturbing activities on all or a portion of the lease, if necessary, to reduce impacts on biological resources to an acceptable level. Alkali Sinks, Goose Lake and Tierra Redonda would be leased with an NSO stipulation to protect biological resources. The NSO stipulation prohibits any surface disturbance on the lease surface.

Approximately 820,000 acres would be available for solid mineral leasing and solid mineral material disposal which could result in impacts to species, populations and habitats biological resources due to surface disturbance and potential interactions between mineral activities and biological resources. There would be 10,130 acres proposed for withdrawal from mineral entry which would eliminate

surface disturbance, introduction and spread of weeds, and potential for interactions between mineral activities and biological resources in these areas.

Approximately 20,000 acres would be proposed for withdrawal from mineral entry, which would eliminate surface disturbance and reduce habitat degradation, fragmentation, and loss, and the potential for interactions between mineral activities and biological resources in these areas.

Approximately 125,750 acres would continue to be managed as SRMAs. Managing lands as SRMAs could encourage additional use of these lands and increase the level of disturbance to biological resources over the long term. SRMAs would have more recreation facilities, which results in surface disturbance and habitat loss. Although SRMAs concentrate and manage recreational use, they can attract more initial and repeat visitation due to outreach efforts and the amenities provided. Focused management, monitoring, and corrective actions may reduce some impacts on biological resources that result from the increased visitation that SRMA designation generates but may not mitigate all of the effects. For example, existing SRMAs are listed on BLM Web pages and recreation maps, making the public more likely to visit SRMAs. Providing and maintaining facilities, such as toilets, trash receptacles, information kiosks, trails, parking areas, and boat launch sites, may manage recreation use, but it also promotes initial and repeat visitation. The outreach and amenities associated with SRMAs increase visitation above what it would be without the SRMA designation. Increased visitation results in increased impacts on biological resources, such as surface disturbance, vegetation collecting, and displacement of wildlife due to humans and pets.

The magnitude of impacts on biological resources from SRMAs depends on the primary activities emphasized by the SRMA, public demand for those activities, and whether the geographic location overlaps with sensitive biological resources. For example, a SRMA, such as Chimney Peak, that emphasizes hiking, horseback riding, and primitive camping in an area with few sensitive biological resources and multiple options for meeting the recreational demand, may have little impact on biological resources. The many options provided by other entities, such as the Forest Service or NPS, results in a low demand for the BLM sites, low levels of use, and a low impact on biological resources. In contrast, a SRMA, such as the North Fork of the Kaweah, that emphasizes river access in an area that contains riparian habitat and few opportunities for meeting the large demand, may have greater impact on biological resources. If the demand and subsequent increase in use is greater than BLM resources can manage, even under a SRMA, surface disturbance, displacement of wildlife, and damage to riparian vegetation may substantially reduce habitat quality over the long term.

Dispersed camping is not permitted within 100 feet of any freshwater source, which would help prevent degradation of aquatic and riparian habitat and displacement of wildlife.

4.2.2 Impacts Common to All Action Alternatives

Updated protections and restrictions, such as additional SOPs; fluid mineral leasing stipulations; ~~*withdrawal from*~~ *requiring notification for casual use under* the mining laws; closing areas to mineral material disposal; eliminating, relocating or redesigning uses; implementing the Central CA Livestock Management Guidelines; and restrictions on the collection of wood and vegetation, would be implemented to protect and conserve vegetation, wildlife and ecosystem processes. Specific biological resource objectives and decisions, such as enhancing or restoring habitat conditions; controlling and eliminating ~~*weeds*~~ *nonnative plants* or nonnative animals; inventorying, monitoring and researching biological resources; restoring or reestablishing native plant and animal populations; retaining lands

with significant biological values or that contribute to regional conservation strategies *or linkages*; acquiring biologically important areas; and restoring and protecting riparian areas are included. ACECs, areas of ecological importance, priority species, plant communities and habitats are designated or identified where specific management decisions are prescribed to protect biological resources. Implementing actions to meet these objectives and decisions would minimize the impacts from resource uses, conserve species and populations, improve habitat conditions, and promote the success of recovery plans and other regional conservation strategies.

Prescribed fire treatments would emphasize hazardous fuels reduction, and vegetation and wildlife habitat objectives. In areas treated for fuel reduction, species diversity would be reduced since vegetation structure would be simplified to create firebreaks and defensible space. Fire treatments to implement biological resource objectives mimic natural fire cycles and would improve plant composition and wildlife habitat structure. In addition, the potential for catastrophic wildfires that remove large expanses of habitat would be reduced.

The use of wildland fire suppression and fuels management practices that minimize impacts to biological resources, such as Minimum Impact Suppressions Tactics, use of Resource Advisors, post fire emergency stabilization and rehabilitation, would help protect species and populations and maintain habitat quality. The use of wildland fire for resource benefit in the South Sierra FMU, Domeland FMU, and the portion of the Three Rivers FMU protected by the National Park Service would implement biological resource objectives by mimicking natural fire cycles and improving plant composition and wildlife habitat structure. In addition, the potential for catastrophic wildfires that remove large expanses of habitat would be reduced.

The travel management network would include approximately six miles of routes within 300 yards of streams and 11 stream crossings along the ~~*756*~~ *1,589* miles of motorized routes. Use of these routes could degrade riparian habitats due to increased sediments from the route crossings and sediment transport down the route tracks. Streambanks would be broken down, vegetation would be removed, and channels would be widened where the routes cross or meander along the stream channel. Habitat for terrestrial and aquatic plants and animals would be degraded at these locations. Impacts would be localized and only occur at 11 locations. In addition, if impacts exceed levels of acceptable change, routes and crossings would be reengineered to restore degraded waters, which would restore riparian habitats for biological resources.

All new oil, gas, and geothermal leases would be issued with CSU stipulations to protect special status species and critical habitat. Important nesting, wintering, and roosting areas in the Hopper Mountain, Kaweah, San Joaquin River Gorge, Kettleman, Chico Martinez, the Temblor and Caliente NCLWMAs and other important raptor areas would be protected from fluid mineral development by a CSU stipulation that allows relocation and seasonal activity restriction to minimize disruption of important raptor behaviors. Cypress Mountain, Frog Pond, Irish Hills, Rusty Peak, and Salinas River would be leased with a CSU stipulation to protect biological resources. These CSUs would allow the BLM to move, delay, and even prohibit surface-disturbing activities on all or a portion of the lease, if necessary, to reduce impacts on biological resources to an acceptable level.

4.2.3 Impact of Alternative B

Approximately ~~*99,616*~~ *99,500* acres of ACEC in ~~*17*~~ *18* areas would be designated. This includes ~~*96,790 acres in 16*~~ *18* ACECs specifically to protect biological resources, including habitat for 83 special status

species. This includes 11 federally listed animal species and eight listed plant species. Two ACECs, Erskine Creek and Kaweah, with 31,060 acres, include riparian objectives. Atwell Island, Deer Spring, Caliente Creek, Frog Pond, NWLWMA(s), South Fork of the Kern River, Table Mountain and Kennedy Table, Conserved Lands, Irish Hills, Rusty Peak, ~~*and*~~ Salinas River *and Tehachapi Linkage* would be identified as areas of ecological importance.

Designation of special areas with high biological value as ACECs and areas of ecological importance would establish management objectives and use restrictions that would help protect important biological resources from human activities and would result in the long-term maintenance of high-quality habitat across the landscapes where BLM lands occur.

Use restrictions, such as closing ~~*42,840*~~ *21,819* acres to camping and campfires, ~~*199,130*~~ *14,200* acres to the discharge of firearms, and ~~*45,550*~~ *20,702* acres to equestrian use would reduce damage to vegetation and soils, fragmentation of habitat, disruption of essential animal behaviors, wildfire ignitions, and loss of woody materials which would help maintain suitable habitat to conserve species and populations in areas of ecological importance, ACECs, and where priority communities, habitats, and species occur. In addition, ~~*29,160*~~ *18,078* acres in the Lokern-Buena Vista and Kettleman Hills ACECs would be open to camping but campfires would be prohibited. This would reduce the risk of fire starts that could eliminate fire intolerant saltbush.

Approximately ~~*30,940*~~ *7540* acres would be recommended for closure to hunting. This would allow animals to use these areas without risk of mortality or harassment from hunting. Certain areas, such as the Atwell Island wetlands, would function as an important regional wildlife sanctuary because it would be closed to hunting.

Disturbance within the Conserved Lands area of ecological importance will be managed not to exceed 10% in reserve areas and 25% in corridor areas. In addition, certain areas outside the reserve and corridor system may be managed as corridors if they were to contain high quality habitat for special status species. This would maintain species populations and habitats on BLM lands within the San Joaquin Valley and would contribute to special status species conservation and recovery over the long term and at the landscape level.

Release of un-retrievable nonnative animals would be limited to approved biocontrol agents, authorized livestock, and augmentation of naturalized species in accordance with a CDFG permit or plan. Release of nonnative animals may result in negative effects (such as competition, predation, habitat destruction, disease transmission, hybridization) from nonnative species to native plants and animals. Release of approved biocontrol agents, authorized livestock and augmentation of naturalized species with a CDFG permit or plan, would be subject to a high level of environmental review and are not expected to result in undesirable impacts.

Collection of dead and down woody material would be limited to less than 4 inches in diameter which would help retain large woody material that is important for nutrient cycling, soil development, wildlife habitat. Smaller diameter woody material would become depleted in concentrated use areas, such as Keyesville, Chimney Peak, Long Valley and Walker Pass. The loss of smaller diameter material may have a localized effect on some species.

Mineral estate with no significant fluid mineral potential could be available for disposal. Disposed mineral estate would no longer be subject to the BLM's protective laws, regulations, and policies which protect biological resources.

Approximately ~~128,100~~ 102,550 acres would be ROW avoidance areas, and ~~121,300~~ 118,860 acres are ROW exclusion areas which would limit surface disturbance and reduce habitat degradation, fragmentation, and loss. Most of these avoidance and exclusion areas are within ACECs, NLCS units, lands with wilderness characteristics and Wild and Scenic River Corridors where biological resources already receive direct or incidental protection. ROW avoidance and exclusion areas provide complementary protection to biological resources in these areas. In addition 261,000 acres in SRMAs, VRM Class I and II areas, ACECs, and NLCS units would be exclusion areas for utility scale renewable energy Rights-of-ways, and 30,124 acres in the Tehachapi area of ecological importance would be an avoidance area for utility scale renewable energy Rights-of-ways which would prevent or reduce large scale habitat modification from renewable energy development.

Approximately ~~328,700~~ 328,900 acres would be available for livestock grazing and ~~66,200~~ 66,100 acres would be unavailable. Livestock grazing in areas available for such use would be conducted in a manner as to meet or exceed the minimum Standards for Rangeland Health. This management would result in the maintenance or attainment of healthy rangelands by ensuring that the four fundamentals of watersheds, ecological processes, water quality, and habitats for special status species are functioning and in order.

In addition 7,800 acres would be available only for the purposes of vegetation management in the Atwell Island area of ecological importance. This would allow livestock to be used to remove vegetation so that height and cover is suitable for species such as horned lizards, mountain plovers, San Joaquin kit fox and Tipton kangaroo rats.

Specific guidelines for livestock grazing management would prescribe minimum annual mulch levels and seasonal restrictions for saltbush scrub and riparian areas within the grazed areas of the planning area. These guidelines help reduce damage to biological resources, habitats and sensitive communities over the long term.

Additional guidelines for livestock grazing management would take into account specific species requirements for grazing in areas known to contain special status species. The locations of most special status animals are generally known within the decision area; therefore, implementing this special livestock management guideline would conserve special status animal populations on public land. In contrast, the locations of special status plant populations are not well known due to a lack of inventory and the difficulty in detecting many species. This is especially true for annual species because their ephemeral nature makes them difficult to detect, and population densities vary year to year. Implementing this special guideline may not protect most special status plant species since their locations are not well known, and grazing has been identified as a threat to most species. In addition, it can be difficult to identify a rare annual species in an area where the vegetation has been grazed.

Livestock grazing would be curtailed within the boundaries of the Cyrus Canyon Kelso Creek Monkeyflower Unit and eliminate impacts from livestock on populations of Kelso Creek monkeyflower. The diminutive monkeyflower would no longer be subject to trampling or other negative impacts from livestock, soil crusts would be given a chance to restore naturally, untrammeled habitat would be available for the normal fluctuation of population boundaries, and there would be less chance for the establishment and spread of weedy species.

Approximately ~~142,940~~ 141,100 acres would be closed to OHV, including Los Osos and Pt. Sal ACECs, designated wilderness areas, Wilderness Study Areas, and the Pacific Crest National Scenic Trail corridor.

This would protect biological resources in these areas. The remaining ~~261,140~~ 262,870 acres of the decision area would be designated as limited to OHV use, with impacts on designated routes. Some illegal user-made routes would proliferate in native habitats, which would reduce habitat quality for biological resources.

Of the ~~1,937~~ 1,953 miles of routes in the travel network, approximately ~~770~~ 1,429 miles of routes would be designated as motorized, 160 miles as Motorized-Authorized use and ~~308~~ 293 miles as closed ~~and 783 miles as authorized use. This includes 238 miles of oil field roads that would be designated as authorized access. Eliminating recreation travel on these roads would reduce vehicle traffic and reduce the potential for disturbance from vehicle noise/human interaction, noxious weed or undesired nonnative species introduction, and mortality from vehicle strikes~~. Habitat could ~~also~~ be restored on approximately ~~308~~ 293 miles of closed routes. Table 4.2-1 displays the miles of routes by designation that cross areas with special biological resource concerns. As ~~undesirable~~ any routes not on the current inventory are identified, the steps and processes to evaluate and remediate these routes identified in the Travel Management Plan (within the RMP) would be used to rectify the situation, diminish the occurrence of user-created routes, and reduce adverse impacts to habitat quality. Furthermore, an on-the-ground BLM presence (e.g., law enforcement and park rangers) would aid in the elimination of this problem through education and enforcement.

Table 4.2-1
Alternative B - Route Designations in Areas with Special Biological Resource Concerns

Route Designation	Conserved Lands Area of Ecological Importance Reserves and Corridors	NCLWMA Area of Ecological Importance	***Tehachapi Linkage Area of Ecological Importance***	Other Areas of Ecological Importance	Biology ACECs
Motorized	~~327~~ 852 miles	~~303~~ 371 miles	66 miles	~~10~~ 13 miles	~~39~~ 283 miles
Motorized–Authorized	~~480~~ 24 miles	~~31~~ 12 miles	<1	31 miles	~~257~~ 55 miles
Non-motorized	~~None~~ < 1 mile	none	none	none	~~18~~ 12 miles
Non-mechanized	none	38 miles	3 miles	5 miles (including 4 miles pedestrian only)	none
Closed	~~70~~ 48 miles	~~120~~ 104 miles	4 miles	21 miles	~~48~~ 47 miles

There would be ~~327~~ 852 miles designated as motorized and ~~480~~ 24 miles designated as Motorized-Authorized use ~~routes~~ within reserves and corridors (Conserved Lands area of ecological importance). These routes contribute to the habitat disturbance within these zones and pose a risk of exceeding habitat disturbance thresholds of 10 percent of the reserves and 25 percent of the corridors.

~~The designation of authorized routes in the Lokern-Buena Vista and Kettleman areas would reduce the likelihood of route proliferation and the potential for vehicle strikes on listed animal species. Authorized~~

~~*users (e.g., oil company employees and their contractors) are required to participate in endangered species training, are subject to slow vehicle speeds, are not allowed to travel cross-country except with special authorization and biological monitors, and are regulated to comply with state and federal endangered species laws. These measures are designed to help limit habitat disturbance and to maintain land uses that would contribute to the recovery of some of the San Joaquin Valley listed species.*~~

The route designations in the Temblor-Caliente and Monache-Walker Pass NCLWMAs(area of ecological importance) would designate ~~*492*~~ *383* miles for motorized travel and close some routes (~~*120*~~ *142* miles) to ~~*the public*~~ *motorized use*. The lower amount of travel and possible rehabilitation on closed routes would protect biological resources. In the Temblor Range and in the Monache-Walker Pass NCLWMAs near the Isabella Lake communities, the existing routes and increasing level of OHV travel would result in greater impacts on biological resources. Recent trends suggest that routes would likely proliferate, notwithstanding the BLM's management actions to encourage travel only on designated routes. This would further degrade habitat for biological resources in these NCLWMA areas.

The route designations in the Tehachapi Linkage area of ecological importance would designate 66 miles for motorized travel and close 4 miles. The scattered lands in the Tehachapi Linkage do not receive much OHV use and proliferation of routes is not expected. Habitat quality and connectivity is expected to be maintained

There would be ~~*67*~~ *70* miles of routes in other areas of ecological importance and ~~*362*~~ *385* miles of routes in ACECs designated for biological resources. Approximately ~~*357*~~ *171* miles would be closed, or restricted to *Motorized*-Authorized *use*, *non-motorized or non-mechanized* which would maintain habitat quality and help deter route proliferation in the Ancient Lakeshores, Atwell Island, *Chico Martinez*, Compensation Lands, ~~*Conserved Lands*~~ Cypress Mountain, Cyrus Canyon, Deer Spring, Erskine Creek, Hopper Mountain, Irish Hills, Kaweah, Kettleman Hills, Lokern-Buena Vista, NCLWMA(s), Pt. Sal, Rusty Peak, Salinas, Tierra Redonda, and Upper Cuyama Valley areas.

Approximately ~~*162,260*~~ *149,600* acres would be closed to oil and gas leasing which would eliminate surface disturbance and potential for interactions between oil field activities and biological resources in these areas. This includes the Bitter Creek, Blue Ridge, Deer Spring, Erskine Creek, and Piute Cypress areas.

Ancient Lakeshores, Compensation Lands, and Tierra Redonda would be leased with an NSO stipulation to protect biological resources. The NSO stipulation prohibits any surface disturbance on the lease surface.

Split estate with surface managed by another entity as compensation for biological resources would be leased with a CSU stipulation. This CSU would allow the BLM to move, delay, and even prohibit surface-disturbing activities on all or a portion of the lease, if necessary, to reduce impacts on biological resources to an acceptable level.

Public land adjacent to or within the boundary of the State of California's Chimineas Unit of the Carrizo Plain Ecological Reserve would be leased with a CSU stipulation. This CSU would allow the BLM to move, delay, and even prohibit surface-disturbing activities on all or a portion of the lease, if necessary, to reduce impacts on biological resources to an acceptable level.

Approximately ~~*820,000*~~ *942,000* acres would be available for solid mineral leasing and solid mineral material disposal which could result in impacts to species, populations and habitats biological resources

due to surface disturbance and potential interactions between mineral activities and biological resources. ~~*29,050 acres would be proposed for withdrawal from mineral entry*~~ *A 15 day notification would be required for casual use under the mining law on 53,810 acres* which would ~~*eliminate*~~ *reduce* surface disturbance, ~~*introduction and spread of weeds*~~ and potential for interactions between mineral activities and biological resources in these areas. Four ERMAs covering ~~*167,320*~~ *130,580* acres would be designated. The Atwell Island, Chimney Peak and Fresno River ERMAs would emphasize primitive and low impacts activities such as wildlife viewing, environmental interpretation, camping, and hiking. Managing the Chimney Peak as an ERMA would have little effect on biological resources since it receives low levels of visitation and does not contain high concentrations of sensitive biological resources. A large portion of Chimney Peak is also designated wilderness, which incidentally protects biological resources. Managing Atwell Island and Fresno River as ERMAs will protect biological resources, such as wetland and riparian habitat, by promoting environmental education and restricting access and certain activities. The Case Mountain ERMA would emphasize non-motorized activities, such as mountain biking, camping, and hunting. Managing and maintaining mountain bike trails could result in accelerated erosion, loss of soil, habitat fragmentation and alter water flow patterns across the landscape. If trails result in unacceptable levels of impacts, however, they could be rerouted and restored.

Three SRMAs covering ~~*45,240*~~ *41,593* acres would be designated. The San Joaquin River Gorge and Keyesville SRMAs would be maintained, and one new SRMA, Temblor, is proposed. The North Fork of the Kaweah SRMA would be discontinued which would eliminate concentrated use of the riparian areas that SRMA management encouraged. Riparian habitat at Cherry Falls and Advance would be allowed to recover and wildlife would make more use of the area in the absence of concentrated and frequent human use.

Managing lands as SRMAs could encourage additional use of these lands and increase disturbance to biological resources. Although SRMAs concentrate and manage recreational use, they can attract more initial and repeat visitation due to outreach efforts and the amenities provided. Focused management, monitoring, and corrective actions may reduce some impacts on biological resources that result from the increased visitation that SRMA designation generates but may not mitigate all of the effects. For example, existing SRMAs are listed on BLM Web pages and recreation maps, making the public more likely to visit SRMAs. Providing and maintaining facilities, such as toilets, trash receptacles, information kiosks, trails, parking areas, and boat launch sites, may manage recreation use but also promotes initial and repeat visitation. The outreach and amenities associated with SRMAs increase visitation above what it would be without the SRMA designation. Increased visitation results in increased impacts on biological resources, such as surface disturbance vegetation collecting, and displacement of wildlife due to humans and pets.

The magnitude of impacts on biological resources from SRMAs depends on the primary activities emphasized by the SRMA, public demand for those activities, and whether the geographic location overlaps with sensitive biological resources. For example, a SRMA, such as the San Joaquin River Gorge, that emphasizes environmental outreach, camping, hiking, mountain biking, horseback riding, and river-based activities in an area with few sensitive biological resources, and multiple options for meeting the recreational demand, may have little impact on biological resources. The many options provided by other entities, such as the Forest Service or NPS, results in a low demand for the BLM site, low levels of use, and a low impact on biological resources. In contrast, a SRMA, such as the Temblor SRMA, that emphasizes dispersed camping, OHV trail riding and touring, and hunting in an area that contains sensitive biological resources and few opportunities for meeting the large demand, may have greater impact on biological resources. If the demand and subsequent increase in use is greater than BLM

resources can manage, even under a SRMA, surface disturbance, displacement of wildlife, vehicle strikes, and destruction of burrows and vegetation may substantially reduce habitat quality over an extensive amount of the Temblor Range adjacent to the Carrizo Plain National Monument.

The San Joaquin River Gorge SRMA would emphasize environmental outreach, camping, hiking, mountain biking, horseback riding, and river-based activities. The environmental outreach component could reduce impacts on biological resources from recreational use. The Keyesville SRMA would emphasize rafting, kayaking, recreational prospecting, camping, fishing, trail use, cultural/historical discovery. The Temblor Range SRMA would emphasize dispersed camping, touring, trail riding, and hunting.

The most increase in impacts would be expected in the new Temblor Range SRMA where new facilities and use areas would be developed. This increase would have direct and indirect effects on the San Joaquin Valley suite of special status species that inhabit the Temblor Range due to increased habitat and human disturbance at recreation sites, higher use of the road network that would result in vehicle strikes, and a likely proliferation of unauthorized roads and cross county travel. The increase in activity would also increase the production of dust and route proliferation, further degrading vegetation and increasing the opportunity for the introduction and spread of ~~*weeds*~~ *nonnative invasive species*.

Within the Keyesville SRMA impacts from dispersed camping, trail riding, parking, gold panning, water based activities would continue in much of the area. Within the Dam RMZ the removal of camping along the river would allow riparian vegetation to become established and reduce interaction between humans and wildlife in the riparian area. Dispersed camping and parking in the blue oak and grey pine woodland would continue to compact soils and damage tree roots, eventually killing the tree. These dead trees then become a hazard and must be removed, eliminating important wildlife habitat features. Continued use of trails by motorized vehicles and mountain bikes would result in accelerated erosion along the route, trail widening, and proliferation of additional routes which degrades habitat. Concentrated and prolonged recreational use, such as group camping and parking, and multiple day visits, tramples vegetation and displaces wildlife.

Within the San Joaquin River Gorge, recreation use is concentrated at established facilities and along existing trails, with few instances of new disturbances or unauthorized routes. Since motorized trail riding is not a targeted recreational activity, accelerated erosion, trail widening and proliferation of routes would not occur. The steep topography, dense vegetation, and focus on environmental outreach results in low impact activities that generally maintains the habitat quality.

4.2.4 Impacts of Alternative C

Approximately 108,377 acres of ACEC in 22 areas would be designated. This includes 100,897 acres in 19 ACECs specifically to protect biological resources, including habitat for 124 special status species. This includes 11 federally listed animal and 12 listed plant species. Three ACECs, Erskine Creek, Kaweah and Salinas River with 32,664 acres, include riparian objectives. Atwell Island, Deer Spring, Caliente Creek, Frog Pond, NWLWMA(s), South Fork of the Kern River, Table Mountain and Kennedy Table, and Conserved Lands would be identified as areas of ecological importance.

Designation of special areas with high biological value as ACECs and areas of ecological importance would establish management objectives and use restrictions that would help protect important

biological resources from human activities and would result in the long-term maintenance of high-quality habitat across the landscapes where BLM lands occur.

Use restrictions, such as closing 75,190 acres to camping and campfires, 236,110 acres to the discharge of firearms, and 69,030 acres to equestrian use would reduce damage to vegetation and soils, fragmentation of habitat, disruption of essential animal behaviors, wildfire ignitions, and loss of woody materials which would help maintain suitable habitat to conserve species and populations in areas of ecological importance, ACECs, and where priority communities, habitats, and species occur.

Approximately 54,600 acres would be recommended for closure to hunting. This would allow animals to use these areas without risk of mortality and harassment from hunting. Certain areas, such as the Atwell Island wetlands, would function as an important regional wildlife sanctuary because it would be closed to hunting.

Disturbance within the Conserved Lands area of ecological importance will be managed not to exceed 10% in reserve areas and 25% in corridor areas. In addition, certain areas outside the reserve and corridor system may be managed as corridors if they were to contain high quality habitat for special status species. This would maintain species populations and habitats on BLM lands within the San Joaquin Valley and would contribute to special status species conservation and recovery over the long term and at the landscape level.

Release of un-retrieved nonnative animals would be limited to approved biocontrol agents, authorized livestock, and augmentation of naturalized species in accordance with a CDFG permit or plan. Release of nonnative animals may result in negative effects (such as competition, predation, habitat destruction, disease transmission, hybridization) from nonnative species to native plants and animals. Release of approved biocontrol agents, authorized livestock and augmentation of naturalized species with a CDFG permit or plan, would be subject to a high level of environmental review and are not expected to result in undesirable impacts.

Prohibiting collection of all dead and down woody material would retain the limited amount of woody debris that is important for nutrient cycling, soil development, wildlife habitat.

Mineral estate with no significant fluid mineral potential could be available for disposal. Disposed mineral estate would no longer be subject to the BLM's protective laws, regulations, and policies which protect biological resources.

Approximately 158,050 acres would be ROW avoidance areas, and 151,410 acres are ROW exclusion areas which would limit surface disturbance and reduce habitat degradation, fragmentation, and loss. Most of these avoidance and exclusion areas are within ACECs, NLCS units, lands with wilderness characteristics and Wild and Scenic River Corridors where biological resources already receive direct or incidental protection. ROW avoidance and exclusion areas provide complementary protection to biological resources in these areas. In addition SRMAs, VRM Class I and II areas, ACECs, NLCS units, cultural sites eligible for the National Register of Historic Places and critical habitat would be exclusion areas for utility scale renewable energy Rights-of-ways which would prevent large scale habitat modification from renewable energy development.

Approximately 322,200 acres would be available for livestock grazing and 72,700 would be unavailable. Livestock grazing in areas available for such use would be conducted in a manner as to meet or exceed the minimum Standards for Rangeland Health. This management would result in the maintenance or

attainment of healthy rangelands by ensuring that the four fundamentals of watersheds, ecological processes, water quality, and habitats for special status species are functioning and in order.

In addition 7,800 acres would be available only for the purposes of vegetation management in the Atwell Island area of ecological importance. This would allow livestock to be used to remove vegetation so that height and cover is suitable for species such as horned lizards, mountain plovers, San Joaquin kit fox and Tipton kangaroo rats.

Specific livestock grazing management guidelines would prescribe minimum annual mulch levels and seasonal restrictions for saltbush scrub within the grazed areas of the planning area. These guidelines help reduce damage to biological resources, habitats and sensitive communities over the long term.

Known riparian areas would not be grazed which would prevent grazing impacts, such as trampling and consumption of vegetation, trampling of stream banks, introduction of weedy species, within most riparian areas. Riparian areas are disproportionately more important to wildlife because of the presence of water, diversity of plant species and structure, and abundance of food. Riparian areas that have not been inventoried could be inadvertently grazed, and depending on the season and level of use, become degraded.

Additional livestock management guidelines would take into account specific species requirements for grazing in areas known to contain special status species. The locations of most special status animals are generally known within the decision area; therefore, implementing this special livestock management guideline would conserve special status animal populations on public land. In contrast, the locations of special status plant populations are not well known due to a lack of inventory and the difficulty in detecting many species. This is especially true for annual species because their ephemeral nature makes them difficult to detect, and population densities vary year to year. Implementing this special guideline may not protect most special status plant species since their locations are not well known, and grazing has been identified as a threat to most species. In addition, it can be difficult to identify a rare annual species in an area where the vegetation has been grazed.

Areas supporting some special status species would be grazed only in a manner that either has no impact or enhances habitat. For example, areas supporting Kern primrose sphinx moth would not be grazed.

Livestock grazing would be curtailed within the boundaries of the Cyrus Canyon ACEC and eliminate impacts from livestock on populations of Kelso Creek monkeyflower. The diminutive monkeyflower would no longer be subject to trampling or other negative impacts from livestock, soil crusts would be given a chance to restore naturally, untrammeled habitat would be available for the normal fluctuation of population boundaries, and there would be less chance for the establishment and spread of weedy species.

Approximately 166,300 acres would be closed to OHV, including Granite Cave, Los Osos, Pt. Sal, a portion of the Kaweah ACEC, designated wilderness areas, Wilderness Study Areas, and the Pacific Crest National Scenic Trail corridor. This would protect biological resources in these areas. The remaining 237,780 acres of the decision area would be designated as limited to OHV use, with impacts on designated routes. Some illegal user-made routes would proliferate in native habitats, which would reduce habitat quality for biological resources.

Of the 1,937 miles of routes in the travel network, approximately 656 miles of routes would be designated as motorized, 580 miles as closed and 617 miles as authorized use. This includes 238 miles of oil field roads which would be designated as authorized access. Eliminating recreation travel on these roads would reduce vehicle traffic and reduce the potential for disturbance from vehicle noise/human interaction, noxious weed or undesired nonnative species introduction, and mortality from vehicle strikes. Habitat could be restored on approximately 580 miles of closed routes. Table 4.2-2 displays the miles of routes by designation that cross areas with special biological resource concerns.

Table 4.2-2
Alternative C Route Designations in Areas with Special Biological Resource Concerns

Route Designation	Conserved Lands Area of Ecological Importance Reserves and Corridors	NCLWMA Area of Ecological Importance	Other Areas of Ecological Importance	Biology ACECs
Motorized	253 miles	225 miles	6 miles	41 miles
Nonmotorized	none	none	none	26 miles
Nonmechanized	none	38 miles	5 miles (including 4 miles pedestrian only)	Less than 1 mile
Closed	270 miles	202 miles	20 miles	206 miles
Authorized Use Only	354 miles	27 miles	24 miles	101 miles

There would be 607 miles of motorized and authorized miles of authorized routes within reserves and corridors (Conserved Lands area of ecological importance). Motorized routes contribute to the habitat disturbance within these zones and pose a risk of exceeding habitat disturbance thresholds of 10 percent of the reserves and 25 percent of the corridors. The designation of authorized routes in the Lokern-Buena Vista and Kettleman areas would reduce the likelihood of route proliferation and the potential for vehicle strikes on listed animal species. Authorized users (e.g., oil company employees and their contractors) are required to participate in endangered species training, are subject to slow vehicle speeds, are not allowed to travel cross-country except with special authorization and biological monitors, and are regulated to comply with state and federal endangered species laws. These measures are designed to help limit habitat disturbance and to maintain land uses that would contribute to the recovery of some of the San Joaquin Valley listed species. These measures may help to limit habitat disturbance and maintain land uses that would contribute to the recovery of some of the San Joaquin Valley listed species.

The route designations in the Temblor-Caliente and Monache-Walker Pass NCLWMAs (NCLWMA area of ecological importance) would close some routes (202 miles) to the public and would maintain 225 miles for motorized travel. The route closures would improve habitat quality for biological resources in the Temblor Range and Monache-Walker Pass NCLWMA in the Chimney Creek and Long Valley areas. Notwithstanding the BLM's management actions to encourage travel only on designated routes, recent trends suggest that routes would continue to proliferate in the Temblor Range and areas near Isabella Lake communities. This would further degrade habitat for biological resources in these NCLWMA areas.

There would be 55 miles of routes in other areas of ecological importance and 374 miles of routes in ACECs designated for biological resources. Of this 351 miles would be closed or restricted to Authorized Access which would maintain habitat quality and help deter route proliferation in the Ancient Lakeshores, Atwell Island, Compensation Lands, Conserved Lands, Cypress Mountain, Cyrus Canyon, Deer Spring, Erskine Creek, Hopper Mountain, Irish Hills, Kaweah, Kettleman Hills, Lokern-Buena Vista, NCLWMA(s), Pt. Sal, Rusty Peak, Tierra Redonda, and Upper Cuyama Valley areas.

Approximately 196,050 acres would be closed to oil and gas leasing which would eliminate surface disturbance and potential for interactions between oil field activities and biological resources in these areas. This includes Bitter Creek, Blue Ridge, Chimineas Unit, Compensation Lands, Deer Spring, Erskine Creek, Piute Cypress, and split estate with surface managed by another entity as compensation for biological resources.

Ancient Lakeshores, Hopper Mountain, Tierra Redonda would be leased with an NSO stipulation to protect biological resources, including condors. The NSO stipulation prohibits any surface disturbance on the lease surface.

Approximately 780,000 solid mineral material disposal which could result in impacts to species, populations and habitats biological resources due to surface disturbance and potential interactions between mineral activities and biological resources. No acres would be available for solid mineral leasing and 62,670 acres would be proposed for withdrawal from mineral entry which would eliminate surface disturbance, introduction and spread of weeds, and potential for interactions between mineral activities and biological resources in these areas.

Four ERMAs covering 190,910 acres would be designated. Atwell Island and Chimney Peak ERMAs would emphasize primitive and low impacts activities such as wildlife viewing, environmental interpretation, camping, and hiking. Managing the Chimney Peak as an ERMA would have little effect on biological resources since it receives low levels of visitation and does not contain high concentrations of sensitive biological resources. A large portion of Chimney Peak is also designated wilderness, which incidentally protects biological resources. Managing Atwell Island as ERMA will protect biological resources, such as wetland habitat, by promoting environmental education and restricting access and certain activities. The Case Mountain ERMA would emphasize non-motorized activities, such as mountain biking, camping, and hunting. Managing and maintaining mountain bike trails could result in accelerated erosion, loss of soil, habitat fragmentation and alter water flow patterns across the landscape. If trails result in unacceptable levels of impacts, however, they could be rerouted and restored. The Temblor ERMA will emphasize dispersed activities, such as trail riding, hunting, and camping. Existing impacts to biological resources, such as displacement of wildlife, vehicle strikes, destruction of burrows and vegetation, production of dust, route proliferation, and the introduction and spread of weeds are expected to continue.

Two SRMAs covering 21,490 acres would be managed as SRMAs. The San Joaquin River Gorge and Keyesville SRMAs would be maintained. The North Fork of the Kaweah SRMA would be discontinued which would eliminate concentrated use of the riparian areas that SRMA management encouraged. Riparian habitat at Cherry Falls and Advance would be allowed to recover and wildlife would make more use of the area in the absence of concentrated and frequent human use.

The San Joaquin River Gorge SRMA would emphasize environmental outreach, camping, hiking, mountain biking, horseback riding, and river-based activities. The environmental outreach component

could reduce impacts on biological resources from recreational use. The Keyesville SRMA would emphasize rafting, kayaking, recreational prospecting, camping, fishing, trail use, cultural/historical discovery.

Within the Keyesville SRMA impacts from dispersed camping, trail riding, parking, gold panning, water based activities would continue in much of the area. Within the Dam RMZ the removal of camping along the river would allow riparian vegetation to become established and reduce interaction between humans and wildlife in the riparian area. Dispersed camping and parking in the blue oak and grey pine woodland would continue to compact soils and damage tree roots, eventually killing the tree. These dead trees then become a hazard and must be removed, eliminating important wildlife habitat features. Continued use of trails by motorized vehicles and mountain bikes would result in accelerated erosion along the route, trail widening, and proliferation of additional routes which degrades habitat. Concentrated and prolonged recreational use, such as group camping and parking, and multiple day visits, tramples vegetation and displaces wildlife.

Within the San Joaquin River Gorge, recreation use is concentrated at established facilities and along existing trails, with few instances of new disturbances or unauthorized routes. Since motorized trail riding is not a targeted recreational activity, accelerated erosion, trail widening and proliferation of routes would not occur. The steep topography, dense vegetation, and focus on environmental outreach results in low impact activities that generally maintains the habitat quality.

4.2.5 Impacts of Alternative D

Approximately 108,377 acres of ACEC in 22 areas would be designated. This includes 100,897 acres in 19 ACECs specifically to protect biological resources, including habitat for 124 special status species. This includes 11 federally listed animal and 12 listed plant species. Three ACECs, Erskine Creek, Kaweah and Salinas River with 32,664 acres, include riparian objectives. Atwell Island, Deer Spring, Caliente Creek, Frog Pond, NWLWMA(s), South Fork of the Kern River, Table Mountain and Kennedy Table, and Conserved Lands would be identified as areas of ecological importance.

Designation of special areas with high biological value as ACECs and areas of ecological importance would establish management objectives and use restrictions that would help protect important biological resources from human activities and would result in the long-term maintenance of high-quality habitat across the landscapes where BLM lands occur.

Use restrictions, such as closing 75,190 acres to camping and campfires, 236,110 acres to the discharge of firearms, and 69,030 acres to equestrian use would reduce damage to vegetation and soils, fragmentation of habitat, disruption of essential animal behaviors, wildfire ignitions, and loss of woody materials which would help maintain suitable habitat to conserve species and populations in areas of ecological importance, ACECs, and where priority communities, habitats, and species occur.

Approximately 54,600 acres would be recommended for closure to hunting. This would allow animals to use these areas without risk of mortality and harassment from hunting. Certain areas, such as the Atwell Island wetlands, would function as an important regional wildlife sanctuary because it would be closed to hunting.

Disturbance within the Conserved Lands area of ecological importance will be managed not to exceed 10% in reserve areas and 25% in corridor areas. In addition, certain areas outside the reserve and corridor system may be managed as corridors if they were to contain high quality habitat for special

status species. This would maintain species populations and habitats on BLM lands within the San Joaquin Valley and would contribute to special status species conservation and recovery over the long term and at the landscape level.

Release of un-retrieved nonnative animals would be limited to approved biocontrol agents, authorized livestock, and augmentation of naturalized species in accordance with a CDFG permit or plan. Release of nonnative animals may result in negative effects (such as competition, predation, habitat destruction, disease transmission, hybridization) from nonnative species to native plants and animals. Release of approved biocontrol agents, authorized livestock and augmentation of naturalized species with a CDFG permit or plan, would be subject to a high level of environmental review and are not expected to result in undesirable impacts.

Prohibiting collection of all dead and down woody material would retain the limited amount of woody debris that is important for nutrient cycling, soil development, wildlife habitat.

Mineral estate with no significant fluid mineral potential could be available for disposal. Disposed mineral estate would no longer be subject to the BLM's protective laws, regulations, and policies which protect biological resources.

Approximately 158,050 acres would be ROW avoidance areas, and 151,410 acres are ROW exclusion areas which would limit surface disturbance and reduce habitat degradation, fragmentation, and loss. Most of these avoidance and exclusion areas are within ACECs, NLCS units, lands with wilderness characteristics and Wild and Scenic River Corridors where biological resources already receive direct or incidental protection. ROW avoidance and exclusion areas provide complementary protection to biological resources in these areas. In addition SRMAs, VRM Class I and II areas, ACECs, NLCS units, cultural sites eligible for the National Register of Historic Places and critical habitat would be exclusion areas for utility scale renewable energy Rights-of-ways which would prevent large scale habitat modification from renewable energy development.

Livestock grazing would be discontinued in the grazing decision area. The effects of livestock grazing, such as trampling, herbivory, mechanical damage, deposition of urine and manure, and dispersal of weed seeds, would no longer occur from authorized grazing use. Soil surfaces would be less disturbed, and less prone to erosion. Soil crusts would become more developed and protect soil surfaces and deter weedy species. Plant vigor, reproduction, cover, and native species diversity would increase. Overall plant community structure and ecosystem health would improve.

An increase in the diversity of vegetation structure would improve habitat conditions for many animal species. More forage, seed, water and other resources would be available to native wildlife. Changes in vegetation structure such as height and foliar density would result in improved habitat for nesting, foraging, and predator avoidance. Burrows, nests, and small sedentary animals would not be trampled.

Riparian areas would not be grazed by livestock and impacts such as trampling and consumption of vegetation, trampling of stream banks, and introduction of weedy species as a result of authorized grazing use would no longer occur. Riparian areas are disproportionately more important to wildlife because of the presence of water, the diversity of plant species and structure, and the abundance of food.

Animal species, including special status animal species that benefit from some level of livestock grazing, may be impacted by the elimination of livestock grazing. Without livestock grazing, rainfall patterns in

certain years may result in persistent herbaceous vegetation that reduces habitat quality for these species.

An indirect impact is that an estimated 1,000 miles of fence would need to be constructed. Fence construction may damage vegetation, collapse burrows, disturb the soil surface, provide perches for predators, and act as a barrier for certain wildlife.

Approximately 166,300 acres would be closed to OHV, including Granite Cave, Los Osos, Point Sal, a portion of the Kaweah ACEC, designated wilderness areas, Wilderness Study Areas, and the Pacific Crest National Scenic Trail corridor. This would protect biological resources in these areas. The remaining 237,780 acres of the decision area would be designated as limited to OHV use, with impacts on designated routes. Some illegal user-made routes would proliferate in native habitats, which would reduce habitat quality for biological resources.

Of the 1,937 miles of routes in the travel network, approximately 656 miles of routes would be designated as motorized, 580 miles as closed and 617 miles as authorized use. This includes 238 miles of oil field roads which would be designated as authorized access. Eliminating recreation travel on these roads would reduce vehicle traffic and reduce the potential for disturbance from vehicle noise/human interaction, noxious weed or undesired nonnative species introduction, and mortality from vehicle strikes. Habitat could be restored on approximately 580 miles of closed routes. Table 4.2-3 displays the miles of routes by designation that cross areas with special biological resource concerns.

Table 4.2-3
Alternative D Route Designations in Areas with Special Biological Resource Concerns

Route Designation	Conserved Lands Area of Ecological Importance Reserves and Corridors	NCLWMA Area of Ecological Importance	Other Areas of Ecological Importance	Biology ACECs
Motorized	253 miles	225 miles	6 miles	41 miles
Nonmotorized	none	none	none	26 miles
Nonmechanized	none	38 miles	5 miles (including 4 miles pedestrian only)	Less than 1 mile
Closed	270 miles	202 miles	20 miles	206 miles
Authorized Use Only	354 miles	27 miles	24 miles	101 miles

There would be 607 miles of motorized and authorized miles of authorized routes within reserves and corridors (Conserved Lands area of ecological importance). Motorized routes contribute to the habitat disturbance within these zones and pose a risk of exceeding habitat disturbance thresholds of 10 percent of the reserves and 25 percent of the corridors. The designation of authorized routes in the Lokern-Buena Vista and Kettleman areas would reduce the likelihood of route proliferation and the potential for vehicle strikes on listed animal species. Authorized users (e.g., oil company employees and their contractors) are required to participate in endangered species training, are subject to slow vehicle speeds, are not allowed to travel cross-country except with special authorization and biological monitors, and are regulated to comply with state and federal endangered species laws. These measures

are designed to help limit habitat disturbance and to maintain land uses that would contribute to the recovery of some of the San Joaquin Valley listed species. These measures may help to limit habitat disturbance and maintain land uses that would contribute to the recovery of some of the San Joaquin Valley listed species.

The route designations in the Temblor-Caliente and Monache-Walker Pass NCLWMAs (NCLWMA area of ecological importance) would close some routes (202 miles) to the public and would maintain 225 miles for motorized travel. The route closures would improve habitat quality for biological resources in the Temblor Range and Monache-Walker Pass NCLWMA in the Chimney Creek and Long Valley areas. Notwithstanding the BLM's management actions to encourage travel only on designated routes, recent trends suggest that routes would continue to proliferate in the Temblor Range and areas near Isabella Lake communities. This would further degrade habitat for biological resources in these NCLWMA areas.

There would be 55 miles of routes in other areas of ecological importance and 374 miles of routes in ACECs designated for biological resources. Of this 351 miles would be closed or restricted to Authorized Access which would maintain habitat quality and help deter route proliferation in the Ancient Lakeshores, Atwell Island, Compensation Lands, Conserved Lands, Cypress Mountain, Cyrus Canyon, Deer Spring, Erskine Creek, Hopper Mountain, Irish Hills, Kaweah, Kettleman Hills, Lokern-Buena Vista, NCLWMA(s), Pt. Sal, Rusty Peak, Tierra Redonda, and Upper Cuyama Valley areas.

Approximately 196,050 acres would be closed to oil and gas leasing which would eliminate surface disturbance and potential for interactions between oil field activities and biological resources in these areas. This includes Bitter Creek, Blue Ridge, Chimineas Unit, Compensation Lands, Deer Spring, Erskine Creek, Piute Cypress, and split estate with surface managed by another entity as compensation for biological resources.

Ancient Lakeshores, Hopper Mountain, Tierra Redonda would be leased with an NSO stipulation to protect biological resources, including condors. The NSO stipulation prohibits any surface disturbance on the lease surface.

Approximately 780,000 solid mineral material disposal which could result in impacts to species, populations and habitats biological resources due to surface disturbance and potential interactions between mineral activities and biological resources. No acres would be available for solid mineral leasing and 62,670 acres would be proposed for withdrawal from mineral entry which would eliminate surface disturbance, introduction and spread of weeds, and potential for interactions between mineral activities and biological resources in these areas.

Four ERMAs covering 190,910 acres would be designated. Atwell Island and Chimney Peak ERMAs would emphasize primitive and low impacts activities such as wildlife viewing, environmental interpretation, camping, and hiking. Managing the Chimney Peak as an ERMA would have little effect on biological resources since it receives low levels of visitation and does not contain high concentrations of sensitive biological resources. A large portion of Chimney Peak is also designated wilderness, which incidentally protects biological resources. Managing Atwell Island as ERMA will protect biological resources, such as wetland habitat, by promoting environmental education and restricting access and certain activities. The Case Mountain ERMA would emphasize non-motorized activities, such as mountain biking, camping, and hunting. Managing and maintaining mountain bike trails could result in accelerated erosion, loss of soil, habitat fragmentation and alter water flow patterns across the landscape. If trails result in unacceptable levels of impacts, however, they could be rerouted and restored. The Temblor ERMA will

emphasize dispersed activities, such as trail riding, hunting, and camping. Existing impacts to biological resources, such as displacement of wildlife, vehicle strikes, destruction of burrows and vegetation, production of dust, route proliferation, and the introduction and spread of weeds are expected to continue.

Two SRMAs covering 21,490 acres would be managed as SRMAs. The San Joaquin River Gorge and Keyesville SRMAs would be maintained. The North Fork of the Kaweah SRMA would be discontinued which would eliminate concentrated use of the riparian areas that SRMA management encouraged. Riparian habitat at Cherry Falls and Advance would be allowed to recover and wildlife would make more use of the area in the absence of concentrated and frequent human use.

The San Joaquin River Gorge SRMA would emphasize environmental outreach, camping, hiking, mountain biking, horseback riding, and river-based activities. The environmental outreach component could reduce impacts on biological resources from recreational use. The Keyesville SRMA would emphasize rafting, kayaking, recreational prospecting, camping, fishing, trail use, cultural/historical discovery.

Within the Keyesville SRMA impacts from dispersed camping, trail riding, parking, gold panning, water based activities would continue in much of the area. Within the Dam RMZ the removal of camping along the river would allow riparian vegetation to become established and reduce interaction between humans and wildlife in the riparian area. Dispersed camping and parking in the blue oak and grey pine woodland would continue to compact soils and damage tree roots, eventually killing the tree. These dead trees then become a hazard and must be removed, eliminating important wildlife habitat features. Continued use of trails by motorized vehicles and mountain bikes would result in accelerated erosion along the route, trail widening, and proliferation of additional routes which degrades habitat. Concentrated and prolonged recreational use, such as group camping and parking, and multiple day visits, tramples vegetation and displaces wildlife.

Within the San Joaquin River Gorge, recreation use is concentrated at established facilities and along existing trails, with few instances of new disturbances or unauthorized routes. Since motorized trail riding is not a targeted recreational activity, accelerated erosion, trail widening and proliferation of routes would not occur. The steep topography, dense vegetation, and focus on environmental outreach results in low impact activities that generally maintains the habitat quality.

4.2.6 Impacts of Alternative E

Approximately 75,050 acres of ACEC in 12 areas would be designated. This includes 75,050 acres in 12 ACECs specifically to protect biological resources, including habitat for 57 special status species. This includes eight federally listed animals and eight listed plants. Two ACECs, Erskine Creek and Kaweah, with 31,060 acres, include riparian objectives.

Atwell Island, Deer Spring, Caliente Creek, Frog Pond, NWLWMA(s), South Fork of the Kern River, Table Mountain and Kennedy Table, Conserved Lands, Cypress Mountain, Cyrus Canyon, Irish Hills, Rusty Peak, Salinas River, Tierra Redonda and Upper Cuyama Valley would be identified as areas of ecological importance.

Designation of special areas with high biological value as ACECs and areas of ecological importance would establish management objectives and use restrictions that would help protect important

biological resources from human activities and would result in the long-term maintenance of high-quality habitat across the landscapes where BLM lands occur.

Use restrictions, such as closing 20,360 acres to overnight camping and campfires, 174,800 acres to the discharge of firearms, and 22,710 acres to equestrian use would reduce damage to vegetation and soils, fragmentation of habitat, disruption of essential animal behaviors, wildfire ignitions, and loss of woody materials which would help maintain suitable habitat to conserve species and populations in areas of ecological importance, ACECs, and where priority communities, habitats, and species occur.

Approximately 7,010 acres would be recommended for closure to hunting. This would allow animals to use these areas without risk of mortality or harassment from hunting. Certain areas, such as the Atwell Island wetlands, would function as an important regional wildlife sanctuary because it would be closed to hunting.

Disturbance within the Conserved Lands area of ecological importance will be managed not to exceed 10% in reserve areas and 25% in corridor areas. This would maintain species populations and habitats on BLM lands within the San Joaquin Valley and would contribute to special status species conservation and recovery over the long term and at the landscape level. High quality habitat outside the reserve and corridor system would not be subject to disturbance limits. These areas could be degraded or lost, reducing their conservation value.

Release of un-retrieved nonnative animals would be limited to approved biocontrol agents, authorized livestock, and for recreational purposes and augmentation of naturalized species in accordance with a CDFG permit or plan. Release of nonnative animals may result in negative effects (such as competition, predation, habitat destruction, disease transmission, hybridization) from nonnative species to native plants and animals. Release of approved biocontrol agents, authorized livestock and augmentation of naturalized species with a CDFG permit or plan, would be subject to a high level of environmental review and are not expected to result in undesirable impacts. Release of nonnative animals for recreational purposes may not receive the same level of environmental review prior to the issuance of a CDFG permit and are more likely to result in undesirable impacts.

Collection of dead and down woody material would be limited to less than 4 inches in diameter which would help retain large woody material that is important for nutrient cycling, soil development, wildlife habitat. Smaller diameter woody material would become depleted in concentrated use areas, such as Keyesville, Chimney Peak, Long Valley and Walker Pass. The loss of smaller diameter material may have a localized effect on some species.

Only mineral estate with no fluid mineral potential could be considered for disposal. Disposed mineral estate would no longer be subject to the BLM's protective laws, regulations, and policies which protect biological resources.

Approximately 96,200 acres would be ROW avoidance areas, and 121,300 acres are ROW exclusion areas which would limit surface disturbance and reduce habitat degradation, fragmentation, and loss. Most of these avoidance and exclusion areas are within ACECs, NLCS units, lands with wilderness characteristics and Wild and Scenic River Corridors where biological resources already receive direct or incidental protection. ROW avoidance and exclusion areas provide complementary protection to biological resources in these areas. Utility scale projects could be approved within ROW avoidance areas, including SRMAs, VRM Class I and II areas, ACECs, NLCS units, and could result in large scale

habitat modification from renewable energy development. Within ACECs, projects would only be authorized if they did not compromise ACEC values.

Approximately 345,800 acres would be available for livestock grazing and 49,100 acres would be unavailable. Livestock grazing in areas available for such use would be conducted in a manner as to meet or exceed the minimum Standards for Rangeland Health. This management would result in the maintenance or attainment of healthy rangelands by ensuring that the four fundamentals of watersheds, ecological processes, water quality, and habitats for special status species are functioning and in order.

In addition 7,800 acres would be available only for the purposes of vegetation management in the Atwell Island area of ecological importance. This would allow livestock to be used to remove vegetation to so that height and cover is suitable for species such as horned lizards, mountain plovers, San Joaquin kit fox and Tipton kangaroo rats.

Specific livestock grazing management guidelines would prescribe minimum annual mulch levels and seasonal restrictions for saltbush scrub and riparian areas within the grazed areas of the planning area. These guidelines help reduce damage to biological resources, habitats and sensitive communities over the long term.

Additional livestock management guidelines would take into account specific species requirements for grazing in areas known to contain special status species. The locations of most special status animals are generally known within the decision area; therefore, implementing this special livestock management guideline would conserve special status animal populations on public land. In contrast, the locations of special status plant populations are not well known due to a lack of inventory and the difficulty in detecting many species. This is especially true for annual species because their ephemeral nature makes them difficult to detect, and population densities vary year to year. Implementing this special guideline may not protect most special status plant species since their locations are not well known, and grazing has been identified as a threat to most species. In addition, it can be difficult to identify a rare annual species in an area where the vegetation has been grazed.

Livestock grazing would occur within the boundaries of the Cyrus Canyon area of ecological importance and some areas would be excluded from grazing to protect monkeyflower species. Although the known populations of monkeyflower would be protected from the impacts associated with livestock grazing, a number of issues would remain. As an annual species, monkeyflower's response to precipitation varies widely; population size during normal years may be only a fraction of the extent during less-frequent rainfall events. Population boundaries based on a few years sampling may not truly reflect the full extent of occupied habitat. Suitable, but not currently occupied, habitat would also not be protected. This is especially important in the light of anticipated climate change and the recognized need for sufficient habitat for plant populations to migrate in response. The current known population boundaries may be contracted due to the extensive grazing history in the area and reflect the limited number of surveys rather than the true extent of the species. Protecting only the known populations limits the ability of the species to colonize adjacent suitable habitat and limits recovery. Having grazing adjacent to monkeyflower habitat also increases the chance of invasion from weedy species introduced and spread by livestock. Protecting only the known populations of the Kelso Creek monkeyflower does not adequately protect another co-occurring uncommon monkeyflower, the related *Mimulus androsaceus*.

Seventy acres in the Kelso Valley area would be open to OHV use. Vehicle use could occur over most or all of the 70 acres and would result in long-term habitat loss. Vegetation would be limited to small remnant areas between vehicle trails and subjected to the generation of dust that reduces plant photosynthesis and reproduction. Wildlife species capable of using small patches of habitat and tolerant of disturbance may be able to persist but would be at risk of vehicle strikes. Habitat quality on adjacent lands would be reduced due to impacts from dust generation. Animals in adjacent habitat would be displaced by human activity and noise in the open area. The potential for users of the open area to use adjacent areas could further reduce habitat quality.

Approximately 139,450 acres would be closed to OHV use, including Los Osos and Pt. Sal ACECs, designated wilderness areas, Wilderness Study Areas, and the Pacific Crest National Scenic Trail corridor, protecting biological resources in these areas. The remaining 264,560 acres of the decision are would be designated as limited to OHV use, with impacts on some routes. Some illegal user-made routes would proliferate in native habitats, which would reduce habitat quality for biological resources.

Of the 1,936 miles of routes in the travel network, 1,683 miles would be designated as motorized, 65 miles as closed, and 112 miles as authorized use. Designation as authorized access would eliminate recreation travel on these roads, reduce vehicle traffic, and reduce the potential for disturbance from vehicle noise/human interaction, noxious weed or undesired nonnative species introduction, and mortality from vehicle strikes. Habitat restoration could occur on only 65 miles of closed routes that could improve habitat for biological resources. The extensive amount of motorized designations, 1,683 miles, would reduce habitat quality for biological resources by creating surface disturbance and high potential for interactions between humans and biological resources, and provide extensive opportunities for the introduction and spread of weeds.

Table 4.2-4 displays the miles of routes by designation that cross areas with special biological resource concerns.

Table 4.2-4
Alternative E Route Designations in Areas with Special Biological Resource Concerns

Route Designation	Conserved Lands area of ecological importance Reserve and Corridors	NCLWMA area of ecological importance	Other Areas of Ecological Importance	Biology ACECs
Motorized	844miles	415 miles	67 miles	278 miles
Nonmotorized	none	none	none	18 miles
Nonmechanized	nonw	38 miles	5 miles (including 4 miles pedestrian only)	none
Closed	none	28 miles	none	3 miles
Authorized Use Only	33 miles	12 miles	10 miles	28 miles

There would be 844 miles of motorized routes within reserves and corridors (Conserved Lands area of ecological importance). This extent of motorized routes would encourage recreation use and would

increase the likelihood of vehicle strikes on listed animal species. Extensive route proliferation is anticipated, although the BLM would attempt to limit travel to designated routes. Increasing trends in the number of motorists and user-made routes suggest that they would proliferate and that the habitat would become degraded from OHV cross-country travel and creation of user-made routes. This activity may preclude the conservation and recovery value of the BLM lands in the reserves and corridors.

The route designations in the Temblor-Caliente and Monache-Walker Pass NCLWMAs (NCLWMA area of ecological importance) would designate 415 miles for motorized travel and close some routes (28 miles) to the public. Possible rehabilitation on closed routes would protect biological resources. In the Temblor Range and in the Monache-Walker Pass NCLWMAs near the Isabella Lake communities, the existing routes and increasing level of OHV travel would result in greater impacts on biological resources. Recent trends suggest that routes would likely proliferate, notwithstanding the BLM's management actions to encourage travel only on designated routes. This would further degrade habitat for biological resources in these NCLWMA areas.

There would be 82 miles of routes in other areas of ecological importance and 327 miles of routes in ACECs designated for biological resources. Only 41 miles would be closed or restricted to Authorized Access which would maintain habitat quality and help deter route proliferation in the Cypress Mountain, Cyrus Canyon, Erskine Creek, Hopper Mountain, Irish Hills, Kaweah, NCLWMA(s), Pt. Sal, Rusty Peak, and Upper Cuyama Valley areas. The motorized designations in the Kettleman Hills, Lokern-Buena Vista, Ancient Lakeshores, Kaweah, Erskine Creek, and Cyrus Canyon ACECs, and the Atwell Island SMA would result in relatively high amounts of the impacts on biological resources described above. It is more likely that routes would proliferate in all areas accessible by the public. The extensive amount of motorized designations would reduce habitat quality for biological resources. This would increase threats to listed plant and animal species and may increase the need to list some species, such as the Kelso Creek monkeyflower, whose habitat has been degraded from OHV impacts.

Approximately 149,200 acres would be closed to oil and gas leasing which would eliminate surface disturbance and potential for interactions between oil field activities and biological resources in these areas. This includes the Blue Ridge, Deer Spring, Erskine Creek, and Piute Cypress areas which would eliminate surface disturbance and potential for interactions between oil field activities and biological resources, including condors, in these areas.

Ancient Lakeshores, Bitter Creek, and Tierra Redonda would be leased with an NSO stipulation to protect biological resources. The NSO stipulation prohibits any surface disturbance on the lease surface

Compensation Lands and split estate with surface managed by another entity as compensation for biological resources would be leased with a CSU stipulation. This CSU would allow the BLM to move, delay, and even prohibit surface-disturbing activities on all or a portion of the lease, if necessary, to reduce impacts on biological resources to an acceptable level

Approximately 900,000 acres would be available for solid mineral leasing and solid mineral material disposal which could result in impacts to species, populations and habitats biological resources due to surface disturbance and potential interactions between mineral activities and biological resources. 17,770 acres would be proposed for withdrawal from mineral entry which would eliminate surface disturbance, introduction and spread of weeds, and potential for interactions between mineral activities and biological resources in these areas.

Four ERMAs covering 47,270 acres would be designated. The Atwell Island and Fresno River ERMAs would emphasize primitive and low impacts activities such as wildlife viewing, environmental interpretation, camping, and hiking. Managing Atwell Island and Fresno River as ERMAs will protect biological resources, such as wetland and riparian habitat, by promoting environmental education and restricting access and certain activities. The Case Mountain ERMA would emphasize non-motorized activities, such as mountain biking, camping, and hunting. Managing and maintaining mountain bike trails could result in accelerated erosion, loss of soil, habitat fragmentation and alter water flow patterns across the landscape. If trails result in unacceptable levels of impacts, however, they could be rerouted and restored. The North Fork ERMA would emphasize fishing, hunting and water play from October through April. Prohibiting use during the hotter summer months when use tends to be concentrated in the riparian area would allow riparian habitat at Cherry Falls and Advance to recover, and wildlife to make more use of the area in the absence of concentrated and frequent human use.

Four SRMAs covering 168,690 acres would be designated. The San Joaquin River Gorge, Chimney Peak and Keyesville SRMAs would be maintained, and one new SRMA, Temblor, is proposed.

Managing lands as SRMAs could encourage additional use of these lands and increase disturbance to biological resources. Although SRMAs concentrate and manage recreational use, they can attract more initial and repeat visitation due to outreach efforts and the amenities provided. Focused management, monitoring, and corrective actions may reduce some impacts on biological resources that result from the increased visitation that SRMA designation generates but may not mitigate all of the effects. For example, existing SRMAs are listed on BLM Web pages and recreation maps, making the public more likely to visit SRMAs. Providing and maintaining facilities, such as toilets, trash receptacles, information kiosks, trails, parking areas, and boat launch sites, may manage recreation use but also promotes initial and repeat visitation. The outreach and amenities associated with SRMAs increase visitation above what it would be without the SRMA designation. Increased visitation results in increased impacts on biological resources, such as surface disturbance, vegetation collecting, and displacement of wildlife due to humans and pets.

The magnitude of impacts on biological resources from SRMAs depends on the primary activities emphasized by the SRMA, public demand for those activities, and whether the geographic location overlaps with sensitive biological resources. For example, a SRMA, such as the San Joaquin River Gorge, that emphasizes environmental outreach, camping, hiking, mountain biking, horseback riding, and river-based activities in an area with few sensitive biological resources, and multiple options for meeting the recreational demand, may have little impact on biological resources. The many options provided by other entities, such as the Forest Service or NPS, results in a low demand for the BLM site, low levels of use, and a low impact on biological resources. In contrast, a SRMA, such as the Temblor SRMA, that emphasizes dispersed camping, OHV trail riding and touring, and hunting in an area that contains sensitive biological resources and few opportunities for meeting the large demand, may have greater impact on biological resources. If the demand and subsequent increase in use is greater than BLM resources can manage, even under a SRMA, surface disturbance, displacement of wildlife, vehicle strikes, and destruction of burrows and vegetation may substantially reduce habitat quality over an extensive amount of the Temblor Range adjacent to the Carrizo Plain National Monument.

The San Joaquin River Gorge SRMA would emphasize environmental outreach, camping, hiking, mountain biking, horseback riding, and river-based activities. The environmental outreach component could reduce impacts on biological resources from recreational use. The Keyesville SRMA would emphasize rafting, kayaking, recreational prospecting, camping, fishing, trail use, cultural/historical

discovery. The Chimney Peak SRMA would emphasize driving for pleasure, scenic viewing, wildlife viewing, camping, hunting, hiking, horseback riding. The Temblor SRMA would emphasize dispersed camping, touring, trail riding, and hunting.

The most increase in impacts would be expected in the new Temblor SRMA where new facilities and use areas would be developed. This increase would have direct and indirect effects on the San Joaquin Valley suite of special status species that inhabit the Temblor Range due to increased habitat and human disturbance at recreation sites, higher use of the road network that would result in vehicle strikes, and a likely proliferation of unauthorized roads and cross county travel. The increase in activity would also increase the production of dust and route proliferation, further degrading vegetation and increasing the opportunity for the introduction and spread of weeds.

Managing the Chimney Peak as an SRMA would have little effect on biological resources since it receives low levels of visitation and does not contain high concentrations of sensitive biological resources. A large portion of Chimney Peak is also designated wilderness, which incidentally protects biological resources.

Within the Keyesville SRMA impacts from dispersed camping, trail riding, parking, gold panning, water based activities would continue in much of the area. Within the Dam RMZ the removal of camping along the river would allow riparian vegetation to become established and reduce interaction between humans and wildlife in the riparian area. Dispersed camping and parking in the blue oak and grey pine woodland would continue to compact soils and damage tree roots, eventually killing the tree. These dead trees then become a hazard and must be removed, eliminating important wildlife habitat features. Continued use of trails by motorized vehicles and mountain bikes would result in accelerated erosion along the route, trail widening, and proliferation of additional routes which degrades habitat. Concentrated and prolonged recreational use, such as group camping and parking, and multiple day visits, tramples vegetation and displaces wildlife.

Within the San Joaquin River Gorge, recreation use is concentrated at established facilities and along existing trails, with few instances of new disturbances or unauthorized routes. Since motorized trail riding is not a targeted recreational activity, accelerated erosion, trail widening and proliferation of routes would not occur. The steep topography, dense vegetation, and focus on environmental outreach results in low impact activities that generally maintains the habitat quality.

4.3 Caves and Karst Resource

Caves on public lands may be considered significant for their biotic, cultural, geologic, hydrologic, recreation, education, or scientific values. Caves are generally found in karst formations, which are geologic areas, composed of soluble rocks, such as limestone or gypsum. Caves can also occur in other rock types and formations, including lava flows and granite. Known cave resources are relatively rare on public lands in the Bakersfield FO.

Impacts on cave and karst resources can occur from direct disturbance and as a consequence of access which potentially results in overuse and vandalism. Management actions that reduce, restrict, monitor, or prohibit disturbance from actions such as, surface development or intensive recreation use would reduce the potential for impacts to occur. In many cases measures to protect other resource values result in management actions that provide protection for cave and karst resources.

Generally impacts are greatest where cave locations are known to the public and ease of access is high, typically near roads, OHV trails, and population centers.

METHODS OF ANALYSIS

The analysis of direct and indirect effects is focused on the four known cave locations within the Decision Area. Similar effects would be anticipated to occur on as yet undiscovered cave locations.

Direct impacts to cave and karst resources result from management actions that physically alter, damage, or destroy cave and karst systems, including their associated geologic features (speleothems) and biologic communities.

Indirect impacts to cave and karst systems can result from actions that increase the accessibility of cave and karst areas, and therefore the probability of adverse impacts due to incompatible or excessive recreational use. Indirect impacts can also result from activities that can alter water quality (e.g., agriculture, pesticide application, pollution) when degraded water infiltrates into groundwater, thereby possibly altering the chemical and biological environment of cave and karst systems.

Indirect impacts from environmental causes cannot be quantified due to the complexity of individual cave ecosystems and the lack of a complete inventory of cave resources. Therefore methods used to describe potential for impacts focuses on a qualitative explanation of how accessible and amount of visitation caves receive as a result of the decisions.

ASSUMPTIONS

Assumptions used in this impact analysis include the following:

- Caves present unique geology and potential for distinctive cave resources including ecosystems that may not be duplicated elsewhere.
- Adverse impacts to cave and karst structure and integrity also would impact associated resources including the biological communities with the cave, and any cultural, geologic, or paleontological resources that are present.
- Impacts are generally irretrievable and irreversible, although only occur at the local scale; due to the sensitive and nonrenewable nature of cave systems and associated resources.
- Limestone caves are more susceptible to impacts than granite cave systems due to their geologic structure.
- Millerton cave is the most easily accessible, receives higher levels of visitation, and therefore is most at risk of adverse impacts from excessive and incompatible uses.
- Determination as significant would limit the distribution of cave location information in accordance with the Federal Cave Protection Act.
- Actions associated with other resources that minimize or eliminate surface-disturbing activities would be anticipated to have beneficial impacts on caves, where present.
- In general, recreational uses of caves have the greatest potential to directly impact cave and karst resources.

4.3.1 Impact of Alternative A (No Action)

Cave and karst formations would not be specifically managed for beyond law, policy and agency guidance. No determination of significance would be made for caves within the decision area; therefore the Freedom of Information Act would allow potentially sensitive information about cave locations and resources to be more freely available from the BLM and visitation would be expected to continue at or near the current levels.

Granite Cave would be managed as a Special Management Area (SMA) for cultural resources. The cave has been gated for protection of cultural resources and values therefore eliminated access and associated impacts.

Special management applied through SMA identification for both Granite Cave and Erskine Creek would establish limitations on fluid mineral development and propose withdrawal from the mining laws that would reduce the likelihood of surface disturbance in these areas therefore providing protection to caves and cave resources.

Designation of the San Joaquin River Gorge Special Recreation Management Area (SRMA), in which Millerton Cave is located, has the potential to increase visitation to the area. However, management is not specifically focused on the recreational use of caves, and therefore access to the cave would not be increased and visitation is expected to continue at current levels.

4.3.2 Impacts Common to All Action Alternatives

The known caves, and karst formations most likely to contain caves, would be determined to be significant either through direct identification or by incorporation into an ACEC as part of its importance criteria. This determination would limit the distribution of cave information potentially reducing impacts resulting from visitation including overuse and vandalism. The determination of significance has the greatest ability to protect caves that are not widely known. Millerton Cave's location is widely known and, therefore, this determination has limited impact on accessibility or visitation.

All caves or segments of caves yet undiscovered and recorded would be restricted (Class II), requiring a permit for access, thus limiting their accessibility and potentially reducing risk of damage and destruction of cave resources.

Wildland fire could result in denudation of vegetation around cave openings increasing their visibility and associated risks of impact from excessive or incompatible uses. Where wildland fire could be used for resource benefit in a portion of the Three Rivers Fire Management Unit, the chance of cave entrances being exposed is higher, but the caves in this area are located further from routes of travel and population centers.

Although caves are located in areas that would be managed as recreation management areas (Case Mountain ERMA and San Joaquin River Gorge SRMA) neither area is specifically focused on the recreational use of caves, therefore access to these caves would not be increased or promoted. Consequently increased visitation resulting from recreation management designations is not expected to increase use of these caves.

Special management attention for Erskine Creek and Kaweah ACECs would provide protection for caves in these areas by limiting surface disturbance through various means including ~~*proposing their withdrawal from mineral entry or*~~ *the requirement for approval of a plan of operation for locatable mining activity, closure to saleable mineral disposal, and* limiting surface use for fluid mineral development.

4.3.3 Impact of Alternative B

Granite Cave would be closed (Class III) eliminating all but permitted scientific and educational use, therefore eliminating adverse impacts from incompatible or excessive use. The gate would continue to be maintained to enforce this closure. Protection the cave would receive from surface-disturbing activities (mineral or ROW development, etc.) through management of other resources would be reduced as there is no overlapping special designation or specific management attention. Protection would still be achieved by compliance with cultural resource law, regulation, and policy as a result of the presence of significant cultural resources and values within the cave.

Millerton Cave would be open (Class I) to all forms of use: recreational, educational and scientific, as is the current condition. Therefore, impacts would be expected to continue at current levels.

Caves occurring with the Erskine Creek and Kaweah ACECs would be restricted (Class II), requiring a permit for access, thus limiting their accessibility. Although still exposing caves to the potential impacts from authorized visitation, this would reduce excessive or incompatible use reducing the risk of damage or destruction of cave resources.

4.3.4 Impact of Alternative C

All known caves including those occurring at Erskine Creek and Kaweah would be closed (Class III) to all forms of use, except scientific or educational use with specific authorization from the BLM. This would eliminate legal recreational cave use and therefore the adverse impacts associated with this visitation.

Millerton Cave is directly accessible by an established and designated (non-motorized) route. Although closed, the cave would continue to accessible via this route, potentially leading to unauthorized visitation and the associated impacts of this use.

4.3.5 Impact of Alternative D

All known caves including those occurring at Erskine Creek and Kaweah would be closed (Class III) to all forms of use, except scientific or educational use with specific authorization from the BLM. This would eliminate legal recreational cave use and therefore the adverse impacts associated with this visitation.

Millerton Cave is directly accessible by an established and designated (non-motorized) route. Although closed, the cave would continue to accessible via this route, potentially leading to unauthorized visitation and the associated impacts of this use.

4.3.6 Impact of Alternative E

Granite Cave would be closed (Class III) eliminating all but permitted scientific and educational use, therefore eliminating adverse impacts from incompatible or excessive use. The gate would continue to be maintained to enforce this closure. Protection the cave would receive from surface-disturbing

activities (mineral or ROW development, etc.) through management of other resources would be reduced as there is no overlapping special designation or specific management attention. Protection would still be achieved by compliance with cultural resource law, regulation, and policy as a result of the presence of significant cultural resources and values within the cave.

Millerton Cave would be open (Class I) to all forms of use: recreational, educational and scientific, as is the current condition. Therefore, impacts would be expected to continue at current levels.

Caves occurring with the Erskine Creek and Kaweah ACECs would be restricted (Class II), requiring a permit for access, thus limiting their accessibility. Although still exposing caves to the potential impacts from authorized visitation, this would reduce excessive or incompatible use reducing the risk of damage or destruction of cave resources.

4.4 Cultural Resources

Cultural resources include those artifacts, features, locations and landscapes (including Traditional Cultural Properties) that provide insight into human history and cultural development or remain important to contemporary Native Americans. These resources are dispersed across the landscape, and often occur in locations which continue to have attraction for a variety of uses. Any activity that disturbs the ground has the potential to impact cultural resources.

Collocation of cultural resources with a variety of uses may be incompatible and result in unintentional adverse impacts. Management actions that reduce, restrict, monitor, or prohibit surface disturbing actions, such as surface development or intensive recreational use, would reduce the potential for disturbance to archaeological cultural resources. In addition, the location of cultural resources in areas of public use may result in purposeful damage and destruction of these resources through vandalism and unauthorized collection (looting).

Impacts on cultural resources are assessed by applying the criteria of adverse effect, as defined in 36 CFR, Part 800.5a: “An adverse effect is found when an action may alter the characteristics of a historic property that qualify it for inclusion in the NRHP in a manner that would diminish the integrity of the property’s location, design, setting, workmanship, feeling, or association. Adverse effects may include reasonably foreseeable effects caused by the action that may occur later in time, be farther removed in distance, or be cumulative.”

METHODS OF ANALYSIS

The area of analysis focuses on cultural resources within the entire Decision Area. Specific attention is given to areas with known or high probability of cultural importance. In addition, 696 recorded cultural resource sites are used to quantify analysis where appropriate.

Direct impacts to cultural resources result from any surface disturbance that physically alter, damage, or destroy archaeological sites or traditional use areas and diminish the factors contributing to their eligibility to the National Register of Historic Places (NRHP) or Native American values. In addition, incompatible use (e.g., purposive vandalism and unauthorized excavation or artifact collecting (“looting”) at archaeological sites) also directly destroys factors contributing to eligibility.

Indirectly cultural resources are impacted by the ease of accessibility to both surface disturbance and incompatible uses in areas with these resources by increasing opportunity for direct impacts to occur. In

addition, indirect impacts result from actions that change the potential for erosion or other natural processes. Human visitation, recreation, vehicle use, livestock grazing, fire and non-fire vegetation treatments, and other activities can increase the rate of deterioration through natural processes (erosion or weathering).

Traditional Cultural Properties are subject to similar direct and indirect impacts; however, the scale of these impacts is often area-wide affecting view shed and overall access for traditional uses.

The potential for degradation of factors contributing to eligibility or Native American values is used as an indicator of impact on cultural resources. When possible acres and mileage where this potential is changed are used to quantify extent of impact.

Cultural sites can potentially occur anywhere in the Decision Area, which has not been completely surveyed for the presence of cultural sites. ~~*Therefore, only a portion of all cultural sites likely to occur within the Decision Area have been discovered.*~~ *A complete survey of the Decision Area has not been conducted and is not feasible; it is still possible to make informed decisions regarding impacts to cultural resources in spite of a lack of complete information based upon an understanding of impacts that are known to affect cultural sites in general*. As a result, known cultural sites are sometimes used as a proxy for impacts on the entire magnitude of cultural resources.

Proposed management of the following resources, resource uses, or programs is anticipated to have an effect on Cultural Resources: Biological Resources, Cave and Karst, Wildland Fire Ecology and Management, Comprehensive Trail and Travel Management, Livestock Grazing, Minerals, Recreation, and Special Designations. Those resources, resource uses and programs not listed are deemed to have negligible effects and, therefore, are not further analyzed.

ASSUMPTIONS

The following assumptions regarding the resource base and management practices were made in the analysis:

- Archaeological sites are highly sensitive to impacts, which are irreversible, and result in irretrievable loss.
- Unless determined otherwise, all cultural sites are treated as eligible historic properties and afforded the associated emphasis on preservation through avoidance of any potential adverse effect.
- Archaeological resources derive their data value from the context of the artifacts and physical features contained within the site. Therefore, disturbance of the arrangement of the site contents effectively destroys the information it contains.
- Designated Wilderness Areas (117,720 acres) eliminate impacts to cultural resources resulting from surface disturbance related to mineral and right-of-way development and use of OHVs. Potential for impact may still occur from support and participation in primitive, unconfined recreational activities.
- Upon request by Native Americans access to places of importance to Native American people would be accommodated appropriately.

- All proposed ground surface disturbing undertakings and use authorizations which could potentially affect cultural sites or access to places of traditional importance to Native Americans on public lands would comply with BLM policy, laws, regulations and Executive Orders designed to preserve and protect cultural resources. If eligible sites are discovered within a project area, and they cannot be avoided, mitigation strategies including excavation and data recovery are required.
- Due to the dispersed nature of livestock grazing, impacts to cultural resources through ground surface disturbance and erosion may occur Decision Area-wide, however, capability to manage for these impacts exists only on public land. Direct impacts due to surface disturbance resulting from livestock grazing are generally concentrated in areas of congregation, such as water sources, salt licks, loafing, and trailing areas. *Individual grazing authorizations are subject to site-specific analysis under NEPA and compliance with Section 106.*
- Cultural resources within 300 feet of a route are most susceptible to surface disturbance and incompatible activity. Motorized routes provide the easiest form of access and therefore are considered to have the highest potential for impact to occur. ~~*The use of this route buffer does in no way indicate this area for all routes has been surveyed for cultural resources and additional sites may be located within those unsurveyed areas*~~.

4.4.1 Impact of Alternative A (No Action)

Potential for surface disturbance, and therefore increased possibility of loss of factors contributing to eligibility would be minimized through management actions that limit mineral development (NSO, closure, or withdrawal), and cease OHV activity (OHV Closed areas) through various designations and identifications that may or may not cite cultural resources protection within their objectives. These limitations result in 155,760 acres (13% of the analysis area) where cultural resources receive some protection from surface disturbing activities.

Specific management for the following SMAs: Granite Cave, Huasna Peak, South Lake Cultural Area, and Walker Pass NHL, would reduce the potential for loss of eligibility of sites within these areas resulting from surface disturbance related to fluid mineral development through the identification of an NSO stipulation for fluid mineral development. Values present would receive no additional protection from incompatible uses beyond those afforded through regulation, policy, and standard procedures.

The complex of historic sites at Keyesville would be managed as an SMA. Management would reduce the potential for loss of eligibility for sites within this area resulting from surface disturbance and incompatible uses. Management includes an existing withdrawal from the mining law and closure of a portion of the area to mineral material disposal eliminating surface disturbance from these types of mineral development. The impact of incompatible use would be reduced through management applied for recreation (prohibition of discharge of firearms and dispersed camping in some areas).

The historic site of Advance Colony would be managed within the North Fork SMA. This area would have no special management limiting surface disturbance or incompatible activities. Values present would receive no protection beyond those afforded through regulation, policy, and standard procedures. The site, however, is easily accessible – adjacent to a parking area and major river access route that exacerbate the opportunity for continued vandalism and potential loss of eligibility.

No routes would be designated as closed to travel and access to cultural resources would remain the same as current conditions. Impacts would continue to occur from 1,936 miles of routes, adjacent (within 300 feet) to which 68% known cultural resource sites. Of these, 439 sites are adjacent to routes available to all modes of travel and would have the highest potential for loss of factors contributing to eligibility due to ease of access and opportunity for incompatible activities.

The cultural resources located within the San Joaquin River Gorge would have no special management limiting surface disturbance or incompatible activities. Although the area would be managed as an SRMA, the cultural resource values present would receive no protection beyond those afforded through regulation, policy, and standard procedures.

The Chico Martinez ACEC, recommended specifically for the protection of cultural resources, would have no special management limiting surface disturbance or incompatible activities with regard to cultural resources. Values present would receive no protection beyond those afforded through regulation, policy, and standard procedures.

Special management for the Goose Lake ACEC reduces the potential for loss of eligibility for sites within this area resulting from surface disturbance and incompatible uses. Management includes withdrawal from the mining law and NSO stipulations for fluid mineral development eliminating surface disturbance from these types of mineral development. The impact of incompatible use would be reduced through management applied for recreation (prohibition of dispersed camping and cross country equestrian travel) and livestock grazing (identification as unavailable for livestock grazing).

Special management for the Horse Canyon ACEC reduces the potential for loss of eligibility for sites within this area resulting from surface disturbance and incompatible uses. Management includes an NSO stipulation for fluid mineral development eliminating surface disturbance from fluid mineral development. The impact of incompatible use would be reduced through management applied for livestock grazing (identification as unavailable for livestock grazing). The continued allowance of mineral/fossil specimen collection would subject these cultural resources to disturbance and increase the potential for vandalism and looting. In addition, the presence of people engaged in these activities may diminish the important traditional cultural values of the area to contemporary Native Americans.

Special management for the Point Sal ACEC reduces the potential for loss of eligibility for sites within this area resulting from surface disturbance and incompatible uses. Management includes withdrawal from the mining law and closure for fluid mineral development eliminating surface disturbance from these types of mineral development. The impact of incompatible use would be reduced through management applied for comprehensive trails and travel management (designation as an OHV Closed Area, prohibition of mechanized and equestrian uses, and cross country pedestrian travel) and livestock grazing (identification as unavailable for livestock grazing).

Piedras Blancas Historic Light Station and associated cultural resources would be protected through the legislation establishing the Outstanding Natural Area (ONA). Furthermore public use would be achieved by guided tours for the visiting public reducing incompatible activities.

4.4.2 Impacts Common to All Action Alternatives

Allocation of Huasna Peak to “traditional use” would result in long-term preservation of the significant cultural values of this area while allowing for traditional cultural practices. The allocation of all rock art sites to “conserve for future use” would preserve this particularly sensitive resource until such time

circumstances allow for their use. The allocation of the Walker Pass National Historic Landmark as "public use" allows continued visitation and interpretation of this key pass used by early explorers.

The complex of historic sites at Keyesville would be allocated to "public use" upon completion of stabilization and restoration activities. In the interim, these resources would be allocated to "conserve for future use". The combination of these allocations would allow for interpretive values of this area to be realized while addressing the stability of these resources that pose a danger to public safety and health. These historic resources occur within the Keyesville SRMA, principally the Gold Fever RMZ. These recreation designations along with their associated management are compatible with the public use allocation and the desire for interpretation. In addition, heightened management focus, including a range of services (e.g., educational programs, patrols, etc.) and visitor controls (e.g., restrictions on casual use, discharge of firearms, etc.), would further protect cultural resources from incompatible uses and vandalism.

Piedras Blancas Historic Light Station and associated cultural resources would be allocated to "public use" and protected through the legislation establishing the Outstanding Natural Area (ONA). Furthermore public use would be achieved by guided tours for the visiting public reducing incompatible activities.

Allocation of all other evaluated cultural resources to "scientific use" ensures these sites would be preserved for study, determination of eligibility and appropriate recordation, pending assignment to another use category.

The historic adobe building (circa 1900) at Atwell Island would have no specific management actions directed at its use or preservation. Values present would receive no protection beyond those afforded through regulation, policy, and standard procedures. The area, however, would be managed as an area of ecological importance for biological resources with management restrictions on public use that would afford some protection from incompatible activities.

The cultural resources within the South Lake Cultural Area (listed on the NRHP) would have no special management limiting surface disturbance or incompatible activities with regard to cultural resources. Although this no longer affords protection from fluid mineral leasing, the potential for development is low and cultural resources would be adequately protected.

Establishment of a limited surface use stipulation for fluid mineral development based on the presence of recorded, eligible cultural resources within newly leased parcels would promote preservation of these resources. This stipulation would eliminate excavation and data recovery as potential mitigation measures for subsequent parcel development. The stipulation could only be applied to new leases. Based on historic patterns of fluid minerals development (the majority of activity occurring on existing leases), this would result in little to no effect to cultural sites within existing leases beyond the protections afforded through legislation and policy.

Wildland fire suppression activities may impact cultural resources at a local scale through the surface disturbance in fire lines and staging areas. Implementation of MIST tactics would reduce impacts from wildland fire and suppression activities.

Identification of minimization and decision area specific criteria in the designation and redesignation of routes would consider the impact of routes on known cultural resources. Routes would be redesignated and/or relocated to avoid impacts on factors contributing to eligibility.

Management of the San Joaquin River Gorge area as an SRMA, with compatible targeted activities including primitive recreation types and cultural resource education and interpretation would reduce potential impacts to cultural resources related to incompatible activities. In addition, heightened management focus, including a range of services (e.g., educational programs, patrols, etc.) and visitor controls (e.g., restrictions on casual use, etc.), would further protect cultural resources from incompatible uses and vandalism.

Dispersed camping may impact cultural resources in a similar fashion to other surface disturbing activities. Restricting parking for dispersed camping to less than one vehicle width from the existing route would somewhat limit the extent of surface disturbance; however, repeated use of dispersed camping sites may expand disturbed areas as the perceived route widens. It is expected cultural resources within the Keyesville and Temblor RMAs would be impacted the most since these areas receive the highest concentrations of dispersed use.

Recreational mining and prospecting (casual use) disturbs localized areas through physical disturbance of surface soils and, therefore, any cultural resources present. Areas with concentrated casual use, such as Keyesville, especially where this use is supported or promoted, would result in increased potential for loss of factors contributing to eligibility.

Special management for all ACECs closes these areas to mineral material disposal and identifies them as right-of-way exclusion areas for utility scale renewable energy projects and avoidance areas for all other rights-of-way. These restrictions reduce potential surface disturbance resulting from these activities and therefore, potential for loss of factors that contribute to the eligibility of cultural resources.

Special management for the Ancient Lakeshores ACEC reduces the potential for loss of eligibility for sites within this area resulting from surface disturbance and incompatible uses. Management includes ~~*withdrawal from the mining law and*~~ NSO stipulations for fluid mineral development, further eliminating surface disturbance from mineral development. The impact of incompatible use would be reduced through management applied for recreation (prohibition of dispersed camping, airsoft and paintball activities, and cross country equestrian travel) and livestock grazing (identification of majority of the area as unavailable for livestock grazing). This recommended ACEC incorporates the existing Alkali Sink and Goose Lake ACECs with the addition of the Sand Ridge portion of Atwell Island.

Special management for the Los Osos ACEC reduces the potential for loss of eligibility for sites within this area resulting from surface disturbance and incompatible uses. These impacts would be reduced through management applied for recreation (prohibition of camping and campfires) comprehensive trails and travel management (designation as an OHV Closed Area, prohibition of mechanized and equestrian uses, and cross country pedestrian travel) and livestock grazing (identification as unavailable for livestock grazing). The area would remain open for Native American traditional cultural use.

4.4.3 Impact of Alternative B

Potential for surface disturbance, and therefore increased possibility of loss of factors contributing to eligibility would be minimized through management actions that limit mineral development (NSO, closure, or *continued* withdrawals), cease OHV activity (OHV Closed areas), and limit right-of-way development (exclusion areas) through various designations and identifications that may or may not cite cultural resources protection within their objectives. These limitations result in 166,140 acres where cultural resources receive some protection from surface disturbing activities. This is an increase of 1%

from the existing conditions where cultural resources would receive protection from surface disturbance.

Designation of Granite Cave as a significant cave would preclude the distribution of cave-related information from Freedom of Information Act requests. Subsequent identification as Class III (closed) would restrict access to only permitted scientific and educational purposes. Although this no longer affords protection from fluid mineral leasing, the potential for development is low and cultural resources would be adequately protected.

The special management for the Chico Martinez *ACEC*, ~~*adjacent to areas known to contain sensitive cultural resources*~~, *recommended specifically for the protection of cultural resources,* would have ~~*no*~~ special management limiting surface disturbance *resulting from salable mineral extraction and utility scale renewable energy development* ~~*or incompatible activities*~~. Values present would *remain at risk from oil and gas development with* ~~*receive*~~ no protection beyond those afforded through regulation, policy, and standard procedures.

The designation of ~~*308*~~ 293 miles of routes as closed to travel would reduce access to cultural resources. Of the known cultural resource sites ~~*eleven*~~ *nine* miles of routes (adjacent to ~~*58*~~ *90* cultural resource sites) would be designated as Closed and, therefore, reduces the opportunity for incompatible uses to occur. Impacts would continue to occur from ~~*1,628*~~ *1,661* miles of routes, which are adjacent (within 300 feet) to 58% of known cultural resource sites. Of these, ~~*134*~~ *388* sites are adjacent to routes designated as Motorized and would have the highest potential for loss of factors contributing to eligibility due to ease of access and opportunity for incompatible activities.

Special management for the Horse Canyon ACEC reduces the potential for loss of eligibility for sites within this area resulting from surface disturbance and incompatible uses. Management includes ~~*withdrawal from the mining law and*~~ NSO stipulations for fluid mineral development, further eliminating surface disturbance from mineral development. The impact of incompatible use would be reduced through management applied for recreation (prohibition of rock hounding and casual collection) and livestock grazing (identification as unavailable for livestock grazing).

The Kaweah ACEC, recommended partially for the protection of cultural resources (specifically the historic site of Advance Colony), would have ~~*no*~~ special management limiting surface disturbance. Incompatible activities may be limited by restriction on recreational use including a ~~*prohibition of discharge of firearms*~~ *requiring BLM authorization for air-soft and paintball activities* and restriction ~~*to seasonal use*~~ *to all visitation of developed recreation sites along the North Fork of the Kaweah River;* ~~*however, the site is easily accessible – adjacent to a parking area and major river access route that exacerbate the opportunity for continued vandalism and potential loss of eligibility*~~.

Special management for the Point Sal ACEC reduces the potential for loss of eligibility for sites within this area resulting from surface disturbance and incompatible uses. Management includes ~~*withdrawal from the mining law and*~~ closure for fluid mineral development, further eliminating surface disturbance from mineral development. The impact of incompatible use would be reduced through management applied for recreation (prohibition of camping and campfires) comprehensive trails and travel management (designation as an OHV Closed Area, prohibition of mechanized and equestrian uses, and cross country pedestrian travel) and livestock grazing (identification as unavailable for livestock grazing).

In total, recommended ACEC designations specifically for the protection of cultural resources would result in reduced potential for loss of eligibility of cultural resources on ~~5,030~~ 36,620 acres (~~<1%~~ 3%) of the Decision Area.

4.4.4 Impact of Alternative C

Potential for surface disturbance, and therefore increased possibility of loss of factors contributing to eligibility would be minimized through management actions that limit mineral development (NSO, closure, or withdrawal), cease OHV activity (OHV Closed areas), and limit right-of-way development (exclusion areas) through various designations and identifications that may or may not cite cultural resources protection within their objectives. These limitations result in 204,450 acres where cultural resources receive some protection from surface disturbing activities. This is an increase of 5% from the existing conditions where cultural resources would receive protection from surface disturbance.

The designation of 580 miles of routes as closed to travel would reduce access to cultural resources. Of the known cultural resource sites 40 miles of routes (adjacent to 165 cultural resource sites) would be designated as Closed and, therefore, reduces the opportunity for incompatible uses to occur. Impacts would continue to occur from 1,356 miles of routes, which are adjacent (within 300 feet) to 45% of known cultural resource sites. Of these, 119 sites are adjacent to routes designated as Motorized and would have the highest potential for loss of factors contributing to eligibility due to ease of access and opportunity for incompatible activities.

The Chico Martinez ACEC, recommended specifically for the protection of cultural resources, would have no special management limiting surface disturbance or incompatible activities with regard to cultural resources. Values present would receive no protection beyond those afforded through regulation, policy, and standard procedures.

Special management for the Granite Cave ACEC reduces the potential for loss of eligibility for sites within this area resulting from surface disturbance and incompatible uses. Management includes withdrawal from the mining law and NSO stipulations for fluid mineral development, further eliminating surface disturbance from mineral development. The impact of incompatible use would be eliminated through the prohibition of public access.

Special management for the Horse Canyon ACEC reduces the potential for loss of eligibility for sites within this area resulting from surface disturbance and incompatible uses. Management includes withdrawal from the mining law and NSO stipulations for fluid mineral development, further eliminating surface disturbance from mineral development. The impact of incompatible use would be reduced through management applied for recreation (prohibition of rock hounding and casual collection and discharge of firearms) and livestock grazing (identification as unavailable for livestock grazing).

The Kaweah ACEC, recommended partially for the protection of cultural resources (specifically the historic site of Advance Colony), would have no special management limiting surface disturbance. Incompatible activities may be reduced by a closure of recreational sites (specifically the parking area adjacent to this historic site).

Special management for the Point Sal ACEC reduces the potential for loss of eligibility for sites within this area resulting from surface disturbance and incompatible uses. Management includes withdrawal from the mining law and closure for fluid mineral development, further eliminating surface disturbance

from mineral development. The impact of incompatible use would be eliminated through the prohibition of public access and unavailability for livestock grazing.

In total, recommended ACEC designation specifically for the protection of cultural resources would result in reduced potential for loss of eligibility of cultural resources on 5,070 acres (<1%) of the Decision Area.

4.4.5 Impact of Alternative D

Potential for surface disturbance, and therefore increased possibility of loss of factors contributing to eligibility would be minimized through management actions that limit mineral development (NSO, closure, or withdrawal), cease OHV activity (OHV Closed areas), and limit right-of-way development (exclusion areas) through various designations and identifications that may or may not cite cultural resources protection within their objectives. These limitations result in 204,450 acres where cultural resources receive some protection from surface disturbing activities. This is an increase of 5% from the existing conditions where cultural resources would receive protection from surface disturbance.

The designation of 580 miles of routes as closed to travel would reduce access to cultural resources. Of the known cultural resource sites 40 miles of routes (adjacent to 165 cultural resource sites) would be designated as Closed and, therefore, reduces the opportunity for incompatible uses to occur. Impacts would continue to occur from 1,356 miles of routes, which are adjacent (within 300 feet) to 45% of known cultural resource sites. Of these, 119 sites are adjacent to routes designated as Motorized and would have the highest potential for loss of factors contributing to eligibility due to ease of access and opportunity for incompatible activities.

The factors contributing to the eligibility of cultural resources on the public lands portion of the Decision Area where livestock grazing would be eliminated (402,800 acres) would be protected from impacts to livestock grazing activity. This action could indirectly increase impacts to cultural resources located on adjoining private lands through concentration of livestock and exacerbation of their impacts. Cultural sites located on private lands, however, are not subject to federal regulatory compliance procedures and protections unless they occur on split estate on which mineral actions are taking place.

The Chico Martinez ACEC, recommended specifically for the protection of cultural resources, would have no special management limiting surface disturbance or incompatible activities with regard to cultural resources. Values present would receive no protection beyond those afforded through regulation, policy, and standard procedures.

Special management for the Granite Cave ACEC reduces the potential for loss of eligibility for sites within this area resulting from surface disturbance and incompatible uses. Management includes withdrawal from the mining law and NSO stipulations for fluid mineral development, further eliminating surface disturbance from mineral development. The impact of incompatible use would be eliminated through the prohibition of public access.

Special management for the Horse Canyon ACEC reduces the potential for loss of eligibility for sites within this area resulting from surface disturbance and incompatible uses. Management includes withdrawal from the mining law and NSO stipulations for fluid mineral development, further eliminating surface disturbance from mineral development. The impact of incompatible use would be reduced through management applied for recreation (prohibition of rock hounding and casual collection and discharge of firearms) and livestock grazing (identification as unavailable for livestock grazing).

The Kaweah ACEC, recommended partially for the protection of cultural resources (specifically the historic site of Advance Colony), would have no special management limiting surface disturbance. Incompatible activities may be reduced by a closure of recreational sites (specifically the parking area adjacent to this historic site).

Special management for the Point Sal ACEC reduces the potential for loss of eligibility for sites within this area resulting from surface disturbance and incompatible uses. Management includes withdrawal from the mining law and closure for fluid mineral development, further eliminating surface disturbance from mineral development. The impact of incompatible use would be eliminated through the prohibition of public access and unavailability for livestock grazing.

In total, recommended ACEC designation specifically for the protection of cultural resources would result in reduced potential for loss of eligibility of cultural resources on 5,070 acres (<1%) of the Decision Area.

4.4.6 Impact of Alternative E

Potential for surface disturbance, and therefore increased possibility of loss of factors contributing to eligibility would be minimized through management actions that limit mineral development (NSO, closure, or withdrawal), cease OHV activity (OHV Closed areas), and limit right-of-way development (exclusion areas) through various designations and identifications that may or may not cite cultural resources protection within their objectives. These limitations result in 152,790 acres where cultural resources receive some protection from surface disturbing activities. This is a negligible (<1%) change from the existing conditions where cultural resources would receive protection from surface disturbance.

Designation of Granite Cave as a significant cave would preclude the distribution of cave-related information including those related to important cultural resources from Freedom of Information Act requests. Subsequent identification as Class III (closed) would restrict access to only permitted scientific and educational purposes. Although this no longer affords protection from fluid mineral leasing, the potential for development is low and cultural resources would be adequately protected.

Chico Martinez, adjacent to areas known to contain sensitive cultural resources, would have no special management limiting surface disturbance or incompatible activities. Values present would receive no protection beyond those afforded through regulation, policy, and standard procedures; however, this is deemed sufficient to adequately protect these values.

Cultural resources located within Horse Canyon would have no special management limiting surface disturbance or incompatible activities. Values present would receive no protection beyond those afforded through regulation, policy, and standard procedures. The continued allowance of mineral/fossil specimen collection would subject these cultural resources to increased potential for disturbance, vandalism, and looting. In addition, the presence of people engaged in these activities may diminish the important traditional cultural values of the area to contemporary Native Americans.

The designation of 65 miles of routes as closed to travel would reduce access to cultural resources. Of the known cultural resource sites less than one mile of routes adjacent to one cultural resource site would be designated as Closed and, therefore, reduces the opportunity for incompatible uses to occur at this site. Impacts would continue to occur from 1,871 miles of routes, which are adjacent (within 300 feet) to 61% of known cultural resource sites. Of these, 344 sites are adjacent to routes designated as

Motorized and would have the highest potential for loss of factors contributing to eligibility due to ease of access and opportunity for incompatible activities.

The Kaweah ACEC, recommended partially for the protection of cultural resources (specifically the historic site of Advance Colony), would have no special management limiting surface disturbance. Incompatible activities may be limited by restriction on recreational use (e.g., prohibition of discharge of firearms and overnight camping); however, the site is easily accessible – adjacent to a parking area and major river access route that exacerbate the opportunity for continued vandalism and potential loss of eligibility.

Special management for the Point Sal ACEC reduces the potential for loss of eligibility for sites within this area resulting from surface disturbance and incompatible uses. Management includes withdrawal from the mining law and closure for fluid mineral development, further eliminating surface disturbance from mineral development. The impact of incompatible use would be reduced through management applied for recreation (prohibition of dispersed camping, hunting and discharge of firearms) comprehensive trails and travel management (designation as an OHV Closed Area, prohibition of mechanized and equestrian uses, and cross country pedestrian travel) and livestock grazing (identification as unavailable for livestock grazing).

In total, recommended ACEC designation specifically for the protection of cultural resources would result in reduced potential for loss of eligibility of cultural resources on 2,200 acres (<1%) of the Decision Area.

4.5 Lands with Wilderness Characteristics

Wilderness characteristics are defined by the area's ability to demonstrate a natural state and provide opportunities for solitude and primitive, unconfined recreation. It is these characteristics that can be impacted by management decisions throughout the alternatives. Where management actions seek to maintain or enhance at natural state (e.g., protection of biological resources) the associated characteristic is beneficially impacted. Where management actions allow for surface disturbance and development all characteristics can be adversely impacted.

The Bakersfield FO inventory for lands with wilderness characteristics completed in conjunction with this RMP evaluated wilderness characteristics as discussed in Section 2(c) of the Wilderness Act, to determine those areas that possess these characteristics. The analysis seeks to determine if prescriptive management of these characteristics would be required to protect an area's naturalness, solitude, and opportunity for primitive, unconfined recreation and whether wilderness characteristics management is appropriate for these areas.

METHODS OF ANALYSIS

The area of analysis focuses on the 16,190 acres of the Decision Area deemed to have wilderness characteristics not already managed for such. An additional 1,700 acres are considered in this analysis, which were proposed by the public, although they no longer present the wealth of wilderness characteristics that warrant protection.

The wilderness characteristics (beyond size that can only be impacted by unforeseeable land tenure adjustments) of naturalness, experiences of solitude, and opportunities for primitive unconfined recreation are used as indicators and to describe the effect of proposed management.

Naturalness is directly impacted by any action that protects the natural environment through restriction or elimination of surface disturbance and development (e.g., closure to mineral development, rights-of-way exclusion etc.). This characteristic is indirectly impacted by actions that enhance the natural environment, such as, improvements to habitat, air quality and water resources.

Solitude and is directly impacted by the presence of sights, sounds and evidence of other people. Indirectly it is impacted through decisions that allow development to occur within or in close proximity to an area.

Opportunities for primitive unconfined recreation are directly impacted by management that restricts these types of activities (closure to overnight camping, prohibition of hunting, etc.) or promotes them (e.g., through the identification of an RMA with primitive recreation types as targeted activities). Indirectly these opportunities are impacted by management that enhances the natural environment to which these activities are linked (e.g., management of game species promotes hunting).

Proposed management of the following resources, resource uses, or programs is anticipated to have an effect on wilderness characteristics: Recreation and Visitor Services, Areas of Critical Environmental Concern, and WSAs. Those resources not listed are deemed to have negligible effects and therefore, are not analyzed further.

ASSUMPTIONS

The following assumptions are used in the impact analysis:

- Actions that diminish naturalness eliminate wilderness characteristics. Where naturalness still exists actions that either reduce experiences of solitude or opportunities for primitive unconfined recreation extinguish wilderness character.
- Surface disturbance and development from the route network, ROWs, livestock grazing, and mineral exploration and extraction, all diminish naturalness and solitude.
- Recreation developments and management may diminish naturalness, solitude and unconfined recreation when not managing for Back County settings and primitive recreation types.
- Restrictions implemented for the protection of biological and cultural resource may limit primitive unconfined recreation, specifically within ACECs.

4.5.1 Impact of Alternative A (No Action)

No management for lands with wilderness characteristics is identified. Of the 16,190 acres of public lands identified as possessing wilderness characteristics, none would receive protection from development, surface disturbing activity or other actions that would lessen the presence of naturalness or eliminate the experiences of solitude. All presence of wilderness characteristic could potentially be diminished at all locations. It is, however, anticipated that factors, such as, proximity to existing wilderness, may infer some level of protection on some areas (3,470 acres).

4.5.2 Impacts Common to All Action Alternatives

The management of lands with wilderness characteristics changes across the action alternatives, as such, there are no impacts considered common to all action alternatives.

4.5.3 Impact of Alternative B

Of the lands identified with wilderness characteristics 21% (3,470 acres) would receive prescriptive management to protect those characteristics present. These would include closure to all mineral development, classification as ROW avoidance areas, designation as OHV closed areas, identification as VRM Class II and limitations on the types of development allowed. As a result of this management no impact would be expected in these areas.

Approximately 3,870 acres (24% of lands identified with wilderness characteristics), not managed for wilderness characteristics, would be managed through either the Cyrus Canyon ACEC or the San Joaquin River Gorge SRMA – Pa San RMZ. The ACEC indirectly protects the naturalness of the area; through measures to preserve biological resources, and affords the wilderness characteristics present protection from mineral development. Primitive unconfined recreation would be diminished through restrictions on opportunities and management actions needed to achieve the objectives of the ACEC. The Pa San RMZ's targeted activities (hiking, hunting etc.) and prescribed management (including, VRM Class I) closely align with the protection of wilderness characteristics and the continued provision of opportunities for solitude and primitive unconfined recreation. As such, the need for additional protective management on top of these other designations is superfluous and may undesirably restrict the ability to manage for the ACEC's relevant values and the RMZ's desired recreation outcomes.

The remaining 55% (8,910 acres) of lands identified as having wilderness characteristics would not be managed to protect these characteristics and, therefore, potentially be at risk of their loss. This area is principally located immediately adjacent to the Kern River Valley communities south of Highway 178. Some of this area is heavily impacted from urban association (e.g., incompatible recreation use (target shooting, OHV use), illegal activity (dumping, clandestine drug labs etc.), and expanding urbanization of the adjacent area; therefore protection of wilderness characteristics would require intensive management. This level of management would be impractical given current or projected funding, and may ultimately be ineffective as the sights and sounds of human activity become ever present within the area.

In addition, if WSAs were released from study status 1,880 acres would be managed for wilderness characteristics, unless congressional release language directs otherwise, as such, the wilderness characteristics of these lands may be protected.

4.5.4 Impact of Alternative C

All of the lands identified as having wilderness characteristics would receive prescriptive management to protect those characteristics present. Wilderness characteristics would be protected through closure to mineral development, classification as ROW exclusion areas, designation as OHV closed areas, identification as VRM Class I and limitations on the types of development allowed to ensure compatibility wilderness characteristics management.

Approximately 8,850 acres (49%) of the areas that would be managed with prescriptive management for the protection of wilderness characteristics could potentially prove problematic due to their proximity

to, and ease of access from, several communities around Lake Isabella. Issues with, incompatible recreation use (OHVs, target shooting etc.), illegal activity and growth of these communities may adversely impact naturalness and solitude. Some impacts could be address through management efforts such as signing, public information, increased patrols, enforcement, and physical barriers; however these in themselves diminish qualities associated with solitude and naturalness. Furthermore issues with urban growth are beyond management ability.

Three areas previously inventoried in the 1970's and found to have wilderness characteristics, albeit determined unmanageable, were re-inventoried and found to no-longer possess these characteristics. Due to public interest these areas in addition to one other (totaling 1,700 acres) would receive prescriptive management to maintain or enhance those characteristics present. This management style would be unlikely to establish wilderness characteristics where none have been determined to exist.

In addition if WSAs were released from study status 21,140 acres would be managed for wilderness characteristics, unless congressional release language directs otherwise, as such, the wilderness characteristics of these lands may be protected.

4.5.5 Impact of Alternative D

Exclusion of cattle from all public lands would potentially enhance wilderness characteristics in areas managed for this resource, however to implement this may require extensive fencing adjacent to public lands and increased enforcement patrols, both of which would diminish naturalness and solitude.

All of the lands identified as having wilderness characteristics would receive prescriptive management to maintain or enhance those characteristics present. Wilderness characteristics would be protected through closure to mineral development, classification as ROW exclusion areas, designation as OHV closed areas, identification as VRM Class I and limitations on the types of development allowed to ensure compatibility wilderness characteristics management.

Approximately 8,850 acres (49%) of the areas with prescriptive management for the protection of wilderness characteristics could potentially prove problematic due to their proximity to, and ease of access from, several communities around Lake Isabella. Issues with, incompatible recreation use (OHVs, target shooting etc.), illegal activity and growth of these communities may adversely impact naturalness and solitude. Some impacts could be address through management efforts such as signing, public information, increased patrols, enforcement, and physical barriers; however these in themselves diminish qualities associated with solitude and naturalness. Furthermore issues with urban growth are beyond management ability.

Three areas previously inventoried in the 1970's and found to have wilderness characteristics, albeit determined unmanageable, were re-inventoried and found to no-longer possess these characteristics. Due to public interest these areas in addition to one other (totaling 1,700 acres) would receive prescriptive management to maintain or enhance those characteristics present. This management style would be unlikely to establish wilderness characteristics where none have been determined to exist.

In addition if WSAs were released from study status 21,140 acres would be managed for wilderness characteristics, unless congressional release language directs otherwise, as such, the wilderness characteristics of these lands may be protected.

4.5.6 Impact of Alternative E

None of the 16,190 acres of lands identified as having wilderness characteristics would be managed for the protection of this resource. Approximately 5,840 acres (36%) of these areas, however, would be less likely to have adverse impacts on wilderness characteristics due to the protective measures afforded other resources that indirectly protect wilderness characteristics.

The 3,470 acres occurring around existing wilderness areas would maintain the protection inferred to it by its location. In addition this area would be managed as the Chimney Peak SRMA, with an undeveloped market strategy, and desired recreational setting and targeted activities that promote solitude and primitive unconfined recreation. The desired Primitive and Back Country settings in the various RMZs would not change the current environment; as such the existing naturalness would be maintained.

The 2,370 acres occurring within the San Joaquin River Gorge as the Pa San RMZ with primitive recreation types as its targeted activities and prescribed management (including VRM Class I) closely align with the protection of wilderness characteristics. It is anticipated these would continue to preserve the wilderness characteristics of the area in lieu of prescriptive management specifically for wilderness characteristics.

The remaining 10,360 acres (64%) of lands identified as having wilderness characteristics would potentially be at risk to loss these characteristics as management for other resources and resource uses would take precedence. It is anticipated over the life of the plan these areas would cease to present wilderness characteristics due to their location directly adjacent to urban development. It is foreseeable that any management would not be sufficient to avert this loss.

4.6 Paleontological Resources

Paleontological resources are generally associated with known geological formations that occur throughout the Decision Area. In locations where these fossil bearing formations outcrop at the ground surface, paleontological resources are often found.

The fossils themselves and the formation they are derived from provide the data necessary for paleontological analysis. Paleontological specimens that have been arbitrarily removed from their context are much less useful to scientific study then specimens carefully collected and recorded. This means that the protection of these resources in situ until appropriate collection and management can occur is vital to the preservation of the information they contain.

METHODS OF ANALYSIS

The analysis focuses on the Potential Fossil Yield Classification (PFYC) 4 ~~*paleontological localities (19,350 acres) in the Decision Area: Chico Martinez-Zemorra Creek; Kettleman Hills North Dome; Maricopa Brea Pits; Sand Canyon-Cache Creek (Horse Canyon); Shark Tooth Hill; and Tierra Redonda Mountain*~~ *and 5 geological formations located within the Decision Area which total (27,703 acres)*.

Direct impacts to paleontological resources result from surface disturbance that physically damages, destroys, or removes paleontological deposits *which may contain significant fossil remains. This can occur inadvertently as a result of impacts due to the use of travel routes through sensitive formations or localities. Other direct impacts include the unauthorized collection of significant paleontological*

specimens through excavation or unregulated casual collection of mineral specimens in areas where these minerals co-occur with significant fossil remains. Management actions that increase the accessibility of areas with paleontological resources can also indirectly affect these resources by increasing opportunity for direct impacts. Indirect impacts may also result from actions that change the potential for erosion or other natural processes.

Availability of areas ~~*with*~~ *containing formations with a high sensitivity for significant* paleontological resources to activities including ~~*inappropriate*~~ casual collection and *unauthorized* surface disturbance is used as an indicator for the potential for direct impacts. The accessibility as a result of area and route designations and proximity to known resources is used to indicate ~~*possible*~~ *the potential for* indirect impacts.

Analysis is limited by the incomplete inventory of paleontological localities within the Decision Area including the variance in PFYC that may occur within a single formation. *PFYC classifications for particular formations are also subject to revision based upon the best available scientific information. A complete survey of the Decision Area has not been conducted and is not feasible; it is still possible to make informed decisions regarding impacts to paleontological resources in spite of a lack of complete information based upon an understanding of impacts that are generally known to affect paleontological resources.*

Due to the dispersed nature and unknown location of paleontological remains (i.e., focus on sensitive formations rather than specific localities), along with the intent to recover for preparation and museum curation of any discovered, route designations are not specifically analyzed. Project level paleontological resource compliance will be required for all actions associated with the maintenance and construction of routes within the Decision Area.

Proposed management ~~*the following resources, resource uses, or programs*~~ is *not* anticipated to have an effect on Paleontological Resources~~*: Comprehensive Trail and Travel Management, Lands and Realty, Minerals, and Recreation. Those resources not listed are deemed to have negligible effects and therefore, are not analyzed further*~~.

ASSUMPTIONS

The following assumptions regarding the resource base and management practices were considered in the analysis:

- Any proposed project or use on public lands would be assessed for potential impacts to paleontological resources in accordance with the Paleontological Resources Preservation Act of 2009 (Sections 6301-6312 of the Omnibus Public Lands Act of 2009, 16 USC 470aaa), *and other authorities which address the protection of paleontological resources including NEPA and FLPMA*. This would result in protection of paleontological resources on public lands.
- All ground surface disturbing actions within areas identified as PFYC 4 or 5 would trigger ~~*inventory and data recovery of paleontological resources*~~ *project specific survey for the potential occurrence of significant paleontological specimens, and the collection, preparation and museum curation of any resulting fossil remains*. ~~*In some cases*~~ *This may include* monitoring of subsurface excavation ~~*may be required*~~ if it is determined that significant fossil remains may be present below the ground surface.

- Management actions that restrict *inadvertent and unauthorized* surface disturbance and ~~*incompatible activities*~~ either within special designations for the protection of paleontological resources or those designated for protection of other resources reduce the potential for direct impacts.
- Paleontological resources are directly impacted where they occur at or near the surface.
- ~~*Excavation*~~ *Paleontological mitigation projects* associated with ~~*other*~~ land use and development (*fluid and solid* mineral ~~*development*~~ *extraction*, route construction, etc.) can reveal previously undiscovered resources, ~~*and potentially allow research*~~ *contributing to research and* interpretive uses
- The public has a high level of interest in paleontological resources. Information regarding paleontological resources within the Planning Area is widely available through existing geological mapping, and other publications. Knowledge of these locations can lead to ~~*incompatible or excessive use*~~ unauthorized collection. *Federal regulations require that paleontological locality location information be kept confidential.*
- Ease of access to localities *or sensitive formations* can contribute to increased ~~*damage*~~ *impacts* due to unauthorized ~~*use*~~ specimen collection or vandalism. Ease of access is enhanced by new development.
- *Significant paleontological remains discovered along designated routes would address at the project level, including interim protection and subsequent removal, preparation and museum curation.*

4.6.1 Impact of Alternative A (No Action)

~~*The PFYC 4 paleontological localities at Maricopa Brea Pits and Shark Tooth Hill and Chico Martinez and Kettleman Hills ACECs (totaling 18,320 acres) would not receive protection from restrictions on surface disturbing activities beyond those afforded through regulation and policy (i.e., inventory and data recovery).*~~

~~*Special management for the Horse Canyon and Tierra Redonda ACECs affords the PFYC 4 paleontological localities (totaling 1,050 acres) protection from surface disturbing activities related to fluid mineral development through identification as NSO. Furthermore Tierra Redonda ACEC is proposed for withdrawal from the mining laws*~~

The significant fossil remains within the PFYC 5 Bopesta formation in the Horse Canyon ACEC will not be protected from inadvertent or purposeful unauthorized collection during the unregulated casual collection of mineral specimens in this area.

~~*All PFYC 4 paleontological localities occur within the OHV Limited Area restricting motorized travel to designated routes and therefore minimizing surface disturbance to these areas. Within the Limited Area, motorized and mechanized travel must occur on routes designated for these purposes. A total of 67 miles of routes that pass through known paleontological localities would be available for motorized use (designated as Motorized or Authorized) and provide easy access to these resources.*~~

4.6.2 Impacts Common to All Action Alternatives

~~*The PFYC 4 paleontological localities at Maricopa Brea Pits and Shark Tooth Hill (totaling 2,710 acres) would not receive protection from restrictions on surface disturbing activities beyond those afforded through regulation and policy (i.e., inventory and data recovery).*~~

~~*All ACECs are identified as right-of-way avoidance areas and exclusion areas for utility scale renewable energy rights-of-ways, therefore the potential for surface disturbance would be reduced. Conflicting with these allocations, the continued designation of right-of-way utility corridors through some of these avoidance areas (e.g., Kettleman Hills) would preferentially locate facilities in these areas and would increase the potential for disturbance of sensitive resources.*~~

Paleontological resources can be directly impacted by ground surface disturbing construction or development activities, by the unauthorized collection of fossils and indirectly by natural or human caused erosion processes which result in the weathering or degradation of the fossil remains or the geological formations which may contain them. The PFYC 4 and 5 geological formations listed in Chapter 3, have a high potential for the occurrence of significant paleontological resources. Within these areas, impacts due to development will be mitigated through appropriate measures specified during the project or land use authorization process which requires formal assessment of the project for potential impacts, project monitoring if necessary and the collection and curation of significant fossil remains should they be discovered during the course of project construction. Impacts due to unauthorized collecting of significant paleontological resources will be managed according to individual circumstances which may include the excavation and collection of threatened fossil remains for proper curation, causal collecting restrictions, access route closure, fencing, law enforcement patrol or other protective measures. Indirect impacts to paleontological resources due to erosion can be prevented through soil resource management actions.

Identification of minimization and decision area specific criteria in the designation and redesignation of routes would consider the impact of routes on known *paleontological* localities *which may contain significant fossil specimens*. Routes would be redesignated and/or relocated or paleontological specimens may be recorded and recovered to avoid impacts *to these localities*.

~~4.6.3 Impact of Alternative B~~

~~*The PFYC 4 paleontological localities at Chico Martinez-Zemorra Creek (1,950 acres) would not receive protection from restrictions on surface disturbing activities beyond those afforded through regulation and policy (i.e., inventory and data recovery).*~~

~~*Special management for the Horse Canyon and Tierra Redonda ACECs affords the PFYC 4 significant paleontological localities (totaling 1,050 acres) specimens within the PFYC Class 5 Bopesta formation located there(1,050 acres) protection from surface disturbing activities related to mineral development through identification as NSO, closure to mineral material disposal, and withdrawal from the mining laws. In addition, the through the restriction on casual collection of all fossil and mineral specimens within the Horse Canyon ACEC would further protect these resources.*~~

~~*Special management for the Kettleman Hills ACEC affords the PFYC 4 paleontological localities (13,660 acres) protection from surface disturbing activities related to mineral material disposal, except for those from administrative uses.*~~

All PFYC 4 paleontological localities occur within the OHV Limited Area restricting motorized travel to designated routes and therefore minimizing surface disturbance to these areas. Within the Limited Area, motorized and mechanized travel must occur on routes designated for these purposes. A total of 65 miles of routes (Table 4.6-1) that pass through known paleontological localities would be available for motorized use (designated as Motorized or Authorized) and provide easy access to these resources, however only four miles of these routes would be available to the public without authorization. Two routes designated Closed would prevent access to some parts of these localities.

Table 4.6-1
Miles of Motorized and Authorized Routes through Known Paleontological Localities

Paleontological Locality	*Motorized*	*Authorized*	*Closed*
Chico Martinez-Zemorra Creeks	*1.4*	*0*	*0*
Kettleman Hills	*2*	*55*	*0*
Maricopa Brea Pits	*0*	*0.3*	*0*
Sand Canyon-Cache Creek	*0.1*	*0*	*0.1*
Shark Tooth Hill	*0*	*6*	*3*
Tierra Redonda Mountain	*0*	*0.1*	*0*

4.6.4 Impact of Alternative C

Special management for the Chico Martinez and Kettleman Hills ACECs affords the PFYC 4 paleontological localities (totaling 15,610 acres) protection from surface disturbing activities related to mineral material disposal, except for those from administrative uses.

Special management for the Horse Canyon and Tierra Redonda ACECs affords the PFYC 4 significant paleontological localities (totaling 1,050 acres) specimens within the PFYC Class 5 Bopesta formation located there(1,050 acres) protection from surface disturbing activities related to mineral development through identification as NSO, closure to mineral material disposal, and withdrawal from the mining laws. In addition, through the restriction on casual collection of all fossil and mineral specimens within the Horse Canyon ACEC would further protect these resources.

Tierra Redonda ACEC is designated as an OHV Closed Area therefore eliminating surface disturbance resulting from motorized use and reducing the potential for damage and destruction of paleontological resources. This closure also reduces the ease of access to these paleontological localities.

The remainder of the PFYC 4 paleontological localities occurs within the OHV Limited Area restricting motorized travel to designated routes and therefore minimizing surface disturbance to these areas. Within the Limited Area, motorized and mechanized travel must occur on routes designated for these purposes. A total of 65 miles of routes (Table 4.6-1, above) that pass through known paleontological localities would be available for motorized use (designated as Motorized or Authorized) and provide easy access to these resources. Two routes designated Closed would prevent access to some parts of these localities.

4.6.5 Impact of Alternative D

Special management for the Chico Martinez and Kettleman Hills ACECs affords the PFYC 4 paleontological localities (totaling 15,610 acres) protection from surface disturbing activities related to mineral material disposal, except for those from administrative uses.

Special management for the Horse Canyon and Tierra Redonda ACECs affords the PFYC 4 significant paleontological localities (totaling 1,050 acres) specimens within the PFYC Class 5 Bopesta formation located there(1,050 acres) protection from surface disturbing activities related to mineral development through identification as NSO, closure to mineral material disposal, and withdrawal from the mining laws. In addition, through the restriction on casual collection of all fossil and mineral specimens within the Horse Canyon ACEC would further protect these resources.

Tierra Redonda ACEC is designated as an OHV Closed Area therefore eliminating surface disturbance resulting from motorized use and reducing the potential for damage and destruction of paleontological resources. This closure also reduces the ease of access to these paleontological localities.

The remainder of the PFYC 4 paleontological localities occurs within the OHV Limited Area restricting motorized travel to designated routes and therefore minimizing surface disturbance to these areas. Within the Limited Area, motorized and mechanized travel must occur on routes designated for these purposes. A total of 65 miles of routes (Table 4.6-1, above) that pass through known paleontological localities would be available for motorized use (designated as Motorized or Authorized) and provide easy access to these resources. Two routes designated Closed would prevent access to some parts of these localities.

4.6.6 Impact of Alternative E

The significant fossil remains associated with the PFYC 4 5 paleontological localities at Chico Martinez-Zemorra Creek and Sand Canyon-Cache Creek (2,840 acres) formations located within the Horse Canyon ACEC would not receive protection from restrictions on surface disturbing activities beyond those afforded through regulation and policy (i.e., inventory and data recovery). Furthermore the continued ability to locate mining claims and engage in unregulated casual use collection in the Sand Canyon-Cache Creek locality would over the long term result in degradation to and unauthorized removal of paleontological specimens.

Specific management for Tierra Redonda area of ecological importance affords the PFYC 4 paleontological localities (160 acres) protection from surface disturbing activities related to mineral development through identification as NSO, closure to mineral material disposal, and withdrawal from the mining laws.

Special management for the Kettleman Hills ACEC affords the PFYC 4 paleontological localities (13,660 acres) protection from surface disturbing activities related to mineral material disposal, except for those from administrative uses.

All PFYC 4 paleontological localities occur within the OHV Limited Area restricting motorized travel to designated routes and therefore minimizing surface disturbance to these areas. Within the Limited Area, motorized and mechanized travel must occur on routes designated for these purposes. A total of 62 miles of routes (Table 4.6-2) that pass through known paleontological localities would be available for motorized use (designated as Motorized or Authorized) and provide easy access to these resources.

~~*Table 4.6-2*~~

~~*Miles of Motorized and Authorized Routes through Known Palcontological Localities*~~

~~*Locality*~~	~~*Motorized*~~	~~*Authorized*~~	~~*Closed*~~
~~*Chico Martinez-Zemorra Creeks*~~	~~*1.4*~~	~~*0*~~	~~*0*~~
~~*Kettleman Hills*~~	~~*57*~~	~~*0*~~	~~*0*~~
~~*Maricopa Brea Pits*~~	~~*0.3*~~	~~*0*~~	~~*0*~~
~~*Sand Canyon-Cache Creek*~~	~~*0.2*~~	~~*0*~~	~~*0*~~
~~*Shark Tooth Hill*~~	~~*3*~~	~~*6*~~	~~*0*~~
~~*Tierra Redonda Mountain*~~	~~*0.1*~~	~~*0*~~	~~*0*~~

4.7 Soil Resources

Soil is principally affected by activities that denude areas of vegetation and agitate soil composition and structure. This includes development of oil and gas facilities (e.g., well pads, pipelines, etc.), creation and use of trails and roads, cross-country OHV activities, livestock grazing, construction associated with renewable energy projects and within other ROWs. Together these activities are termed "surface disturbance" and ultimately result in the increase potential for accelerated erosion and transport by exposing soil particles to the erosional forces of water and wind. In addition, surface disturbance also has consequences for soil productivity through the removal of organic matter and disruption of natural soil horizons.

METHODS OF ANALYSIS

The analysis focuses on soils in the public lands portion of the Decision Area (404,080 acres).

Soils are directly impacted by increased potential for erosion that results from surface disturbance. Therefore management actions that allow for surface disturbance, such as, removal vegetative cover from oil well pad construction, or compaction of the surface soils from intensively used natural surface trails, can be considered to result in direct impacts. These impacts can be short-term, prior to revegetation or application of other measures to minimize potential for erosion, or long term where bare-ground is left for extended periods. Indirectly soils are impacted by actions that result in changes to soils physical and biological properties (e.g., infiltration capacity, disturbance of soil horizons and amount of organic matter). These indirect impacts largely occur as a result of the direct impacts and can be attributed to similar activities. Ultimately the combined result of changes to soils physical and biological properties and erosion can be a loss of soil productivity and damage to those resources and resource uses dependent upon it.

For analytical purposes the number of acres or miles where surface disturbance would be reduced by management decisions is used as a general indicator of potential impacts to soil resources. The increase or reduction in potential for accelerated soil erosion, and subsequent loss or maintenance of soil productivity is qualitatively used to further describe these impacts.

The lack of a detailed soil inventory that includes the location of biological crusts and occurrence of soils hosting high levels of *Coccidioides immitis*, limits the ability to analyze the impacts on these soil types at the scale of the RMP but would be included in analysis of site-specific projects.

Proposed management of the following resources, resource uses, or programs is anticipated to have an effect on Soil Resources: Comprehensive Trail and Travel Management and Recreation and Visitor

Services. Those resources not listed are deemed to have negligible effects and therefore, are not analyzed further.

ASSUMPTIONS

The following assumptions are used in the impact analysis:

- Actions that protect or improve habitats and aid in the achievement or exceedance of Standards for Rangeland Health ensures vegetation health and vigor, and adequate cover are maintained, which minimizes erosion rates in most areas, resulting in long term beneficial impacts to soil resources.
- Fugitive dust is soil particles that are dispersed into the air from surface disturbing activities (either agitation or denudation) and subsequent wind erosion.
- Limitations on surface disturbing activities such as closure to mineral development, rights-of-way exclusion, OHV Closed areas, seasonal restriction or elimination of livestock grazing all reduce impacts on soils.
- Bare soil (without vegetation or other surface cover) with a surface layer that has been altered from its natural condition is more susceptible to accelerated wind and water erosion than undisturbed soil.
- Soil compaction is considered a localized impact common to, for example, livestock trails and congregation areas, particularly during times when soils are wet, and high-traffic areas such as roads, walking paths, hiking trails, or OHV trails.
- Poorly designed and engineered routes along with inappropriate use (e.g., use when wet that causes rutting) continue to contribute to accelerated erosion from runoff.
- Routes cease to cause impacts only if they are restored and revegetated; if accomplished naturally, this may take upwards of five years.
- Use of natural surface (unimproved) routes continues to disturb surface layers of soil allowing for accelerated wind and water erosion.
- Approximately 18,000 acres of surface disturbance would result from minerals and energy development over the life of the plan (Appendix M).
- *Actions that result in the disturbance of one acre of more soil will be managed in accordance with the applicable Regional Water Quality Control Board NPDES permit process requirements addressing stormwater discharges.*

4.7.1 Impact of Alternative A (No Action)

Potential for surface disturbance, and therefore increased rates of erosion and loss of productivity, would be minimized through management actions that limit mineral development (NSO, closure, or withdrawal), cease OHV activity (OHV Closed areas), through designation and identification as ACECs and SMAs. These limitations result in 155,760 acres (39% of the analysis area) where soils receive some protection from surface disturbing activities.

The method of route designation did not consider or minimize the impact of routes on resources (including soils). No routes would be designated closed. Routes may be closed through on the ground measures resulting from activity plans and site-specific NEPA and be either actively or passively restored and revegetated; resulting in a reduction in potential for soil erosion and improvement to soil productivity. Impacts would continue to occur from the existing travel network until routes were individually closed.

The allocation of 61,200 acres (15% of the analysis area) as unavailable for livestock grazing would eliminate impacts on soils from removal of vegetative cover and compaction of highly used areas (trails, troughs, gathering areas, etc.) by livestock. In areas available for livestock grazing, the application of Central California Guidelines for Livestock Grazing as necessary to attain the Standards for Rangeland Health would maintain soil productivity at acceptable levels.

4.7.2 Impacts Common to All Action Alternatives

Implementing BMPs and the minimization of disturbance of special soils (e.g., serpentine soils, soils highly susceptible to erosion, and Prime or other Important Farmlands), would result in BLM actions and authorizations receiving stipulations, terms, and conditions addressing the reduction of impacts to soil resources (Appendix L). These may include measures to reduce fugitive dust, minimizing areas of disturbance, treatment of bare soils, revegetation, preservation of topsoil, installation of drainage structures, and prohibition of projects on unsuitable slopes. All of which would reduce the potential for accelerated soil erosion and subsequent loss of soil productivity.

Wildland fire can affect soil attributes, such as physical, biological, and chemical characteristics, and denude areas of vegetation leading to accelerated soil erosion. Suppression activities may also impact soils at a local scale through the compaction and disturbance of soils in fire lines and staging areas. Implementation of MIST tactics and ESR plans would reduce impacts from wildland fire and suppression activities. Prescribed fires may have similar impacts, although are generally managed to be lower intensity and for the benefit of resources.

Non-fire fuel treatment (especially mechanical treatments) would remove vegetation and expose soils to erosion in the short term. However, masticated chips from non-fire fuel treatment would provide ground cover, lessening the potential for accelerated erosion. Long-term impacts could occur during fuel break construction and non-fire fuel treatments, due to soil compaction from heavy machinery and vehicles.

Although generally not permitted outside an OHV Open Area, cross country travel by vehicles is authorized in conjunction with certain activities including geophysical studies, non-fire fuel treatments, or access to specific projects or developments (e.g. fence installation). This type of travel creates surface disturbance, compacts soils, and increases the potential for accelerated erosion; these impacts would be analyzed through site-specific NEPA associated with the action or authorization.

Dispersed camping may impact soils in a similar fashion to other surface disturbing activities. Restricting parking for dispersed camping to less than one vehicle width from the existing route would somewhat limit the extent of surface disturbance; however, repeated use of dispersed camping sites may expand disturbed areas as the perceived route widens. It is expected soils within the Keyesville and Temblor Range SRMAs would be impacted the most since these areas receive the highest concentrations of dispersed use.

Recreational mining and prospecting (casual use) disturbs localized areas of soil through physical disturbance of soil horizons. Areas with concentrated casual use, such as Keyesville, especially where this use is supported or promoted, would result in accelerated rates of erosion and loss of soil productivity.

4.7.3 Impact of Alternative B

Potential for surface disturbance, and therefore increased rates of erosion and loss of soil productivity, would be minimized through management actions that limit mineral development (NSO, closure, or *continued* withdrawal), cease OHV activity (OHV Closed areas), and limit right-of-way development (exclusion areas) through designation and identification as ACECs, lands managed for wilderness characteristics, and areas of ecological importance. These limitations result in 166,140 acres where soils receive some protection from surface disturbing activities. This is an increase of 2% from the existing conditions where soil productivity would be maintained.

The designation of ~~*308*~~ *293* miles of routes as closed to travel would allow for their restoration and revegetation; subsequently reducing the potential for soil erosion and improvement of soil productivity. *Although closure of routes potentially has beneficial impacts on those routes closed, it may alter use patterns resulting in the same miles driven on fewer routes therefore increasing the intensity of impacts the available routes*. Impacts would continue to occur on ~~*1,628*~~ *1,589* miles of routes; of which 23 miles (1%) occur on slopes greater than 50%, or in areas considered to be highly erodible on slopes greater than 30%.

The allocation of ~~*66,210*~~ *66,100* acres as unavailable for livestock grazing, an increase of ~~*1%*~~ *4%* from the existing conditions, would ~~*eliminate*~~ *prevent* impacts on soils from removal of vegetative cover and compaction of highly used areas (trails, troughs, gathering areas, etc.) by livestock. In areas available for livestock grazing, the application of Central California Guidelines for Livestock Grazing as necessary to attain the Standards for Rangeland Health would maintain soil productivity at acceptable levels.

4.7.4 Impact of Alternative C

Potential for surface disturbance, and therefore increased rates of erosion and loss of soil productivity, would be minimized through management actions that limit mineral development (NSO, closure, or withdrawal), cease OHV activity (OHV Closed areas), limit right-of-way development (exclusion areas) through designation and identification as ACECs, lands with wilderness characteristics, and areas of ecological importance. These limitations result in 204,450 acres where soils receive some protection from surface disturbing activities. This is an increase of 12% from the existing conditions where soil productivity would be maintained.

The designation of 580 miles of routes as closed to travel would allow for their restoration and revegetation, subsequently reducing the potential for soil erosion and improvement of soil productivity. Impacts would continue to occur on 1,356 miles of routes; of which 22 miles (1%) occur on slopes greater than 50%, or in areas considered to be highly erodible on slopes greater than 30%.

The allocation of 72,700 acres as unavailable for livestock grazing, an increase of 3% from the existing conditions, would eliminate impacts on soils from removal of vegetative cover and compaction of highly used areas (trails, troughs, gathering areas, etc.) by livestock. In areas available for livestock grazing, the application of Central California Guidelines for Livestock Grazing as necessary to attain the Standards for Rangeland Health would maintain soil productivity at acceptable levels.

4.7.5 Impact of Alternative D

Potential for surface disturbance, and therefore increased rates of erosion and loss of soil productivity, would be minimized through management actions that limit mineral development (NSO, closure, or withdrawal), cease OHV activity (OHV Closed areas), limit right-of-way development (exclusion areas) through designation and identification as ACECs, lands with wilderness characteristics, and areas of ecological importance. These limitations result in 204,450 acres where soils receive some protection from surface disturbing activities. This is an increase of 12% from the existing conditions where soil productivity would be maintained.

The designation of 580 miles of routes as closed to travel would allow for their restoration and revegetation, subsequently reducing the potential for soil erosion and improvement of soil productivity. Impacts would continue to occur on 1,356 miles of routes; of which 22 miles (1%) occur on slopes greater than 50%, or in areas considered to be highly erodible on slopes greater than 30%.

The allocation of 402,800 acres as unavailable for livestock grazing, an increase of 85% from the existing conditions, would eliminate impacts on soils from removal of vegetative cover and compaction of highly used areas (trails, troughs, gathering areas, etc.) by livestock.

4.7.6 Impact of Alternative E

Potential for surface disturbance, and therefore increased rates of erosion and loss of soil productivity, would be minimized through management actions that limit mineral development (NSO, closure, or withdrawal), cease OHV activity (OHV Closed areas), and limit right-of-way development (exclusion areas) through designation and identification as ACECs and areas of ecological importance. These limitations result in 152,790 acres where soils receive some protection from surface disturbing activities. This is a decrease of 1% from the existing conditions where soil productivity would be maintained.

Designation of 70 acres as an OHV Open Area would allow cross country travel by all public lands users, principally expected to be recreational use. This could potentially denude, compact, or otherwise alter soil composition on all 70 acres resulting in increased potential for accelerated erosion and loss of soil productivity. Of specific concern would be erosion caused by water runoff due to the steepness of the slopes within this area.

The designation of 65 miles of routes as closed to travel would allow for their restoration and revegetation; subsequently reducing the potential for soil erosion and improvement of soil productivity. Impacts would continue to occur on 1,871 miles of routes; of which 49 miles (3%) occur on slopes greater than 50% or in areas considered to be highly erodible on slopes greater than 30%.

The allocation of 49,100 acres as unavailable for livestock grazing, a decrease of 3% from the existing conditions, would eliminate impacts on soils from removal of vegetative cover and compaction of highly used areas (trails, troughs, gathering areas, etc.) by livestock. In areas available for livestock grazing, the application of the Central California Guidelines for Livestock Grazing as necessary to attain the Standards for Rangeland Health would maintain soil productivity at acceptable levels.

4.8 Visual Resources

Visual resources refer to the visible features and objects, natural, man-made, moving and stationary, which comprise the character of the landscape observed from a given location or Key Observation Point (KOP). Any action that provides or allows for contrast with the existing elements of the landscape has the potential to impact the visual resource. Management of visual resource focuses on establishing the allowable level of contrast any action may have with the existing environment based on a number of factors such as resource concern, number and sensitivity of views and the desired goals and objectives for an area (e.g., to achieve a physical recreation setting). Management is achieved through the prescription of Visual Resource Management (VRM) Class objectives to all regions within the Decision Area which establish a measurable standard for the amount of change allowed to visual resources in that specific area. The following are statements of the allowed impacts under each VRM Class (these are not the VRM objectives verbatim, but rather a restatement of how objectives for each class will impact the visual environment):

> **Class I**: This class will preserve the existing character of the landscape. Natural ecological changes and limited management activity will be allowed. The level of change to the characteristic landscape will be very low and will not attract the attention of the observer in the area.
>
> **Class II**: This class will retain the existing character of the landscape. The level of change to the characteristic landscape will be low. Management activities may be seen, but will not attract the attention of the casual observer. Changes will repeat the basic elements found in the predominant natural features of the characteristic landscape.
>
> **Class III**: This class will partially retain the existing character of the landscape. The level of change to the characteristic landscape will be moderate. Management activities may attract attention but will not dominate the view of the casual observer. Changes will repeat the basic elements found in the predominant natural features of the characteristic landscape.
>
> **Class IV**: This class provides for management activities that require major modifications to the existing character of the landscape. The level of change to the characteristic landscape will be high. Management activities may dominate the view and be the major focus of viewer attention. Every attempt will be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

Table 4.8-1, "Visual Resources Inventory and Management Classes by Alternative" provides a comparative analysis between the acres of inventory class versus the acres of VRM Classes. To facilitate impact analysis, VRM Classes represent the allowable levels of impacts described above and the inventory classes represent the general existing condition of the landscape, or baseline.

Table 4.8-1
Visual Resources Inventory and Management Classes by Alternative

Alternatives (Acres)		Visual Resource Inventory Class Designations (acres)								
		VRI Class I		VRI Class II		VRI Class III		VRI Class IV		TOTAL
		148,630	%	91,900	%	54,340	%	854,890	%	1,149,760
Alternative A										
VRM I	120,820	120,820	81%	-	0%	-	0%	-	0%	**120,820**
VRM II		-	0%	-	0%	-	0%	-	0%	**0**
VRM III	4,760	-	0%	4,760	5%	-	0%	-	0%	**4,760**
VRM IV	3,820	-	0%	-	0%	-	0%	3,820	0%	**3,820**
Total	**129,400**	**120,820**	**81%**	**4,760**	**5%**	**0**	**0%**	**3,820**	**0%**	**129,400**
Alternative B[64]										
VRM I	175,340	148,630	82%	18,540	20%	890	2%	3,410	0%	**175,340**
VRM II	208,650	26,740	18%	60,050	65%	20,210	37%	100,780	12%	**208,650**
VRM III	542,220	-	0%	12,110	13%	32,950	61%	480,800	56%	**542,220**
VRM IV	238,840	-	0%	1,200	1%	290	1%	269,900	32%	**238,840**
Total	**1,165,050**	**148,630**	**100%**	**91,900**	**100%**	**54,340**	**100%**	**854,890**	**100%**	**1,165,050**
Alternative C / D										
VRM I	163,110	125,030	84%	19,160	21%	6,390	12%	12,530	1%	**163,110**
VRM II	250,060	23,600	16%	70,230	76%	30,910	57%	125,320	15%	**250,060**
VRM III	475,560	-	0%	1,310	1%	16,930	31%	457,320	53%	**475,560**
VRM IV	261,030	-	0%	1,200	1%	110	0%	259,720	30%	**261,030**
Total	**1,149,760**	**148,630**	**100%**	**91,900**	**100%**	**54,340**	**100%**	**854,890**	**100%**	**1,149,760**
Alternative E										
VRM I	143,300	120,460	81%	18,540	20%	890	2%	3,410	0%	**143,300**
VRM II	36,740	1,430	1%	24,960	27%	-	0%	10,350	1%	**36,740**
VRM III	361,620	26,740	18%	47,200	51%	45,840	84%	241,840	28%	**361,620**
VRM IV	608,100	-	0%	1,200	1%	7,610	14%	599,290	70%	**608,100**
Total	**1,149,760**	**148,630**	**100%**	**91,900**	**100%**	**54,340**	**100%**	**854,890**	**100%**	**1,149,760**

METHODS OF ANALYSIS

The area of analysis includes the entire Decision Area, both public lands surface and split-estate with federal minerals where BLM authorizations have capacity temporarily or permanently affect the visual landscape (e.g., authorization to drill a well that would result in construction of a well pad and associated facilities).

Impacts to visual resources are those that contrast with the existing environment when viewed by the casual observer from any key observation point. Contrast can be with form, line, texture or color e.g., construction of a route denudes an area of vegetation (contrasting with texture and color) and introduces strong parallel lines (add lines to the landscape not previously found). Direct impacts are

[64] Acreages for Alternative B (Proposed Plan) reflect 2012 data and include the correction of mapping errors and new acquisitions occurring since publication of the Draft RMP/Draft EIS.

considered to be those that reduce the potential for contrast with the existing visual landscape through limitations on surface disturbing and development activities (e.g., closure of an area to fluid mineral development). Indirect impacts are those resulting from actions which support resources that contribute to the visual landscape (e.g., protection of vegetative communities infers protection several aspects of line, color and texture).

To evaluate the impact of the proposed alternatives on visual resources the quantitative measure of the acres of Visual Inventory Classes that are prescribed to specific Visual Resource Management Class objectives is used to disclose the anticipated loss or protection of visual quality in the existing environment.

Proposed management of the following resources, resource uses, or programs is anticipated to have an effect on Visual Resources: Comprehensive Trail and Travel Management, Lands and Realty, Minerals Management, Recreation and Visitor Services, National Trails, and Lands with Wilderness Characteristics. Those resources not listed are deemed to have negligible effects and therefore, are not analyzed further.

ASSUMPTIONS

The following assumptions are used in the impact analysis:

- The terms “higher classes” and “lower classes” refer VRM Class Objective in that higher VRM classes are Class I and II and lower VRM classes are Class III and IV.
- A decrease in Scenic Quality (from the conditions contributing to the inventory class) in Classes I or II within a given alternative marks an adverse impact to visual resources. Whereas, an increase in Scenic Quality within a given alternative marks a beneficial impact to visual resources.
- Areas inventoried at higher classes and managed under lower VRM Classes objectives would, in the long term, assume the characteristics of the lower VRM Class, because visual intrusions would be allowed to degrade visual/scenic quality in those areas.
- Due to a combination of local environmental conditions (e.g., climate, vegetation types, soils, etc.), visual qualities of the landscape would not be improved during the life of the plan without intensive rehabilitation. Management focus, therefore, is on protecting existing higher class visual resources.
- Surface disturbances would adversely impact visual resources. Surface disturbances introduce new visual elements onto the landscape or intensify existing visual elements, altering the line, form, color, and/or texture that characterize the existing landscape. Ergo actions that restrict or minimize surface disturbance (e.g., ROW exclusion area or closure or withdrawal from mineral development) beneficial impact visual resources.
- Existing routes are commonplace on the landscape in most areas and have contributed to the inventoried visual condition. Where routes are closed and allowed to revegetate their contribution to the existing visual condition is diminished; however, the extent of visual intrusion associated with specific routes determines the level of impact closure would have (e.g., closed routes with large hillside cuts would continue to diminish visual quality unless actively rehabilitated).

- Although livestock grazing activities introduce surface disturbance and various rangeland improvements they are common-place on the landscape in all areas. This activity at or near currently levels would not introduce additional contrast to the visual environment.
- Wildland fire and suppression actions have the capacity to impact visual resources within any Class. The impact these activities have is related to the intensity and extent of the fire, which cannot be predicted; suffice it to say high intensity fires and greater suppression activities are capable of altering line, texture and color on a landscape for extended periods of time (long-term).
- Any new surface-disturbing activities would be subject to NEPA analysis, which would include a VRM contrast rating for VRM Class I, II, and III areas. Those activities proposed that would not initially meet VRM objectives for the area would be mitigated to the extent needed to meet the objectives. Those activities proposed that could not be mitigated would not be authorized.

4.8.1 Impact of Alternative A (No Action)

Visual Resource Management Class Objective would only be applied to areas previously managed under the Hollister RMP and those areas receiving VRM management direction through guidance and policy (i.e., Wilderness, National Scenic Trails and Outstanding Natural Areas). As such 86% of the Decision Area would not be assigned a VRM Class Objective. For these unassigned areas it is assumed that BLM policy (Manual 8410) would be followed and interim management classes assigned at a project specific level using inventoried classes as a baseline. This style of management poses the greatest risk from accumulative impacts on visual resources and could potentially result in unwanted and unnecessary degradation of the visual landscape over the life of the plan.

The small amount VRM management applied would preserve the existing character of 81% of the area inventoried as Class I. The portion of the area (5%) inventoried as Class II (San Joaquin River Gorge) would be managed as VRM Class III to partially retain the existing character of the landscape. It is expected that over the life of the plan this area of VRI Class II would be altered and assume the characteristics of a Class III landscape.

4.8.2 Impacts Common to All Action Alternatives

The application of VRM "Best Management Practices" as terms and conditions (stipulations) to all ROW authorizations as appropriate for the prescribed VRM Class in that location, would aid achieving VRM objectives and overall reduce the impact of ROWs on the visual environment.

Restrictions on mineral development are not a direct a result of visual resource management, but of management aimed at achieving other resource objectives (e.g., protection of relevance values of an ACEC or biological resources within an area of ecological concern). The limitations that result, such as no surface use (NSO), closure or *continued* withdrawal indirectly benefit the visual environment through a reduction in the potential sources of visual contrast. In practicality, those areas of highest mineral potential have previously been explored and the resulting levels of development are a major contributing factor to the lower existing visual resource and VRI Class assigned (Classes III and IV) and consequently the designation of these areas to lower VRM Objectives. As such there are limited impacts on these areas.

Prescription of VRM Classes to achieve desired recreation settings in Recreation Management Areas; both SRMAs and ERMAs, would have varying levels of impact depending on the desired conditions and how far removed they are from the existing environment. Generally desired conditions match or prescribe a lower class from existing conditions and therefore little impact is expected to occur. In the case of Wallow Rock and Tahoot RMZs (Keyesville and San Joaquin River Gorge SRMAs respectively) a lower class is desired that would allow for more visual contrast (this results from the desired development of facilities such as, campgrounds, visitors centers etc.). At the Wallow Rock RMZ this is a departure of one visual class from VRI III to VRM IV. At the Tahoot RMZ this is a departure of two visual classes from VRI II to VRM IV. Over the life of the plan these area would be expected to attain the new VRM objective with the subsequent loss of acreage of higher classes of visual resources.

Establishment of a corridor 0.25 miles wide to protect the scenic quality of the Pacific Crest National Scenic Trail has negligible impact on visual resources as the majority of the trail within the Decision Area occurs within designated Wilderness. Visual resources along the seven percent of outside wilderness would benefit from the establishment of the corridor as these would be assigned VRM Class I allowing for no alteration from the existing condition (VRI Class I).

4.8.3 Impact of Alternative B

On the whole over the life of the plan, areas inventoried with visual resource Classes I, II or III would retain those qualities. Of the areas inventoried as Class IV, there would be a general shift to limit major modification of the landscape and reduce impacts on visual resources.

The VRM management applied would preserve the existing visual landscapes through designation as VRM Class I of 20% of area inventoried as Class II and 2% of areas inventoried as Class III; principally in WSAs and lands managed for wilderness characteristics. The majority (65%) of the areas inventoried as Class II would have their visual qualities retained with a potential loss of 14% through designation as a lower VRM class. Of the areas inventoried as Class IV, VRM management would allow for major modification of approximately 32%, with the larger majority (68%) partially or totally retained in current condition; generally in the foothills of the Sierra Nevada Mountains.

Identification of VRM Class I and II as exclusion areas for utility scale renewable energy projects protects the elements of form, line, color and texture from visual intrusion and contrast, created by development of renewable energy sites such as, wind farms and solar fields.

Prescriptive management of lands managed for wilderness characteristics (3,500 acres) would designate these areas as Class II and is protective of visual resources. Other management prescribed to these areas, such as, closures ~~*or withdrawal from*~~ mineral development, Closed OHV area designation and as ROW avoidance areas (exclusion for renewable energy projects) would minimize the sources of visual contrast that could occur.

4.8.4 Impact of Alternative C

On the whole over the life of the plan, areas inventoried with visual resource Classes I and II would retain those qualities. Of the areas inventoried as Class III or IV, there would be a general shift to limit partial retention and major modification of the landscape and reduce impacts on visual resources.

The VRM management applied would preserve the existing visual landscapes through designation as VRM Class I of 21% of area inventoried as Class II in the Kern River Valley area and 12% of areas

inventoried as Class III in the Cuyama Valley area, as a result of prescriptive management for lands managed with wilderness characteristics. The majority (76%) of the areas inventoried as Class II would have their visual qualities retained with a potential loss of 2% through designation as a lower VRM class in RMAs. Of the areas inventoried as Class IV, VRM management would allow for major modification of approximately 30% of the acres and manage the larger majority (68%) as a higher VRM Class including one percent (12,530 acres) as VRM Class I in areas managed for wilderness characteristics.

Identification of VRM Class I and II as exclusion areas for utility scale renewable energy projects protects the elements of form, line, color and texture from visual intrusion and contrast, created by development of renewable energy sites such as, wind farms and solar fields.

Total closure of the Decision Area for development of Solid (non-energy) leasable minerals would eliminate any impact this specific type of mineral development would have on the visual environment beyond those existing facilities.

Prescriptive management of lands managed for wilderness characteristics would designate these areas as VRM Class I, and therefore, is protective of visual resources. In several areas this assigns a higher class than the existing VRI, most notable those areas managed around Cuyama and in the San Joaquin Valley which are inventoried as VRI Class IV. In these areas visual intrusion and contrast with the existing environment would cease, however these areas are not anticipated to achieve the characteristics of a higher class over the life of the plan. Other management prescribed to these areas, such as, closures or withdrawal from mineral development, Closed OHV area designation and as ROW avoidance areas (exclusion for renewable energy projects) would minimize the sources of visual contrast that could occur.

4.8.5 Impact of Alternative D

On the whole over the life of the plan, areas inventoried with visual resource Classes I and II would retain those qualities. Of the areas inventoried as Class III or IV, there would be a general shift to limit partial retention and major modification of the landscape and reduce impacts on visual resources.

The VRM management applied would preserve the existing visual landscapes through designation as VRM Class I of 21% of area inventoried as Class II in the Kern River Valley area and 12% of areas inventoried as Class III in the Cuyama Valley area, as a result of prescriptive management for lands managed with wilderness characteristics. The majority (76%) of the areas inventoried as Class II would have their visual qualities retained with a potential loss of 2% through designation as a lower VRM class in RMAs. Of the areas inventoried as Class IV, VRM management would allow for major modification of approximately 30% of the acres and manage the larger majority (68%) as a higher VRM Class including one percent (12,530 acres) as VRM Class I in areas managed for wilderness characteristics.

Identification of VRM Class I and II as exclusion areas for utility scale renewable energy projects protects the elements of form, line, color and texture from visual intrusion and contrast, created by development of renewable energy sites such as, wind farms and solar fields.

Total elimination of livestock grazing from the landscape may indirectly impact visual resource. Although potential removal of rangeland improvements may reduce contrast to the natural landscape, the fencing required for the exclusion of cattle from public lands could be in conflict with higher VRM Objective (Classes I and II) by contrasting with the visual elements of form, line, color and texture to the degree that it draws the attention of the casual observer.

Total closure of the Decision Area for development of Solid (non-energy) leasable minerals would eliminate any impact this specific type of mineral development would have on the visual environment beyond those existing facilities.

Prescriptive management of lands managed for wilderness characteristics would designate these areas as VRM Class I, and therefore, is protective of visual resources. In several areas this assigns a higher class than the existing VRI, most notable those areas managed around Cuyama and in the San Joaquin Valley which are inventoried as VRI Class IV. In these areas visual intrusion and contrast with the existing environment would cease, however these areas are not anticipated to achieve the characteristics of a higher class over the life of the plan. Other management prescribed to these areas, such as, closures or withdrawal from mineral development, Closed OHV area designation and as ROW avoidance areas (exclusion for renewable energy projects) would minimize the sources of visual contrast that could occur.

4.8.6 Impact of Alternative E

On the whole over the life of the plan, areas inventoried with visual resource Classes I, III and IV would retain those qualities, with an overall loss of Class II. Of the areas inventoried as Class II, there would be a general shift to allow partial modification of the landscape: increasing impacts on visual resources.

The VRM management applied would preserve the existing visual landscapes through designation as VRM Class I of 20% of area inventoried as Class II and 2% of areas inventoried as Class III; principally in WSAs. Of the area inventoried as Class II less than half (47%) would be preserved or retained. The remaining majority would, over the life of the plan take on the characteristics of Class III or IV. The majority (70%) of areas inventoried as Class IV would continue to allow for major modification.

Designation of the 70-acre OHV Open Area would diminish visual qualities in this location through the obliteration of vegetation and extensive surface disturbance associated with vehicular travel. Key observation points include the community of Weldon and travelers on approximately five miles of routes adjacent to the area including California State Highway 178, Kelso Valley and Kelso Creek roads. Aggravating the visual impact, the area is located on a north facing slope elevating and angling the area toward these observers.

4.9 Water Resources

Watersheds are valued for various purposes including the provision of water supplies, aquatic and terrestrial habitat, their scenic and aesthetic qualities, and recreational opportunities. Water resources include surface and ground water and although traditionally addressed separately, both are more effectively managed as an organized unit at the watershed level. Watershed management considers a mix of point and nonpoint source pollution control, water quality and quantity, and the interaction of ground and surface water. As required by law, policy, and guidance, this resource deserves attention and requires protection in order to maintain its quality and sustain designated and beneficial uses. Furthermore, the recreational opportunities and aesthetic values provided by water resources are dependent upon protection and sustainability.

Protection is required by various laws including the Clean Water Act and *Safe Drinking Water Act and* is achieved by implementing Watershed Management Initiatives, the State Strategic Plan, and Water Quality Standards which are designed to protect the quality of water and its designated or beneficial

uses. As a general rule, water resources should be protected by preventing or reducing contamination and waters that are impaired should be restored, *particularly if they are included on the CWA Section 303(d) List. The manner in which BLM demonstrates compliance with water resource protection laws are described in Section 3.9 – Water Resources. Furthermore, the BLM utilizes Onshore Oil and Gas Orders to implement and supplement regulations in 43 CFR 3160 that govern oil and gas exploration, development, and production on federal leases.* ~~*If identified as impaired on the CWA Section 303(d) List, then measures would be identified and implemented to remove the segment or basin from listing. Surface waters are not notably extensive on BLM managed lands in the Planning Area (Map 3.13). The Salinas River (0.8 mile) is the only 303(d) listed segment on these lands.*~~

Impacts to water resources can occur from direct contact or interaction with surface (and ground) waters. Water quality issues mainly result from indirect impacts associated with diversion and use. These impacts may be further exacerbated by the effects of climate change on water availability, thus emphasizing the importance of maintaining healthy watersheds to buffer the effects of a changing climate.

METHODS OF ANALYSIS

Given the ~~*limited extent of water resources on BLM and*~~ the scattered nature of ~~*these*~~ *public* lands *within the Planning Area,* the analysis of direct effects on water quality is focused on surface waters within the Decision Area. In analyzing the impacts of Comprehensive Trails and Travel Management, the focus is on routes that interact with surface waters. The analysis will qualitatively address the indirect effects of proposed management on watersheds within the Planning Area.

Direct impacts to water resources can occur from actions that result in the physical alteration or modification of surface waters, including restoration, by the introduction of pathogens via direct contact (from recreation or by livestock). Management actions that limit, restrict, exclude or prohibit direct contact with surface waters and in riparian zones would reduce the potential for direct impacts to occur; no direct adverse impacts are anticipated.

Indirect impacts to water resources result from diversion and use, storm water discharge, non-point source pollution, and the physical alteration of streams, riparian zones, wetlands, and/or floodplain which results in compromised function. Indirect impacts to water resources may result from BLM program and authorized actions that disturb soils, which alter or modify rates of infiltration and runoff, resulting in increased sediment or nutrient load. In many cases measures to protect other resource values (air, soil, biological, cultural, visual) result in management actions that provide protection for water resources. The possibility for increased risk to water quality from sedimentation, runoff, and direct contact contamination are based on the potential for surface disturbance and presence of humans, pets, and livestock. As such, the acres where surface disturbance, incompatible activities, and livestock are excluded from the landscape act as a quantifiable indicator of the reduction of risks to water resources.

Proposed management of the following resources, resource uses, or programs is anticipated to have an effect on the Water Resources: Biological Resources, Soil Resources, Wildland Fire Ecology and Management, *Minerals Management*, Livestock Grazing, Comprehensive Trail and Travel Management, Recreation and Visitor Services, and Special Designations. Those resources not listed are deemed to have negligible effects and therefore, are not analyzed further.

ASSUMPTIONS

Assumptions used in this impact analysis include the following:

- The conditions and function of watersheds within the Planning Area have been altered by historic land and water uses; Federal, State, and regional water quality laws, regulations, plans, and policies are likely to result in improved quality of affected watersheds.
- Surface disturbance from BLM program and authorized activities such as road construction and maintenance, livestock grazing, and energy and mineral development may *potentially* result in adverse impacts to water quality such as increased sedimentation within the affected watershed.
- Restoration activities and management actions that limit or restrict activities (near surface waters) generally benefit water resources. This may include eliminating, relocating, or redesigning uses that have resulted or may result in direct impacts to other resources and indirect impacts to water quality.
- Surface waters not occurring within special and administrative designations with prescriptive management would receive no additional protection other than those inferred by law, regulation, and policy.
- *Prescriptive management that reduces surface disturbance, limits direct contact, and/or maintains the natural water flow would enhance protection of surface waters (and indirectly groundwater) beyond those protections provided by law, regulation, and policy.*
- Management actions that improve or maintain ecosystem health (e.g., attainment or exceedance of the Standards for Rangeland Health) provides protection to water quality and quantity at the watershed level.
- For maintenance of the travel network, the application of Comprehensive Trails and Travel Management route designation criteria and guidelines would generally benefit water resources by minimizing direct and indirect impacts.
- The implementation of BMPs (Appendix L) consistent with State and Regional Water Quality Control Board Management Measures would provide adequate protection for water resources; this includes the application of Central California ~~*grazing management guidelines to meet the Standards for Rangeland Health*~~ *Guidelines for Livestock Grazing Management (Appendix F)*.
- Climate change may affect the availability of water resources. Maintaining healthy, resilient watersheds will be critical to buffering the effects of a changing climate.
- The BLM does not anticipate direct (point-source) discharge into any surface waters that would require *the BLM to obtain* a NPDES permit in the Planning Area or the State.
- Travel on such routes that bisect, lie parallel to, or occur within 300 feet of a perennial water bodies may result in impacts that reduce the ability to maintain PFC and to meet standards for water quality, or to attain Central California Standards for Rangeland Health.
- Chemical application to control weeds would be conducted in accordance with integrated pest management principles (BLM 1992), therefore, water resources would be adequately protected direct contamination; any chemical *(herbicide and/or pesticide)* use would be subject to site-specific NEPA analysis and a Pesticide Use Permit.

4.9.1 Impact of Alternative A (No Action)

Water resources would be managed in accordance with law, policy, and agency guidance, including the Clean Water Act, California State Standards, and regional and local objectives of the *Rangeland Health Standards and Guidelines for California and Northwestern Nevada Final EIS.*

At the watershed level, special and administrative designations (e.g., ACECs, SMAs, Wilderness, and Wild and Scenic Rivers) and their associated prescriptive management would generally benefit water resources on over 225,120 acres (56% of the Decision Area) by limiting and restricting actions that may affect water quality such as limitations on mineral development, restrictions on livestock grazing, and elimination of incompatible uses. Special management that specifically protects water resources includes the prohibition of water diversions in the Alkali Sink ACEC.

Travel management activities that directly disturb soils or reduce vegetation can lead to erosion, increased sediment transport, and nonpoint source pollution to surface waters, thereby degrading water quality. No Comprehensive Trails and Travel Management route designations including minimization criteria were applied. The greatest potential for impacts on would occur where motorized routes interact with bodies of surface water. Approximately 6 miles of Motorized routes in the Decision Area would bisect, lie parallel to, or occur within 300 feet of a perennial water bodies; there would be 11 locations where travel routes cross streams. No routes designated Motorized interact with the Salinas River and would not contribute to its continued impairment.

Impacts on water quality from the direct loading of animal wastes and sediment on surface waters from livestock grazing would be eliminated from 22% of the Decision Area that would be allocated as Unavailable or not given an allocation and therefore unavailable for livestock authorizations.

4.9.2 Impacts Common to All Action Alternatives

Measures to protect healthy riparian areas and restore degraded riparian areas may include fencing, the installation of in-stream structures, channel stabilization, removal or redesign of spring alterations, and activity exclusion. Although implementing actions to protect, enhance, or restore currently degraded water quality may result in direct impacts to surface waters from contact, such measures would be localized and temporary in nature; however, these measures would indirectly benefit water quality downstream in the long term.

Measures to protect, enhance, or restore water quality would provide indirect long term benefits realized at the local, regional and watershed levels. Furthermore, the continued filing of State water rights and proposed management actions represent the agency's commitment to manage natural resources for present and future generations in a multiple use environment. Incompliance with State water rights reporting requirements would potentially jeopardize the continued availability of water resources for beneficial uses on public lands administered by BLM.

Restoration of closed routes and disturbed areas reduces the potential for sediment runoff. Implementation of BMPs (Appendix L) to minimize surface disturbance, and limit or reduce pollution would minimize the potential for contaminated or sediment runoff from a localized area, thereby protecting the affected watershed. Management that specifically protects soils highly susceptible to erosion and those that support biological crusts will provide indirect water quality protection by decreasing the potential for sedimentation and runoff that result from surface disturbance and accelerated erosion.

Severe wildland fire may denude vegetation resulting in increased surface runoff and less infiltration, creating periods of accelerated soil erosion and water quality problems. The indirect effects of wildland fire (increased surface runoff, sedimentation, and decreased water quality) would be minimized by timely implementation of post-fire Emergency Stabilization and Rehabilitation (ESR) needs. The proposed use of MIST or other modified suppression techniques in sensitive areas such as Wilderness, Wilderness Study Areas, lands managed for wilderness characteristics, culturally significant areas and ACECs would further enhance protection of water quality in these areas by minimizing surface disturbance from fire line construction and reducing the potential for contaminated or sediment runoff.

Travel management activities that directly disturb soils or reduce vegetation can lead to erosion, increased sediment transport, and nonpoint source pollution to surface waters, thereby degrading water quality. During the Comprehensive Trails and Travel Management route designation process, minimization criteria for water resource protection using indicators of central California Rangeland Health Standards and PFC for water quality. The greatest potential for impacts on would occur where motorized routes interact with bodies of surface water. Approximately 6 miles of Motorized routes in the Decision Area would bisect, lie parallel to, or occur within 300 feet of a perennial water bodies; there would be 11 locations where travel routes cross streams. No routes designated Motorized interact with the Salinas River and would not contribute to its continued impairment.

Management and maintenance of the travel network will allow for the identification of areas that physically change (erosion, washout, etc.), which may warrant redesignation or closure. Closure of areas where OHV use has resulted or may result in considerable adverse impacts to other physical resources (e.g. soils, vegetation, and wildlife habitat) would generally benefit water quality by reducing and/or eliminating the potential for impacts. Restoration of routes designated as Closed may result in localized, temporary impacts to surface waters.

4.9.3 Impact of Alternative B

Water resources (surface and ground) would be managed in accordance with law, policy, and agency guidance including, but not limited to, the Clean Water Act, the Safe Drinking Water Act, 43 CFR 3160, Onshore Oil and Gas Orders, California State Standards, and regional and local objectives of the Rangeland Health Standards and Guidelines for California and Northwestern Nevada Final EIS. BLM program and management activities and authorizations would be designed to meet water quality standards and to maintain designated and beneficial uses by implementing State approved Best Management Practices, Management Measures, or other Non-Point Source Measures that reduce the potential for nonpoint source pollution.

At the watershed level, special and administrative designations (e.g., ACECs, Wild and Scenic Rivers, and areas of ecological importance) and their associated prescriptive management would generally benefit water resources on over 301,140 acres (75% of the Decision Area) by limiting and restricting actions that may affect water quality such as limitations on mineral development, restrictions on livestock grazing, and elimination of incompatible uses.

Within the areas identified for special management, the Salinas River would be identified as an area of ecological importance. The area would continue to be specifically managed for protection of the exemplary riparian system through prescriptive management that would continue the allocation as unavailable for livestock grazing ~~*and withdraw the riparian area from the mining laws*~~. Although management actions would prevent ~~*further*~~ *additional* degradation of the Salinas River (CWA Section

303(d) listed) from nonpoint source pollution, these actions would not aid in the remediation of the impaired status.

Impacts on water quality from the direct loading of animal wastes and sediment on surface waters from livestock grazing would be eliminated from 16 % of the Decision Area that would be allocated as Unavailable.

Impacts from motorized travel, on water resources, would be restricted to those that occur within the 261,140 acre OHV Limited Area. Soil disturbance, sediment transport, and nonpoint source pollution from vehicle travel would not occur on 34% of the Decision Area designated as OHV Closed Areas.

The potential for impacts to water quality as a result of direct contact would be lessened by further restricting casual use prospecting in the Fresno River ERMA by requiring an authorization or mining notice for activities other than gold panning.

~~*Two*~~ *Four* river segments would be determined suitable and pursued for congressional designation in the NWSRS ~~*North Fork of the Kaweah (Scenic/Recreational) and the San Joaquin River Segment 1 (Wild/Scenic)*~~. Determination of river segments as suitable for inclusion in the National Wild and Scenic Rivers System (NWSRS) would result in the establishment of a 0.50 mile width corridor (0.25 miles each side of the river segment); protective management guidelines would be followed in Wild and Scenic River corridors that prevent modifications or alterations, allowing the free-flowing nature and ~~*Outstanding Remarkable Values (ORVs) of a segment and*~~ water quality to be maintained. ~~*These segments would receive overlapping protection through SRMA and ACEC designations.*~~

4.9.4 Impact of Alternative C

At the watershed level, special and administrative designations (e.g., ACECs, Wild and Scenic Rivers, and areas of ecological importance) and their associated prescriptive management would generally benefit water resources on over 322,110 acres (80% of the Decision Area) by limiting and restricting actions that may affect water quality such as limitations on mineral development, restrictions on livestock grazing, and elimination of incompatible uses. .

Within the areas identified for special management, the Salinas River would be identified as an ACEC. The area would continue to be specifically managed for protection of the exemplary riparian system through special management that would continue the allocation as unavailable for livestock grazing and withdraw the riparian area from the mining laws. Although management actions would prevent further degradation of the Salinas River (CWA Section 303(d) listed) from nonpoint source pollution, these actions would not aid in the remediation of the impaired status.

Impacts on water quality from the direct loading of animal wastes and sediment on surface waters from livestock grazing would be eliminated from 18% of the Decision Area that would be allocated as Unavailable.

Impacts from motorized travel, on water resources, would be restricted to those that occur within the 237,780 acre OHV Limited Area. Soil disturbance, sediment transport, and nonpoint source pollution from vehicle travel would not occur on 41% of the Decision Area designated as OHV Closed Areas.

All eight river segments (30 miles) would be determined suitable and recommended for congressional designation in the NWSRS for the following classifications: the Lower Kern River (Recreational); South

Fork of the Kern River (Recreational); East Fork of the Kaweah (Recreational); Middle Fork of the Kaweah (Recreational); North Fork of the Kaweah (Scenic/Recreational); The Salinas River (Scenic); Chimney Creek (Wild/Recreational); and San Joaquin River Segment 1 (Wild/Scenic). Determination of river segments as suitable for inclusion in the National Wild and Scenic Rivers System (NWSRS) would result in the establishment of a 0.50 mile width corridor (0.25 miles each side of the river segment). In accordance with BLM policy this corridor would be managed so no action could harm the values for which the river segment is found eligible and suitable. Protective management guidelines would be followed in Wild and Scenic River corridors that prevent modifications or alterations, allowing the free-flowing nature and Outstanding Remarkable Values (ORVs) of a segment and water quality to be maintained.

4.9.5 Impact of Alternative D

At the watershed level, special and administrative designations (e.g., ACECs, Wild and Scenic Rivers, and areas of ecological importance) and their associated prescriptive management would generally benefit water resources on over 322,110 acres (80% of the Decision Area) by limiting and restricting actions that may affect water quality such as limitations on mineral development, restrictions on livestock grazing, and elimination of incompatible uses. .

Within the areas identified for special management, the Salinas River would be identified as an ACEC. The area would continue to be specifically managed for protection of the exemplary riparian system through special management that would continue the allocation as unavailable for livestock grazing and withdraw the riparian area from the mining laws. Although management actions would prevent further degradation of the Salinas River (CWA Section 303(d) listed) from nonpoint source pollution, these actions would not aid in the remediation of the impaired status.

Impacts on water quality from the direct loading of animal wastes and sediment on surface waters from livestock grazing would be eliminated from the Decision Area. Installation *and ongoing maintenance* of *in excess of 1,000 miles of new* fencing (i.e., vehicular access to physically install *and maintain* fencing) to exclude livestock grazing from public lands would potentially result in adverse indirect impacts at the watershed level including soil disturbance and erosion resulting in sedimentation. *Furthermore, new fencing would alter livestock movement patterns potentially resulting in surface disturbance and increased potential for soil erosion along and around newly installed fencing on private property that may indirectly impact water resources on public lands.*

Impacts from motorized travel, on water resources, would be restricted to those that occur within the 237,780 acre OHV Limited Area. Soil disturbance, sediment transport, and nonpoint source pollution from vehicle travel would not occur on 41% of the Decision Area designated as OHV Closed Areas.

All eight river segments (30 miles) would be determined suitable and recommended for congressional designation in the NWSRS for the following classifications: the Lower Kern River (Recreational); South Fork of the Kern River (Recreational); East Fork of the Kaweah (Recreational); Middle Fork of the Kaweah (Recreational); North Fork of the Kaweah (Scenic/Recreational); The Salinas River (Scenic); Chimney Creek (Wild/Recreational); and San Joaquin River Segment 1 (Wild/Scenic). Determination of river segments as suitable for inclusion in the National Wild and Scenic Rivers System (NWSRS) would result in the establishment of a 0.50 mile width corridor (0.25 miles each side of the river segment). In accordance with BLM policy this corridor would be managed so no action could harm the values for which the river segment is found eligible and suitable. Protective management guidelines would be

followed in Wild and Scenic River corridors that prevent modifications or alterations, allowing the free-flowing nature and Outstanding Remarkable Values (ORVs) of a segment and water quality to be maintained.

4.9.6 Impact of Alternative E

At the watershed level, special and administrative designations (e.g., ACECs, Wilderness, and areas of ecological importance) and their associated prescriptive management would generally benefit water resources on over 279,650 acres (69% of the Decision Area) by limiting and restricting actions that may affect water quality such as limitations on mineral development, restrictions on livestock grazing, and elimination of incompatible uses.

Within the areas identified for special management, the Salinas River would be identified as an area of ecological importance. The area would continue to be specifically managed for protection of the exemplary riparian system through prescriptive management that would continue the allocation as unavailable for livestock grazing and withdraw the riparian area from the mining laws. Although management actions would prevent further degradation of the Salinas River (CWA Section 303(d) listed) from nonpoint source pollution, these actions would not aid in the remediation of the impaired status.

Impacts on water quality from the direct loading of animal wastes and sediment on surface waters from livestock grazing would be eliminated from 12 % of the Decision Area that would be allocated as Unavailable.

Impacts from motorized travel, on water resources, would be restricted to those that occur within the 264,560 acre OHV Limited Area. Soil disturbance, sediment transport, and nonpoint source pollution from vehicle travel would not occur on 35% of the Decision Area designated as OHV Closed Areas. In addition, 70 acres would be designated as an OHV Open Area where disturbance would not be confined to routes; it is anticipated surface disturbance resulting from motorized activity in this area would increase nonpoint source pollution from sedimentation.

The potential for impacts to water quality as a result of direct contact would be lessened by further restricting casual use prospecting in the Fresno River ERMA by requiring an authorization or mining notice for activities other than gold panning.

The potential for impacts to water quality as a result of direct contact would be increased by supporting and promoting recreation use at sites within the North Fork ERMA.

4.10 Wildland Fire Ecology and Management

The main impacts to wildland fire ecology and management include changes to fire ecology and Fire Regime Condition Class (FRCC); risk of human-caused ignitions from various land uses and the various factors that influence wildfire suppression effectiveness, including level of access and constraints on suppression activities.

METHODS OF ANALYSIS

The area of analysis will be the decision area, with emphasis on areas where BLM has surface ownership.

Direct impacts to wildland fire ecology and management include management actions that designate fire suppression direction for specific land areas, such as areas available for the use of fire for resource benefit or areas where Minimum Impact Suppression Tactics (MIST) must be employed. Direct effects also include those management actions that directly impact a fuel bed by removing burnable fuel, such as livestock grazing, fuel treatments and developments or roads that clear vegetation. The road network also directly affects the ease of access for suppression activities, as well as the amount of existing fire control barriers. Actions that ignite fires are also direct impacts, including management actions that allow or necessitate activities such as welding, equipment use, shooting, and catalytic converters coming into contact with dry grass.

Wildland fire ecology is in part related to the overall land health of natural systems. Therefore, management actions that provide for or promote land health would also indirectly promote a healthier FRCC. This includes actions such as providing for wildlife habitat, healthy soils and control of noxious weeds. Indirect effects also include management actions that direct some type of resource protection, which indirectly affects how fires can be suppressed. Increased human use leads to a higher risk of wildfire ignition, so indirect effects stem from actions associated with the extent of the travel network, and the amount of mineral development and recreation use.

Predicting incidence and size of wildland fires is highly speculative and depends on many factors beyond the BLM's control including weather conditions, fuel availability (which is tied to rainfall), the presence of ignition sources (both human and natural), as well as fire suppression resource availability based on other fire activity within the geographic area. Therefore, specific predictions of the acres of wildland fire expected under each alternative are not given. This subject will be limited to qualitative discussions of management actions that would increase or decrease either the risk of ignition or a fire's ease of suppression or resistance to control.

Due to the lack of specific information about the magnitude and location of various management actions that would change the FRCC, no attempt will be made to quantify the number of acres by FRCC by alternative. Qualitative analysis will highlight actions that would tend to improve FRCC and those that would tend to worsen FRCC.

Proposed management of the following resources, resource uses, or programs are anticipated to have negligible effects on wildland fire and ecology for all alternatives and will not be analyzed further: Back Country Byways, National Trails, Caves and Karst Resources, Lands and Realty and Outstanding Natural Areas.

ASSUMPTIONS

Assumptions used in this impact analysis include the following:

- A direct relationship exists between the amount of human use within the planning area and the frequency of human-caused fires;
- A direct relationship exists between fuel loading and potential fire intensity and severity;
- Actions associated with other resources that promote or improve land health will generally improve FRCC,

- Actions associated with other resources that direct specific management for resource protection will generally complicate fire suppression efforts and could lead to increased time or expense to suppress fires in these areas.
- Actions associated with permitting mineral development or granting rights-of-ways for utility corridors, communication sites, and wind and solar energy developments will generally both increase the hazard of suppressing fires in an area and add to the values at risk that need to be protected.

4.10.1Impact of Alternative A (No Action)

The Hollister RMP provides limited direction for fire management in terms of implementation of prescribed burning in the San Joaquin River Gorge Management Area. Throughout the Decision Area fire management activities would be implemented following guidance in the Federal Wildland Fire Policy. The first priority in implementing any fire management activity would be the safety of firefighters and the public. Human life would not be jeopardized for the protection of any property or resource values. In situations where human life is threatened, suppression actions would not be constrained by resource protection measures. This is the same as current management.

The No Action alternatives include measures for protection of natural and cultural resources, either explicitly stated in the existing RMP, or provided by law, regulation or policy. These constraints on various surface disturbing activities may affect the way in which wildland fires are suppressed in the decision area. Sensitive resource areas may need to be avoided when fire control lines are constructed or there may be limits on the type of line that can be constructed; hand line versus dozer line. Minimum impact suppression tactics (MIST) would be used in some areas, including Wilderness and Wilderness Study Areas, culturally significant areas and ACECs. In general, use of modified suppression techniques could extend the time needed to contain fires in some cases, such as when handline is constructed in favor of a dozer line. In some cases, more acres may be burned if suppression action cannot be taken in sensitive areas near the fire and a more distant control line is used instead. MIST may require less actual work on the ground, such as cold-trailing, where the fire edge is not lined, but monitored to ensure the fire is out. While these tactics may not require as much physical labor, they can be much more time-consuming, require more patrol and increase suppression costs. Special protection measures, such as wrapping historic structures with fire resistant material or setting up sprinkler systems would increase suppression costs. Sensitive areas may require more intensive post-fire suppression damage repair and emergency stabilization and rehabilitation activities.

In general, modified suppression techniques may be required for protection of ACEC and SMA values, biological resources and habitats, protection of sensitive soil, protection of water quality and riparian values, protection of cultural and paleontological resources, and protection of wilderness characteristics (in Designated Wilderness and WSAs). Implementation of these protection measures under the no action alternatives is generally the same as is occurring under current management based on law, regulation and policy.

While protection of natural resources can constrain suppression activities in some cases, it can also have beneficial effects for wildland fire ecology and FRCC. The FRCC is affected by the amount of departure from both natural vegetation characteristics (species composition and structural stage) and natural fire characteristics (fire frequency and severity). In general, measures to meet the Standards for Rangeland Health benefit FRCC through maintenance of healthy physical and biological systems that allow for

maintenance of a more natural fire regime. Actions to protect, recover, and enhance biotic diversity, natural habitats and native plant species, as well as actions to control, decrease and eradicate invasive nonnative plants and noxious weeds benefit FRCC. Implementation of Rangeland Standards and Guidelines and actions to maintain biodiversity and control noxious weeds are generally the same as current management.

Alternative A would make a total of 314,600 acres available for grazing. The impacts of livestock grazing are twofold. Removal of vegetation, especially persistent herbaceous material, reduces fine fuels that can contribute to fire spread. However, grazing can favor nonnative weedy species over native species by creating disturbed germination sites and nitrogen rich soils that promote weedy species. Nonnative annuals are well-established in most areas and restoration to native species would require active restoration activities above and beyond elimination of livestock grazing alone. In the absence of these large scale restoration initiatives, the overall net effect is that grazing is beneficial to controlling the spread of fires in fine fuels. This can also decrease the number of fires that spread from the grass vegetation into adjacent shrub areas, which is especially important in areas with fire intolerant shrubs, such as saltbush.

Livestock grazing infrastructure also has indirect effects to fire suppression. Range improvements often include water developments, including installation and maintenance of tanks, ponds, and their associated delivery systems (pumps and lines). In the absence of other municipal sources or larger natural water bodies, these water developments can provide water sources useful during suppression activities.

There is a complex relationship between various human uses of public land, the resulting increase in wildfire ignition risk and the varying effects to wildfire suppression effectiveness and complexity. Discussed below in this context are the resource uses that have these effects, including: Mineral Development, Recreation and Travel Management.

Activities associated with mineral development (welding, heavy equipment use) can increase the risk of ignition. However, developed areas often represent areas of low fuel due to heavy activity, cleared pads and an extensive road network such that when fires get started they are usually contained at a small size. Suppression complexity can be increased in these areas due to the infrastructure to be protected as well as the presence of combustible gases and other potentially hazardous materials. Effects from mineral development are similar to current management.

In general, recreation use tends to increase the risk of wildfire ignition and increased human presence and recreation infrastructure can increases the complexity of wildfire suppression. Alternative A designates one SRMA (4,760 acres) where recreation use would likely be focused. However, there would be a more obvious management presence in the SRMA, with increased patrol and more control of various uses to compatible zones that would likely offset much of the increased risk of ignition. The complexity of wildfire suppression is increased in these areas, as there are more threats to public safety and improvements to protect in the event of a wildfire.

The remainder of the Decision Area (399,320 acres) would be managed as an Extensive Recreation Management Area (ERMA). Recreation use in the ERMAs would generally be less intensively managed as compared to the SRMAs, so ignition risk would not be offset by management presence in these areas. Areas with recreational developments would continue to receive visitors and without the management presence, risk of fire ignition would increase.

Roads tend to be areas of higher ignition from vehicles themselves as well as increasing public access and use. However, roads also serve as fire control barriers and provide access for fire suppression resources, thus increasing suppression effectiveness and reducing costs. Areas that are closed to OHVs will have a decreased risk of ignition from this use. Almost 140,000 acres are closed to OHV use in this alternative. Over 1,895 miles of routes are designated as open to motorized use in this alternative. This use increases the risk of human caused ignitions in this alternative. In terms of wildfire suppression effectiveness, there would be over 1,850 miles of road readily available for use by fire suppression resources for access and use as existing fire control barriers.

4.10.2Impacts Common to All Action Alternatives

Conducting all fire management activities on an interagency basis with the involvement of cooperators and partners would facilitate more efficient implementation of fire planning and management across the partners' intermingled jurisdictions to improve overall safety and cost effectiveness. Use of a decision support process to analyze and document fire suppression strategies and tactics would facilitate reasoned decision-making and ensure consideration of resource values and land management objectives. Proactive participation in local Fire Safe Councils or other community organizations would facilitate collaboration between communities and land management agencies to implement fire mitigation and education strategies to prevent fire ignition and reduce detrimental effects to communities as a result of wildfires. Educating public land users and affected communities on the role of fire in ecosystems and the safe use of fire in the recreational environment would further efforts to prevent human-caused wildfires and increase support of restoring fire back to the ecosystem. Effects of the above actions are the same as current management.

The first priority in implementing any fire management activity is the safety of firefighters and the public. Human life would not be jeopardized for the protection of any property or resource values. In situations where human life is threatened, suppression actions would not be constrained by resource protection measures. Firefighter safety would also not be sacrificed for implementation of MIST for resource protection.

All of the action alternatives include measures for protection of natural and cultural resources. These constraints on various surface disturbing activities may affect the way in which wildland fires are suppressed in the decision area. Sensitive resource areas may need to be avoided when fire control lines are constructed or there may be limits on the type of line that can be constructed; hand line versus dozer line. Minimum impact suppression tactics (MIST) are required in some areas, including Wilderness, Wilderness Study Areas, lands managed for wilderness characteristics, culturally significant areas and ACECs. In general, use of modified suppression techniques could extend the time needed to contain fires in some cases, such as when handline is constructed in favor of a dozer line. In some cases, more acres may be burned if suppression action cannot be taken in sensitive areas near the fire and a more distant control line is used instead. MIST may require less actual work on the ground, such as cold-trailing, where the fire edge is not lined, but monitored to ensure the fire is out. While these tactics may not require as much physical labor, they can be much more time-consuming, require more patrol and increase suppression costs. Special protection measures, such as wrapping historic structures with fire resistant material or setting up sprinkler systems would increase suppression costs. Sensitive areas may require more intensive post-fire suppression damage repair and emergency stabilization and rehabilitation activities.

In general, modified suppression techniques may be required for protection of biological resources and habitats, protection of sensitive soils and soil crusts, protection of water quality and riparian values, protection of Wild and Scenic River corridors, protection of cultural and paleontological resources, protection of visual resource values in Class I and II areas and protection of wilderness character/characteristics (in designated Wilderness, WSAs, and lands managed for wilderness characteristics). Consultation with a resource advisors or archaeologist during fire suppression activities would ensure that sensitive areas, whether designated as ACECs or not, receive sufficient modified suppression techniques. Therefore, effects from management of ACECs are the same for all action alternatives. Implementation of these protection measures under the action alternatives is generally the same as is occurring under current management based on law, regulation and policy.

While protection of natural resources can constrain suppression activities in some cases, it can also have beneficial effects for wildland fire ecology and FRCC. The FRCC is affected by the amount of departure from both natural vegetation characteristics (species composition and structural stage) and natural fire characteristics (frequency and severity). In general, measures to meet the Standards for Rangeland Health benefit FRCC through maintenance of healthy physical and biological systems that allow for maintenance of a more natural fire regime. Actions to protect, recover, and enhance biotic diversity, natural habitats and native plant species, as well as actions to control, decrease and eradicate invasive nonnative plants and noxious weeds benefit FRCC. Implementation of Rangeland Standards and Guidelines and actions to maintain biodiversity and control noxious weeds are generally the same as current management.

All of the Action Alternatives allow for the use of fire for resource benefit in three areas: the South Sierra FMU, the Domeland FMU and a portion of the Three Rivers FMU. Wildfires in these areas could be concurrently managed for one or more objectives; suppression or resource benefit. Having the ability to use fire to meet resource objectives in one area and suppressing another portion of the fire where values are at risk allows more flexibility to meet overall resource objectives. Managing fires for resource benefit would return fire to its natural role in the ecosystem and promote healthy fire regimes, improving FRCC. This action represents an increase in the number of acres managed for resource benefit under current management, where this management is not currently allowed.

Implementing the full range of wildland fire and fuels management practices, including prescribed fire, mechanical, chemical, biological and cultural treatments will improve FRCC in most instances. Fuel treatments will reduce areas of unnatural fuel build-up to more closely resemble a natural fire regime. Prescribed fire treatments will reduce fuels and return fire to the ecosystem. Where prescribed fire is not appropriate, non-fire fuel treatments will be used. In some cases, non-fire fuel treatments can reduce fuels to the point that subsequent treatments can utilize natural or prescribed fire to meet resource and fuel management objectives and return fire to the ecosystem. Some fuel treatments may actually represent a departure from the natural fire regime, such as fuelbreaks adjacent to wildland urban interface areas that are maintained through time with a very low fuel loading and may in effect convert chaparral stands to grasslands. These FRCC departures would represent a very minor acreage when considered at the landscape scale. Implementation of fuel treatments and their effect on FRCC would be continuation of current management.

Fuel management projects and fires managed for resource benefit would need to be designed to meet air quality standards and not degrade Federal Class I areas. As is current management, smoke management plans would be written and submitted to local air pollution control districts for approval and burn day authorization. This coordination could delay or limit some prescribed burning operations.

In some cases, nonfire fuel treatments may be implemented instead of the desired prescribed fire treatments if it becomes too difficult to secure sufficient burn windows to complete projects due to poor air quality. Air pollution control districts would also be consulted when fires are managed for resource benefit. Poor air quality may limit the use of fire for resource benefit in order to meet air quality requirements.

There is a complex relationship between various human uses of public land, the resulting increase in wildfire ignition risk and the varying effects to wildfire suppression effectiveness and complexity. Although the action alternatives differ slightly in the amount of area available for mineral development, the reasonably foreseeable development scenario predicts most development will be located within the established boundaries of producing fields. Therefore, effects are similar enough to be considered common to all alternatives. Activities associated with mineral development (welding, heavy equipment use) can increase the risk of ignition. However, developed areas often represent areas of low fuel due to heavy activity, cleared pads and an extensive road network such that when fires get started they are usually contained at a small size. Suppression complexity can be increased in these areas due to the infrastructure to be protected as well as the presence of combustible gases and other potentially hazardous materials. Effects from mineral development are similar to current management.

4.10.3Impact of Alternative B

The impacts of livestock grazing are twofold. Removal of vegetation, especially persistent herbaceous material, reduces fine fuels that can contribute to fire spread. However, grazing can favor nonnative weedy species over native species by creating disturbed germination sites and nitrogen rich soils that promote weedy species. Nonnative annuals are well-established in most areas and restoration to native species would require active restoration activities above and beyond elimination of livestock grazing alone. In the absence of these large scale restoration initiatives, the overall net effect is that grazing is beneficial to controlling the spread of fires in fine fuels. This can also decrease the number of fires that spread from the grass vegetation into adjacent shrub areas, which is especially important in areas with fire intolerant shrubs, such as saltbush. Alternative B would make a total of ~~*336,500*~~ *336,700* acres available for grazing. This represents a ~~*5%*~~ *6%* increase in the number of acres available for grazing as compared with current management.

Livestock grazing infrastructure also has indirect effects to fire suppression. Range improvements often include water developments, including installation and maintenance of tanks, ponds, and their associated delivery systems (pumps and lines). In the absence of other municipal sources or larger natural water bodies, these water developments can provide water sources useful during suppression activities.

There is a complex relationship between various human uses of public land, the resulting increase in wildfire ignition risk and the varying effects to wildfire suppression effectiveness and complexity. Discussed below in this context are the resource uses that have these effects, including: Recreation and Travel Management.

In general, recreation use tends to increase the risk of wildfire ignition and increased human presence and recreation infrastructure can increases the complexity of wildfire suppression. Alternative B designates three SRMAs (~~*45,240*~~ *41,590* acres) where recreation use would likely increase. However, there would be a more obvious management presence in SRMAs, with increased patrol and more control of various uses to compatible zones that would likely offset much of the increased risk of

ignition. The complexity of wildfire suppression is increased in these areas, as there are more threats to public safety and improvements to protect in the event of a wildfire.

Recreation use in the four designated ERMAs (~~*167,320*~~ *130,580* acres) would generally be less intensively managed as compared to the SRMAs, so ignition risk would not be offset by management presence in these areas. However, use of these areas is not expected to increase to a great extent, due to limited marketing and absence of popular features or facilities to draw large crowds. Limited recreation use on the remaining ~~*191,520*~~ *232,150* acres that is not designated as a RMA is not expected to increase ignition risk a great deal.

Various resource protection measures also affect the extent of area open to various recreational opportunities in each alternative, which also affects the risk of wildfire ignition. Overnight camping is prohibited on ~~*just over 29,000*~~ *21,820* acres and camp fires are prohibited on over 68,000 acres. Ignition risk would be reduced in these areas. Where camp fires are permitted, collection of dead and downed material for firewood would be limited to material 4 inches in diameter and less. This would help moderate the size of campfires for visitors who do not bring their own firewood, further decreasing the risk of escaped fires.

Roads tend to be areas of higher ignition from vehicles themselves as well as increasing public access and use. However, roads also serve as fire control barriers and provide access for fire suppression resources, thus increasing suppression effectiveness and reducing costs. Areas that are closed to OHVs will have a decreased risk of ignition from this use. Almost 141,000 acres are closed to OHV use in this alternative, a slight increase over current management. Ignition risk will also be reduced where routes are closed and slightly less reduced on routes that are open to authorized use only. With over ~~*1,000*~~ *290* miles of routes ~~*either*~~ closed ~~*or limited to authorized use*~~ in this alternative there is a ~~*large*~~ decrease in ignition risk from current management where no routes are closed ~~*or limited*~~.

In terms of wildfire suppression effectiveness, there would be over 1,500 miles of road readily available for use by fire suppression resources for access and use as existing fire control barriers. In the short term, the ~~*300*~~ *293*miles designated closed would remain available to use for fire suppression resources, except where active restoration is done to re-contour the area and remove the road bed. Due to the limited road maintenance budget historically in the Bakersfield Field Office, passive restoration (where routes are allowed to become overgrown and restore naturally over time) is the more likely closure method. Over time, as the road beds deteriorate and these routes become overgrown with vegetation they will not be available for access or serve as fire control barriers, increasing wildfire suppression complexity as compared with current conditions.

4.10.4Impact of Alternative C

The impacts of livestock grazing are twofold. Removal of vegetation, especially persistent herbaceous material, reduces fine fuels that can contribute to fire spread. However, grazing can favor nonnative weedy species over native species by creating disturbed germination sites and nitrogen rich soils that promote weedy species. Nonnative annuals are well-established in most areas and restoration to native species would require active restoration activities above and beyond elimination of livestock grazing alone. In the absence of these large scale restoration initiatives, the overall net effect is that grazing is beneficial to controlling the spread of fires in fine fuels. This can also decrease the number of fires that spread from the grass vegetation into adjacent shrub areas, which is especially important in areas with fire intolerant shrubs, such as saltbush. Alternative C would make a total of 322,200 acres available for

grazing. This represents a 2% increase in the number of allocated acres available for grazing as compared with current management.

Livestock grazing infrastructure also has indirect effects to fire suppression. Range improvements often include water developments, including installation and maintenance of tanks, ponds, and their associated delivery systems (pumps and lines). In the absence of other municipal sources or larger natural water bodies, these water developments can provide water sources useful during suppression activities.

There is a complex relationship between various human uses of public land, the resulting increase in wildfire ignition risk and the varying effects to wildfire suppression effectiveness and complexity. Discussed below in this context are the resource uses that have these effects, including: Recreation and Travel Management.

In general, recreation use tends to increase the risk of wildfire ignition and increased human presence and recreation infrastructure can increases the complexity of wildfire suppression. Alternative C designates two SRMAs (21,490 acres) where recreation use would likely increase. However, there would be a more obvious management presence in SRMAs, with increased patrol and more control of various uses to compatible zones that would likely offset much of the increased risk of ignition. The complexity of wildfire suppression is increased in these areas, as there are more threats to public safety and improvements to protect in the event of a wildfire.

Recreation use in the four designated ERMAs (190,910 acres) would generally be less intensively managed as compared to the SRMAs, so ignition risk would not be offset by management presence in these areas. However, use of these areas is not expected to increase to a great extent, due to limited marketing and absence of popular features or facilities to draw large crowds. Limited recreation use on the remaining 191,680 acres that is not designated as a RMA is not expected to increase ignition risk a great deal.

Various resource protection measures also affect the extent of area open to various recreational opportunities in each alternative, which also affects the risk of wildfire ignition. Overnight camping is prohibited on just over 52,000 acres and camp fires are prohibited on over 68,000 acres. Ignition risk would be reduced in these areas. Where camp fires are permitted, visitors would have to bring their own fire wood, as collection of dead and downed material is prohibited under this alternative. This would reduce the number and size of camp fires, further decreasing the risk of escaped fires.

Roads tend to be areas of higher ignition from vehicles themselves as well as increasing public access and use. However, roads also serve as fire control barriers and provide access for fire suppression resources, thus increasing suppression effectiveness and reducing costs. Areas that are closed to OHVs will have a decreased risk of ignition from this use. Just over 166,000 acres are closed to OHV use in this alternative, which is almost a 20% increase over current management. Ignition risk will also be reduced where routes are closed and slightly less reduced on routes that are open to authorized use only. With almost 1,200 miles of routes either closed or limited to authorized use in this alternative there is a large decrease in ignition risk from current management where no routes were closed or limited.

In terms of wildfire suppression effectiveness, there would be over 1200 miles of road readily available for use by fire suppression resources for access and use as existing fire control barriers. In the short term, the almost 600 miles designated closed would remain available to use for fire suppression resources, except where active restoration is done to re-contour the area and remove the road bed.

Due to the limited road maintenance budget historically in the BFO, passive restoration (where routes are allowed to become overgrown and restore naturally over time) is the more likely closure method. Over time, as the road beds deteriorate and these routes become overgrown with vegetation they will not be available for access or serve as fire control barriers, increasing wildfire suppression complexity as compared with current conditions.

4.10.5Impact of Alternative D

There would be no livestock grazing under Alternative D. This would allow grasses to persist longer and grow taller than in grazed areas. Grass and other forage is a fine fuel that contributes to fire spread. Eliminating grazing would increase the fine fuels available and would increase fire spread, sometimes into the chaparral next to grasslands. Increasing fire spread could result in more acres burned. Burning more acres does not necessarily imply that there would be an adverse impact on wildland fire ecology, as some of the acres would benefit from fire if the fires were to burn under the conditions that the vegetation types developed under. Alternative D would create the least weedy habitat and allow for the smallest chance of introduction and spread of nonnative weedy plants, which would benefit FRCC over time.

Many livestock water sources that are also used for fire suppression would be removed under this alternative, which could reduce fire suppression effectiveness. In order to prevent unauthorized use of public land, an estimated 1,000 of miles of fencing would need to be constructed on private land adjacent to BLM. This may increase the response time to access some areas for fire suppression. Impacts would be minor if fences are barbed wire and could be easily cut to gain access. This would increase the amount of fire suppression repair work that would be required following suppression efforts.

There is a complex relationship between various human uses of public land, the resulting increase in wildfire ignition risk and the varying effects to wildfire suppression effectiveness and complexity. Discussed below in this context are the resource uses that have these effects, including: Recreation and Travel Management.

In general, recreation use tends to increase the risk of wildfire ignition and increased human presence and recreation infrastructure can increases the complexity of wildfire suppression. Alternative D designates two SRMAs (21,490 acres) where recreation use would likely increase. However, there would be a more obvious management presence in SRMAs, with increased patrol and more control of various uses to compatible zones that would likely offset much of the increased risk of ignition. The complexity of wildfire suppression is increased in these areas, as there are more threats to public safety and improvements to protect in the event of a wildfire.

Recreation use in the four designated ERMAs (190,910 acres) would generally be less intensively managed as compared to the SRMAs, so ignition risk would not be offset by management presence in these areas. However, use of these areas is not expected to increase to a great extent, due to limited marketing and absence of popular features or facilities to draw large crowds. Limited recreation use on the remaining 191,680 acres that is not designated as a RMA is not expected to increase ignition risk a great deal.

Various resource protection measures also affect the extent of area open to various recreational opportunities in each alternative, which also affects the risk of wildfire ignition. Overnight camping is

prohibited on just over 52,000 acres and camp fires are prohibited on over 68,000 acres. Ignition risk would be reduced in these areas. Where camp fires are permitted, visitors would have to bring their own fire wood, as collection of dead and downed material is prohibited under this alternative. This would reduce the number and size of camp fires, further decreasing the risk of escaped fires.

Roads tend to be areas of higher ignition from vehicles themselves as well as increasing public access and use. However, roads also serve as fire control barriers and provide access for fire suppression resources, thus increasing suppression effectiveness and reducing costs. Areas that are closed to OHVs will have a decreased risk of ignition from this use. Just over 166,000 acres are closed to OHV use in this alternative, which is almost a 20% increase over current management. Ignition risk will also be reduced where routes are closed and slightly less reduced on routes that are open to authorized use only. With almost 1,200 miles of routes either closed or limited to authorized use in this alternative there is a large decrease in ignition risk from current management where no routes were closed or limited.

In terms of wildfire suppression effectiveness, there would be over 1200 miles of road readily available for use by fire suppression resources for access and use as existing fire control barriers. In the short term, the almost 600 miles designated closed would remain available to use for fire suppression resources, except where active restoration is done to re-contour the area and remove the road bed. Due to the limited road maintenance budget historically in the BFO, passive restoration (where routes are allowed to become overgrown and restore naturally over time) is the more likely closure method. Over time, as the road beds deteriorate and these routes become overgrown with vegetation they will not be available for access or serve as fire control barriers, increasing wildfire suppression complexity as compared with current conditions.

4.10.6Impact of Alternative E

The impacts of livestock grazing are twofold. Removal of vegetation, especially persistent herbaceous material, reduces fine fuels that can contribute to fire spread. However, grazing can favor nonnative weedy species over native species by creating disturbed germination sites and nitrogen rich soils that promote weedy species. Nonnative annuals are well-established in most areas and restoration to native species would require active restoration activities above and beyond elimination of livestock grazing alone. In the absence of these large scale restoration initiatives, the overall net effect is that grazing is beneficial to controlling the spread of fires in fine fuels. This can also decrease the number of fires that spread from the grass vegetation into adjacent shrub areas, which is especially important in areas with fire intolerant shrubs, such as saltbush. Alternative E would make a total of 345,800 acres available for grazing. This represents a 4% increase in the number of allocated acres available for grazing as compared with current management.

Livestock grazing infrastructure also has indirect effects to fire suppression. Range improvements often include water developments, including installation and maintenance of tanks, ponds, and their associated delivery systems (pumps and lines). In the absence of other municipal sources or larger natural water bodies, these water developments can provide water sources useful during suppression activities.

There is a complex relationship between various human uses of public land, the resulting increase in wildfire ignition risk and the varying effects to wildfire suppression effectiveness and complexity. Discussed below in this context are the resource uses that have these effects, including: Recreation and Travel Management.

In general, recreation use tends to increase the risk of wildfire ignition and increased human presence and recreation infrastructure can increases the complexity of wildfire suppression. Alternative E designates four SRMAs (168,690 acres) where recreation use would likely increase. However, there would be a more obvious management presence in SRMAs, with increased patrol and more control of various uses to compatible zones that would likely offset much of the increased risk of ignition. The complexity of wildfire suppression is increased in these areas, as there are more threats to public safety and improvements to protect in the event of a wildfire.

Recreation use in the four designated ERMAs (47,270 acres) would generally be less intensively managed as compared to the SRMAs, so ignition risk would not be offset by management presence in these areas. However, use of these areas is not expected to increase to a great extent, due to limited marketing and absence of popular features or facilities to draw large crowds. Limited recreation use on the remaining 188,120 acres that is not designated as a RMA is not expected to increase ignition risk a great deal.

Various resource protection measures also affect the extent of area open to various recreational opportunities in each alternative, which also affects the risk of wildfire ignition. Overnight camping is prohibited on just over 20,000 acres and camp fires are prohibited on over 68,000 acres. Ignition risk would be reduced in these areas. Where camp fires are permitted, collection of dead and downed material for firewood would be limited to material 4 inches in diameter and less. This would help moderate the size of campfires for visitors who do not bring their own firewood, further decreasing the risk of escaped fires.

Roads tend to be areas of higher ignition from vehicles themselves as well as increasing public access and use. However, roads also serve as fire control barriers and provide access for fire suppression resources, thus increasing suppression effectiveness and reducing costs. This alternative includes a 70-acre area that is open to OHV use. Ignition risk would be increased in the Open area where OHVs would be allowed off-road where they would be more likely to contact flammable vegetation. Areas that are closed to OHVs will have a decreased risk of ignition from this use. Just over 139,450 acres are closed to OHV use in this alternative, which is similar to current management. Ignition risk will also be reduced where routes are closed and slightly less reduced on routes that are open to authorized use only. With just under 200 miles of routes either closed or limited to authorized use in this alternative there is a slight decrease in ignition risk from current management where no routes were closed or limited.

In terms of wildfire suppression effectiveness, there would be almost 1800 miles of road readily available for use by fire suppression resources for access and use as existing fire control barriers. In the short term, the almost 65 miles designated closed would remain available to use for fire suppression resources, except where active restoration is done to re-contour the area and remove the road bed. Due to the limited road maintenance budget historically in the BFO, passive restoration (where routes are allowed to become overgrown and restore naturally over time) is the more likely closure method. Over time, as the road beds deteriorate and these routes become overgrown with vegetation they will not be available for access or serve as fire control barriers, slightly increasing wildfire suppression complexity as compared with current conditions.

Resource Uses

4.11 Comprehensive Trail and Travel management

The Comprehensive Trail and Travel Management (CTTM) program manages both *the land use planning level* OHV area designations -open, closed and limited - and the *implementation level* route designations assigned to specific features of the travel network. Since travel and transportation are a part of virtually every activity on public lands, including; recreation; livestock management; wildlife management; minerals exploration and development; ROWs to private in-holdings; and management and monitoring of public lands, the resulting travel network is managed to provide for appropriate public access while achieving resource and program goals and objectives. As such, the CTTM program is considered a support function for all resources, resource uses and other BLM-programs with the following basic principles (Executive Order 11644 and 43 CFR 8340); Provide and improve sustainable access for public needs and experiences; Protect natural and cultural resources and settings; and Minimize conflicts among the various users of BLM-administered lands.

In its support role CTTM tends to be reactive to the management direction provided by other resources, essentially implementing their protective or developmental actions.

METHODS OF ANALYSIS

The analysis focuses on the public lands portion of the Decision Area (404,180 acres) and the ~~*1936*~~ *1954* miles of inventoried routes from the Bakersfield FO 2009 Digital Route Inventory (BLM 2009d) *and route inventory information provided during the public scoping and comment periods*. *The specific rationale for each route designation is provided in Appendix E, and impacts of that designation presented under the affected resource.*

Direct impacts to CTTM occur when travel opportunity is expressly reduced or increased. This can impact a specific area, route or mode of travel. Examples of direct impacts include; reduction in OHV travel opportunity resulting, from OHV Closed Area designations; decrease in all travel opportunity from closure of routes; and increase in pedestrian opportunity through the creation of additional hiking trails. Indirect impacts to CTTM occur through actions that allow for expansion of, or limit the extent of, the travel network. In addition some actions go beyond mere allowance and necessitate additional routes (e.g., development of new oil well pads).

To act as an indicator of direct impacts both the acres and miles of travel opportunity restricted or enhanced is used. To indicate indirect impacts the reasonable potential for expansion (i.e., additional routes) resulting from an action is used (e.g., allowance of mineral development increases potential for new routes to occur, or management for a Back Country recreation setting results in a lower potential for routes in that area).

For the purposes of this analysis the physical condition of the route, suitability for use by allowable modes of transport and ability to access the route (i.e., the route is landlocked by private property) are not considered.

Proposed management of the following resources, resource uses, or programs is anticipated to have an effect on CTTM: Biological Resources, Visual Resources, Minerals Management, Recreation and Visitor

Services, and Special Designations. Those resources not listed are deemed to have negligible effects and therefore, are not analyzed further.

ASSUMPTIONS

The following assumptions are used in the impact analysis:

- The existing route network is 937 miles of route designated "open" by the Caliente RMP (BLM 1997) as it occurred on maps and aerial photos available at the time this document was completed.
- Route designations are implementation level decisions that may be altered by activity level planning and site specific NEPA analysis. The RMP provides the parameters in which these alterations to the travel network may occur and the criteria to be used when making them.
- OHV travel opportunity is not recreation specific and refers to the ability to use a motorized vehicle capable of travelling cross-country (as defined by 43 CFR 8340) for any purpose (some exceptions are provided in the CFR).
- The coarse method of route designation used in the Caliente RMP resulted in routes receiving designation in conflict with other management prescriptions, such as, ACEC special management and Closed OHV Area designations.
- In the No Action Alternative, routes designated 'open' would be available for all modes of transport.
- The allowance for development, livestock grazing and recreational uses, promotes the expansion of the route network within these areas to support these activities.
- Route designations were made using both minimization criteria and Field Office specific criteria based on existing information and knowledge of other resources. Incomplete information with regard to route authorizations (e.g., rights-of-way or routes authorized through an APD/Sundry notice) may result in errors in designations.
- Route designations will change and evolve through activity-level planning over the life of the RMP.

4.11.1 Impact of Alternative A (No Action)

Designation of 139,490 acres as OHV Closed Areas, would maintain the existing environment, and therefore is considered to be no additional loss of OHV travel opportunity. The vast majority of the 35% of public lands designated as OHV Closed Areas results from non-discretionary closures of designated Wilderness areas. The discretionary portion of this closure would result from special management within two ACECs; Blue Ridge and Pt Sal.

Route designations would occur through the existing method (i.e., all routes occurring on BLM, and USGS Maps and those on aerial photographs would be 'open' unless indicated closed by on the ground measures). These designations would conflict with the OHV area designations and specific management applied to certain areas (e.g., ACECs and SMAs) and to specific routes (i.e., restrictions to non-mechanized use on 41 miles of the PCNST).

The result of this coarse method of route designation (that lacks consideration of other resources and minimization criteria) would be 1895 miles of route available for all modes of transport; this incorporates all routes on BLM's 2009 Digital Inventory (principally completed from maps and aerial photographs). All inventoried routes are considered to be used to some degree by various modes of transport and users; and would continue to be available for these uses and users. This would be an increase of 958 miles of designated routes over the existing conditions.

Management of the Keyesville SMA would over the life of the plan refine route designations within the SMA, identifying routes for OHVs and bicycles.

4.11.2 Impacts Common to All Action Alternatives

The identification of reserves and corridors within the Conservation area of ecological importance (principally the southern San Joaquin Valley Floor) with specific limitation on the amount of surface disturbance may result in losses to the route network over the life of the plan as surface disturbed areas (specifically routes) would be reclaimed to allowed for continued mineral development. This has the greatest potential to impact the authorized users: who are principally responsible for the creation of this portion of the network.

Designation of VRM Classes I, II and III would increase the complexity of route location and design in order to meet these visual objectives. Therefore, the potential for the route network to expand in these areas may be limited. Conversely, designation of Class IV would support major modification of the landscape thus allowing increased potential for expansion of the travel network.

Use of route designation criteria specifically addresses the purpose and value of each individual route and its relationship to other resource values. The criteria ensure routes are not designated within wilderness or primitive areas (with the exception of routes associated with valid existing rights, which would be designated for authorized use only); reduce potential for harassment of wildlife; minimize to an acceptable level impacts to physical resources; and attempt to eliminate conflicts between various modes of transport and particular route uses.

Establishment of processes to manage and maintain route designations, including general criteria to be addressed for minimizing impacts, ~~*and*~~ local resource specific concerns to be considered, *and public input on route redesignations* would allow the evolution of the route network over the life of the plan to ensure provision for continue public, private and commercial access to (or through) public lands and minimization of impacts to other resource concerns.

Targeted activities related to travel (e.g., OHV use, mountain biking, hiking, equestrian use, and driving for pleasure) in both ERMAs and SRMAs would support continued travel opportunity and may allow for the expansion or improved sustainability of the travel network in these areas.

4.11.3 Impact of Alternative B

Designation of ~~*142,940*~~ *141,100* acres as OHV Closed Areas would increase the existing restriction by 4%. Although the vast majority of public lands designated as OHV Closed Areas is a result of non-discretionary action (i.e., Wilderness and WSAs), the increase is attributed to the discretionary decision to identify lands managed for wilderness characteristics as OHV Closed Areas. Since these additional acres are considered to have wilderness characteristics (i.e., an absence of routes) there is no actual loss

in existing opportunity. The potential for the travel network to increase within these areas would be eliminated through both the, desire to manage for wilderness characteristics and OHV designation.

Within the OHV Limited Areas all travel is confined to designated routes and further restricted by specific modes of transport for each route. Approximately ~~770~~ 1,430 miles of route (~~40%~~ 73% of the route inventory) would remain open to all modes of transport and all users (i.e., designated Motorized); this is approximately a ~~18% reduction~~ 34% increase from existing network available for motorized use.

In total ~~308~~ 293 miles of route would be designated closed; and either actively or passively restored and revegetated. A portion ~~of this reduction~~ closures can be attributed to routes previously mistakenly designated in OHV Closed Areas (e.g., Wilderness); loss of these routes, although designated closed, cannot be considered a loss to opportunity since no legal opportunity exists on these routes. *Closures of routes that currently have legal opportunity may result in changes to use patterns, however the overall increase in available routes for all modes of transport could accommodate the displaced use. Outside of these mistakenly designated routes in Wilderness, discretionary OHV area closures include Pt Sal and Los Osos ACECs, lands managed for wilderness characteristics and Wilderness Study Areas. The closures associated with the ACECs are negligible, however those associated with lands managed for wilderness characteristics and Wilderness Study Areas amount to 24 miles of closure (Approximately 7 miles in lands managed for wilderness characteristics and 17 miles in WSAs).*

Table 4.11-1 summarizes the opportunity for each designated mode of travel within the Decision area and presents the percentage change from the current condition – which allowed any restricted motorized use on any route appearing on maps an aerial photography at the time the ROD for Caliente RMP (BLM, 1997) was signed. The route designations would for all modes of transport result in over a one third increase in available opportunity. It's unlikely this increase in opportunity would impact users directly as many of the previously undesignated routes (i.e., those that didn't appear on maps and aerial photography in 1997 or have since been crated) contributing to this increase are already in use.

Table 4.11-1
Alternative B - Travel Opportunities (miles of route) within the Decision Area

Route Designation	Miles of Opportunity	Percent Change from Current Condition
Motorized	1,429	33% ↑
Motorized-Street Legal Only	1,430	34% ↑
Motorized-Authorized	1,589	40% ↑
Non-Motorized	1,457	36%↑
Non-Mechanized[65]	1,502	38%↑
Non-Mechanized-Pedestrian	1,506	38% ↑

Restrictions to public access, specifically in intensively developed oil fields, would be complimented by routes being designated as Authorized[66]. Besides contributing to the aforementioned reduction in Motorized opportunity for the public, this would also eliminate all travel and modes of travel by non-permitted users from 11,420 acres.

[65] *Most non-mechanized modes of transport (equestrians, pedestrians etc.) may travel cross county unless otherwise prohibited*

[66] Authorized route may still receive motorized use by permitted users.

4.11.4 Impact of Alternative C

Designation of 166,300 acres as OHV Closed Areas would increase the existing restriction by 26,810 acres (6%). Although the vast majority of public lands designated as OHV Closed Areas is a result of non-discretionary action (i.e., Wilderness and WSAs), the increase is attributed to the discretionary decision to identify lands managed for wilderness characteristics and additional ACECs as OHV Closed Areas. Since these additional acres are considered to have wilderness characteristics (i.e., an absence of routes) there would be no actual loss in existing opportunity. The potential (although low) for the travel network to increase within these areas would be eliminated through both the prescriptive management in lands managed for wilderness characteristics and OHV designations.

Within the OHV Limited Areas all travel is confined to designated routes and further restricted by specific modes of transport for each route. Approximately 656 miles of route (34% of the route inventory) would remain open to all modes of transport and all users (i.e., designated Motorized); this is a 30% reduction from existing network available for motorized use. A portion of this reduction can be attributed to routes previously mistakenly designated in OHV Closed Areas (e.g., Wilderness); loss of these routes, although designated closed, cannot be considered a loss to opportunity since no legal opportunity exists on these routes. In total 580 miles of route would be designated closed; and either actively or passively restored and revegetated. *Closures of routes that currently have legal opportunity may result in changes to use patterns and consequently more intense use of those routes still available. More intensive use of route could impact the physical nature of the route and therefore its sustainability. Adverse impacts of more intensive use of routes may exacerbate impacts to other resources.*

Restrictions to public access, specifically in intensively developed oil fields would eliminate all travel and modes or travel by non-permitted users from 23,400 acres. The designation of approximately half of the routes not currently designated as Closed would eliminate all modes of travel on these routes. These closures may conflict with previous authorizations incidentally allowing route construction that have not been appropriately tracked and recorded for incorporation into the route inventory. It is anticipated some of these routes would be redesignated through the life of the plan to remedy this situation; in the meantime, illegal use of these now closed routes would be expected to continue.

4.11.5 Impact of Alternative D

Designation of 166,300 acres as OHV Closed Areas would increase the existing restriction by 26,810 acres (6%). Although the vast majority of public lands designated as OHV Closed Areas is a result of non-discretionary action (i.e., Wilderness and WSAs), the increase is attributed to the discretionary decision to identify lands managed for wilderness characteristics and additional ACECs as OHV Closed Areas. Since these additional acres are considered to have wilderness characteristics (i.e., an absence of routes) there would be no actual loss in existing opportunity. The potential (although low) for the travel network to increase within these areas would be eliminated through both the prescriptive management of lands managed for wilderness characteristics and OHV designations.

Within the OHV Limited Areas all travel is confined to designated routes and further restricted by specific modes of transport for each route. Approximately 656 miles of route (34% of the route inventory) would remain open to all modes of transport and all users (i.e., designated Motorized); this is a 30% reduction from existing network available for motorized use. A portion of this reduction can be attributed to routes previously mistakenly designated in OHV Closed Areas (e.g., Wilderness); loss of these routes, although designated closed, cannot be considered a loss to opportunity since no legal

opportunity exists on these routes. In total 580 miles of route would be designated closed; and either actively or passively restored and revegetated. *Closures of routes that currently have legal opportunity may result in changes to use patterns and consequently more intense use of those routes still available. More intensive use of route could impact the physical nature of the route and therefore its sustainability. Adverse impacts of more intensive use of routes may exacerbate impacts to other resources.*

Restrictions to public access, specifically in intensively developed oil fields would eliminate all travel and modes or travel by non-permitted users from 23,400 acres. The designation of approximately half of the routes not currently designated as Closed would eliminate all modes of travel on these routes. These closures may conflict with previous authorizations incidentally allowing route construction that have not been appropriately tracked and recorded for incorporation into the route inventory. It is anticipated some of these routes would be redesignated through the life of the plan to remedy this situation; in the meantime, illegal use of these now closed routes would be expected to continue.

4.11.6 Impact of Alternative E

Designation of 136,280 acres as OHV Closed Areas would reduce the existing restriction by 3,172 acres (1%). The reduction results from the lifting of the closures in within the Blue Ridge ACEC. The remaining public lands designated as OHV Closed Areas are a result of non-discretionary action (i.e., Wilderness and WSAs). The potential for the travel network to increase within the Blue Ridge ACEC would be low due to protective measures in place for condor, and it is doubtful OHV travel would occur as it is not publically accessible.

Designation of 71 acres (0.02% of public lands) as an OHV Open Area for recreational purpose would introduce a travel opportunity not currently found on public lands; although, similar travel opportunities do currently exist nearby at Jawbone Canyon and Cyrus Canyon OHV Park. The area designated open contains 3.5 miles of route which would be removed from the route inventory; a 0.1% reduction in on route opportunities, but with this reduction would come the addition of cross-country OHV travel opportunity. The designation of this area as open, however, would not likely result in an increase in OHV use of the area, as it is located on a slope in which the topography and existing vegetation do not accommodate cross-country travel and OHV recreational opportunities (e.g., travel to a destination, technical challenge, speed etc.).

Within the OHV Limited Areas all travel would be confined to designated routes and further restricted by specific modes of transport for each route. Approximately 1683 miles of route (87% of the route inventory) would remain open to all modes of transport and all users (i.e., designated Motorized); this would be a 43% increase to the existing network available for motorized use. In total 65 miles of route would be designated closed; and either actively or passively restored and revegetated. These closures can principally be attributed to routes previously designated or inventoried occurring in OHV Closed Areas (e.g., Wilderness); loss of these routes, although designated closed, cannot be considered a loss to opportunity since no legal opportunity exists on these routes. *Closures of routes that currently have legal opportunity may result in changes to use patterns, however the overall increase in available routes for all modes of transport could accommodate the displaced use.*

Continued designation of the Chimney Peak Back Country Byway and reconnection of the Long Valley Loop portion would expand the travel network and increase the utility of these routes.

4.12 Lands and Realty

The lands and realty program includes land tenure adjustments (e.g., disposals and acquisitions), land use authorizations (i.e., leases, permits, right-of-way grants), and withdrawals. Its purpose is to facilitate management of public lands and resources in the planning area. The program adapts according to changing land management, resource needs, demands for public land to meet expanding communities and other public purposes.

The lands and realty program is impacted by increasing, limiting, or preventing the potential for realty actions and the land base on which they can occur.

METHODS OF ANALYSIS

The analysis of impacts on lands and realty focuses on two distinctive areas. The area of analysis for land tenure and withdrawals can include the entire Decision Area, including both public lands and federal mineral estate. The area of analysis for land use authorizations consists of public lands (surface).

Direct impacts to lands and realty are considered to be those that either reduce or enlarge the area upon which land tenure and use authorizations can occur (e.g., identification of exclusion areas reduces the locations in which use authorizations may be issued). As such, the number of acres where lands and realty actions are potentially restricted is used to indicate the impact of management actions and decisions.

Indirect impacts would potentially occur from restrictions that limit the type of development allowed by a specific use authorization (e.g., requirements to comply with BMPs and SOPs, see Appendix L, may make ROW projects infeasible). This principally occurs through the application of special stipulations, which would be applied to all ROW authorizations within avoidance areas and to meet other resource objectives (such as VRM objectives, desired habitat condition, or dust control measures) outside of avoidance areas. These would be established based on the proposed action through a site specific NEPA analysis.

The lack of site specific information for lands meeting the criteria for disposal or acquisition, details of future proposal for rights-of-way development, and the incomplete inventory of cultural resources limits the ability to perform quantitative analysis of these elements as they relate to land tenure and right-of-way authorizations. *This information, however, will be included in the site-specific analysis at the project level.*

Withdrawals related to mineral entry and leasing are analyzed under the Mineral Management sections.

Proposed management of the following resources, resource uses, or programs is anticipated to have an effect on Lands and Realty: Biological Resources, Cultural Resources, Visual Resources Management, Recreation and Visitor Services, ACECs, Wild and Scenic Rivers, and wilderness characteristics. Those resources not listed are deemed to have negligible effects and therefore, are not analyzed further.

ASSUMPTIONS

The analysis is based on the following assumptions:

- Site specific analysis will be conducted for all proposed land tenure actions and land use authorizations.
- Less than 1% of the Decision Area would meet the criteria for disposal (common to all action alternatives) and is likely to have interest expressed for its acquisition during the life of the plan.
- Land acquisitions will depend upon having willing sellers and available funding.
- Demand for land use authorizations is a result of several elements including economic and political climate and demand for services. It is anticipated that increases in population and associated demand for services will be the driving force in a greater call for rights-of-way for roads, utilities, renewable energy development, communication sites, and other land uses.
- BLM has limited discretion in restricting certain right-of-way authorization such as access to private mineral estate, leased or claimed minerals, or private in-holdings.
- The Decision Area is generally considered to have low potential for renewable energy development.

4.12.1 Impact of Alternative A (No Action)

4.12.1.1 Land Tenure

An emphasis is placed on land tenure adjustment activities (repositioning, new management or cooperative management) through the specific disclosure of lands available for disposal in the Decision Area, except NPR 2, for the purpose of improved management efficiency. These lands consist of approximately half of the public lands and all federal mineral estate. This would result in the retention of approximately 188,000 acres and would allow land tenure actions (disposals) to occur on 99% of the Decision Area. There are no criteria established governing which lands are suitable for disposal beyond those provided by law, regulation, and policy. Over the long term these disposals would lead to a net acre loss of public lands and federal mineral estate within the Decision Area.

4.12.1.2 Land Use Authorizations

Continuation of right-of-way utility corridors delineated by the Western Regional Utility Corridor Study of 1992 preferentially sites large scale utility projects within these areas. The implications of this are the trends to group development within these areas and limit the spread outside of the identified corridors. Beyond this there are only non-discretionary restrictions on ROW development (i.e., Wilderness designations).

4.12.1.3 Withdrawals

Continued withdrawal from application under the non-mineral public land laws of approximately 175,000 acres would limit the ability for appropriation of these acres.

4.12.2 Impacts Common to All Action Alternatives

4.12.2.1 Land Tenure

Retention of all lands not meeting disposal criteria (established through site specific study) diminishes the opportunity for disposal actions to occur. Furthermore, areas that do not meet these criteria as established by the decision, including NLCS units, SRMAs, lands acquired with LWCF funds, and mineral estate with significant fluid mineral potential completely eliminate the opportunity for disposal actions in these areas. This would be a reduction of greater than 99% of lands available for disposal and no net loss of public lands would be anticipated.

Identification of acquisition criteria and priorities such as special status species habitat would result in a net gain of public lands.

4.12.2.2 Land Use Authorizations

Continuation of right-of-way utility corridors delineated by the Western Regional Utility Corridor Study of 1993 preferentially sites large scale utility projects within these areas. The implications of this are the trends to group development within these areas and limit the spread outside of the identified corridors. However, the identification of ROW avoidance areas, including areas through which the delineated corridors pass, may create a potential for conflict between resources for which the avoidance area is identified to protect and development within the corridor.

4.12.2.3 Withdrawals

Continued withdrawal from application under the non-mineral public land laws of approximately 184,000 acres would limit the ability for appropriation of these acres.

4.12.3 Impact of Alternative B

4.12.3.1 Land Use Authorizations

Identification of avoidance areas *for all types of rights-of-way* (~~*128,130*~~ *102,550* acres), including all ACECs, lands managed for wilderness characteristics, ~~*and some NLCS units*~~ *the Piedras Blancas ONA, suitable Wild and Scenic Rivers (except Chimney Creek), and all Wilderness Study Areas* would restrict the opportunity for and feasibility of right-of-way authorizations through the application of special stipulations to development within these areas. *In addition, the identification of the Tehachapi Linkage area of ecological importance as a right-of-way avoidance area for utility scale* (i.e., those supplying power to the national grid) *renewable energy projects would restrict the opportunity for these rights-of-way on approximately 26,000 acres within this area of high wind energy development potential and historic development.*

Identification of exclusion areas (~~*121,300*~~ *118,860* acres) for all *types of* rights-of-way, ~~*a portion*~~ *the majority* of which is non-discretionary, would reduce the acreage available for rights-of-way. ~~*This would result in a 62% increase in areas with right-of-way restrictions.*~~

The identification of ACECs, ~~*NLCS units*~~, *the Piedras Blancas ONA*, SRMAs, and VRM Class I and II as exclusion areas (~~*280,650*~~ *261,690* acres) for utility scale renewable energy development would reduce the acreage available for right-of-ways granted for renewable energy development ~~*if new technologies provide means to produce energy in low potential areas*~~. Two areas where the exclusion of utility scale renewable energy development would potentially have immediate impact are Hopper Mountain and Horse Canyon ACECs. These ACECs comprise approximately 25% of the area identified as having high potential for wind energy within the Decision Area.

4.12.4 Impact of Alternative C

4.12.4.1 Land Use Authorizations

Identification of avoidance areas (158,050 acres), including all ACECs, some NLCS units, cultural sites eligible for the NHRHP, and designated critical habitat would restrict the opportunity for and feasibility of rights-of-way authorizations through the application of special stipulations to development within these areas. Identification of exclusion areas (151,410 acres) for all rights-of-way, a portion of which is non-discretionary, would reduce the acreage available for rights-of-way. This would result in a 77% increase in areas with right-of-way restrictions.

The identification of ACECs, NLCS units, designated critical habitat, SRMAs, and VRM Class I and II as exclusion areas (273,710 acres) for utility scale renewable energy development would reduce the acreage available for right-of-ways granted for renewable energy development if new technologies provide means to produce energy in low potential areas. Areas where the exclusion of utility scale renewable energy development would potentially have immediate impact include Hopper Mountain and Horse Canyon ACECs and designated critical habitat. These areas comprise approximately 60% of the area identified as having high potential for wind energy within the Decision Area.

4.12.5 Impact of Alternative D

4.12.5.1 Land Use Authorizations

Identification of avoidance areas (158,050 acres), including all ACECs, some NLCS units, cultural sites eligible for the NRHP, and designated critical habitat would restrict the opportunity for and feasibility of rights-of-way authorizations through the application of special stipulations to development within these areas. Identification of exclusion areas (151,410 acres) for all rights-of-way, a portion of which is non-discretionary, would reduce the acreage available for rights-of-way. This would result in a 77% increase in areas with right-of-way restrictions.

The identification of ACECs, NLCS units, designated critical habitat, SRMAs, and VRM Class I and II as exclusion areas (273,710 acres) for utility scale renewable energy development would reduce the acreage available for right-of-ways granted for renewable energy development if new technologies provide means to produce energy in low potential areas. Areas where the exclusion of utility scale renewable energy development would potentially have immediate impact include Hopper Mountain and Horse Canyon ACECs and designated critical habitat. These areas comprise approximately 60% of the area identified as having high potential for wind energy within the Decision Area.

4.12.6 Impact of Alternative E

4.12.6.1 Land Use Authorizations

Identification of avoidance areas (96,210 acres), including all ACECs and some NLCS units would restrict the opportunity for and feasibility of rights-of-way authorizations through the application of special stipulations to development within these areas. Identification of exclusion areas (121,300 acres) for all rights-of-way, a portion of which is non-discretionary, would reduce the acreage available for rights-of-way. This would result in a 54% increase in areas with right-of-way restrictions. Rights-of-way related to renewable energy development would not be further restricted.

4.13 Livestock Grazing

Public lands within the Bakersfield FO may be allocated as either available or unavailable for livestock grazing. Lands available for livestock grazing support livestock grazing operations within the region or provide opportunities for the development of such operations. The vast majority of public lands grazing allotments are utilized in conjunction with intermingled private lands which act as the base for the livestock operations.

Existing livestock grazing operations and future opportunities would be impacted when the area available for livestock grazing is reduced or restrictions on such use (i.e., the level, timing or type of use allowed) curtail the benefits provided by the use of those areas.

METHODS OF ANALYSIS

The analysis of impacts to livestock grazing focuses on the amount of lands allocated as either available or unavailable for livestock grazing within the public lands portion of the Decision Area for which management allocations have been made (402,800 acres). The analysis of impacts on the social and economic values related to regional livestock grazing is addressed in the *Social and Economic Conditions and Environmental Justice* section of this Chapter.

Direct impacts to livestock grazing (operations and opportunities) result from management actions that alter the amount of land that is available or unavailable for livestock grazing. Additional direct impacts to livestock grazing operations result from management actions that impose restrictions on the amount (AUMs), area, timing, or type of livestock grazing that could occur on lands allocated as available for livestock grazing.

Indirect impacts to livestock grazing operations can result from actions that restrict livestock grazing in such a way as to necessitate fencing or other actions to control livestock from any unauthorized use of the adjacent public lands. In addition livestock grazing may be indirectly impacted from environmental causes such as wildfire, drought or climate change that may diminish the productivity of land and therefore available forage.

Impacts are quantitatively described by the acreage change in livestock grazing opportunities. Impacts to livestock grazing operations are generally described qualitatively.

Proposed management of the following resources, resource uses, or programs is anticipated to have an effect on Livestock Grazing: Biological Resources, Cultural Resources, Wildland Fire Ecology and Management, Comprehensive Trails and Travel Management, Recreation and Visitor Services, and Special Designations. Those resources not listed are deemed to have negligible effects and therefore, are not analyzed further.

ASSUMPTIONS

Assumptions used in this impact analysis include the following:

- Overall productivity, sustainability, and viability of rangelands and the livestock operations that depend on them are achieved through accomplishing the fundamentals of rangeland health.
- Application of the appropriate Central California Guidelines for Livestock Grazing Management to the applicable grazing authorizations as needed to meet the Standards for Rangeland Health will beneficially impact livestock grazing operations and opportunities by ensuring rangelands are productive on a sustained basis.
- Actions associated with other resources or programs that minimize or eliminate surface-disturbing activities or protect water resources would have beneficial impacts on available rangeland resources, although not necessarily livestock grazing operations or opportunities.
- Seventy-five percent of acres allocated as available for livestock grazing but without a current authorization are estimated to result in new grazing authorizations on those lands within the life of the plan. The reasonably foreseeable levels of permitted grazing use in those new authorizations are projected given an estimated average stocking rate of five acres/AUM.
- Additional livestock management strategies (such as herding or the installation of fencing) will be needed to implement allocations of unavailable for livestock grazing. Periodic unauthorized grazing may still occur, especially on isolated, scattered parcels.
- Range improvements may be removed or allowed to remain in areas made unavailable *for livestock grazing* and these actions would be subject to site-specific assessments to comply with NEPA.

4.13.1Impact of Alternative A (No Action)

Management of both biological and cultural resources in ACECs and SMAs generally prescribes actions that reduce livestock grazing opportunities and limits the extent of operations for the protection of these resources. The majority of these areas has not historically been of interest to the livestock grazing industry and would not likely have been allotted.

Specifically within the Fresno and Madera counties portion of the decision area, prescribed burns would be used to increase livestock forage available. Short term losses in forage availability from such vegetation treatments will be replaced by long term increases in both the quality and quantity of forages.

Currently unallocated lands (27,000 acres) would remain unallocated and would be unable to be authorized for any level of livestock grazing. Lands currently allocated as available for livestock grazing

but without a current authorization (20,800 acres) would be expected to increase potential grazing opportunity by 3,100 AUMs over the existing permitted use levels to 37,600 AUMs.

Application of Bakersfield FO livestock grazing management guidelines would continue the same grazing management as the existing conditions. On a landscape scale, implementation of these guidelines would aid in the attainment of the Standards for Rangeland Health, and ultimately, healthy, sustainable forage for continued livestock grazing operations. Operations may be locally restricted through various actions such as the establishment of exclusion fencing, limitations on season of use, or postponement of turn-out dates in accordance with these guidelines based on site specific conditions.

Lack of adequate management of the Keyesville SMA and Temblor area would allow for continued surface disturbance associated with route proliferation and dispersed camping. This disturbance would decrease productivity of lands through decreased forage quality and quantity. Harassment of livestock away from desired grazing locations would escalate as unmanaged visitation increases.

New information concerning the compatibility of the Blue Ridge ACEC with livestock grazing would not be addressed and this area would remain unavailable.

Conflicting management decisions between the livestock grazing allocations and the special management for the Lokern ACEC would not be resolved; and the status of livestock grazing in this area would remain open to interpretation.

4.13.2Impacts Common to All Action Alternatives

Currently unallocated lands would be allocated as either available or unavailable for livestock grazing allowing the authorization of livestock grazing operations as appropriate; beyond this, no impacts are considered to be common to all action alternatives.

4.13.3Impact of Alternative B

Identification of priority communities, habitats and species; areas of ecological importance; ACECs proposed for the protection of biological resources generally prescribe management that reduces livestock grazing opportunities and limits the extent of operations for the protection of these resources. *Since the publication of the 1997 Caliente RMP, the BLM has* however, ~~*new information concerning compatibility of livestock grazing*~~ *reconsidered the impacts of livestock grazing in the Blue Ridge ACEC on condor habitat, determining that livestock grazing did not have negative effects on this habitat,* ~~*in the Blue Ridge ACEC would*~~ allow*ing* it to be designated available, therefore increasing livestock grazing opportunities locally. On the contrary, new information concerning compatibility of livestock grazing *with recreation activities within the sequoia groves and riparian quality within the sequoia groves* in portions of the Kaweah ACEC would cause them to be allocated as unavailable, therefore decreasing livestock grazing opportunities locally.

The allocation of the Atwell Island area of ecological importance as Available for livestock grazing only for the purpose of vegetation management to meet resource objectives (other than the production of livestock forage) provides new opportunities but would limit operations dependent on site specific needs for the San Joaquin Valley suite of special status species.

The use of wildland fire in certain Fire Management Units (FMUs) for resource benefit will be beneficial to livestock grazing operations and opportunities in those FMUs by indirectly providing improved forage

conditions. Short term losses in forage availability from such vegetation treatments will be replaced by long term increases in both the quality and quantity of forages.

Restrictive designations (non-motorized or closed) of ~~339~~ 365 miles of routes, most of which are within grazing allotments, would impact livestock grazing operations by limiting the ability to utilize motorized modes of transport for this activity. This impact could be alleviated through route redesignation associated with site-specific authorizations.

Through the incorporation of previously unallocated lands and adjustments in availability based on resource objectives ~~336,500~~ 336,700 acres would be available for livestock grazing; a 6% increase from the existing condition. Lands allocated as available for livestock grazing but without a current authorization (~~40,000~~ 40,300 acres) would be expected to increase potential grazing opportunity by 6,000 AUMs over the existing permitted use levels to ~~40,000~~ 40,200 AUMs.

Allocation of an additional 5,000 acres as unavailable over the existing condition (1% increase) results from management prescriptions to protect biological resources, specifically special management for portions of the Cyrus Canyon and Kaweah ACECs and priority species and habitats. This amounts to a reduction of ~~500~~ 400 AUMs in five existing allotments.

Application of Bakersfield FO guidelines for livestock grazing management would continue much of the same grazing management as the existing conditions. Minor adjustments, however, would clarify management for areas with special status species by removing unnecessary restrictions. On a landscape scale, implementation of these guidelines would aid in the attainment or exceedance of the Standards for Rangeland Health, and ultimately, healthy, sustainable forage for continued livestock grazing operations. Operations may be locally restricted through such actions as the establishment of exclusion fencing, limitations on season of use, or postponement of turn-out dates in accordance with these guidelines based on site specific conditions.

Designation of the Atwell Island, Case Mountain, Chimney Peak and Fresno River ERMAs would provide some management of existing recreation uses, specifically this may reduce surface disturbance associated with route proliferation. Reduced surface disturbance would increase productivity of lands through increased forage quality and quantity. Harassment of livestock away from desired grazing locations in the allotments may continue.

Designation and management of the Keyesville, San Joaquin River Gorge and Temblor Range SRMAs would provide supervision of existing recreation uses, specifically this may reduce surface disturbance associated with route proliferation and dispersed camping. Reduced surface disturbance would increase productivity of lands through increased forage quality and quantity. Increased BLM presence (e.g., visitor patrols) may reduce the level of harassment of livestock away from desired grazing locations.

Allocating the ~~entire~~ *Cyrus Canyon Kelso Creek monkeyflower Unit within the* Cyrus Canyon ACEC, an area that is currently allotted and grazed, as unavailable for livestock grazing for the protection of Shevock's monkeyflower may unnecessarily eliminate livestock grazing opportunities from an area far greater than required to achieve its protection than of the extent of known populations.

Prescriptive management applied to lands managed for wilderness characteristics would allow livestock grazing to continue at the level of initial authorization (including associated facilities) prior to designation. Opportunity for livestock grazing would not be lost; however, future increases in operations in these areas would be curtailed. New facilities would be restricted so as to not impair

wilderness characteristics. In addition, designation as OHV Closed area would restrict livestock support activities (e.g., rangeland improvement maintenance, livestock gathering, etc.) to primitive, non-motorized modes of transport (pedestrian or equestrian).

4.13.4Impact of Alternative C

Identification of priority communities, habitats and species; areas of ecological importance; ACECs proposed for the protection of biological resources generally prescribe management that reduces livestock grazing opportunities and limits the extent of operations for the protection of these resources. However, new information concerning compatibility of livestock grazing in the Blue Ridge ACEC would allow it to be designated available, therefore increasing livestock grazing opportunities locally. On the contrary, new information concerning compatibility of livestock grazing in portions of the Kaweah ACEC would cause them to be designated unavailable, therefore decreasing livestock grazing opportunities locally.

The allocation of the Atwell Island area of ecological importance as available for livestock grazing only for the purpose of vegetation management to meet resource objectives (other than the production of livestock forage) provides new opportunities but would limit operations dependent on site specific needs for the San Joaquin Valley suite of special status species.

The use of wildland fire in certain Fire Management Units (FMUs) for resource benefit will be beneficial to livestock grazing operations and opportunities in those FMUs by indirectly providing improved forage conditions. Short term losses in forage availability from such vegetation treatments will be replaced by long term increases in both the quality and quantity of forages.

The designation of OHV Closed areas (specifically lands managed for wilderness characteristics and Lokern-Buena Vista ACEC) would restrict livestock support activities (e.g., rangeland improvement maintenance, livestock gathering, etc.) to primitive, non-motorized modes of transport (pedestrian or equestrian).

Restrictive designations (non-motorized or closed) of 619 miles of routes, most of which are within grazing allotments, would impact livestock grazing operations by limiting the ability to utilize motorized modes of transport for this activity. This impact could be alleviated through route redesignation associated with site-specific authorizations.

Through the incorporation of previously unallocated lands and adjustments in availability based on resource objectives 330,200 acres would be available for livestock grazing: a 4% increase from the existing condition. Lands allocated as available for livestock grazing but without a current authorization (37,000 acres) would be expected to increase potential grazing opportunity by 5,600 AUMs over the existing permitted use levels to 37,900 AUMs.

Allocation of an additional 11,500 acres as Unavailable over the existing condition (3% increase) results from management prescriptions to protect biological resources, specifically special management for all or portions of several ACECs and priority species and habitats. These unavailable allocations would amount to a reduction of 1,700 AUMs in thirteen existing allotments from existing conditions. In addition, to achieve the allocation of unavailable for livestock grazing within riparian corridors or habitats, further livestock management strategies or approximately 40 miles of new fencing is estimated to be necessary to control livestock from entering these areas.

Application of Bakersfield FO livestock grazing management guidelines would continue much of the same grazing management as the existing conditions. Minor adjustments, however, would clarify management for areas with special status species by removing unnecessary restrictions. On a landscape scale, implementation of these guidelines would aid in the attainment or exceedance of the Standards for Rangeland Health, and ultimately, healthy, sustainable forage for continued livestock grazing operations. Operations may be locally restricted through such actions as the establishment of exclusion fencing, limitations on season of use, or postponement of turn-out dates in accordance with these guidelines based on site specific conditions.

Designation of the Atwell Island, Case Mountain, Chimney Peak and Temblor ERMAs would provide some management of existing recreation uses, specifically this may reduce surface disturbance associated with route proliferation. Reduced surface disturbance would increase productivity of lands through increased forage quality and quantity. Harassment of livestock away from desired grazing locations in the allotments may continue.

Designation and management of the Keyesville and San Joaquin River Gorge SRMAs would provide supervision of existing recreation uses, specifically this may reduce surface disturbance associated with route proliferation and dispersed camping. Reduced surface disturbance would increase productivity of lands through increased forage quality and quantity. Increased BLM presence (e.g., visitor patrols) may reduce the level of harassment of livestock away from desired grazing locations.

Allocating the entire Cyrus Canyon ACEC (5,400 acres), an area that is currently allotted and grazed, as unavailable for livestock grazing for the protection of Shevock's monkeyflower may unnecessarily eliminate livestock grazing opportunities from an area far greater than required to achieve its protection than of the extent of known populations.

Prescriptive management applied to lands managed for wilderness characteristics would allow livestock grazing to continue at the level of initial authorization (including associated facilities) prior to designation. Opportunity for livestock grazing would not be lost; however, future increases in operations in these areas would be curtailed. New facilities would be restricted so as to not impair wilderness characteristics.

4.13.5Impact of Alternative D

Although previously unallocated lands would be incorporated, the entire grazing decision area would be allocated as unavailable for livestock grazing. The process to terminate existing grazing leases would be initiated upon approval of the ROD. Livestock grazing would cease to be a feature on the landscape of public lands within 2 years after required permittee/lessee notification, with far reaching implications to livestock operators including feasibility of continued ranching on their base property.

Existing authorized range improvements may be removed from the public lands under this alternative. Where grazing permittees or lessees have documented interest in these improvements, the permittee or lessee shall receive reasonable compensation from the BLM for the depreciated value of their interest.

The enforcement of the allocation as Unavailable would place extreme financial burden on both the BLM (e.g., required patrol to implement) and the livestock owners (i.e., installation of fences) likely resulting in the failure of the livestock operation in many cases. The *Social and Economic Conditions and*

Environmental Justice section of this chapter, discusses the social and economic impacts from implementing these allocations in further detail.

In excess of 1,000 miles of new fencing may be necessary to prevent livestock from entering the 402,800 acres of land allocated as unavailable for livestock grazing. This fencing (primarily a responsibility of the livestock owners) would have repercussions beyond public lands impacting the continued function of adjacent private lands as a grazing unit through the interruption of livestock movement, elimination of access to preferential grazing areas (e.g., livestock watering sources, loafing and bedding areas), and ultimately making some portions of private property unusable. Direct impacts to the productivity of private lands as a result of the extensive fencing (e.g., livestock trailing around newly installed fences resulting in surface disturbance and subsequent increased potential for accelerated erosion) may indirectly impact public lands resources.

4.13.6Impact of Alternative E

Identification of priority communities, habitats and species; areas of ecological importance; ACECs proposed for the protection of biological resources generally prescribe management that reduces livestock grazing opportunities and limits the extent of operations for the protection of these resources. However, new information concerning compatibility of livestock grazing in the Blue Ridge ACEC would allow it to be designated available, therefore increasing livestock grazing opportunities locally. On the contrary, new information concerning compatibility of livestock grazing in portions of the Kaweah ACEC would cause them to be designated unavailable, therefore decreasing livestock grazing opportunities locally.

The identification of the Atwell Island area of ecological importance as available for livestock grazing only for the purpose of vegetation management to meet resource objectives (other than the production of livestock forage) would limit operations dependent on site specific needs for the San Joaquin Valley suite of special status species.

The use of wildland fire in certain Fire Management Units (FMUs) for resource benefit will be beneficial to livestock grazing operations and opportunities in those FMUs by indirectly providing improved forage conditions. Short term losses in forage availability from such vegetation treatments will be replaced by long term increases in both the quality and quantity of forages.

Restrictive designations (non-motorized or closed) of 96 miles of routes, most of which are within grazing allotments, would impact livestock grazing operations by limiting the ability to utilize motorized modes of transport for this activity. This impact could be alleviated through route redesignation associated with site-specific authorizations.

Through the incorporation of previously unallocated lands and adjustments in availability based on resource objectives 353,700 acres would be available for livestock grazing: a 10% increase from the existing condition. Lands allocated as available for livestock grazing but without a current authorization (52,600 acres) would be expected to increase potential grazing opportunity by 7,900 AUMs over the existing permitted use levels to 42,300 AUMs.

The allocation of 12,100 acres less than the existing condition (a decrease of 3%) as unavailable would result from management prescriptions to protect biological resources, specifically known populations of priority species and habitats. Some land previously unavailable would require future efforts to improve suitability before any authorization is made. This allocation would amount to a reduction of 100 AUMs

in five existing allotments across the decision area from existing conditions. Existing grazing leases would be amended upon approval of the ROD.

Application of Bakersfield FO livestock grazing management guidelines would continue much of the same grazing management as the existing conditions. Minor adjustments, however, would clarify management for areas with special status species by removing unnecessary restrictions. On a landscape scale, implementation of these guidelines would aid in the attainment or exceedance of the Standards for Rangeland Health, and ultimately, healthy, sustainable forage for continued livestock grazing operations. Operations may be locally restricted through such actions as the establishment of exclusion fencing, limitations on season of use, or postponement of turn-out dates in accordance with these guidelines based on site specific conditions.

Designation of the Atwell Island, Case Mountain, Fresno River and North Fork ERMAs would provide some management of existing recreation uses, specifically this may reduce surface disturbance associated with route proliferation. Reduced surface disturbance would increase productivity of lands through increased forage quality and quantity. Harassment of livestock away from desired grazing locations in the allotments may continue.

Designation and management of the Chimney Peak, Keyesville, San Joaquin River Gorge and Temblor Range SRMAs would provide supervision of existing recreation uses, specifically this may reduce surface disturbance associated with route proliferation and dispersed camping. Reduced surface disturbance would increase productivity of lands through increased forage quality and quantity. Increased BLM presence (e.g., visitor patrols) may reduce the level of harassment of livestock away from desired grazing locations.

Allocating the Cyrus Canyon area of ecological importance as available for livestock grazing except for the known populations of Shevock's monkeyflower (105 acres) would provide continued opportunity for livestock operations on the majority of this area while providing adequate protection for this priority species, meeting the Bakersfield grazing guidelines, and achieving the Standards for Rangeland Health.

4.14 Minerals Management

The purpose of the minerals management program is to support development of mineral resources on public lands in an environmentally sound manner.

Minerals management considers the impacts on commercial/industrial development, casual use, and recreational collection of mineral resources. These impacts result from increasing, limiting, or preventing the development of federal mineral estate and the land base on which they can occur. In addition to impacts to the availability of federal mineral estate to minerals development, impacts may alter the projected reasonable foreseeable development scenario (e.g., increasing or decreasing predicted levels of development).

METHODS OF ANALYSIS

The area of analysis for mineral resources varies by mineral type, but includes the entire Decision Area. As such, analysis of impacts on fluid mineral development considers 1,162,210 acres and solid mineral development (solid (non-energy) leasable, locatable, and salable) considers 1,046,290 acres.

Direct impacts to minerals are considered to be those that allow or prohibit the development of federal mineral estate. Indirect impacts include those restrictions implemented through terms and conditions, special stipulations, and conditions of approval (COAs). Furthermore indirect impacts to mineral development may extend to the feasibility of development itself.

Absence of a complete inventory with regard to ancillary facilities authorized in conjunction with mineral development (e.g., roads, pipelines, etc.) limits the ability to describe the extent these features may be impacted by management decisions; however, qualitative analysis is provided as appropriate. *It is still possible to make informed decisions regarding impacts of mineral management in spite of a lack of complete information based upon an understanding of impacts that are known to affect limit mineral development in general.*

To quantify impacts to mineral management, the acreage available for mineral development for each mineral type is used. This is further described by the areas closed with high potential for leasable and salable minerals or withdrawn with moderate to high potential locatable minerals. The mineral potential was assessed for each mineral type and categorized as "high", "moderate", "low", and "none" using the BLM's mineral potential classification system (BLM Manual 3060). *The USGS inventory of historic mine sites, metallic mines, non-metallic mines, and phosphate and sodium was used in the development for mineral potential in this analysis.*

Proposed management of the following resources, resource uses, or programs is anticipated to have an effect on the Minerals Management: Biological Resources, Cultural Resources, Soils, Visual Resources, Comprehensive Trail and Travel Management, Recreation and Visitor Services and Special Designations. Management decisions for those resources not listed are deemed to have negligible effects and therefore, are not analyzed further.

ASSUMPTIONS

The analysis is based on the following assumptions:

- Within the Decision Area there are: 158,500 acres with high oil and gas potential; 35,080 acres with solid (non-energy) leasable potential; 257,690 acres with locatable mineral potential; and 51,280 acres with salable mineral potential.
- Leaseholders and claimants have the right to explore, develop, and produce mineral resources from any valid, existing lease or claim. These existing rights continue even if the area is proposed to be closed or withdrawn, subject to continued production beyond the term of the lease or validity examination (respectively).
- New surface use stipulations for oil and gas development are only applied to new leases (those leased after the final approval of the ROD). Post-lease authorizations (e.g., APDs, road/pipeline ROWs) could, however, be encumbered by COA restrictions on a case-by-case basis, as required through project-specific analysis.
- No action taken under any alternative would result in deviation from the development described in the RFD (Appendix M) for fluid, locatable, and salable minerals.
- Mineral resources would be considered unrecoverable in areas designated unavailable for mineral development either through closure or withdrawal. *Valid existing rights in these areas would be respected.*

- Mineral development can occur in areas that remain available outside of areas of high occurrence potential; however, these endeavors are not expected to be productive based on currently available technologies. Furthermore, although areas may be classified as having high *occurrence* potential, specific locations within these areas may not have development potential.
- Identification of mineral potential is accurate and few mineral discoveries of significance will be made outside those areas with historic exploration and development.
- Restrictive designations (non-motorized, authorized, or closed) of routes would impact prospecting and exploration activities by limiting the ability to utilize motorized modes of transport for these activities.
- *Mineral development is restricted by a number of factors outside the authority of the BLM (e.g., state and local permitting requirements, nondiscretionary withdrawals, environmental compliance) that may have a greater impact on extraction activity than BLM management itself.*

4.14.1 Impact of Alternative A (No Action)

4.14.1.1 Fluid Minerals

Fluid mineral (oil and gas) development would continue to be available on 1,012,080 acres. Of the areas closed, 3,740 acres have high development potential for oil and gas; this is 2% of the area with high potential.

New leases would be issued with Standard Stipulations on 30% of the area available. In addition, the major constraint stipulation NSO would apply to new leases on 4,910 acres, of which 1,460 acres have development potential. Leasing with standard stipulations would not absolve operators from their obligations to comply various laws, regulations and policies (e.g., ESA and NHPA).

Fluid mineral (geothermal) development would continue to be available on 1,015,240 acres. Of these areas closed, 140,100 acres have potential for geothermal development.

4.14.1.2 Solid (non-energy) Leasable Minerals

Solid (non-energy) leasable mineral development would continue to be available on 817,690 acres. Of the areas closed, 493 acres (1%) have development potential for solid non-energy leasable minerals. *The proposed closed areas do not involve any known solid leasable mine sites in addition to those already closed.*

4.14.1.3 Locatable Minerals

The ability to stake a mining claim for the development of locatable minerals would continue to be available on 914,570 acres; the unavailable area includes 121,590 acres of existing withdrawals. This is a decrease of 7,954 acres 1% from the existing condition due to additional acreage proposed for withdrawal for the protection of other resources. Of the areas proposed for withdrawal, 21,330 acres (8%) have potential for locatable minerals development*. Alternative A restricts or prohibits development of 1,031 mines and mineral collecting sites, or 42% of the known 2,449 locatable mineral sites in the Decision Area.*

There are existing withdrawals that will continue to be in effect on 4,207 acres for the following: Piute Cyprus ACEC; Keysville SRMA (two parcels); San Joaquin River Gorge SRMA; Piedras Blancas Light Station ONA. There are 117,720 acres that will continue to be withdrawn in Wilderness Areas, and 20,311 acres that will continue to be withdrawn in WSA's.

The opportunity for collecting a rare variety of tubucular green moss agate at the Horse Canyon Agate beds – a world-class mineral collecting locality, would continue to be available.

4.14.1.4 Salable Minerals

Salable mineral development would continue to be available on 817,690 acres. Of the areas closed, 7,954 acres (16%) have potential for salable minerals development. In addition to total closure a number of salable mineral resources are restricted to administrative use only, therefore, eliminating commercial development from these sources. *Alternative A restricts or prohibits development of 144 mines and mineral collecting sites, or 19% of the known 761 salable mineral sites in the Decision Area*

4.14.2 Impacts Common to All Action Alternatives

4.14.2.1 Fluid Minerals

The types and styles of facilities associated with fluid mineral development may be altered through the application of conditions of approval (COAs) associated with site-specific projects to achieve non-mineral resource goals and objectives (e.g., BMPs for VRM and soils, SOPs and Avoidance Measures for threatened and endangered species); see Appendices B and L. While it is unlikely that these terms and conditions would limit fluid mineral development they may delay projects and require additional expense to implement these measures. These project-level COAs would be applied to both new and existing leases.

4.14.2.2 Locatable Minerals

Existing withdrawals preventing the location of mining claims would continue on 121,590 acres. Areas requiring Plans of Operations for locatable mineral exploration and development may be increased from the existing conditions due to special designations and specific resource objectives.

The types and styles of facilities associated with locatable mineral development may be altered through the application of terms and conditions associated with site-specific projects to achieve non-mineral resource goals and objectives (e.g., BMPs for VRM and soils, SOPs and Avoidance Measures for threatened and endangered species); see Appendices B and L. These terms and conditions may limit development, delay projects, and require additional expense to implement these measures, which could make small scale operations infeasible.

Activities permitted under the causal use component of locatable mineral surface management, specifically for recreational mining and prospecting, would be further refined through the application of special rules governing mining and prospecting methods. Throughout the Decision Area these additional restrictions would limit access to regularly prospected areas requiring disturbance to move further from existing routes and prohibit the removal of material offsite for processing. In effect this would narrow the range of opportunity for casual use and require the submittal of a Notice of Intent for activities that

do not currently require it. Additional limitations at Keyesville and San Joaquin River Gorge areas would further limit the opportunity for recreational gold prospecting activities.

4.14.2.3 Salable Minerals

The types and styles of facilities associated with salable mineral development may be altered through the application of terms and conditions associated with site-specific projects to achieve non-mineral resource goals and objectives (e.g., BMPs for VRM and soils, SOPs and Avoidance Measures for threatened and endangered species); see Appendices B and L. ~~*While it is unlikely that these*~~ *In some cases, the* terms and conditions would limit development *or* they may delay projects and require additional expense to implement these measures.

4.14.3 Impact of Alternative B

4.14.3.1 Fluid Minerals

Fluid mineral (oil and gas) development would continue to be available on ~~*999,950*~~ *1,011,470* acres, a decrease of 1% from the existing condition due to increased acreage of special designations for the protection of other resources. Of the ~~*areas*~~ *149,600 acres* closed 3,740 acres have high development potential for oil and gas; this is 2% of the area with high potential.

No new leases would be issued with Standard Stipulations or moderate constraints, as such; all new leases would be subject to some form of major constraint with the potential to limit fluid mineral extraction from all or a portion of the leased parcel. Specifically, the major constraint stipulation NSO would apply to new leases on a minimum of 3,880 acres, of which 1,550 acres have development potential. Overall, the increased area of major constraints would have little impact on development as operators are already required to comply with the various laws, regulations and policies these stipulations invoke.

The closure of 10,000 acres of highly industrialized oil fields to unauthorized public access would decrease the conflict between incompatible public uses (OHV recreation and target shooting) and the industrial setting of these oil fields. In addition, designation of the majority of routes in oil fields beyond the public closure as Authorized further reduces conflicts and incompatible use.

Fluid mineral (geothermal) development would continue to be available on 977,390 acres, a decrease of 1% from the existing condition due to increased acreage of special designations for the protection of other resources. Of these areas closed 146,180 acres have potential for geothermal development.

4.14.3.2 Solid (non-energy) Leasable Minerals

Solid (non-energy) leasable mineral development would continue to be available on ~~*818,330*~~ *908,510* acres, essentially the same as the existing condition (Alternative A). Of the areas closed 740 acres (2%) have development potential for solid non-energy leasable minerals. *There are no solid leasable mineral mine sites closed by this alternative in addition to those already closed under Alternative A.*

The types and styles of facilities associated with solid (non-energy) leasable mineral development may be altered through the application of terms and conditions associated with site-specific projects to achieve non-mineral resource goals and objectives (e.g., BMPs for VRM and soils, SOPs and Avoidance

Measures for threatened and endangered species); see Appendices B and L. ~~*While*~~ It is ~~*unlikely*~~ *possible* that these terms and conditions would limit development though delay of projects or they could require additional expense to implement. *Conformance to the terms and conditions could, make some projects uneconomic.*

4.14.3.3 Locatable Minerals

The ability to stake a mining claim for the development of locatable minerals would continue to be available on ~~*895,650*~~ *908,510* acres.

The requirement of an authorization or mining notice for casual use prospecting activity, other than gold panning, on the Fresno River ERMA, *Keyesville SRMA, some areas of ecological importance, some cultural resource sites and all ACECs* would narrow the range of opportunity for casual use. *There are no additional mine sites that would be made unavailable in addition to those already closed under Alternative A.*

Special management for the Horse Canyon ACEC would prohibit rock hounding, including the casual collection of fossils, mineral agates, and semi-precious stones throughout the ACEC, including the Horse Canyon Agate beds within the Decision Area. This would eliminate the opportunity for collecting this rare variety of tubucular green moss agate at this world-class mineral collecting locality.

4.14.3.4 Salable Minerals

Salable mineral development would continue to be available on ~~*818,090*~~ *908,510* acres, essentially the same as the existing condition; however, the specific areas closed differ from those existing. Of the areas closed, 20,980 acres 41% have potential for salable minerals development. This is a decrease of 34% in the available area with development potential from the existing conditions and result in a subsequent reduction in development from the reasonably foreseeable development scenario for salable minerals. ~~*The substantial reduction in areas available with potential with no increase in total areas closed, results from closures lifted from areas with no potential and being applied to areas with potential.*~~ *There are nine salable mine sites that would me made unavailable in addition to those already closed under Alternative A.*

In addition to total closure a number of salable mineral resources are restricted to administrative use only, therefore, eliminating commercial development from these sources. These administrative use areas with potential include: Cyrus Canyon, Kettleman Hills, Lokern-Buena Vista, and Piute Cypress ACECs. *These closures will reduce the number of jobs that would have been generated by mineral material production throughout the decision area.*

4.14.4 Impact of Alternative C

4.14.4.1 Fluid Minerals

Fluid mineral (oil and gas) development would continue to be available on 966,160 acres, a decrease of 5% from the existing condition due to increased acreage of special designations for the protection of other resources. Of the areas closed, 15,610 acres have high potential for oil and gas; this is 10% of the area with high potential. These closed areas have not historically been of interest to the oil and gas industry and would not likely have been developed. These closures are a result of the prescribed

management of the federal mineral estate underlying the State of California's Chimineas Unit of the Carrizo Plain Ecological Reserve and lands managed for compensation regardless of surface manager, for the protection of biological resources.

No new leases would be issued with Standard Stipulations or moderate constraints, as such; all new leases would be subject to some form of major constraint with the potential to limit fluid mineral extraction from all or a portion of the leased parcel. Specifically, the major constraint stipulation NSO would apply to new leases on a minimum of 8,400 acres, of which 3,990 acres have development potential. Overall, the increased area of major constraints would have little impact on development as operators are already required to comply with the various laws, regulations and policies these stipulations invoke.

The closure of 10,000 acres of highly industrialized oil fields to unauthorized public access would decrease the conflict between incompatible public uses (OHV recreation and target shooting) and the industrial setting of these oil fields.

The designation of OHV Closed areas (specifically Lokern-Buena Vista ACEC) would restrict mineral exploration and development activities including geophysical survey to primitive, non-motorized vehicles.

The designation of the majority of routes in oil fields as Closed creates conflict with existing use and authorizations. It is expected potentially illegal use of these routes by operators would continue until such time the route designations were appropriately adjusted to incorporate a complete inventory of existing authorizations (i.e., routes created in associated with APDs, Sundry Notices or ROWs). Some routes are not covered by such authorizations and would ultimately remain closed, this may inconvenience operators but would not limit their ability to access approved facilities.

Fluid mineral (geothermal) development would continue to be available on 956,780 acres, a decrease of 3% from the existing condition due to increased acreage of special designations for the protection of other resources. Of these areas closed 161,550 acres have potential for geothermal development.

4.14.4.2 Solid (non-energy) Leasable Minerals

Solid (non-energy) leasable mineral development would cease to be available, with the exception of existing leases. As a result there would be no reasonably foreseeable development of this mineral type in the Decision Area (a reduction of two projects over the life of the plan) and, consequently, resonating impacts to the social and economic conditions within the Planning Area.

4.14.4.3 Locatable Minerals

The ability to stake a mining claim for the development of locatable minerals would continue to be available on 862,030 acres with locatable mineral potential, a decrease of 6% from the existing condition due to increased acreage of special designations for the protection of other resources. Of the areas proposed for withdrawal, 35,510 acres (13%) have potential for locatable minerals development.

Special management for the Horse Canyon ACEC would prohibit rock hounding, including the casual collection of fossils, mineral agates, and semi-precious stones throughout the ACEC, including the Horse Canyon Agate beds within the Decision Area. This would eliminate the opportunity for collecting this rare variety of tubucular green moss agate at this world-class mineral collecting locality.

4.14.4.4 Salable Minerals

Salable mineral development would continue to be available on 781,120 acres, a decrease of 4% from the existing condition due to increased acreage of special designations for the protection of other resources. Of the areas closed, 21,110 acres (41%) have potential for salable minerals development. This is a decrease of 25% in the available area with development potential from the existing conditions and result in a subsequent reduction in development from the reasonably foreseeable development scenario for salable minerals.

In addition to total closure a number of salable mineral resources are restricted to administrative use only, therefore, eliminating commercial development from these sources. These administrative use areas with potential include: Cyrus Canyon, Kettleman Hills, Lokern-Buena Vista, and Piute Cypress ACECs.

4.14.5 Impact of Alternative D

4.14.5.1 Fluid Minerals

Fluid mineral (oil and gas) development would continue to be available on 966,160 acres, a decrease of 5% from the existing condition due to increased acreage of special designations for the protection of other resources. Of the areas closed, 15,610 acres have high potential for oil and gas; this is 10% of the area with high potential. These closed areas have not historically been of interest to the oil and gas industry and would not likely have been developed. These closures are a result of the prescribed management of the federal mineral estate underlying the State of California's Chimineas Unit of the Carrizo Plain Ecological Reserve and lands managed for compensation regardless of surface manager, for the protection of biological resources.

No new leases would be issued with Standard Stipulations or moderate constraints, as such; all new leases would be subject to some form of major constraint with the potential to limit fluid mineral extraction from all or a portion of the leased parcel. Specifically, the major constraint stipulation NSO would apply to new leases on a minimum of 8,400 acres, of which 3,990 acres have development potential. Overall, the increased area of major constraints would have little impact on development as operators are already required to comply with the various laws, regulations and policies these stipulations invoke.

The closure of 10,000 acres of highly industrialized oil fields to unauthorized public access would decrease the conflict between incompatible public uses (OHV recreation and target shooting) and the industrial setting of these oil fields.

The designation of OHV Closed areas (specifically Lokern-Buena Vista ACEC) would restrict mineral exploration and development activities including geophysical survey to primitive, non-motorized vehicles.

The designation of the majority of routes in oil fields as Closed creates conflict with existing use and authorizations. It is expected potentially illegal use of these routes by operators would continue until such time the route designations were appropriately adjusted to incorporate a complete inventory of existing authorizations (i.e., routes created in associated with APDs, Sundry Notices or ROWs). Some

routes are not covered by such authorizations and would ultimately remain closed, this may inconvenience operators but would not limit their ability to access approved facilities.

Fluid mineral (geothermal) development would continue to be available on 956,780 acres, a decrease of 3% from the existing condition due to increased acreage of special designations for the protection of other resources. Of these areas closed 161,550 acres have potential for geothermal development.

4.14.5.2 Solid (non-energy) Leasable Minerals

Solid (non-energy) leasable mineral development would cease to be available, with the exception of existing leases. As a result there would be no reasonably foreseeable development of this mineral type in the Decision Area (a reduction of two projects over the life of the plan) and, consequently, resonating impacts to the social and economic conditions within the Planning Area.

4.14.5.3 Locatable Minerals

The ability to stake a mining claim for the development of locatable minerals would continue to be available on 862,030 acres with locatable mineral potential, a decrease of 6% from the existing condition due to increased acreage of special designations for the protection of other resources. Of the areas proposed for withdrawal, 35,510 acres (13%) have potential for locatable minerals development.

Special management for the Horse Canyon ACEC would prohibit rock hounding, including the casual collection of fossils, mineral agates, and semi-precious stones throughout the ACEC, including the Horse Canyon Agate beds within the Decision Area. This would eliminate the opportunity for collecting this rare variety of tubucular green moss agate at this world-class mineral collecting locality.

4.14.5.4 Salable Minerals

Salable mineral development would continue to be available on 781,120 acres, a decrease of 4% from the existing condition due to increased acreage of special designations for the protection of other resources. Of the areas closed, 21,110 acres (41%) have potential for salable minerals development. This is a decrease of 25% in the available area with development potential from the existing conditions and result in a subsequent reduction in development from the reasonably foreseeable development scenario for salable minerals.

In addition to total closure a number of salable mineral resources are restricted to administrative use only, therefore, eliminating commercial development from these sources. These administrative use areas with potential include: Cyrus Canyon, Kettleman Hills, Lokern-Buena Vista, and Piute Cypress ACECs.

4.14.6 Impact of Alternative E

4.14.6.1 Fluid Minerals

Fluid mineral (oil and gas) development would continue to be available on 1,013,010 acres; essentially the same as the existing condition. Of the areas closed, 2,100 acres have high development potential for oil and gas; this is 1% of the area with high potential.

No new leases would be issued with Standard Stipulations or moderate constraints, as such; all new leases would be subject to some form of major constraint with the potential to limit fluid mineral extraction from all or a portion of the leased parcel. Specifically, the major constraint stipulation NSO would apply to new leases on a minimum of 3,590 acres, of which 3,110 acres have development potential. Overall, the increased area of major constraints would have little impact on development as operators are already required to comply with the various laws, regulations and policies these stipulations invoke.

Public access to highly industrialized oil fields would continue the conflicts between incompatible public uses (OHV recreation and target shooting) and the industrial setting of these oil fields.

Fluid mineral (geothermal) development would continue to be available on 990,450 acres; essentially the same as the existing condition. Of these areas closed 140,720 acres have potential for geothermal development.

4.14.6.2 Solid (non-energy) Leasable Minerals

Solid (non-energy) leasable mineral development would continue to be available on 896,830 acres, an increase of 8% from the existing condition. Of the areas closed 320 acres (1%) have development potential for solid non-energy leasable minerals.

The types and styles of facilities associated with solid (non-energy) leasable mineral development may be altered through the application of terms and conditions associated with site-specific projects to achieve non-mineral resource goals and objectives (e.g., BMPs for VRM and soils, SOPs and Avoidance Measures for threatened and endangered species); see Appendices B and L. While it is unlikely that these terms and conditions would limit development they may delay projects and require additional expense to implement these measures.

4.14.6.3 Locatable Minerals

The ability to stake a mining claim for the development of locatable minerals would continue to be available on 906,930 acres, a decrease of 1% from the existing condition due to increased acreage of special designations for the protection of other resources. Of the areas proposed for withdrawal, 21,610 acres (8%) have potential for locatable minerals development.

The opportunity for collecting a rare variety of tubucular green moss agate at the Horse Canyon Agate beds – a world-class mineral collecting locality, would continue to be available.

4.14.6.4 Salable Minerals

Salable mineral development would continue to be available on 896,830 acres, an increase of 8% from the existing condition. Of the areas closed 17,580 acres (34%) have potential for salable minerals development. This is a decrease of 18% in the available area with development potential from the existing conditions and result in a subsequent reduction in development from the reasonably foreseeable development scenario for salable minerals.

In addition to total closure a number of salable mineral resources are restricted to administrative use only, therefore, eliminating commercial development from these sources. These administrative use

areas with potential include: Kettleman Hills, Lokern-Buena Vista, and Piute Cypress ACECs and the Cyrus Canyon area of critical environmental concern.

4.15 Recreation and Visitor Services

Recreation activities are not managed on federal mineral estate where there is no BLM surface and the surface owner has property rights that allow the restriction of activity on and travel across their lands. The pattern of land ownership results in many parcels of BLM land being inaccessible (or access only resulting from trespass across private property); these areas with no legal public access are considered to have diminished impacts to Recreation and Visitor Services over those areas where legal public access exists.

METHODS OF ANALYSIS

The analysis focuses on public lands (surface) within the Decision Area.

Direct impacts to Recreation and Visitor Services are considered to be those that allow, restrict or prohibit opportunity; including both, the opportunity for access (i.e., public closure) and opportunity to engage in specific activities (e.g., participation in camping or shooting activities). Indirect impacts are considered to be those alter the physical, social or administrative settings (Appendix H). Impacts on settings can either be beneficial by the achievement of a desired setting or adverse through the unwanted shift in setting to either a more primitive or urban environment.

Physical, social and administrative settings are not specifically managed for in areas not designated for recreation management, although these areas do still provide intrinsic recreational values and opportunities. The indicator used to describe the impact on these areas is the availability of opportunities as described by either acreage restrictions or specific activity prohibitions.

For areas specifically managed for recreation (either as ERMA or SRMA) both availability of opportunity and changes to physical, social and administrative settings are used as indicators of impact. As necessitated the average resulting from the three separate settings is used to indicate the change from the existing environment.

Since visitor use patterns are difficult to estimate and dependent on many factors beyond the scope of management (e.g., recreational trends and economy) only qualitative language (e.g., increase or decrease) is used to describe anticipated impacts on visitation. *It is still possible to make informed decisions regarding impacts on visitation in spite of a lack of complete information based upon an understanding of impacts that are known to affect visitation in general.*

Proposed management of the following resources, resource uses, or programs is anticipated to have an effect on the Recreation and Visitor Services: Biological Resources, Cultural Resources, Visual Resources, Comprehensive Trail and Travel Management, Lands and Realty, and Special Designations. Those resources not listed are deemed to have negligible effects and therefore, are not analyzed further.

ASSUMPTIONS

The following assumptions are used in the impact analysis:

- Recreational activity occurs on all public lands (including those not managed for recreation).

- Designation of Recreation Management Areas increases the ability to protect and enhance the targeted set of activities, experiences and benefits and desired recreation setting characteristics on a long-term basis.
- Actions that afford environmental protection or reduce development (e.g., protection of riparian habitat, closure of roads, restriction on mineral development, or management for VRM Class I or II) generally preserve or maintain more primitive settings; however, if on-the-ground control measures are required to implement/enforce protective measures such as, signs, fencing, patrols etc., operational and social elements may shift away from the more primitive settings.
- Actions that allow for surface disturbance or development (e.g., OHV use, mineral exploration and extraction, construction of rangeland improvements or establishment of Rights-of-Way), generally promote a more urban setting for both physical and social elements of the setting.
- Intensively developed industrial areas (oil fields) and utility scale renewable energy projects would be considered to be incompatible with recreational use and result in loss of opportunities for public access and recreational activities.
- Only four types of dispersed recreational activity are identified for specific management, namely: equestrian use, hunting, overnight camping, and shooting sports (target shooting, paintball and air-soft activities, etc.). Caving and specialized vehicle recreation also receives specific management although are not considered dispersed activities, due to their dependency on a very specific and infrequently occurring resources.
- Closed OHV Area designations eliminate recreational opportunity related to OHV use. Limited OHV Area designations restrict recreational opportunity related to OHV use to only those routes designated as Motorized unless as permit is given to use Authorized routes; therefore the size of the limited OHV area doesn't impact recreation, however the specific designation of routes does.
- Introduction of fees for service in areas previously free would reduce recreational opportunities for certain segments of the population who cannot afford to pay.
- Management of National Trails promotes recreational opportunities and access, but does not provide additional opportunity.
- Prescriptive management of lands managed for wilderness characteristics and management of WSAs would protect opportunities for solitude and primitive, unconfined recreation types.

4.15.1 Impact of Alternative A (No Action)

Identification of the North Fork SMA for the protection of riparian resources, cultural resources, and sensitive vegetation, while improving recreational opportunities would limit the length of stay for visitors to reduce conflicts and increase visitor turnover. Limited opportunities would be available to a larger audience. The capacity of the SMA for such use is severely hindered by the physical nature of the sites (topography). Over the life of the plan, it would be expected that visitor numbers would exceed management capacity endangering public safety and health.

Intermittent closure of public lands to public access, as resource values necessitate (e.g., condor nesting periods if found to be nesting in the area) would be in effect in several ACECs; none of which are

managed for recreation. Although the extent of these temporary closures would be limited to the boundaries of the ACECs affected, it is unknown when these closures may be enacted, how long they would last and what specific areas they would affect (a site specific NEPA document and federal register publication would be required). The effect of these intermittent closures would be localized, and temporarily reduce access and limit recreational activities.

Identification of the Keyesville SMA would manage for low impact recreational types compatible with natural resources including cultural resources and biological values. Management would limit portions of the area to day-use only therefore restricting overnight camping opportunities. This may further limit opportunities for non-primitive recreational types (e.g., OHV use, mountain biking, and recreational gold prospecting).

Management of existing Class II visual resources as VRM Class II within the San Joaquin River Gorge SRMA would result in alteration of the scenic qualities of the area, which may be undesirable and alter the existing physical setting. No VRM Classes would be assigned to other areas of recreational use and therefore existing physical settings may be changed.

The designation of the San Joaquin Gorge SRMA continues unique opportunities for environmental education and interpretation for schools in the local area.

No targeted activities, desired outcomes or benefits are listed for the recreational designations made, which does not satisfy current policy and guidance. Furthermore, providing no other SRMA designations for some of the most intensively visited areas of public land and those providing the most sensitive and/or unique opportunities, fails to adequately provide for recreation management. The majority of recreation management would continue to be reactive to problems and issues; rather than proactively addressing and providing for public use. It is expected that all existing recreation settings would migrate towards more urban settings as visitation increased and more administrative controls were installed to resolve problems with visitation.

Continued and increasing use of the Case Mountain region would over the life of the plan cause both conflicts with adjacent land owners (pressures on their properties resulting from access issues) and resources (e.g., unplanned routes often poorly designed would continue to erode hillsides and associated impacts). In addition the quality of the recreational experiences would be diminished without management controls on levels of use and provision of visitor services (maps, kiosks etc.).

Failure to provide management for public visitation to the Temblor Range area would continue to allow a myriad of issues, namely; continued private property trespass; OHV incursion into the Carrizo Plain National Monument; and route proliferation. Visitation in this area is expected to increase over the life of the plan exacerbating these issues and leading to the continued decline in both recreational opportunity and environmental resources.

Prohibition of certain activities (those receiving specific management) in areas through either ACEC special management, implementation of biological resource management or to achieve desired recreation conditions would reduce opportunity for these activities on public lands. Table 4.15-1 summarizes these restrictions and the percent change from where these activities are currently allowed.

Table 4.15-1
Alternative A - Recreation Opportunities Restricted within the Decision Area

Opportunities	Acres Prohibited	Percent of Change
Equestrian use	450	0%
Hunting	0	0%
Overnight camping	2,890	0%
Shooting Sports	127,930	0%

"Acres prohibited" includes areas closed to all forms of public access.

Continued designation of the Back Country Byway supports opportunities associated with Byway interpretation and increases the potential for associated improvements (kiosks, viewing areas etc.) along this route to be developed. The issues concerning connectivity the Long Valley Loop road would diminish the recreational opportunities this designation provides, if not addressed.

4.15.2 Impacts Common to All Action Alternatives

Intermittent closure of public lands to public access, as resource values necessitate (e.g., condor nesting periods if found to be nesting in the area) would be in effect in several ACECs; none of which are managed for recreation. Although the extent of these temporary closures would be limited to the boundaries of the ACECs affected, it is unknown when these closures may be enacted, how long they would last and what specific areas they would affect (a site specific NEPA document and federal register publication would be required). The effect of these intermittent closures would be localized, and temporarily reduce access and limit recreational activities.

The allocation to "public use" of various cultural resources including historic sites within the Keyesville SRMA and the Piedras Blancas Light Station would support recreational use of these sites as educational and interpretational facilities. These cultural resource allocations increase opportunities for recreation dependent on these resources and would result in increased visitation to these sites over the life of the plan. With specific regard to the Keyesville SRMA, the "public use" allocation of sites within the Gold Fever RMZ directly supports the cultural exploration targeted activities.

VRM Classes would be designated in support of desired physical recreation settings aiding in the attainment and long term protection of these settings.

Designation of SRMAs (Keyesville and San Joaquin River Gorge) and ERMAs (Atwell Island and Case Mountain) would provide specific desired outcomes for recreational settings. Where these outcomes match the existing settings, the current setting would be preserved through recreation management aimed at maintaining it. Table 4.15-2 presents the existing and the prescribed setting (average derived from physical, social and administrative) for the RMZs and ERMAs designated.

Table 4.15-2
Existing and Prescribed Settings for RMZs and ERMAs

SRMA/RMZ	Existing Setting	Prescribed Setting
Keyesville SRMA		
The Dam	Front Country	Front Country
French Gulch	Back Country	Middle Country
Gold Fever	Front Country	Front Country
Wallow Rock	Front Country	Rural
San Joaquin River Gorge SRMA		
Pa'san	Middle Country	Middle Country
Wu Ki' Oh	Middle Country	Middle Country
Tahoot	Front Country	Rural
ERMAs		
Atwell Island	Middle Country	Middle Country
Case Mountain	Back Country	Back Country

As can be seen in the table, the trend across the areas designation as RMAs (either SRMAs or ERMAs) is to preserve the existing setting in which recreation is currently occurring. The exception to this is those RMZs which would receive an elevated level of administrative management; therefore primarily shifting the operational setting towards the more urban end of the spectrum. This is generally a shift of just one setting category, but may inadvertently alter the physical and social settings in doing so.

The designation of the Atwell Island ERMA and overlapping identification of an area of ecological importance supports the ERMA objectives through the protection and enhancement of wildlife viewing opportunity.

The designation of the Case Mountain ERMA would focus acquisition efforts on a more suitable public access and parking area therefore increasing public access and over the life of the plan potentially increasing visitation. The ERMA management would enhance existing opportunities and activities specifically mountain biking, through the maintenance and improvement of non-motorized trails. Prohibition of competitive events (i.e., no competitive SRPs issued) and restrictions on the number of commercial permits available (e.g., outfitters and guides) would aid in maintaining the desired Middle Country social and administrative settings of the area.

The designation of the Keyesville SRMA ensures the diverse recreation experiences available in this location, ranging from primitive to intensive recreational types and individual visits to large organized events, receive the appropriate levels of management, including visitor services and environmental monitoring to sustainably support the area of highest public use within the Decision Area. Management guidance provided through the identification of RMZs, especially as they relate to the various targeted activities, provides the ground work for subsequent activity-level planning needed to achieve the desired experiences and benefits.

The designation of the San Joaquin Gorge SRMA continues unique opportunities for environmental education and interpretation for schools in the local area. Management guidance provided through the identification of RMZs, especially as they relate to the various targeted activities, provides for the desired experiences and benefits.

The prescriptive management allowing only day-use in various areas (ACECs, areas of ecological importance, and RMZs) would have the most significant impact on The Dam RMZ since visitation and camping within this area comprise the largest proportion of visitation within the Decision Area (estimated 200,000 campers per year). Elimination of overnight camping, however, supports the targeted activities and benefits of the RMZ, and alternate camping opportunities would be provided throughout the SRMA. Outside of these areas closed overnight camping the opportunity is restricted to a length of stay limitation (i.e., 14 days within a 90 day period of a 25 mile radius of original camp location). Although this locally limits camping activities for individuals beyond the 14 days, it does allow for up eight weeks of camping at the same dispersed location within a calendar year, and furthermore increases camping opportunity for those individuals using dispersed camping areas greater than 25 miles apart. This is a 50% increase in camping opportunity for the individual at the same location and a 92% increase area wide.

Limitations on Specialized Vehicle Recreation would reduce opportunity for this activity to occur to only those areas designated for such use and those allowed by permit. This essentially has no impact as it mimics current management of this activity.

Prescriptive management prohibiting the discharge of firearms limits all shooting activities, except legal hunting. This includes the loss of opportunity for paint balling, air-soft, and target shooting. These restrictions not specifically affect any areas where this activity is known to occur.

The method of providing public access to the Piedras Blancas Light Station limits opportunity to only permitted or guided tours. Levels of visitation over the life of the plan would be dependent on the frequency these visitor services were provided.

Management of the PCNST through the identification of a 0.25 mile trail corridor and associated management prescriptions would support recreational trail values (scenic quality, continued access, etc.) and indirectly desired physical and administrative settings-when identified. Management of the Wu Ki' Oh National Recreation Trail again supports recreational trail values and use. The National Trails promote access opportunities and activities associated with primitive or semi-primitive (mechanized use on the Wu Ki' Oh trail) trail use, including; hiking, equestrian/livestock use, dispersed camping and hunting.

4.15.3 Impact of Alternative B

Identification of SRMAs as exclusion areas for utility scale renewable energy projects aids in achieving the desired recreation settings and ensure access to and opportunity for recreational experiences continue.

Designation of ~~*45,240*~~ *41,590* acres for special recreation management (i.e., as SRMAs: Keyesville, San Joaquin River Gorge, Temblor Range) and ~~*167,320*~~ *130,580* acres for recreation management (i.e., as ERMAs: Atwell Island, Case Mountain, Chimney Peak and Fresno River) would provide specific desired outcomes for recreational settings. Table 4.15-3 presents the existing and the prescribed setting (average derived from physical, social and administrative) for the RMZs within the SRMAs and ERMAs.

Table 4.15-3
Existing and Prescribed Settings for RMZs and ERMAs

SRMA/RMZ	Existing Setting	Prescribed Setting
Temblor Range SRMA		
Temblor North	Back Country	Middle Country
Urban Interface	Back Country	Middle Country
ERMAs		
Chimney Peak	Primitive	Primitive
Fresno River	Front Country	Front Country

As can be seen in the table, the trend across the areas designation as RMAs (either SRMAs or ERMAs) is to preserve the existing setting in which recreation is currently occurring.

The designation of the Chimney Peak ERMA would focus management efforts on maintenance of existing facilities and access to Wilderness opportunities and the PCNST.

The designation of the Temblor Range SRMA would ensure the recreation experiences available in this location; ranging from primitive to intensive recreational types receive the appropriate levels of management, including visitor services and environmental monitoring to sustainably support public use. Management guidance provided through the identification of RMZs, especially as they relate to the various targeted activities would enhance existing opportunities and activities specifically OHV use, through the maintenance and improvement of motorized trails. Prohibition of competitive events (i.e., no competitive SRPs issued) and restrictions on the number of commercial permits available (e.g., outfitters and guides) would aid in maintaining the desired Middle Country social and administrative settings of the area.

Closure of approximately ~~*11,000*~~ *4,000* acres to all forms of public access, except travel on state and county roads would limit opportunity for access and all recreation activities in these areas. This prohibition results from restrictions in oil fields for protection of public health and safety, *recreation sites along the North Fork of the Kaweah to address public safety and resource damage concerns,* and in Bitter Creek ACEC for the purpose of coordinating management with the adjacent Wildlife Refuge. ~~*Neither*~~ *None* of these areas is specifically managed for recreation and all legal visits would cease. This is a decrease in public land available for general public use of 3%.

The permanent closure of the recreation sites along the North Fork of the Kaweah eliminates access and all recreation activities (such as, water-play, fishing and picnicking) from these desirable river access locations. Concerns over excessive unmanaged visitation resulting in resource damage and risks to public safety and health from such visitation and the small carrying capacity of these sites would cease. Access to the North Fork area would be allowed to continue outside the closed recreation sites.

~~*In addition to the areas of total closure, recreation sites along the North Fork of the Kaweah would be seasonally closed (from May through September) to address carrying capacity issues of these sites (i.e., inadequate infrastructure to support high visitation and infeasibility to provide enhanced infrastructure due to topography and location.). Although this area is not managed for recreation this seasonal closure eliminates access and all recreation activities (such as, water-play, fishing and picnicking) for the period when they are most desirable. It does however, continue to allow access for activities such as hunting,*~~

~~*fishing and kayaking through the fall and winter months. Access would not be limited outside of the recreation sites at any time of year.*~~

Prohibition of certain activities (those receiving specific management) in areas through ACEC special management, implementation of biological resource management, or to achieve desired recreation conditions in SRMAs and ERMAs would reduce opportunity for these activities on public lands. Table 4.15-4 summarizes these restrictions and the percent change from where these activities are currently allowed.

Table 4.15-4
Alternative B - Recreation Opportunities Restricted within the Decision Area

Opportunities	Acres Prohibited	Percent Change
Equestrian use	~~*45,550*~~ *20,700*	5% ↑
Hunting	~~*30,940*~~ *7,540*	~~*3*~~ *2*% ↑
Overnight camping	~~*42,840*~~ *21,820*	5% ↑
Shooting Sports	~~*199,130*~~ *14,200*	~~*9% ↑*~~ *1%*

Areas available for equestrian use and overnight camping would be reduced by 5%. Of the areas closed to equestrian use, a number of locations are known to be popular for this activity including Cyrus Canyon and Los Osos ACECs. The closure to camping specifically impacts use occurring within Cyrus Canyon ACEC, Fresno River ERMA, and The Dam RMZ within Keyesville SRMA. A portion of the closure for shooting sports results from specifically allocating areas where shooting would otherwise be prohibited through state laws (e.g., within camping areas).

Although not considered a recreational activity by itself campfires (including those associated with overnight camping) would also be restricted. Primarily by area prohibition, including all those acres where overnight camping is prohibited and additional areas where sensitive biological resource are at the greatest risk from human-ignited wildfire; and indirectly by a limitation on the size of woody materials collected from public lands for use in campfires (to less than four inches in diameter).

Caving opportunities would be limited by the identification of known caves (and those occurring with Erskine Creek and Kaweah ACECs) as either Class II or III (restricted or closed). Restricted caves would still allow permitted recreational use, therefore unlikely to impact caving groups (which are currently required to have a permit as an organized group), but individual cavers would be also be required to get a permit, which they are not currently required to do. Millerton Cave (in the SJRG) would remain open (Class I) to all public users.

Rockhounding and casual collection of mineral specimens would be limited through specific prohibition on this activity in Wallow Rock RMZ and the Horse Canyon ACEC. There are no known collection sites within the Wallow Rock RMZ; however, this restriction would essentially prohibit the activity of gold panning and collection of gold from the area withdrawn from the General Mining Law. The prohibition in the Wallow Rock RMZ would allow for the attention of desired recreational setting. The Horse Canyon ACEC is known to contain agates which have historically been collected by rockhounds. The prohibition of this activity would eliminate the recreational collection of these agates from public lands. Due to the unique nature of the resource (i.e., not found elsewhere in the field office) the opportunity casual collection of this mineral type would be lost from the Decision Area. The casual collection of mineral specimens is not impacted outside of these two areas, however casual use (conducted under 43 CFR 3809) which may in some cases be considered recreational prospecting would be impacted by specific

locatable mineral management including the requirement to notify the BLM 15-days prior to conducting any casual use in 53,810 acres including 30 mineral locations of public interest (Appendix G). The requirement doesn't prohibit causal use, but introduce the need for foresight and planning on the part of the recreationalist.

Recreational OHV opportunity is eliminated by Closed OHV area designations from approximately 141,100 acres. This is a reduction in acreage available for these opportunities of less than 1%[67] from the existing conditions. Within the Limited OHV area designation ~~770~~ 1,430 miles of route are designated as Motorized (thus allowing recreational OHV use) this is a ~~reduction~~ *increase* of, ~~167~~ *437* miles or ~~18%~~ *34%* from the existing available network. The route designations do also provide ~~76~~ *72* miles of *route specifically for* non-motorized ~~routes~~ *users* which may ~~in~~directly enhance opportunities for non-motorized (bicycling, hiking, horseback riding etc.) recreational activities; *although actual opportunity for non-motorized use is greater as route designated Motorized allow for all modes up transport up-to and included motorized vehicles. As such non-motorized user may benefit from up to 1,457 miles of opportunity and non-mechanized users over 1,500 miles of opportunity.*

Closure of293 miles of route may result in changes to use patterns and therefore changes in recreational setting; however the overall increase in available routes for all modes of transport could accommodate the displaced use.

Revocation of the Back Country Byway would abolish the opportunities associated with Byway interpretation and potential for associated improvements (kiosks, viewing areas etc.) along this route, and from the Decision Area. ~~This~~ *The routes themselves would remain open so* do not however, impact the ability to engage in driving for pleasure.

4.15.4 Impact of Alternative C

Identification of SRMAs as exclusion areas for utility scale renewable energy projects aids in achieving the desired recreation settings and ensure access to and opportunity for recreational experiences continue.

Designation of 21,490 acres for special recreation management (i.e., as SRMAs: Keyesville and San Joaquin River Gorge) and 190,910 acres for recreation management (i.e., as ERMAs: Atwell Island, Case Mountain, Chimney Peak and Temblor Range) would provide specific desired outcomes for recreational settings. Where these outcomes match the existing settings, the current setting would be preserved through recreation management aimed at maintaining it. Table 4.15-5 presents the existing and the prescribed setting (average derived from physical, social and administrative) for each of the ERMAs designated.

Table 4.15-5
Existing and Prescribed Settings for ERMAs

SRMA/RMZ	Existing Setting	Prescribed Setting
ERMAs		
Chimney Peak	Primitive	Primitive
Temblor Range	Back Country	Back Country

[67] This percentage does not include reduction in OHV opportunity from area closed to public access within the Limited OHV area designation.

As can be seen in the table, the trend across the areas designation as RMAs (either SRMAs or ERMAs) is to preserve the existing setting in which recreation is currently occurring.

Closure of approximately 23,000 acres to all forms of public access, except travel on state and county roads would limit opportunity for access and all recreation activities in these areas. This prohibition results from restrictions in oil fields for protection of public health and safety, the recreation sites along the North Fork of the Kaweah to resolved carrying capacity concerns and in several ACECs both for protection of relevance values and to coordinate management with adjacent land owners. None of these areas are specifically managed for recreation and all legal visits would cease. This is a decrease in public land available for general public use of 6%.

Prohibition of certain activities (those receiving specific management) in areas through either ACEC special management, implementation of biological resource management or to achieve desired recreation conditions in SRMAs and ERMAs would reduce opportunity for these activities on public lands. Table 4.15-6 summarizes these restrictions and the percent change from where these activities are currently allowed.

Table 4.15-6
Alternatives C/D - Recreation Opportunities Restricted within the Decision Area

Opportunities	Acres Prohibited[68]	Percent Change
Equestrian use	69,030	17% ↑
Hunting	54,600	14% ↑
Overnight camping	75,190	19% ↑
Shooting Sports	236,110	27% ↑

Areas available for equestrian use, overnight camping, and shooting sports would be sizably reduced. Of the areas closed to equestrian use, a number of locations are known to be popular for this activity including Cyrus Canyon and Los Osos ACECs. The closure to camping specifically impacts use occurring within Cyrus Canyon and Piute Cypress ACECs and The Dam RMZ within Keyesville SRMA. A portion of the closure for shooting sports results from specifically allocating areas where shooting would otherwise be prohibited through state laws (e.g., within camping areas), but there would be loss of legitimate opportunities (e.g., Erskine Creek, Kaweah, and Lokern-Buena Vista ACECs).

Although not considered a recreational activity by itself campfires (including those associated with overnight camping) would also be restricted. Primarily by area prohibition, including all those acres where overnight camping is prohibited and further areas where sensitive biological resource are at the greatest risk from human-ignited wildfire; and indirectly by a prohibition on collection of woody materials for campfires on all public lands. Where campfires are allowed the prohibition of collection may result in an increase in litter (nails, packing/bundling materials, etc.) and burning of undesirable wood types (pallets, treated lumber, etc.). Furthermore this may place undue burden on a variety of recreationalists as they have to acquire and transport their campfire materials; most impacted being

[68] "Acres prohibited" includes areas closed to all forms of public access.

primitive recreational user of the wilderness areas and through hikers along the Pacific Crest National Scenic Trail, whom may be unable to carry enough fuel for extended visits.

Caving opportunities on public lands would be limited by the identification of caves as either Class II or III. (restricted or closed). This would immediately close recreational access to all known caves including any cave occurring with Erskine Creek and Kaweah ACECs. Restricted caves would be those as yet undiscovered and would still allow permitted recreational use upon discovery until such time study had provided guidance on the management direction of the cave. The likelihood for discovery of new caves where this management would apply is small. Therefore, this action essentially excludes recreation cave use from the Decision Area.

Recreational OHV opportunity is eliminated by Closed OHV area designations from approximately 166,300 acres. This is a reduction in acreage available for these opportunities of 6%[69] from the existing conditions. Within the Limited OHV area designation 656 miles of route are designated as Motorized (thus allowing recreational OHV use) this is a reduction of, 281 miles or 30% from the existing available network. The route designation do also provide 84 miles of non-motorized routes which may indirect enhance opportunities for non-motorized (bicycling, hiking, horseback riding etc.) recreational activities.

Revocation of the Back Country Byway would abolish the opportunities associated with Byway interpretation and potential for associated improvements (kiosks, viewing areas etc.) along this route, and from the Decision area. This does not however, impact the ability to engage in driving for pleasure.

4.15.5 Impact of Alternative D

Identification of SRMAs as exclusion areas for utility scale renewable energy projects aids in achieving the desired recreation settings and ensure access to and opportunity for recreational experiences continue.

Designation of 21,490 acres for special recreation management (i.e., as SRMAs: Keyesville and San Joaquin River Gorge) and 190,910 acres for recreation management (i.e., as ERMAs: Atwell Island, Case Mountain, Chimney Peak and Temblor Range) would provide specific desired outcomes for recreational settings. Where these outcomes match the existing settings, the current setting would be preserved through recreation management aimed at maintaining it. Table 4.15-5, above presents the existing and the prescribed setting (average derived from physical, social and administrative) for each of the ERMAs designated.

Total elimination of livestock grazing from the landscape may unintentionally shift recreational settings. Although potential removal of unnecessary rangeland improvements may promote more primitive settings, the fencing required for the exclusion of cattle from public lands and the levels of enforcement needed to maintain the closure could shift settings towards a more urban environment. The fencing would not directly occur on public lands but may be in close proximity. The fencing may physically restrict access to public lands and leaded to a public perception of closure.

Closure of approximately 23,000 acres to all forms of public access, except travel on state and county roads would limit opportunity for access and all recreation activities in these areas. This prohibition results from restrictions in oil fields for protection of public health and safety, the recreation sites along

[69] This percentage does not include reduction in OHV opportunity from area closed to public access within the Limited OHV area designation.

the North Fork of the Kaweah to resolved carrying capacity concerns and in several ACECs both for protection of relevance values and to coordinate management with adjacent land owners. None of these areas are specifically managed for recreation and all legal visits would cease. This is a decrease in public land available for general public use of 6%.

Prohibition of certain activities (those receiving specific management) in areas through either ACEC special management, implementation of biological resource management or to achieve desired recreation conditions in SRMAs and ERMAs would reduce opportunity for these activities on public lands. Table 4.15-6, above, summarizes these restrictions and the percent change from where these activities are currently allowed.

Areas available for equestrian use, overnight camping, and shooting sports would be sizably reduced. Of the areas closed to equestrian use, a number of locations are known to be popular for this activity including Cyrus Canyon and Los Osos ACECs. The closure to camping specifically impacts use occurring within Cyrus Canyon and Piute Cypress ACECs and The Dam RMZ within Keyesville SRMA. A portion of the closure for shooting sports results from specifically allocating areas where shooting would otherwise be prohibited through state laws (e.g., within camping areas), but there would be loss of legitimate opportunities (e.g., Erskine Creek, Kaweah, and Lokern-Buena Vista ACECs).

Although not considered a recreational activity by itself campfires (including those associated with overnight camping) would also be restricted. Primarily by area prohibition, including all those acres where overnight camping is prohibited and further areas where sensitive biological resource are at the greatest risk from human-ignited wildfire; and indirectly by a prohibition on collection of woody materials for campfires on all public lands. Where campfires are allowed the prohibition of collection may result in an increase in litter (nails, packing/bundling materials, etc.) and burning of undesirable wood types (pallets, treated lumber, etc.). Furthermore this may place undue burden on a variety of recreationalists as they have to acquire and transport their campfire materials; most impacted being primitive recreational user of the wilderness areas and through hikers along the Pacific Crest National Scenic Trail, whom may be unable to carry enough fuel for extended visits.

Caving opportunities on public lands would be limited by the identification of caves as either Class II or III. (restricted or closed). This would immediately close recreational access to all known caves including any cave occurring with Erskine Creek and Kaweah ACECs. Restricted caves would be those as yet undiscovered and would still allow permitted recreational use upon discovery until such time study had provided guidance on the management direction of the cave. The likelihood for discovery of new caves where this management would apply is small. Therefore, this action essentially excludes recreation cave use from the Decision Area.

Recreational OHV opportunity is eliminated by Closed OHV area designations from approximately 166,300 acres. This is a reduction in acreage available for these opportunities of 6%[70] from the existing conditions. Within the Limited OHV area designation 656 miles of route are designated as Motorized (thus allowing recreational OHV use) this is a reduction of, 281 miles or 30% from the existing available network. The route designation do also provide 84 miles of non-motorized routes which may indirect enhance opportunities for non-motorized (bicycling, hiking, horseback riding etc.) recreational activities.

[70] This percentage does not include reduction in OHV opportunity from area closed to public access within the Limited OHV area designation.

Revocation of the Back Country Byway would abolish the opportunities associated with Byway interpretation and potential for associated improvements (kiosks, viewing areas etc.) along this route, and from the Decision area. This does not however, impact the ability to engage in driving for pleasure.

4.15.6 Impact of Alternative E

Designation of 168,690 acres for special recreation management (i.e., as SRMAs: Chimney Peak, Keyesville, San Joaquin River Gorge and Temblor Range) and 47,270 acres for recreation management (i.e., as ERMAs: Atwell Island, Case Mountain, Fresno River and North Fork) would provide specific desired outcomes for recreational settings. Where these outcomes match the existing settings, the current setting would be preserved through recreation management aimed at maintaining it. Table 4.15-7 presents the existing and the prescribed setting (average derived from physical, social and administrative) for each of the RMZs within the SRMAs and ERMAs designated.

Table 4.15-7
Existing and Prescribed Settings for RMZs and ERMAs

SRMA/RMZ	Existing Setting	Prescribed Setting
Chimney Peak SRMA		
Byway	Middle Country	Middle Country
PCNST	Back Country	Back Country
Wilderness	Primitive	Primitive
Temblor Range SRMA		
Temblor North	Back Country	Middle Country
Urban Interface	Back Country	Middle Country
ERMAs		
Fresno River	Front Country	Front Country
North Fork	Back Country	Back Country

As can be seen in the table, the trend across the areas designation as RMAs (either SRMAs or ERMAs) is to preserve the existing setting in which recreation is currently occurring.

No closures to public access beyond those intermittent temporary closes needed to address resource concerns or public health and safety would be in effect. No opportunities to access public lands would be reduced and therefore no difference from the current conditions is expected.

The designation of the North Fork ERMA would facilitate visitor participation in fishing, hunting and water-play. Recreation sites along the North Fork of the Kaweah (except Paradise) would be open to access all year. The temporary closure these sites are under would be lifted upon final approval of the ROD and visitation would be expected to resume gradually and over the life of the plan exceed the carrying capacity of the sites. As visitation increases beyond manageable levels (as it has historically done), the sheer number of people, accessibility of the area to emergency response, parking situation (on a narrow winding road) and the associated consequences of visitation (e.g., litter) would present unacceptable risks to public health and safety, and the local community. The exceedance of carrying capacity could partially be addressed through increase facilities and services provided for by the ERMA designation, however physical space and local topography limit the level of recreation development the area can sustain.

The designation of the Chimney Peak SRMA would focus management efforts on improvement of existing facilities and access to Wilderness opportunities and support of the Back Country Byway and PCNST. Management guidance provided through the identification of RMZs, especially as they relate to the various targeted activities would enhance existing opportunities for primitive, unconfined recreation types.

The designation of the Temblor Range SRMA would ensure the recreation experiences available in this location; ranging from primitive to intensive recreational types receive the appropriate levels of management, including visitor services and environmental monitoring to sustainably support public use. Management guidance provided through the identification of RMZs, especially as they relate to the various targeted activities would enhance existing opportunities and activities specifically OHV use, through the maintenance and improvement of motorized trails. Prohibition of competitive events (i.e., no competitive SRPs issued) and restrictions on the number of commercial permits available (e.g., outfitters and guides) would aid in maintaining the desired Middle Country social and administrative settings of the area.

Prohibition of certain activities (those receiving specific management) in areas through either ACEC special management, implementation of biological resource management or to achieve desired recreation conditions in SRMAs and ERMAs would reduce opportunity for these activities on public lands. Table 4.15-8 summarizes these restrictions and the percent change from where these activities are currently allowed.

Table 4.15-8
Alternative E - Recreation Opportunities Restricted within the Decision Area

Opportunities	Acres Prohibited[71]	Percent Change
Equestrian use	22,710	6% ↑
Hunting	7,010	2% ↑
Overnight camping	20,360	5% ↑
Shooting Sports	174,800	12% ↑

A more than 10% increase in the closure for shooting sports results from specifically allocating areas where shooting would otherwise be prohibited through state laws (e.g., within camping areas) but there would be loss of legitimate opportunities (e.g., Erskine Creek and Kaweah ACECs).

Although not considered a recreational activity by itself campfires (including those associated with overnight camping) would also be restricted. Primarily by area prohibition, including all those acres where overnight camping is prohibited and additional areas where sensitive biological resource are at the greatest risk from human-ignited wildfire. Secondarily through limitation on the size woody materials collected from public lands for use in campfires

Caving opportunities would be limited by the identification of known caves (and those occurring with Erskine Creek and Kaweah ACECs) as either Class II or III (restricted or closed). Restricted cave would still allow permitted recreational use, therefore unlikely to impact caving groups (which are currently required to have a permit as an organized group). Millerton Cave (in the SJRG) would remain open (Class I) to all public.

[71] "Acres prohibited" includes areas closed to all forms of public access.

Recreational OHV opportunity is eliminated by Closed OHV area designations from approximately 139,450 acres. This is no change in existing conditions. Within the Limited OHV area designation 1,683 miles of route are designated as Motorized (thus allowing recreational OHV use) this is a increase of 746 miles or 44% from the existing available network. The route designation do also provide 76 miles of non-motorized routes which may indirect enhance opportunities for non-motorized (bicycling, hiking, horseback riding etc.) recreational activities.

Continued designation of the Back Country Byway supports opportunities associated with Byway interpretation and increases the potential for associated improvements (kiosks, viewing areas etc.) along this route to be developed. The reestablishment of connectivity the Long Valley Loop road would increase access to and within the Chimney Peak SRMA and its associated facilities. Visitor use would be expected to increase, however not to such a level that the desired recreational setting of the area is impacted.

4.16 Interpretation and Environmental Education

The analysis of impacts to interpretation and environmental education are discussed where appropriate under the resource giving rise to the interpretive or educational opportunity.

Special Designations

4.17 Areas of Critical Environmental Concern

ACECs are areas requiring special management to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect life and safety from natural hazards (43 CFR 1610.0–5). A few management prescriptions come automatically with ACEC designation including: the requirement for a Plan of Operations for locatable mineral exploration and development regardless of the amount of surface disturbance (43 CFR 3809) and the closure to geothermal development unless specifically opened by an RMP.

METHODS OF ANALYSIS

The area of analysis focuses on those areas considered during the preparation of the ACEC Report (BLM 2011a), specifically those carried forward in the alternatives for a maximum extent of 108,380 acres of both public lands and federal mineral estate.

Direct impacts to ACECs are considered to be those that either diminish or enhance the values for which the ACEC was proposed for designation. As such the discussion focuses on relevance and importance criteria as a whole and if these values would receive adequate protection without special management derived from ACEC designation. The relevance values, themselves, are not expressly analyzed as the parent resource (i.e., the resource program responsible for managing the relevant values) discusses impacts to these values when not managed as an ACEC. As such, a qualitative description of whether protection of relevant values is deemed to be adequate without ACEC designation is used.

Proposed management of the following resources, resource uses, or programs is anticipated to have an effect on the relevance and importance values for which ACECs would be designated: Biological Resources, Cultural Resources, Paleontological Resources, Livestock Grazing, Minerals Management, and

Recreation and Visitor Services. Those resources not listed are deemed to have negligible effects and therefore, are not analyzed further.

ASSUMPTIONS

Assumptions used in this impact analysis include the following:

- Special management prescribed within an ACEC is sufficient to address resource concerns and protect values for which the ACEC is proposed.
- Special management prescribed within ACECs is included and implemented in other resource and resource use management decisions (e.g., travel restrictions within ACECs are brought forward through the route designations).
- ACEC designation provides protection for relevant values beyond that provided through general management of their parent resource (e.g., cave management protects specific caves whereas ACEC designation protects a larger area including yet undiscovered caves).
- Designation as an ACEC infers a greater level of management responsibility to those areas and resources identified, including enhanced monitoring, higher level filtering for incompatible activities, and greater response to adverse circumstances.
- Actions that improve parent resources of relevant values (e.g., improved habitat due to the exceedance of the Standards for Rangeland Health) enhance these relevant values regardless of ACEC designation.

4.17.1 Impact of Alternative A (No Action)

Recommendation for designation of 13 proposed ACECs totaling 59,808 acres would ensure the adequate protection of their various relevance and importance values.

The Sand Ridge portion of Atwell Island would not be included in any ACEC recommendation and would not receive special management. The relevant biological and cultural values would be protected through the applicable laws and policy and would be expected that over the life of the plan these values would be adequately protected.

The proposed Bitter Creek ACEC would not be recommended for designation and the importance and relevance values would not receive special management. The area, however, would be identified as an SMA with prescriptive management providing a similar level of protection from fluid mineral development and livestock grazing activities as would special management associated with an ACEC designation. The relevant values (i.e., California condor roosting and foraging habitat) would receive no protection from incompatible public visitation and recreational activities. It would be expected that over the life of the plan the habitat would not be adequately protected.

Compensation lands transferred to the BLM would be evaluated for evidence that the lands meet the relevance and importance criteria. Should such evidence exist, these lands would be recommended for ACEC consideration upon completion of NEPA, public review, and a plan amendment.

The proposed Cyrus Canyon ACEC would not be recommended for designation and the importance and relevance values would not receive special management. It would be expected that over the life of the

plan the unique vegetative communities and other sensitive status species would not be adequately protected from surface disturbances resulting from livestock grazing and recreation.

The proposed Erskine Creek ACEC would not be recommended for designation and the importance and relevance values would not receive special management. The area, however, would be identified as an SMA with prescriptive management providing a similar level of protection from fluid mineral development and livestock grazing activities as would special management associated with an ACEC designation. The relevant values would receive no protection from incompatible recreational activities (i.e., target shooting). It would be expected that over the life of the plan the relevant values would be adequately protected.

The proposed Granite Cave ACEC would not be recommended for designation and the importance and relevance values would not receive special management. The area, however, would be identified as an SMA with prescriptive management providing a similar level of protection from fluid mineral as would special management associated with an ACEC designation. The relevant cultural values would be protected through the applicable law and policy and would be expected that over the life of the plan these values would be adequately protected.

The proposed Hopper Mountain ACEC would not be recommended for designation and the importance and relevance values would not receive special management. The area, however, would be identified as an SMA with prescriptive management providing a similar level of protection from fluid mineral development and livestock grazing activities as would special management associated with an ACEC designation. The relevant values (i.e., California condor nesting habitat) would receive no protection from incompatible public visitation and recreational activities. It would be expected that over the life of the plan the habitat would not be adequately protected.

The proposed Irish Hills ACEC would not be recommended for designation and the importance and relevance values would not receive special management. The area, however, would be identified as an SMA with prescriptive management providing a similar level of protection from mineral development as would special management associated with an ACEC designation. The relevant values would receive no protection from incompatible public visitation and recreational activities. It would be expected that over the life of the plan the unique vegetative communities and numerous rare and endemic plants would be adequately protected, except for the risks from human-caused wildand fires.

The North Fork area would not be included in any ACEC recommendation and would not receive special management. The area, however, would be identified as an SMA with prescriptive management designed to eliminate user conflicts and incompatible use. The relevance and importance values may be subject to adverse impacts and loss over the life of the plan.

The Buena Vista area would not be included in any ACEC recommendation and would not receive special management. The relevant biological values would be protected through the applicable laws and policy and would be expected that over the life of the plan these values would be adequately protected.

The Los Osos area would not be included in any ACEC recommendation and would not receive special management. The relevant biological and cultural values would be protected through the applicable laws and policy and would be expected that over the life of the plan these values would be adequately protected.

The proposed Rusty Peak ACEC would not be recommended for designation and the importance and relevance values would not receive special management. The area, however, would be identified as an SMA with prescriptive management providing a similar level of protection from mineral development and livestock grazing activities as would special management associated with an ACEC designation. It is expected that over the life of the plan the unique vegetative communities and other sensitive plant species would be adequately protected.

The Upper Cuyama Valley area would not be included in any ACEC recommendation and would not receive special management. The relevance and importance values may be subject to adverse impacts and loss over the life of the plan.

4.17.2 Impacts Common to All Action Alternatives

The management of relevant and important values (i.e., designation of ACECs) changes across the action alternatives, as such, there are no impacts considered common to all action alternatives.

4.17.3 Impact of Alternative B

Recommendation for designation of ~~*17*~~ *18* proposed ACECs totaling ~~*99,490*~~ *99,500* acres would ensure the adequate protection of their various relevance and importance values.

~~*The proposed Chico Martinez ACEC would not be recommended for designation and the importance and relevance values would not receive special management. These values may be subject to adverse impacts and loss over the life of the plan. The relevant cultural resource values, however, would be allocated to "scientific use" directing their protection and preservation until such time they can evaluated. The paleontological resources, associated with the Zemorrian stage geologic formations, would be at risk from surface disturbing activities however the identification of prescriptive management of PFYC 4 would alleviate risks posed by authorized activities. Habitat for the San Joaquin Valley Suite of listed species would receive protection from general biological resources (including identification as part of the Conserved Lands area of ecological importance). It would be anticipated that laws and policy governing the management of cultural and biological resources would provide adequate protection.*~~

The proposed Granite Cave ACEC would not be recommended for designation and the importance and relevance values would not receive special management. The cave itself would be determined significant (cave information withheld from FOIA requests) and designated Class III (closed) therefore eliminating access and reducing the availability of information concerning its relevant resources. In addition, the relevant cultural values would be protected through the applicable law and policy. The sensitive species present would also benefit from cave management. Although the cave would be closed to the public it would still be at risk from locatable mineral development.

The proposed Irish Hills ACEC would not be recommended for designation and the importance and relevance values would not receive special management. The area, however, would be identified an area of ecological importance with prescriptive management providing the same level of protection as would an ACEC designation except for the requirement for a plan of operations for locatable mineral activities greater than casual use. It would be expected that over the life of the plan the unique vegetative communities and numerous rare and endemic plants would be adequately protected *without the need for special management attention associated with ACEC designation*.

The proposed Rusty Peak ACEC would not be recommended for designation and the importance and relevance values would not receive special management. The area, however, would be identified an area of ecological importance with prescriptive management providing the same level of protection as would an ACEC designation except for the requirement for a plan of operations for locatable mineral activities greater than casual use. It is expected that over the life of the plan the unique vegetative communities and other sensitive plant species would be adequately protected *without the need for special management attention associated with ACEC designation*.

The proposed Salinas River ACEC would not be recommended for designation and the importance and relevance values would not receive special management. The area, however, would be identified an area of ecological importance with prescriptive management providing the same level of protection as would an ACEC designation ~~*except for the requirement for a plan of operations for locatable mineral activities greater than casual use*~~. It would be expected that over the life of the plan the rare vegetative communities would be adequately protected ensuring no net loss of associated habitat for special status plants and animals *without the need for special management attention associated with ACEC designation*.

4.17.4 Impact of Alternative C

Recommendation for designation of all 22 proposed ACECs totaling 108,248 acres would ensure the adequate protection of their various relevance and importance values.

4.17.5 Impact of Alternative D

Recommendation for designation of all 22 proposed ACECs totaling 108,248 acres would ensure the adequate protection of their various relevance and importance values.

4.17.6 Impact of Alternative E

Recommendation for designation of 12 proposed ACECs totaling 75,918 acres would ensure the adequate protection of their various relevance and importance values.

The proposed Chico Martinez ACEC would not be recommended for designation and the importance and relevance values would not receive special management. These values may be subject to adverse impacts and loss over the life of the plan. The relevant cultural resource values, however, would be allocated to "scientific use" directing their protection and preservation until such time they can evaluated. The paleontological resources, associated with the Zemorrian stage geologic formations, would be at risk from surface disturbing activities however the identification of prescriptive management of PFYC 4 would alleviate risks posed by authorized activities. Habitat for the San Joaquin Valley Suite of listed species would receive protection from general biological resources (including identification as part of the Conserved Lands area of ecological importance). It would be anticipated that laws and policy governing the management of cultural and biological resources would provide adequate protection *without the need for special management attention associated with ACEC designation*.

The proposed Cypress Mountain ACEC would not be recommended for designation and the importance and relevance values would not receive special management. The area, however, would be identified an area of ecological importance with prescriptive management providing the same level of protection

as would an ACEC designation except for the requirement for a plan of operations for locatable mineral activities greater than casual use. It is expected that over the life of the plan the unique vegetative communities and other sensitive plant species would be adequately protected *without the need for special management attention associated with ACEC designation*.

The proposed Cyrus Canyon ACEC would not be recommended for designation and the importance and relevance values would not receive special management. The area, however, would be identified an area of ecological importance with prescriptive management providing the similar level of protection as would an ACEC designation except for the requirement for a plan of operations for locatable mineral activities greater than casual use and the less restrictive livestock grazing allocation (i.e., only known population of special status species would be Unavailable). It would be expected that over the life of the plan the unique vegetative communities and other sensitive status species would be adequately protected *without the need for special management attention associated with ACEC designation*.

The proposed Granite Cave ACEC would not be recommended for designation and the importance and relevance values would not receive special management. The cave itself would be determined significant (cave information withheld from FOIA requests) and designated Class III (closed) therefore eliminating access and reducing the availability of information concerning its relevant resources. In addition, the relevant cultural values would be protected through the applicable law and policy. The sensitive species present would also benefit from cave management. Although the cave would be closed to the public it would still be at risk from locatable mineral development.

The proposed Horse Canyon ACEC would not be recommended for designation and the importance and relevance values would not receive special management. These values may be subject to adverse impacts and loss over the life of the plan. The relevant cultural resource values, however, would be allocated to "scientific use" directing their protection and preservation until such time they can evaluated. The paleontological resources, associated with the area would be at risk from surface disturbing activities however the identification of prescriptive management of PFYC 4 would alleviate some of the risks posed by authorized activities. Although the continued ability to locate mining claims and engage in casual use collection, which would not be subject to approval of a Plan of Operations, would over the long term negate the protective measures provided to cultural and paleontological resource values.

The proposed Irish Hills ACEC would not be recommended for designation and the importance and relevance values would not receive special management. The area, however, would be identified an area of ecological importance with prescriptive management providing the similar level of protection as would an ACEC designation except for the requirement for a plan of operations for locatable mineral activities greater than casual use. It is expected that over the life of the plan the unique vegetative communities and numerous rare and endemic plants would be adequately protected *without the need for special management attention associated with ACEC designation*.

The proposed Rusty Peak ACEC would not be recommended for designation and the importance and relevance values would not receive special management. The area, however, would be identified an area of ecological importance with prescriptive management providing the same level of protection as would an ACEC designation except for the requirement for a plan of operations for locatable mineral activities greater than casual use. It is expected that over the life of the plan the unique vegetative communities and other sensitive plant species would be adequately protected *without the need for special management attention associated with ACEC designation*.

The proposed Salinas River ACEC would not be recommended for designation and the importance and relevance values would not receive special management. The area, however, would be identified an area of ecological importance with prescriptive management providing the same level of protection as would an ACEC designation except for the requirement for a plan of operations for locatable mineral activities greater than casual use. It would be expected that over the life of the plan the rare vegetative communities would be adequately protected ensuring no net loss of associated habitat for special status plants and animals *without the need for special management attention associated with ACEC designation*.

The proposed Tierra Redonda ACEC would not be recommended for designation and the importance and relevance values would not receive special management. The area, however, would be identified an area of ecological importance with prescriptive management providing the similar level of protection as would an ACEC designation except for the requirement for a plan of operations for locatable mineral activities greater than casual use and the level of public accessibility (i.e., motorized, mechanized, and equestrian use on trails only). It would be expected that over the life of the plan the vegetative communities would be adequately protected *without the need for special management attention associated with ACEC designation*. The identification as an area of ecological importance would incidentally provide protection to significant paleontological resources.

The proposed Upper Cuyama Valley ACEC would not be recommended for designation and the importance and relevance values would not receive special management. The area, however, would be identified an area of ecological importance with prescriptive management providing the same level of protection as would an ACEC designation except for the requirement for a plan of operations for locatable mineral activities greater than casual use. It would be expected that over the life of the plan the unique vegetative communities and other sensitive status species, along with the link between the Sierra Madre and the San Emigdio Mountains would be adequately protected *without the need for special management attention associated with ACEC designation*.

4.18 Outstanding Natural Areas

The Piedras Blancas Light Station is the single Outstanding Natural Area within the Decision Area. Under the Consolidated Natural Resources Act of 2008 (S. 2739) which designated the Piedras Blancas Light Station as an Outstanding Natural Area, the Secretary of the Interior was directed to "manage the ONA in a manner which conserves, protects and enhances the unique and nationally important historical, natural, cultural, scientific educational, scenic, and recreational values of that area."

METHODS OF ANALYSIS

The area of analysis focuses on the 20 acres designated as the ONA.

Direct impacts occur when the values associated with the ONA designation are supported and protected through management decisions. Due to the legislation designating the ONA, impacts are limited to those discretionary actions achieved through land use planning much of which mimics the currently implemented activity level plan and various agreements between the BLM and the SHPO and the State of California Parks and Recreation.

Management for the ONA does not vary between the action alternatives nor do the impacts from these alternatives due to restrictions placed upon the area by legislative designation.

Proposed management of the following resources, resource uses, or programs is anticipated to have an effect on resources within the Piedras Blancas ONA: Lands and Realty, Livestock Grazing, Recreation. Those resources, resource uses and programs not listed are deemed to have negligible effects and, therefore, are not further analyzed.

ASSUMPTIONS

The following assumptions are used in this analysis:

- Implementation of Biological and Cultural Resource management directly benefits the values for which the ONA was designated. Furthermore, the existing agreement between the BLM and the SHPO limits potential impacts from restoration activities on the historic properties and other cultural resources.
- Native American access to the PBLS ONA for traditional cultural and religious purposes are guaranteed under the provisions of the Consolidated Natural Resources Act of 2008 (S. 2739) and additional authorities protecting Native American rights.

4.18.1Impact of Alternative A (No Action)

Under the Consolidated Natural Resources Act of 2008 (S. 2739), the Piedras Blancas Light Station is closed, made unavailable and prohibited from the following uses: all forms of entry, appropriation, or disposal under the public land laws; location, entry, and patent under the public land mining laws; operation of the mineral leasing and geothermal leasing laws and the mineral materials laws. The combination of which protects the nationally important historical, natural, cultural, scientific, educational, scenic, and recreational values of that area from appropriation under these laws.

In accordance with its designating act, current management decisions provide objectives to restore the historic Light Station and ancillary buildings; implement a continuing program of interpretation and public education about the Light Station and its importance to the surrounding community; and limit administrative and public facilities to be compatible with achieving the resources objectives. These actions protect and support the values for which the area was designated.

4.18.2Impacts Common to All Action Alternatives

Under the Consolidated Natural Resources Act of 2008 (S. 2739), the Piedras Blancas Light Station is closed, made unavailable and prohibited from the following uses: all forms of entry, appropriation, or disposal under the public land laws; location, entry, and patent under the public land mining laws; operation of the mineral leasing and geothermal leasing laws and the mineral materials laws. The combination of which protects the nationally important historical, natural, cultural, scientific, educational, scenic, and recreational values of that area from appropriation under these laws.

In accordance with its designating act, management decisions provide objectives to restore the historic Light Station and ancillary buildings; implement a continuing program of interpretation and public education about the Light Station and its importance to the surrounding community; and limit administrative and public facilities to be compatible with achieving the resources objectives. These actions protect and support the values for which the area was designated.

Furthermore, designation of this area as unavailable for livestock grazing, prohibition on discharge of firearms, and identification as a right-of-way avoidance area eliminates incompatible uses of the area.

4.19 Back Country Byways

Generally, backcountry byways traverse remote country, providing opportunities for solitude and spectacular scenery, for the "off-the-beaten-path" driving for pleasure experiences. As such, the visual landscape, opportunities for solitude, and motorized experience are the primary elements of a byway that can be impacted through the management of other resources. In addition, backcountry byways present an opportunity for education and interpretation. Although not the main attraction of a byway, the management actions of other resources may influence these opportunities.

The Chimney Peak Back Country Byway winds through a narrow corridor between congressionally designated wilderness areas. Wilderness area management both limits the ability to manage the byway as well as reducing impacts that can occur to its visual and social setting.

METHODS OF ANALYSIS

The analysis focuses on the Chimney Peak Back Country Byway; there are no other designated or proposed byways within the Decision Area. Impacts to the byway result from management actions that either enhance or diminish the primary elements of the byway: visual, social and administrative settings. Where the byway designation is removed, it is considered that there are no longer impacts on the special designation.

Management actions that change the administrative setting cause direct impacts by altering the physical nature of the route (e.g., improving the route to allow passage of standard vehicles), and indirect impacts by potentially altering the visual setting (as described by contrast with the existing landscape) within the route corridor and providing for changes to the social setting (as described using the recreation setting matrix).

Proposed management of the following resources, resource uses, or programs is anticipated to have an effect on the Back Country Byway: Comprehensive Trail and Travel Management, and Recreation and Visitor Services. Those resources not listed are deemed to have negligible effects and therefore, are not analyzed further.

ASSUMPTIONS

The following assumptions are used in the impact analysis:

- The Backcountry Byway designation has no additional land use constraints.
- Impacts on the byway's visual landscape are not likely to occur outside the route corridor due to the surrounding wilderness designations. Impacts within the route corridor would be limited to physical road maintenance or improvement.
- Reestablishment of the Long Valley Loop Road portion of the Byway will increase use of the Byway and increase human presence in these areas.

4.19.1 Impact of Alternative A (No Action)

The Chimney Peak Back Country Byway occurs within the Limited OHV area and constitutes a small portion of the Travel Network designated for motorized use. The Byway would be maintained as a Type II Byway (narrow, slow speed, secondary roads and recommended for high-clearance vehicles). These actions maintain the current condition of the byway and are not expected to impact either its social (i.e. no change in visitor use), visual (i.e. resulting in no contrast to the existing visual landscape) or administrative (i.e. not altering the physical nature of the route) setting.

4.19.2 Impacts Common to All Action Alternatives

The Byway designation changes across the action alternatives, as such, there are not impacts considered common to all action alternatives.

4.19.3 Impact of Alternative B

Revocation of the Chimney Peak Back Country Byway would eliminate impacts to this special designation. *The routes to which this designation was granted would remain open as Motorized routes for use by all modes of transport.*

4.19.4 Impact of Alternative C

Revocation of the Chimney Peak Back Country Byway would eliminate impacts to this special designation. *The routes to which this designation was granted would remain open as Motorized routes for use by all modes of transport.*

4.19.5 Impact of Alternative D

Revocation of the Chimney Peak Back Country Byway would eliminate impacts to this special designation. *The routes to which this designation was granted would remain open as Motorized routes for use by all modes of transport.*

4.19.6 Impact of Alternative E

The Chimney Peak Back Country Byway occurs within the Limited OHV area and constitutes a small portion of the Travel Network designated for motorized use. The Byway would be maintained as a Type II Byway (narrow, slow speed, secondary roads, recommended for high-clearance vehicles). These actions maintain the current condition of the byway and are not expected to impact either its social (i.e. no change in visitor use), visual (i.e. resulting in no contrast to the existing visual landscape) or administrative (i.e. not altering the physical nature of the route) setting. The reestablished of the Long Valley Loop Road segment, which is currently impassable, would potentially result in a marginal increase in use as connectivity is restored and travel time on the road between paved county road and recreation facilities is reduced.

In addition, incorporation of the Byway into a specific Recreation Management Zone (RMZ) within the Chimney Peak Special Recreation Management Area (SRMA), with targeted activities of driving for pleasure and expanded interpretation and education along the Byway is expected increase visitor use

however not sufficiently to move existing Back Country social setting to Middle Country (15-29 encounters per day on routes).

4.20 National Trails

National Trails provide opportunities for outdoor recreation and promote enjoyment, appreciation and preservation of scenic values, open space and historic resources. The Bakersfield FO specifically addresses only National Scenic Trails (the Pacific Crest National Scenic Trail [PCNST]) and existing or recommended National Recreation Trails.

National Scenic Trails are characterized by their outstanding scenic values, as such; actions that affect the visual resources of the trail potentially have the most impact. Ancillary values of these trails can be considered to be provision of access to public lands. In addition values of solitude and opportunity for unconfined primitive recreation are deemed to be values of the portion of the PCNST managed through this RMP.

The primary value of a National Recreation Trail is considered to be its provision of outdoor recreation opportunity. Therefore actions that limit access to these trails are deemed to have the most impact. These trails are also considered to have trail specific ancillary values that can relate to a variety of elements including, scenic quality, open-space and interpretive or educational opportunity. The ancillary values for Recreation Trails managed by the Bakersfield FO are considered to be scenic quality and open space.

METHODS OF ANALYSIS

The analysis uses two primary indicators of impacts. For the National Scenic Trail impacts are described as those affecting the visual landscape, specifically beneficial impacts being those that protect and adverse being those that allow for contrast with the scenic environment. For the National Recreation Trail provision of outdoor recreation opportunity is used as the indicator of impacts, whereby actions that restrict access have adverse impacts and those that promote and encourage visitation have beneficial impacts.

Impacts to the PCNST are only addressed for the portion of the trail managed through this RMP: the Owens Peak segment. The other segments (Cache Creek and Dove Springs) that intermittently occur on public land within the Planning Area are managed by Ridgecrest and therefore not addressed.

Impacts of the recommendation of San Joaquin River Trail as a National Recreation Trail and to the trail itself are only addressed under the alternatives in which that proposal occurs.

Proposed management of the following resources, resource uses, or programs is anticipated to have an effect on the National Trails: Visual Resource Management, Wildland Fire Ecology and Management, Comprehensive Trail and Travel Management, Minerals, Lands and Realty, Recreation and Visitor Service, and lands with wilderness characteristics. Those resources not listed are deemed to have negligible effects and therefore, are not analyzed further.

ASSUMPTIONS

Assumptions used in this impact analysis include the following:

- Of the PCNST, 37 miles of the total 41 miles analyzed (93 percent) occur within designated Wilderness areas, and therefore the trails important values (scenic quality and recreational access/opportunity) receive associated protection from these designation in addition to the protections provided by the National Trails Act.
- Appropriate access to the trail would not be limited by any action, except temporarily as a result of an emergency situation or law enforcement activity.
- Provision of outdoor recreation opportunity is synonymous to increasing access to public lands.

4.20.1 Impact of Alternative A (No Action)

National Scenic Trails

The seven percent of the trail not within designated Wilderness would be susceptible to impacts to its visual landscape from development including ROWs and mineral exploration, as there are no established Visual Resource Management Class objectives established for the area outside of Wilderness. Although unlikely to occur in this remote location, this segment of the trail is within the area identified as having geothermal potential and high potential for locatable Barite and moderate to low potential for other locatable minerals. These types of development, should they occur, could result in substantial contrast to the existing visual landscape, through the construction of facilities, access routes and other associated development.

In addition, the portion of the trail outside designated Wilderness occurs within the Limited OHV area, allowing OHV use on existing routes; several of which are in proximity to the trail, could result in both changes to the visual landscape (e.g., scars from route proliferation) and damage to the integrity of the route from vehicular trespass.

4.20.2 Impacts Common to All Action Alternatives

National Scenic Trails

The seven percent of the trail not within designated Wilderness would be protected through the establishment of a management corridor 0.25 miles wide in which specific management (VRM Class I, Closure to Fluid and Salable mineral development, and identification as a ROW exclusion area) is identified for the protection of the trails scenic values and continued recreational access, thus eliminating disturbance to the scenic integrity of the landscape from these sources.

The identification of the Fire Management Units in which the PCNST occurs as suitable for the use of wildland fire for resource benefit, as with any occurrence of wildland fire itself, could result in both short and long term impacts dependent on fire intensity, to the visual qualities of the trail corridor (i.e., a fire scared landscape) and evidence of suppression efforts. The impact of latter being reduced through the application of Minimum Impact Suppression Tactics (MIST) within the Wilderness areas.

National Recreation Trails

Continued designation of the San Joaquin River Gorge Special Recreation Management Area (SRMA), in which the Wu Ki' Oh National Recreation Trail occurs, supports the provision of outdoor recreation opportunity, and therefore directly the values of the trail, through its marketing strategy and targeted activities of the Wu Ki' Oh Recreation Management Zone (RMZ). Management associated with the SRMA/RMZ; including VRM designation (Class II) also support the ancillary values of the trail such as, preservation of open-space and retention of the scenic qualities of the landscape.

4.20.3 Impact of Alternative B

National Scenic Trails

The majority of the trail not within designated wilderness is located in areas that would be managed for wilderness characteristics. This designation would provide incremental protection of visual resources to an area larger than that of the trail corridor alone through: designation as VRM Class II outside the trail corridor, and identification as an OHV Closed area ~~*the proposal for withdrawal from the mining laws*~~.

National Recreation Trails

Recommendation of the San Joaquin River Trail as a National Recreation Trail directly supports the values of the trail through identification and provision of outdoor recreation opportunity. The portions of this trail managed by the BLM (the proposed trail extends off public lands) occur within the San Joaquin River Gorge SRMA through multiple RMZs. Although not all RMZs through which the trail passes specifically target trail use activities, these designations support the provision of outdoor recreation opportunities and though application of their management provide protection to the ancillary values of the trail including physical, social and administrative setting.

The occurrence of two National Recreation Trails (the Wu Ki' Oh and the San Joaquin River Trail) in close proximity to each other would be expected to multiply use marginally on each trail as a result of increased visitor awareness and the draw of two recognized trails in one location. This is again beneficial to trail values.

4.20.4 Impact of Alternative C

National Scenic Trails

The majority of the trail not within designated wilderness is located in areas that would be managed for wilderness characteristics This designation would provide incremental protection of visual resources to an area larger than that of the trail corridor alone through: designation as VRM Class I outside the trail corridor, identification as an OHV Closed area, and the proposal for withdrawal from the mining laws.

4.20.5 Impact of Alternative D

National Scenic Trails

The majority of the trail not within designated wilderness is located in areas that would be managed for wilderness characteristics. This designation would provide incremental protection of visual resources to an area larger than that of the trail corridor alone through: designation as VRM Class I outside the trail corridor, identification as an OHV Closed area, and the proposal for withdrawal from the mining laws.

4.20.6 Impact of Alternative E

National Scenic Trails

The PCNST corridor would be designated as the PCNST RMZ within the Chimney Peak SRMA. This designation would not provide additional protection to the scenic value of the trail, however may result increased facilities (trail heads, spur trails etc.) and services (patrols) which may marginally and locally alter trail values (e.g., occurrence of a kiosk on the landscape at a trailhead, or change to the social/administrative setting of the trail through increased patrols).

National Recreation Trails

Recommendation of the San Joaquin River Trail as a National Recreation Trail directly supports the values of the trail through identification and provision of outdoor recreation opportunity. The portions of this trail managed by the BLM (the proposed trail extends off public lands) occur within the San Joaquin River Gorge SRMA through multiple RMZs. Although not all RMZs through which the trail passes specifically target trail use activities, these designations support the provision of outdoor recreation opportunities and though application of their management provide protection to the ancillary values of the trail including physical, social and administrative setting.

The occurrence of two National Recreation Trails (the Wu Ki' Oh and the San Joaquin River Trail) in close proximity to each other would be expected to multiply use marginally on each trail as a result of increased visitor awareness and the draw of two recognized trails in one location. This is again beneficial to trail values.

4.21 Wild and Scenic Rivers

Eight river segments totaling approximately 30 miles were studied for eligibility (i.e., segment must be free flowing and contain at least one river-related outstandingly remarkable value (ORVs)). In conjunction with this plan, a determination of suitability and a tentative classification were given to these river segments.

Once determined suitable a river segment is managed for the protection of their tentative classification, ORVs, and free-flowing nature until such a time that Congress either designates the segment as part of the NWSRS or removes it from consideration. If the segment is removed from consideration, it would be managed according to the underlying management provisions of the RMP. For example, segments within ACECs would be managed according to the provisions of the respective ACEC.

METHODS OF ANALYSIS

The area of analysis consists of the eight eligible river segments studied for suitability for inclusion in the NWSRS in conjunction with the RMP. Specifically the analysis focuses on the 0.5 mile corridor created around each river segment for a total acreage of 12,220 acres.

Three elements of a WSR can be impacted by management actions; the free flowing characteristics, the ORVs for which the river segment was found eligible and the tentative classification assigned to it. Once determined suitable (and until that determination is acted upon by congress) interim management protects the aforementioned elements from impacts that would impede the free flowing nature, degrade the ORVs or alter the tentative classification. Therefore, if a river segment is determined suitable, no adverse impacts are anticipated. River segments not determined suitable would not receive such protection and their free flowing characteristics and ORVs could be adversely impacted.

Direct impacts to free flowing characteristics include any action that would modify the water-course/streambed, this could include; impoundments, channelization or diversions. Indirect impacts would result from actions (either BLM or others) that remove water from the river above the segment and reduce in-stream flows below an acceptable level.

Direct impacts to the ORVs are dependent on the ORVs present, they range from protection of specific species (biological ORVs), to elimination of surface disturbance adjacent to the river (scenic ORVs).

Indirectly ORVs are impacted by actions that improve or enhance the ORVs such as, maintenance or improvement of riparian habitats.

The tentative classification is impacted when a level of alteration occurs within the management corridor that shifts its qualification as one category as opposed to another. For example a scenic river that has a route built along its banks may no longer qualify as scenic, but still be suitable for a recreational classification.

For the purposes of analysis the impacts on free flowing characteristics and ORVs of river segments not determined suitable are described to identify the consequences, if any, of a negative determination.

Proposed management of the following resources, resource uses, or programs is anticipated to have an effect on Wild and Scenic Rivers: Biological Resources, Comprehensive Trail and Travel Management, Recreation and Visitor Services, and Areas of Critical Environmental Concern. Those resources not listed are deemed to have negligible effects and therefore, are not analyzed further.

ASSUMPTIONS

The following assumptions are used in the impact analysis:

- The free-flowing character of suitable waterways will be protected to the extent that modifications such as stream impoundments, channelization, and/or rip-rapping will not be permitted along public lands shorelines.
- Protection of free-flowing character and dependent ORVs is limited because there are no federal reserved water rights established for in-stream flow purposes due to suitability determinations.
- Maintenance or enhancement of riparian-wetland areas will ensure protection of all suitable waterways from surface-disturbing activities, however not to the full 0.5 mile extent of the WSR corridor.

4.21.1 Impact of Alternative A (No Action)

No suitability determinations would be made for river segments studied and found to be eligible. All river segments would remain in interim protective management until such time a suitability determination was made. In addition to the protective management all eligible river segments receive rivers flowing through ACECs, SRMAs (with compatible management), in wilderness, or with specific biological values (managed as special management areas) would be further protected by these overlapping management designations.

4.21.2 Impacts Common to All Action Alternatives

The Wild and Scenic River designations change across the action alternatives, as such, there are no impacts considered common to all action alternatives.

4.21.3 Impact of Alternative B

~~*Two*~~ *Four* segments of river; Segment 1 of the San Joaquin River, North Fork of the Kaweah River, Lower Kern River and Chimney Creek, for a total of ~~*eight*~~ *twenty seven* miles would be determined suitable for inclusion in the NWSRS and pursued for congressional designation. Each segment would have a 0.5 mile

corridor established (0.25 miles each side of the river) to apply management to maintain or enhance the free flowing nature and ORVs making the segment eligible. In accordance with BLM policy this corridor would be managed so no action could harm the values for which the river segment is found eligible and suitable. In addition to the WSR corridor these river segments are further given protective management through the overlapping *Wilderness,* SRMA and ACEC designations.

Segment one of the San Joaquin River occurs within the Pa San RMZ of the San Joaquin River Gorge SRMA. This RMZ targets primitive recreation types, and prescribes VRM Class I management; both of which aid in protection of the ORVs and maintain the Wild/Scenic classification.

The suitable segment of the North Fork of the Kaweah occurs within the Kaweah ACEC. The ACEC broad management objectives seek to preserve biological resources (including riparian systems) and protect geological resources. The ACEC also ~~*restricts recreational visits to the fall and winter seasons, making recreational use more manageable along this segment of river; all of which is in concert with WSR management*~~ *prohibits public access to the recreational sites accessing the river, therefore eliminating the potential for overuse and the resulting environmental degradation*.

The suitable segment of the Lower Kern River occurs within the Keyesville SRMA, in the Dam RMZ. This RMZ includes prescriptive management aimed at reducing the environmental impact of excessive summertime visitation and providing appropriate, managed river access for recreational use. The surrounding RMZs; Gold Fever and Wallow Rock, which overlap the river corridor, also address direct management of recreational activities, again contributing to the protection of and enhancing the ORVs for which the river segment was found suitable.

The suitable segment of Chimney Creek occurs almost entirely within congressionally designated Wilderness; as such the ORVs for which the river segment was found suitable are afforded the highest protection, from adverse impacts resulting from development and incompatible recreation.

In ~~*both*~~ all cases the protection provided by a WSR designation would only add minimal protection beyond that achieved through attainment of a federal water allocation.

Designation of the San Joaquin River Gorge SRMA, Kaweah ACEC, *Keyesville SRMA and the existing Wilderness designations* in which these rivers occur would protect the tentative classifications assigned to these river segments and further ensure that the free flowing nature and ORVs of the river are maintained. There would be no adverse impact on these river segments.

Those river segments not determined suitable would be dropped from further consideration. The values which made these rivers eligible would receive no protection from WSR management, however, rivers flowing through ACECs, ~~*SRMAs (with compatible management), in wilderness,*~~ or with specific biological values (managed as areas of ecological importance) would receive continued protection of their ORVs. This protection in some form of overlapping designation would apply to all studied river segments.

4.21.4 Impact of Alternative C

All eight river segments for a total of 30 miles would be determined suitable for inclusion in the NWSRS and pursued for congressional designation. Each segment would have a 0.5 mile corridor established (0.25 miles each side of the river) to apply management to maintain or enhance the free flowing nature and ORVs making the segment eligible. In accordance with BLM policy this corridor would be managed so no action could harm the values for which the river segment is found eligible and suitable.

4.21.5 Impact of Alternative D

All eight river segments for a total of 30 miles would be determined suitable for inclusion in the NWSRS and pursued for congressional designation. Each segment would have a 0.5 mile corridor established (0.25 miles each side of the river) to apply management to maintain or enhance the free flowing nature and ORVs making the segment eligible. In accordance with BLM policy this corridor would be managed so no action could harm the values for which the river segment is found eligible and suitable.

4.21.6 Impact of Alternative E

No river segments would be determined suitable for inclusion in the NWSRS and all segments would be dropped from further consideration. The values which made these rivers eligible would receive no protection from WSR management, however, rivers flowing through ACECs, SRMAs (with compatible management), in wilderness, or with specific biological values (managed as areas of ecological importance) would receive continued protection of their ORVs. This protection in some form of overlapping designation would apply to all studied river segments.

4.22 Wilderness Study Areas

Both designated wilderness areas and wilderness study areas (WSAs) have legislative and regulatory protections. In the case of Wilderness to preserve their wilderness character and in the case of WSAs maintain wilderness characteristics until such time that congress either designates as Wilderness or releases from study status. As such, any action that threatens the above values of an area would not be permitted.

Wilderness character is defined by the areas ability to demonstrate an untrammeled and undeveloped nature, appear in a natural state and provide opportunities for solitude and unconfined primitive recreation. It is these character elements that can be impacted by management decisions throughout the alternatives. Where management actions seeks to maintain or enhance at natural state (e.g., protection of biological resources) the associated character element is beneficially impacted, however where the same protective management implements on the ground activities (e.g., pulling weeds) the untrammeled nature may be adversely impacted. Where management actions allow for surface disturbance and development all character elements can be adversely impacted.

METHODS OF ANALYSIS

The area of analysis focuses on Wilderness and WSAs within the Decision Area. Since both are protected from action that would diminish wilderness character the analysis is further refined to only WSAs when/if released by congress from study status.

The wilderness character elements of untrammeled and undeveloped nature, naturalness and provision of opportunities for solitude and unconfined primitive recreation types are used as the indicators for impacts. These elements are beneficially impacted when they are either protected or enhanced (e.g., beneficial impacts to the untrammeled nature occur when management actions or restrictions are removed or lifted). In contrast the elements are adversely impacted when they lose protection or become diminished (e.g., increased visitation may diminish opportunities for solitude).

Proposed management of the following resources, resource uses, or programs is anticipated to have an effect on Wilderness Study Areas: Biological Resources, Areas of Critical Environmental Concern, and

Lands with Wilderness Characteristics. Those resources not listed are deemed to have negligible effects and therefore, are not analyzed further.

ASSUMPTIONS

The following assumptions are used in the impact analysis:

- Due to legislative protections impacts to Wilderness and WSAs (prior to release) do not vary greatly by alternative and the existing conditions would likely be maintained or marginally improved through renewed management emphasis and improved planning (e.g., route designations).
- Wilderness areas would continue to be managed according to BLM Manual 8560, Management of Designated Wilderness Areas (BLM 1983), BLM Handbook H-8560-1, Management of Designated Wilderness Areas (BLM 1988), 43 CFR Subpart 6300, Management of Designated Wilderness Areas, and in coordination and cooperation with other agencies with authority.
- WSAs would continue to be managed under the Interim Management Policy for Lands under Wilderness Review (BLM Handbook H-8550-1, [BLM 1995]) until Congress either designates or releases all or portions of the WSAs from any further consideration for wilderness.
- Management of both wilderness and WSA is subject to valid existing rights, the impact of which is not included in the analysis.
- Congress will act on WSA recommendations by releasing them from study status, with no specific management guidelines associated with their release.

4.22.1 Impact of Alternative A (No Action)

No management guidance is provided for the management of WSA once released from study status by congress. These lands would be managed as multiple-use dispersed public lands except where overlapping designations guide management otherwise.

Portions of the Milk Ranch/Case Mountain WSA (8,570 acres) and Piute Cypress WSA (400 acres) would be managed within ACECs (Case Mountain and Piute Cypress) where the natural and undeveloped elements of wilderness character would still receive some protection from special management prescriptions such as, restricted mineral development and limited OHV designation. Untrammeled nature and opportunities for primitive unconfined recreation may be adversely impacted through management actions in the Piute Cypress ACEC that restrict the cross country use of livestock and prohibit overnight camping.

Besides overlapping with ACEC designations, several WSA once released would be managed within Special Management Areas (SMAs). The Erskine Creek SMA would provide protection of natural and undeveloped elements to portions of the Piute Cypress WSA (2,500 acres) from mineral development. The application of recreation management restricting camping within the North Fork of the Kaweah SMA would reduce the untrammeled nature and opportunities for primitive unconfined recreation in portions of the Milk Ranch/Case Mountain and Sheep Ridge WSA.

Rockhouse Basin WSA and potions of Owens Peak and Piute Cypress WSAs would be managed within the Monache-Walker Pass NCLWMA however this affords no protection of the wilderness character elements.

Portions of the aforementioned WSAs not within an overlapping designation and the remainder of the WSAs released would be managed in concert with the rest of the public lands in the Decision Area. It's anticipated that over time presence of some wilderness character could be diminished in these areas, however due to many of these areas being adjacent to wilderness protection may be inferred to them by their location. Black Mountain and Moses WSA would be most at risk to adverse chance since they are small isolated parcels.

4.22.2 Impacts Common to All Action Alternatives

The management of WSAs once released by congress changes across the action alternatives, as such, there are not impacts considered common to all action alternatives.

4.22.3 Impact of Alternative B

Those WSAs (1,880 acres) directly adjacent to designated Wilderness would be managed for wilderness characteristics. Management for wilderness characteristics would continue to protect the elements of wilderness character present, through closure to mineral development, designation as an OHV closed areas, and identification as VRM Class II. Minimal impact would be anticipated to wilderness character present.

A total of 18,650 acres of three WSAs would be managed within ACECs. All of Mike Ranch/Case Mountain and Sheep Ridge WSAs would be managed as and within the Kaweah ACEC which would provide some protection to the natural and undeveloped elements through restrictions on mineral development. Restrictions to seasonal visitation on portions of the area, however, may reduce the untrammeled nature and limit opportunities for primitive unconfined recreation. Portions of the Piute Cypress WSA would be managed within the Piute Cypress and Erskine Creek ACECs, while protection would be provided from mineral development, there would be no anticipated impact to opportunities for primitive unconfined recreation, as no camping restriction would be in place in either of the ACECs.

Black Mountain and Moses WSA (610 acres) would be managed as multiple-use dispersed public lands and most at risk to degradation and loss of all wilderness character elements.

4.22.4 Impact of Alternative C

Identification of all WSA, after release from study status by congress, for management to protect wilderness characteristics would maintain the protection of wilderness character through implementation of management including, closure or withdrawal from mineral development, identification as right-of-way exclusion zones, designation as OHV closed areas, and management as VRM Class I. Where ACEC designation overlaps (Kaweah, Piute Cypress and Erskine Creek) it is anticipated that more stringent parts of the ACEC management designations would be applied and may diminish the untrammeled nature and opportunities for primitive unconfined recreation.

4.22.5 Impact of Alternative D

Identification of all WSA, after release from study status by congress, for management to protect wilderness characteristics would maintain the protection of wilderness character through implementation of management including, closure or withdrawal from mineral development, identification as right-of-way exclusion zones, designation as OHV closed areas, and management as

VRM Class I. Where ACEC designation overlaps (Kaweah, Piute Cypress and Erskine Creek) it is anticipated that more stringent parts of the ACEC management designations would be applied and may diminish the untrammeled nature and opportunities for primitive unconfined recreation.

Exclusion of livestock grazing from all lands may enhance the natural elements of wilderness character. The undeveloped nature and opportunity to experience solitude may be impacted by both the removal of rangeland improvements; which would enhance these elements, and the construction of fencing around public lands needed to implement this action; which would diminish these elements.

4.22.6 Impact of Alternative E

All WSAs, once released from study status would be managed as multiple-use dispersed public lands. Where ACEC designation overlaps (18,650 acres in Kaweah, Piute Cypress and Erskine Creek ACECs) it is anticipated that more stringent parts of the ACEC management designations would be applied. These areas would still receive some protection from the impact of mineral development on the natural and undeveloped wilderness character elements.

The management for North Fork ERMA would be applied to a portion of the Sheep Ridge WSA. Targeted activities of the ERMA include fishing, hunting, and water-play would be consistent with the maintenance of wilderness character. Opportunities for solitude would be adversely impacted due to numbers of visitors expected during the summer.

Social and Economic Considerations

4.23 Social and Economic Resources

This section presents an analysis of social and economic impacts of the management alternatives proposed in the RMP/EIS. This document discusses employment, labor income, and effects on sectors in the impact area economy that encompass the Bakersfield FO. Impacts to revenues received by states and counties, environmental justice, and communities within the Planning Area are also presented. Finally, the alternatives are discussed in light of forecasts for the area over the 20-year period of analysis.

The economic analysis focuses on changes in labor income and employment associated with BLM planning actions and estimated outputs for the alternatives (Table 4.23-1). The social analysis focuses on the interests and concerns of identified communities relative to the alternatives. Higher employment, subject to some qualifications, can be seen as a benefit to the local community. Other benefits are also present, although some are not easily measured or tied to economic activity. An example of where effects are difficult to quantify are equity effects, impacts to social values, and non-market values. Regardless, these benefits are discussed despite the inability to measure them quantitatively.

Table 4.23-1
BLM Outputs, by Alternative

Output	Current[1]	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
General recreation (visits)[2]	266,899	298,092	298,092	288,777	288,777	307,408
Fish and wildlife recreation (visits)	88,966	99,364	99,364	96,259	96,259	102,469
Livestock Grazing (AUMs)[3]	25,200	~~37,626~~ 37,600	~~40,056~~ 40,200	~~37,775~~ 37,900	~~859~~ 900	~~42,288~~ 42,300
Natural gas (thousand cubic feet)	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000
Oil (barrels)	19,000,000	15,000,000 to 19,000,000	15,000,000 to 19,000,000	15,000,000 to 19,000,000	15,000,000 to 19,000,000	15,000,000 to 19,000,000
Sand and gravel (short tons)	2,000	2,000	1,500	2,000	2,000	1,500
Gypsum (short tons)	5,000	5,000	5,000	5,000	5,000	5,000

[1] Estimates include actual use levels (average annual use).
[2] Recreation visits are expected to increase by 2% per year as a result of observed rates of increase in BLM recreation data (Recreation Management Information System 2010).
[3] This is the total of authorized AUMs and projected future authorized AUMs, under the assumptions that 75 percent of acres available for application would be authorized with a stocking rate of 5 acres per AUM (except under the Current column where current average annual authorized AUMs are displayed).

The social analysis focuses on changes to social and economic well-being as it relates to the quality of life of communities identified in Chapter 3. While many of the potential changes in quality of life can only be discussed qualitatively, outputs in Table 4.23-1 provide an approach to discuss the magnitude of effects to these communities. Scoping comments from the RMP planning process provided specific information pertaining to the concerns of individuals and groups affected by this plan. All comments were examined and general categories were formed from common themes pertaining to community connections and interests in BLM management. The three communities of interest identified include individuals and groups interested in Recreation and Access, Preservation of Rural Characteristics and Lifestyle Associated with Grazing, and Oil and Gas Development.

METHODS OF ANALYSIS

In order to accurately portray the relationship of current BLM management and the community, the social and economic geographic scope of analysis must be defined. The social and economic effects from changes on BLM lands feasibly extend beyond the immediate vicinity of their location. Consequently, Fresno, Kern, Kings, Madera, San Luis Obispo, Santa Barbara, Tulare, and Ventura Counties make up the impact area used to examine social and economic effects from management under this DEIS.

Employment and labor income estimates developed for this analysis include direct, indirect, and induced economic effects measured using IMPLAN. Direct employment would, for example, be generated in the agriculture sector as a result of livestock grazing on BLM. Additional employment would be generated as the affected livestock operators purchase services and materials as inputs ("indirect" effects) and

ranchers spend their earnings within the local economy ("induced" effects). Direct, indirect, and induced effects are combined in the discussion of effects below.

Theoretically, expenditures associated with changes in final demand would be available and specific enough to allocate to each of the 440 sectors contained in the IMPLAN model. National-level production functions from IMPLAN are used to assess impacts from BLM outputs (Table 4.23-1). Expenditures should be delineated between local and non-local providers, as purchases out of the economic study region would have no local economic impact. IMPLAN's data contain information, called regional purchase coefficients, which describe the proportion of a given commodity that would be provided by local producers. Previous modeling experience has shown that the data contained in the IMPLAN modeling system for the various sectors are an accurate representation of impacts.

The social analysis assesses the potential effects of different management actions on potentially affected social groups. These groups were identified based on the results of public scoping and comments received during the planning process. This analysis addresses the potential impacts of the alternatives based on the issues and concerns raised by these groups. The analysis draws upon ongoing discussions between the BLM and potentially affected publics, as well as discussions with subject matter experts involved in other parts of the analysis. The analysis is primarily qualitative with quantitative measures used as appropriate.

The social groups are defined to facilitate the discussion of social impacts. These discussions simplify what are often quite complex and unique values and attitudes, and the groupings presented here are by no means mutually exclusive. For example, many ranchers also participate in recreation activities. It is also worth noting that attitudes, interests, and values often change over time. The social analysis covers the groups and individuals that are most likely to be affected by this plan.

Proposed management of the following resources, resource uses, or programs is anticipated to have an effect on the Economic and/or Social condition: Biological Resources, Cultural Resources, Lands with Wilderness Characteristics, Soil Resources, Visual Resources, Water Resources, Wildland Fire and Ecology Management, Comprehensive Trail and Travel Management, Lands and Realty, Livestock Grazing, Minerals Management, Areas of Critical Environmental Concern, Back Country Byways, and National Trails. The effects that pertain to social and economic components of some of these resources are addressed directly (i.e., Livestock Grazing and Minerals); while other resources are considered as a component of overall economic or social impacts. Those resources not listed are deemed to have negligible effects and therefore, are not analyzed further.

ASSUMPTIONS

The following analysis methods and assumptions were used to complete the analysis for the social and economic impacts from the proposed management decisions:

- The planning area population would continue to increase and age as described in Chapter 3.
- Regional economic impacts are estimated based on the assumption of full implementation of each alternative. The actual changes in the economy would depend on individuals taking advantage of the resource-related opportunities that would be supported by each alternative. If market conditions or trends in resource use were not conducive to developing some opportunities, the impact to the economy would be different than estimated here.

- Resource specialists projected annual resource outputs that are based on the best available information and professional judgment. The purpose of the economic analysis is to compare the relative impacts of the alternatives and should not be viewed as absolute economic values.
- Projected recreation visits are distributed among different types of visitors based on the results of National Visitor Use Monitoring (NVUM) surveys conducted for the Sequoia National Forest.
- The ratios of recreation visits to jobs and income used to assess the impacts of the alternatives are based on national ratios developed through the U.S. Forest Service's NVUM program (Stynes and White 2005).
- Baseline recreation demand is assumed to increase by 2 percent per year based on the observed annual rate of recreation use in the Bakersfield FO (Recreation Management Information System [RMIS] 2010).
- Levels of expenditures and employment at the Field Office are not expected to change as result of the alternatives. Thus a constant budget over the life of the plan is a reasonable and practical assumption.
- Non salary-related expenditures made by the Bakersfield FO are assumed to be allocated to different economic sectors based on data compiled for the Sequoia National Forest.
- Livestock grazing revenues received by the BLM and benefits of BLM forage were calculated using the conservative AUM price for 2010 of $1.35 per AUM and the 2009 statewide average AUM price for private land of $16.40, adjusted for inflation (U.S. Department of Agriculture 2010).
- 75% of the acres allocated as available for livestock grazing but without a current authorization are estimated to result in new grazing authorizations on those lands within the life of the plan. The reasonably foreseeable levels of grazing use in those new authorizations are projected given an estimated average stocking rate of 5 acres/AUM.
- *Employment and Income effects from Bakersfield FO grazing are assessed using direct, indirect and induced multipliers developed by the BLM for California in the 2012 DOI's Economics Report (DOI 2012a).*
- Between approximately 80 and 90 percent of all surface-disturbing activities related to the oil industry would occur in the San Joaquin Valley portion of the Planning Area. In fact, during the last 10+ years, more than 95% of all federal drilling has occurred in this area. Most of this would be within the established boundaries of producing fields in Kern County, and the vast majority would be on lands that are already leased (not on new leases issued subsequent to this RMP). (Appendix M. Reasonably Foreseeable Development Scenarios).
- The alternatives establish areas to be managed for wilderness characteristics and Visual Resource Management (VRM) designations changes to ACECs and other special designations such as Wild and Scenic River (WSR) suitability determinations. These designations would further maintain and perhaps enhance non-market values associated with natural amenities protected on these lands.

4.23.1 Impact of Alternative A (No Action)

4.23.1.1 Economic

Alternative A is not expected to reduce economic diversity (the number of economic sectors) or increase economic dependency, which occurs when the local economy is dominated by a limited number of industries. Shifts in emphasis could occur, but these would not result as a consequence of planning actions under this alternative. While this alternative has the potential to affect local businesses and individuals, the relative contribution of BLM-related activities to the local economy would not be large enough to have any measurable effect on economic diversity or dependency. For example, the dependency of the local economy on the livestock industry, mining, and recreation activities would not be affected by BLM resource management under this alternative. Under this alternative, all BLM-related contributions, i.e. jobs and labor income, would continue to support less than 1 percent of totals within the impact area economy, but could be more important for smaller communities within the planning area.

Estimates of the levels of employment and labor income that would be supported under this alternative are based on projected resource outputs from BLM management actions (see Table 4.23-1), estimated payments to counties, BLM expenditures, and other externally funded activities on BLM lands. The projected outputs and activities are discussed for BLM resource areas in the following sections. Estimated average annual employment and labor income from outputs and activities are summarized in Table 4.23-3 and Table 4.23-4 below, respectively.

As a result of Alternative A, about ~~*3,394*~~ *3,521* total jobs (direct, indirect and induced jobs) and $~~*200.2*~~ $*200.9* million in total labor income (direct, indirect and induced income) would be generated in the impact area economy on an average annual basis from recreation, livestock grazing, fluid minerals, solid minerals, BLM expenditures and externally funded projects on BLM. In addition, contributions resulting from payments to counties would accrue from PILT, grazing payments (grazing lease fees and possessory interest taxes) and minerals royalty payments. Payments to counties would vary under this alternative (from 518 to 803 total jobs and from $27.3 to $42.3 million in total labor income) based on energy market conditions, the resulting minerals production and royalties paid and are discussed below in the subsection on Impacts to Counties.. Employment and labor income contributions are slightly higher than current contributions evaluated in Chapter 3 due to the larger estimated potential opportunity for livestock grazing, solid minerals potential and recreation visits evaluated under this alternative than levels evaluated under the current actual use scenario. Estimates of livestock grazing contributions are based on the estimated potential grazing opportunity that would be available rather than actual grazing use evaluated under in Chapter 3. The largest employment and labor income effects would occur in the Mining, and Accommodation & Food Services sectors (IMPLAN 2009).

While employment and labor income contributions under this alternative would be the higher than alternatives B, C and D, less acreage would be designated under protected areas (ACECs, land to be managed for wilderness character, WSR suitable segments and VRM Class I and II acres) than the other alternatives (*Comparison of Alternatives Table*; Chapter 2). Therefore this alternative would provide less protection of non-market values and natural amenities than the other alternatives.

Recreation

The role of recreation in the local economy will continue to increase as OHV use, boating, biking and other forms of recreation continue to increase. Travel to the area from outside the area to enjoy these opportunities is not an unreasonable assumption.

Under this alternative recreation management would continue to sustain opportunities important to the area economy and well-being of area communities. As noted in Chapter 3, opportunities provided to local residents are important; however, their recreation expenditures do not represent new money introduced into the economy. If BLM related opportunities were not present, it is likely that residents would participate in other locally based recreation activities and this money would still be retained in the local economy. Recreation on BLM administered lands would sustain more jobs and labor income than all other programs except fluid minerals under this alternative (see Table 4.23-3 and Table 4.23-4 below).

While OHV use would continue to be limited to designated routes, Alternative A would provide the most miles available for motorized uses than the other alternatives. As a result of continued current recreation management under the No Action Alternative visitors use would continue to increase by roughly 2 percent per year (based on rates of visitation observed in the past; RMIS 2010). Given this increase, contributions from recreation related visits to the Bakersfield FO are greater under Alternative A than experienced currently (Table 4.23-1). Expenditures of these visitors would support approximately 278 jobs and $7.8 million in labor income in the impact area economy on an average annual basis.

Livestock Grazing

The estimated potential grazing opportunity under Alternative A of 37,600 AUMs (Table 4.23-1) would support approximately ~~*5*~~ *131* jobs and ~~*$125,000*~~ $140 million in labor income (Table 4.23-3 and Table 4.23-4). While these contributions are higher than current actual contributions from billed livestock grazing presented in Chapter 3, it must be noted these are impacts from the estimated potential level of AUMs in the planning area. This is the total authorized number of AUMs that could be offered under average forage conditions which may not be an accurate portrayal of actual impacts. Factors such as drought or high production years, changing permit or lease holders, financial limitations on livestock operators, market conditions and implementation of grazing practices to improve range conditions are important to consider.

In addition to employment and income provide by BLM forage, the value of BLM forage to area lessees and permittees should also be considered. While dependency on BLM forage would remain low (the number of cattle that BLM forage could support under this alternative would constitute less than 1 percent of 2007 inventory in planning area counties; USDA 2007), BLM forage would continue to provide a low cost and important complement to some livestock producers' other sources of forage. In addition, private property values can be considered to be connected to BLM grazing permits or leases and would be maintained under this alternative. Under this alternative, payments to counties associated with grazing fees and possessory interest taxes would continue to support area communities under this alternative, and are discussed below under the subsection on Impacts to Counties.

Fluid Minerals

Fluid mineral management under this alternative would continue to support levels of production depicted in Table 4.23-1. Under this Alternative historic production of 15 to 19 million barrels of oil and 5 million MCF of gas is anticipated to continue. Contributions to employment and income from these

uses would provide 2,871 total jobs (direct, indirect and induced jobs) and $179.5 million in total labor income (direct, indirect and induced income) on an average annual basis (Table 4.23-3 and Table 4.23-4). Seven percent of employment and 6 percent of labor income would continue to be supported in the planning area minerals sector under this alternative as a result of total contributions (direct, indirect and induced) from fluid minerals management.

Solid Minerals (Locatable, Saleable and Solid Leaseable)

Salable mineral material from the community pit (Kelso) and Gypsum (solid leasable) would continue to be made available (Holloway Gypsum) under this alternative. Areas with mineral potential would continue to be restricted or closed to development: less than one percent of the acres with solid leasable mineral potential, 16 percent of the acres with salable mineral potential, and 8 percent of the acres with locatable, mineral potential. While future development under this alternative is possible, the driving force behind development on available acreage is price and demand, such as nearby construction needs for salable minerals. If market conditions are favorable it is anticipated that up to 20 locatable projects, 310 saleable projects and 2 solid leasable projects would potentially be developed on BLM. If this projected development occurred, 49 jobs and $3.1 million in labor income would be supported under this alternative (Table 4.23-3 and Table 4.23-4).

Impacts to Counties

Under this alternative BLM land identified for retention or disposal does not change thus entitlement acreage used to calculate Payment in Lieu of Taxes (PILT) would not change (Table 4.23-2). Further site specific NEPA process not covered under this plan would evaluate the availability of this land for disposal if proposed. If this land is disposed, it would no longer count towards the entitlement acreage used in Payment in Lieu of Taxes (PILT) calculations which could slightly decrease the contribution to county payments from BLM land in the area. However, predicting county payments based on entitlement acreage alone is impractical due to other factors used to determine PILT payments such as changes in the population ceiling and congressionally approved annual appropriation acts. Nevertheless, if BLM land is disposed, it would be subject to property taxes whereas before disposal it was not. Payments under PILT are designed to help offset losses in property taxes due to the nontaxable status of Federal lands within state or county boundaries. Therefore, county property taxes could offset losses from the qualifying entitlement acreage for PILT.

Table 4.23-2
Payments to Counties (2010 dollars)

Resource	Alternative A No Action	Alternative B Preferred	Alternative C	Alternative D	Alternative E
PILT	$2,309,773	$2,309,773	$2,309,773	$2,309,773	$2,309,773
Grazing (portion of grazing fees and possessory interest taxes)	$15,857	$15,857	$15,857	$404	$15,857
Solid Minerals	1,500	1,500	1,500	1,500	1,500
Minerals min	$42,232,782	$42,232,782	$42,232,782	$42,232,782	$42,232,782
Minerals max	$66,783,313	$66,783,313	$66,783,313	$66,783,313	$66,783,313

Any changes under this alternative in livestock grazing revenues (lease fees and possessory interest taxes) would not be large enough to substantially affect the overall amount of payment made to counties since these payments make up a small portion of county payments under this alternative (Table 4.23-2).

Some of the sand and gravel removal by county and state governments is authorized under free use permits, such that no revenues or lease fees are received by BLM and consequently no payments to counties are made. Gypsum would continue to be removed under this alternative and is treated as a leasable since it is found on acquired lands. Thus royalties are collected in addition to those royalties received from oil and gas production. These royalties are distributed back to local governments under the 1902 Reclamation Act and the 1920 Mineral Leasing Act.

As discussed in Chapter 3 and in the Reasonably Foreseeable Development Scenarios developed for this plan (Appendix M) oil and gas are worldwide commodities and events that occur globally may have effects on production in the U.S. and in the planning area. In addition, the US and worldwide economic conditions have changed dramatically within the last couple of years, causing further uncertainty. Thus a range of oil and gas production and price is evaluated here to provide context within a range of possible scenarios. Costs to local governments would remain unchanged as a result of planning actions, consequent changes in population, or oil and gas development; i.e. demand for services and infrastructure would not change as a result of BLM planning actions, since the level of development is not anticipated to change under this alternative. Payments to counties would remain a small portion of local government revenue in all planning area counties (less than one percent of total revenue in planning area counties and 3 percent or less of Kern County government revenue).

Payments to counties under Alternative A include PILT, grazing and mineral related payments and would range from approximately $44.56 to 69.11 million based on anticipated variation in oil and gas royalties. PILT payments that can be attributed to BLM entitlement acreage range from 5 to 3 percent of the min and max potential payment, respectively. Payments received from livestock grazing revenues include Section 3 and Section 15 payments in addition to possessory interest tax and range from .04 to .02 of the minimum and maximum potential payment. Payments associated with solid and fluid minerals would vary from 95 to 97 percent of the total payment to counties; however, impracticalities exist in predicting actual levels of production, market prices and the resulting royalties paid. These payments would support from 518 to 803 jobs and $27.3 to $42.3 million in labor income (Table 4.23-3 and Table 4.23-4). As discussed above this estimate is based on current prices and potential production. Actual production and market price cannot be projected thus, these estimates may not be an accurate portrayal of actual impacts. Regardless contributions from these payments are likely to remain a small but important portion of county revenue (less than one percent of total revenue in planning area counties and 3 percent or less of Kern County government revenue).

Table 4.23-3
Average Annual Employment[72] by Program by Alternative (Full and Part-time Jobs)

Resource	Alternative A No Action	Alternative B Preferred	Alternative C	Alternative D	Alternative E
Recreation[73]	278	278	269	269	287
Livestock Grazing	~~5~~ 131	~~5~~ 140	~~5~~ 132	~~0.1~~ 3	~~6~~ 147
Solid Minerals	49	34	20	20	36
Fluid Minerals	2,871	2,871	2,871	2,871	2,871
Payments to Counties - Low	518	518	518	517	518
Payments to Counties - High	803	803	803	803	803
BLM Expenditures	177	177	177	177	177
Externally funded projects	15	19	19	19	19
Total BLM Management- low	~~3,912~~ 4,039	~~3,901~~ 4,037	~~3,878~~ 4,006	~~3,876~~ 3,876	~~3,913~~ 4,055
Total BLM Management- high	4,324	4,322	4,291	4,162	4,340

Table 4.23-4
Average Annual Labor Income by Program by Alternative (thousands of 2011 dollars)

Resource	Alternative A No Action	Alternative B Preferred	Alternative C	Alternative D	Alternative E
Recreation[74]	$7,789	$7,789	$7,546	$7,546	$8,032
Livestock Grazing	~~$125~~ $3,820	~~$133~~ $4,085	~~$126~~ $3,851	~~$3~~ $92	~~$141~~ $4,298
Solid Minerals	$3,121	$2,198	$1,220	$1,220	$2,359
Fluid Minerals	$179,539	$179,539	$179,539	$179,539	$179,539
Payments to Counties - Low	$27,253	$27,253	$27,253	$27,243	$27,253
Payments to Counties - High	$42,267	$42,267	$42,267	$42,258	$42,267
BLM Expenditures	$9,158	$9,158	$9,158	$9,158	$9,158
Externally funded projects	$458	$704	$706	$706	$702
Total BLM Management- low	$231,138	$230,726	$229,273	$225,504	$231,341
Total BLM Management- high	$246,152	$245,740	$244,287	$240,519	$246,355

BLM Expenditures and Employment

Levels of expenditures and employment at the Field Office are not expected to change as result of this alternative. Under this alternative, it is estimated that average annual BLM expenditures would continue to support around 177 total jobs and $9.2 million in total labor income (Table 4.23-3 and Table 4.23-4) in the BKFO planning area economy. In addition to direct job and income impacts from BLM

[72] Average annual values are based on projected impacts over the 20-year analysis period. Source: Potential employment and labor income impacts are based on the estimated resource outputs summarized by alternative in Table 4.22-1. Potential impacts were estimated using the IMPLAN model and FEAST.

[73] As discussed in Chapter 3, these recreation estimates do not include visits from all local use since their expenditures do not represent new money into the economy.

[74] As discussed in Chapter 3, these recreation estimates do not include visits from all local use since their expenditures do not represent new money into the economy.

employees and their salaries, these estimates include impacts to industries that provide factors of production to BLM, and other industries impacted by wage related spending.

Renewable Energy

There is currently no geothermal, wind or solar energy projects on BLM land within the planning area; however, inquires, proposals, and ROW applications have occurred (Appendix M Reasonably Foreseeable Development Scenarios). Under this alternative opportunities for the Bakersfield FO to support renewable energy development will continue, limited only on areas that have non-discretionary closures (i.e., Wilderness Areas).

Externally Funded Projects

A portion of the management actions performed on BLM are carried out with funds not provided by BLM. Thus these expenditures are not accounted for under the category of BLM expenditures discussed above. Recent examples of such projects are discussed in Chapter 3. Under the No Action Alternative current projects would continue to be funded from external sources and are estimated to support about 15 total jobs and $458,000 in total labor income (see Table 4.23-3 and Table 4.23-4).

Role of Amenities, Migration and Non-market Values

The economic analysis assesses the economic effects of the direct use of resources in terms of jobs and income. This type of analysis does not include other types of economic value often referred to as non-market values. Non-market values are important to the well-being of visitors, area residents and others outside the planning area. These values include natural amenities, quality of life factors, recreational opportunities, ecosystem services and non-use values such as existence, option and bequest values. As noted above, non-market values are difficult to quantify and insufficient data exists to assess the effects of management actions. However, the fact that no monetary value is assigned to these values does not lessen their importance in the decision making process.

In addition, helpful inferences can be made. While there is a general consensus that non-use values exist, the methodologies for measuring these values are controversial and difficult to apply. Wilderness has been the subject of numerous non-use studies, usually conducted for specific natural areas, however no attempt has been made to directly elicit potential non-use values associated with the alternatives under this RMP. The alternatives establish areas to be managed for wilderness characteristics, changes to ACECs and other designations such as Wild and Scenic River (WSR) suitability and Visual Resource Management (VRM) designations. These designations would further maintain and perhaps enhance non-market values associated with natural amenities protected on these lands.

Additionally land to be managed for wilderness characteristics, WSR suitable segments and areas managed for VRM Class I and II may attract new residents and tourists to the area which would then contribute to area economic activity. While in some cases land protection directly reduces recreation visitation or other resource uses, it has been shown that natural amenities can offset job losses due to population growth (Eichman et al. 2010). Natural amenities and quality of life have been increasingly recognized as important factors in the economic prospects of many rural communities in the West (Rudzitis and Johnson 2000). In addition, non-labor income is intimately tied to natural amenities as discussed in Chapter 3. Rural county population change, the development of rural recreation, and retirement-destination areas are all related to natural amenities (McGranahan 1999). Thus, designations that maintain and protect natural amenities may similarly contribute to area economic well-being.

Under Alternative A, less land would be managed under protected area designations than under the other alternatives. Therefore, this alternative would provide the least protection of non-market values and natural amenities amongst the alternatives (see *Comparison of Alternatives Table*; Chapter 2). Consequently well-being associated with non-market values and potential contributions from new residents and tourists attracted by natural amenities could be less than the other alternatives.

4.23.1.2 Social

Recreation and Access

Under this alternative wildlife and non-wildlife visits are expected to increase (Table 4.23-1). Employment and income related to recreational activities, many of which are dependent on access to public lands, will at minimum continue to support this community's quality of life. While localized changes in access could occur, recreation opportunities will be maintained and enhanced thus accommodating existing recreation uses and expected increases in recreation uses (Table 4.23-1).

Effects of increased visitation on the quality of the recreation experience will depend on the type and location of the recreation activity taking place as well as the behavior of the individual recreating. No information is currently available on the effects of increased visitation on quality of recreational experience or access to public land. Regardless changes in the quantity and quality of recreation experiences are discussed in the recreation section of this EIS.

Alternative A has the smallest acreage restricted from camping amongst the alternatives; however, the annual length of stay would be the shortest. While OHV use would be limited to designated routes, Alternative A would provide the more miles available for motorized uses than the other alternatives, apart from Alternative D. As a result of SRMA management and route designations under this alternative, visitors use would continue to increase by 2 percent per year (based on rates of visitation observed in the past; RMIS 2010). Given this increase, average annual recreation visits under Alternative A are greater than experienced currently (Table 4.23-1). In addition, current access for other commercial and non-commercial uses would be maintained under current transportation management. Thus Alternative A continues to support quality of life through continued access to public land.

Preservation of Rural Characteristics and Lifestyle Associated with Grazing

Individuals and communities interested in the preservation of rural characteristics and lifestyle noted the importance of continued livestock grazing use. Effects on rural character and the cultural value of livestock grazing are dependent on continued availability of forage and landscapes used for grazing. Under this alternative the estimated potential grazing opportunity would continue to provide the same level of forage as available for lessees and permittees in the past and thus accommodate current levels of billed use depicted in the first column of Table 4.23-1. Resulting employment and income generated from livestock grazing activities would continue to contribute to the quality of life for those depending on the industry and connected industries. In addition, the cultural value and rural character associated with BLM forage would be maintained under this alternative.

Oil and Gas Development

Under this alternative, oil and gas production and development is anticipated to continue within its historic range (Table 4.23-1) as discussed in Chapter 3. Oil and gas fields on BLM-managed mineral estate within the Bakersfield FO have been active for over a century and are well developed. While wells are projected to be drilled on federal mineral estate, most of this drilling would occur within existing developed oil fields and would be considered infill and disturbance of new areas would be minimal.

Employment and income generated from oil and gas development activities contribute to the quality of life for those depending on the industry and connected industries. In addition, potential change in population that would result from changes in employment would be similar to levels and change experienced in the past. Effects associated with oil and gas employment-related population change on infrastructure, community demographics, and quality of life would thus not change for communities in the planning area. Public perceptions about greenhouse gas emissions and global warming associated with development in the Bakersfield FO would continue since production and development levels are not anticipated to change from historic levels.

Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires federal agencies to identify and address disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low income populations. The Order further stipulates that agencies conduct their programs and activities in a manner that does not have the effect of excluding persons from participation in, denying persons the benefits of, or subjecting persons to discrimination because of their race, color, or national origin.

This alternative could result in increases in employment and labor income relative to current conditions over the next decade (see Table 4.23-3 and Table 4.23-4), from which minority and low income populations may benefit. As noted above, access for recreation and other uses would be accommodated under all the alternatives. In addition, access for cultural uses, traditional materials and cultural sites will continue to provide valuable resources to communities in the area; sustaining lifestyles, traditions, ceremonies and the heritage that remain an important part of community lifestyle, rural character and quality of life.

Additionally, public involvement efforts for this project have been inclusive and the agency has considered input from persons or groups regardless of race, color, national origin, income, or other social and economic characteristics.

4.23.2 Impact of Management Common to All Action Alternatives

4.23.2.1 Economic

The action alternatives are not expected to reduce economic diversity (the number of economic sectors) or increase economic dependency, which occurs when the local economy is dominated by a limited number of industries. Shifts in emphasis could occur, but these would not result as a consequence of planning actions under the action alternatives. While the action alternatives have the potential to affect local businesses and individuals, the relative contribution of BLM-related activities to the local economy (see Alternative A and Chapter 3) and the relative differences between the action alternatives would not be large enough to have any measurable effect on economic diversity or dependency. For example, the dependency of the local economy on the livestock industry, mining, and recreation activities would not be affected by BLM resource management under the action alternatives. Under the action alternatives, all BLM-related contributions, i.e. jobs and labor income, would continue to support less than 1 percent of totals within the impact area economy, but could be more important for smaller communities within the planning area.

Estimates of the levels of employment and labor income that would be supported under the action alternatives are based on projected resource outputs from BLM management actions (see Table 4.23-1), estimated payments to counties, BLM expenditures, and other externally funded activities on BLM lands. The projected outputs and activities are discussed by resource in the following sections. Estimated average annual employment and labor income from outputs and activities are summarized in Table 4.23-3 and Table 4.23-4 above, respectively.

Recreation

While change in recreation may occur as a result of planning actions under the action alternatives, the role of recreation in the local economy will continue to increase as OHV use, boating, biking and other forms of recreation continue to increase. Travel to the area from outside the area to enjoy these opportunities is not an unreasonable assumption.

Under the action alternatives recreation management would continue to sustain opportunities important to the area economy and well-being of area communities. As noted in Chapter 3, opportunities provided to local residents are important however; their recreation expenditures do not represent new money introduced into the economy. If BLM related opportunities were not present, it is likely that residents would participate in other locally based recreation activities and this money would still be retained in the local economy. Recreation on BLM administered lands would sustain more jobs and labor income than all other programs except fluid minerals under the action alternatives (see Table 4.23-3 and Table 4.23-4 below).

Jobs and income associated with recreation management should not overshadow the value of experience held by recreation users within the planning area. For example, backcountry or motorized use in the planning area could change as management actions are implemented. The value of these recreation experiences could thus change as visitor use changes. Changes in the quantity and quality of these recreation experiences offered are discussed in the recreation section of this EIS.

Fluid Minerals

Fluid mineral management under the action alternatives would continue to support levels of production depicted in Table 4.23-1. Management under this RMP will determine the extent of mineral resource activity in the future. For example, restrictions on mineral entry will occur for portions of Areas of Critical Environmental Concern (ACECs) with mineral potential. Regardless of these changes, area dependency on BLM related employment provided to the oil, gas and other mining sectors would not change amongst the action alternatives.

Historic production of 15 to 19 million barrels of oil and 5 million MCF of gas are anticipated to continue under all the action alternatives. Contributions to impact area employment and income from these uses would provide 2,871 total jobs (direct, indirect and induced jobs) and $179.5 million in total labor income (direct, indirect and induced income) on an average annual basis (Table 4.23-3 and Table 4.23-4). Seven percent of employment and 6 percent of labor income would continue to be supported in the planning area minerals sector under this alternative as a result of total contributions (direct, indirect and induced) from fluid minerals management.

Under all the action alternatives the change in population that would result from changes in mineral sector employment would be within the historic range of population change depicted in Chapter 3. In addition, the housing vacancy rate within the impact areas would accommodate any changes in housing demand from population changes since required households would not exceed one percent of current

vacancies under all the action alternatives. It should be noted that these effects are based on current and past observed conditions in both the housing and oil and gas markets. Actual oil and gas activity and housing markets cannot be projected, thus these estimates may not be an accurate portrayal of actual impacts; however, they do provide a frame of reference for discussion of housing and infrastructure effects. In addition, projected population increases, discussed in Chapter 3 and the cumulative effects section below, also temper potential effects on housing availability and affordability at the local level.

Solid Minerals

Solid minerals would continue to be provided by BLM in the planning area under all the action alternatives (Table 4.23-1 above). Management under this RMP will determine the extent of mineral resource activity in the future. For example, restrictions on mineral entry will occur for portions of Areas of Critical Environmental Concern (ACECs) with mineral potential. Regardless of these changes, area dependency on BLM related employment provided to mining sectors would not change amongst the action alternatives.

Impacts to Counties

Under all alternatives BLM land identified for retention or disposal varies; however, the identification of this land for potential land tenure changes does not guarantee disposal would occur. Further site specific NEPA process not covered under this plan would evaluate the availability of this land for disposal if proposed. If this land is disposed, it would no longer count towards the entitlement acreage used in Payment in Lieu of Taxes (PILT) calculations which could slightly decrease the contribution to county payments from BLM land in the area. However, predicting county payments based on entitlement acreage alone is impractical due to other factors used to determine PILT payments such as changes in the population ceiling and congressionally approved annual appropriation acts. Nevertheless, if BLM land is disposed, it would be subject to property taxes whereas before disposal it was not. Payments under PILT are designed to help offset losses in property taxes due to the nontaxable status of Federal lands within state or county boundaries. Therefore, county property taxes could offset losses from the qualifying entitlement acreage for PILT.

Some of the sand and gravel removal by county and state governments is authorized under free use permits, such that no revenues or lease fees are received by BLM and consequently no payments to counties are made. Gypsum would continue to be removed under all the action alternatives and is treated as a leasable since it is found on acquired lands. Thus royalties are collected in addition to those royalties received from oil and gas production. These royalties are distributed back to local governments under the 1902 Reclamation Act and the 1920 Mineral Leasing Act.

As discussed in Chapter 3 and in the Reasonably Foreseeable Development Scenarios developed for this plan (Appendix M) oil and gas are worldwide commodities and events that occur globally may have effects on production in the U.S. and in the planning area. In addition, the US and worldwide economic conditions have changed dramatically within the last couple of years, causing further uncertainty. Thus a range of oil and gas production and price is evaluated here to provide context within a range of possible scenarios. Costs to local governments would remain unchanged as a result of planning actions, consequent changes in population, or oil and gas development; i.e. demand for services and infrastructure would not change as a result of BLM planning actions, since the level of development is not anticipated to change under all the action alternatives. Payments to counties would remain a small portion of local government revenue in all planning area counties (less than one percent of total revenue in planning area counties and 3 percent or less of Kern County government revenue).

Payments to counties under the action alternatives include PILT, grazing and mineral related payments and range from approximately $44.56 to 69.11 million based on anticipated variation in oil and gas royalties. PILT payments that can be attributed to BLM entitlement acreage range from 5 to 3 percent of the min and max potential payment, respectively. Payments received from livestock grazing revenues include Section 3 and Section 15 payments in addition to possessory interest tax and range from .04 to .02 of the minimum and maximum potential payment (except under Alternative D, where no grazing would occur). Payments associated with solid and fluid minerals would vary from 95 to 97 percent of the total payment to counties; however, impracticalities exist in predicting actual levels of production, market prices and the resulting royalties paid. As discussed above this estimate is based on current prices and potential production. Actual production and market price cannot be projected, thus these estimates may not be an accurate portrayal of actual impacts. Regardless contributions from these payments are likely to remain a small but important portion of county revenue (less than one percent of total revenue in planning area counties and 3 percent or less of Kern County government revenue).

BLM Expenditures and Employment

Levels of expenditures and employment at the Field Office are not expected to vary as result of the action alternatives. While different action alternatives may cost more or less to implement, speculating whether the budget will be available is impractical. However, this does not mean implementation is impractical, since management priorities are likely to determine how funds are allocated to actions outlined in the plan. Thus a constant budget over the life of the plan is a reasonable and practical assumption. Under all the alternatives, it is estimated that average annual BLM expenditures would continue to support around 177 total jobs and $9.2 million in total labor income (Table 4.23-3 and Table 4.23-4) in the BKFO planning area economy. In addition to direct job and income impacts from BLM employees and their salaries, these estimates include impacts to industries that provide factors of production to BLM, and other industries impacted by wage related spending.

Renewable Energy

On BLM within the planning area, there are currently no geothermal leases however areas of high potential exist and would continue to be made available under all the action alternatives despite surface restrictions in other areas. While the Bakersfield FO has never had any geothermal, wind or solar installation projects inquires, proposal and requests for ROW applications have occurred (Appendix M Reasonably Foreseeable Development Scenarios). Under all the alternatives opportunities for the Bakersfield FO to support renewable energy development will continue despite surface restrictions in some areas.

Externally Funded Projects

A portion of the management actions performed on BLM are funded by external partners and thus not accounted for under the effects from BLM Expenditures and Employment. Under the Action Alternatives it is anticipated that OHV route decommissioning and closure would be funded externally through California OHV Commission grants. These externally funded projects would be performed in addition, to those occurring currently and discussed in Chapter 3. These actions are labor intensive and utilize industries and associated businesses contained within the impact area economy. As a result 19 jobs and approximately $700,000 in labor income would be supported annually in the planning area economy (see Table 4.23-3 and Table 4.23-4).

4.23.2.2 Social

Recreation and Access

Under all the action alternatives wildlife and non-wildlife visits are expected to increase (Table 4.23-1). Employment and income related to recreational activities, many of which are dependent on access to public lands, will at minimum continue to support this community's quality of life. While localized changes in access could occur, recreation opportunities will be maintained and enhanced thus accommodating existing recreation uses and expected increases in recreation uses (Table 4.23-1).

Effects of increased visitation on the quality of the recreation experience will depend on the type and location of the recreation activity taking place as well as the behavior of the individual recreating. No information is currently available on the effects of increased visitation on quality of recreational experience or access to public land. Regardless changes in the quantity and quality of recreation experiences are discussed in the recreation section of this EIS.

Across all alternatives, it is important to recognize that the difference in special management area designations (such as SRMAs and areas open, closed or limited to motorized uses) represents a change in management focus, and may not change the ability to access public land or the uses that occur on that land. Also, drawing conclusions about changes to access based on acreage or route designations may not be appropriate since substantive consideration depends on an accurate proxy for actual portrayal of effects to quality of life. Regardless, as discussed above, it is anticipated that recreation opportunities will be maintained and enhanced with these designations thus accommodating existing recreation uses and expected increases in recreation uses (Table 4.23-1). Therefore, no decrease in quality of life is anticipated from changes in recreation access under all the action alternatives.

Oil and Gas Development

Under the action alternatives, oil and gas production and development is anticipated to continue within its historic range (Table 4.23-1) as discussed in Chapter 3. Oil and gas fields on BLM-managed mineral estate within the Bakersfield FO have been active for over a century and are well developed. While wells are projected to be drilled on federal mineral estate, most of this drilling would occur within existing developed oil fields and would be considered infill and disturbance of new areas would be minimal. Employment and income generated from oil and gas development activities contribute to the quality of life for those depending on the industry and connected industries. In addition, potential change in population that would result from changes in employment would be similar to levels and change experienced in the past. Effects associated with oil and gas population change on infrastructure, community demographics, and quality of life would thus not change for communities in the planning area. Public perceptions about greenhouse gas emissions and global warming associated with development in the Bakersfield FO would continue since production and development levels are not anticipated to change from historic levels.

Air quality, traffic congestion, noise and other concerns expressed by communities commonly in the presence of oil and gas development, could experience increases in quality of life with travel management planning that limits access to oil fields and other developments under the action alternatives.

Environmental Justice

The action alternatives could result in increases in employment and labor income relative to current conditions over the next decade from which minority and low income populations may benefit. As noted above, access for recreation and other uses would be accommodated under all the alternatives. In addition, access for cultural uses, traditional materials and cultural sites will continue to provide valuable resources to communities in the area; sustaining lifestyles, traditions, ceremonies and the heritage that remain an important part of community lifestyle, rural character and quality of life.

Additionally, public involvement efforts for this project have been inclusive and the agency has considered input from persons or groups regardless of race, color, national origin, income, or other social and economic characteristics.

Under the Action Alternatives, the implementation of fees for access to specific SRMA's has the potential to affect minority and low income populations who have historically recreated in these areas. However, effects to these communities cannot be considered disparate since all users would be assessed fees regardless of racial, ethnic or poverty status. In addition, it is anticipated that substitute opportunities would continue to be made available on other public land in the areas.

4.23.3 Impact of Alternative B

4.23.3.1 Economic

As a result of Alternative B, about ~~*3,383*~~ *3,519* total jobs (direct, indirect and induced jobs) and ~~*$199.5*~~ *$203.5* million in labor income (direct, indirect and induced income) would be generated in the impact area economy on an average annual basis from recreation, livestock grazing, fluid minerals, solid minerals, BLM expenditures and externally funded projects on BLM. In addition, contributions resulting from payments to counties would accrue from PILT, grazing payments (grazing lease fees and possessory interest taxes) and minerals royalty payments. Payments to counties would vary under this alternative (from 518 to 803 total jobs and from $27.3 to $42.3 million in total labor income) based on energy market conditions, the resulting minerals production and royalties paid and are discussed below in the subsection on Impacts to Counties. Employment and labor income contributions are higher than the other alternatives, apart from Alternatives A and E, due to larger recreation visits evaluated under this alternative and additional externally funded projects discussed below. The largest employment and labor income effects would occur in the Mining and Accommodation & Food Services sectors (IMPLAN 2009).

While employment and labor income contributions under this alternative would be larger than the other alternatives, apart from Alternative E, less acreage would be designated under protected area designations than alternatives C or D (*Comparison of Alternatives Table*; Chapter 2). Therefore this alternative would provide less protection of non-market values and natural amenities than alternatives C or D but more than the other alternatives.

Recreation

Three SRMAs would receive a greater level of management, including direct funds, additional staff, and a higher level of recreation development under Alternative B: Keyesville, San Joaquin River Gorge, and Temblor. Alternative B would provide fewer miles available for motorized uses than alternatives A and E however, more than alternatives C and D. Regardless, increases in routes designated as authorized in

areas like Temblor SRMA would provide access to wild, open, unconfined space and motorized recreation on designated trails. Thus, in spite of the increase in OHV Closed areas relative to Alternative A, it is anticipated that this alternative would accommodate recreation at levels similar to the expected rates of increase discussed under Alternative A. Given this increase, average annual recreation visits are the same as experienced under Alternative A (Table 4.23-1) and expenditures of these visitors would support the same contributions as under Alternative A (Table 4.23-3 and Table 4.23-4).

Job and income associated with this alternative should not overshadow the value of experience provided by recreation on BLM under this alternative. With the Special Recreation Management Areas and route designation under this alternative, BLM management would likely be more commensurate with desired recreational experiences, regardless of the increase in OHV Closed areas. For example certain motorized user segments would benefit from opportunities specifically catered to their interests. Additionally, as conflicts between non-motorized and motorized users are resolved, desired recreation experiences are likely to improve. Consequently, the value of the recreation experience on BLM could actually stay the same or slightly increase relative to Alternative A.

Livestock Grazing

Alternative B would have a slightly higher level of potential permitted grazing than Alternative A and Alternative C and substantially more than Alternative D and could thus support more average annual AUM contributions (Table 4.23-1). On an average annual basis this permitted use would support ~~5~~ *140* jobs and ~~$133,000~~ *$4.1 million* in labor income within planning area counties (Table 4.23-3 and Table 4.23-4). While reductions in use on several allotments yields a decrease in potential permitted use relative to Alternative E, current billed activity (25,200 AUMs) could still be accommodated across the entire planning area and potentially increase under this alternative since the estimated potential grazing opportunity is ~~40,056~~ *40,200* AUMs. This potential use may be less likely to occur considering current levels of actual billed use of AUMs (25,200 AUMs; See chapter 3 discussion), nonetheless if demand for AUMs existed along with favorable forage and market conditions; the contribution from BLM grazing could increase relative to current billed use under this alternative. Regardless, decreases in use for individual operators are likely to occur with reductions in use on several allotments. Thus, while the removal of livestock grazing from BLM in the planning area would not appear to impact the overall supply of forage to producers in the entire planning area (the number of cattle BLM forage could support under this alternative would constitute less than 1 percent of 2007 inventory in planning area counties; USDA 2007), smaller communities and individual operators within the planning area could experience adverse impacts. Impacts of changes to individual allotments are discussed in *Chapter 4, Livestock Grazing* section of this DEIS.

Small changes in the levels of employment and income associated with Alternative B should not overshadow potential increases in other values as a result of grazing actions under this alternative. Reducing use on several allotments under this alternative could reduce conflict and increase value to other resources. For example, the creation of ACECs would provide for other community benefits despite the loss of livestock grazing opportunity. Thus despite the potential for a small decrease in employment, labor income, and the value of forage, other benefits would accrue to resources on BLM.

Solid Minerals (Locatable, Saleable and Solid Leaseable)

Salable mineral material from the community pit (Kelso) and Gypsum (solid leasable) would continue to be made available (Holloway Gypsum) under this alternative; however, acreage with mineral potential would be restricted or closed: 2 percent, 41 percent and 10 percent of acreage with locatable, saleable and solid leasable mineral potential would be restricted or closed, respectively. While future

development under this alternative is possible, the driving force behind development on available acreage is price and demand, such as nearby construction needs for salable minerals. If market conditions are favorable it is anticipated that up to 18 locatable projects, 183 saleable projects and 2 solid leasable projects would potentially be developed on BLM. If this projected development occurred, 34 jobs and $2.2 million in labor income would be supported under this alternative (Table 4.23-3 and Table 4.23-4).

Impacts to Counties

Under Alternative B annual payments to counties in the planning area would be approximately the same as discussed under Alternative A. PILT payments are anticipated to continue at current levels as well as payments associated with minerals royalties (Table 4.23-2). In addition, current levels of billed grazing use could be supported across the entire planning area by the estimated potential grazing opportunity (discussed above) and thus support grazing fee payments and possessory interest taxes (Table 4.23-2). Consequently these payments would support the same levels of employment and income (from 518 to 803 jobs and $27.3 to $42.3 million in labor income; Table 4.23-3 and Table 4.23-4) and would remain a small but important portion of county revenue (less than one percent of total revenue in planning area counties and 3 percent or less of Kern County government revenue).

Role of Amenities, Migration and Non-market Values

Under this alternative more protected area designations would occur than Alternatives A and E but less than Alternative C and D. Therefore, this alternative would provide more protection of non-market values and natural amenities than currently and Alternative E, however less than alternatives C and D. Consequently well-being associated with non-market values and potential contributions from new residents and tourists attracted by natural amenities could be more than these alternatives but less than alternatives C and D.

4.23.3.2 Social

Recreation and Access

The acreage restricted to camping under Alternative B is more than alternatives C and D but less than alternatives A and E. However, the annual length of stay would be twice as long as under Alternative A. In spite of the increase in OHV Closed areas relative to Alternative A, it is anticipated that the increase in routes designated authorized would accommodate recreation at levels similar to the expected rates of increase discussed under Alternative A. Given this increase, average annual recreation visits are the same as experienced under Alternative A (Table 4.23-1). In addition, it is anticipated that the designation of routes and site specific travel management planning will continue to accommodate other commercial and non-commercial uses of public land. Consequently no change in quality of life is anticipated.

Preservation of Rural Characteristics and Lifestyle Associated with Grazing

Individuals and communities interested in the preservation of rural characteristics and lifestyle noted the importance of continued livestock grazing use. Effects on rural character and the cultural value of livestock grazing are dependent on continued availability of forage and landscapes used for grazing. Under this alternative the estimated potential grazing opportunity would be slightly less than available currently however would accommodate current levels of billed use depicted in the first column of Table 4.23-1. Resulting employment and income generated from livestock grazing activities would continue to contribute to the quality of life for those depending on the industry and connected industries. In addition, the cultural value and rural character associated with BLM forage would be maintained under this alternative.

Environmental Justice

The closure of individual active allotments under this alternative has the potential to disparately effect environmental justice populations if lessees are minorities or low income.

4.23.4 Impact of Alternative C

4.23.4.1 Economic

As a result of Alternative C, about ~~*3,360*~~ *3,488* jobs and $~~*198.3*~~ $*202* million in labor income would be generated in the impact area economy on an average annual basis from recreation, livestock grazing, fluid minerals, solid minerals, BLM expenditures and externally funded projects on BLM. In addition, contributions resulting from payments to counties would accrue from PILT, grazing payments (grazing lease fees and possessory interest taxes) and minerals royalty payments. Payments to counties would vary under this alternative (from 518 to 803 total jobs and from $27.3 to $42.3 million in total labor income) based on energy market conditions, the resulting minerals production and royalties paid and are discussed below in the subsection on Impacts to Counties. These employment and labor income contributions are lower than under the other alternatives, apart from Alternative D, due to fewer recreation visits evaluated under this alternative and lower levels of anticipated solid minerals development. The largest employment and labor income effects would occur in the Mining and Accommodation & Food Services sectors (IMPLAN 2009).

While employment and labor income contributions under this alternative would be less than under the other alternatives, apart from Alternative D, more acreage would be designated under protected area designations than under the other alternatives (apart from Alternative D, where the same amount of protected areas would be designated; see the *Comparison of Alternatives Table* in Chapter 2). Therefore this alternative would provide more protection of non-market values and natural amenities than these alternatives. While the same amount of protected area designations would occur as under Alternative D, more employment and labor income would also be supported under this alternative than under Alternative D.

Recreation

Levels of recreation anticipated under Alternative C are less than the other alternatives (the same as Alternative D) due to restrictions on OHV access and decreases in areas open to the discharge of firearms, overnight camping and unrestricted equestrian uses. Expenditures of these visitors would support 269 jobs and $7.5 million in labor income on an average annual basis (Table 4.23-3 and Table 4.23-4).

While recreation visitation could decrease, opportunities on BLM may be more commensurate with desired recreational experiences. For example, conflicts between recreation users and oil and gas development would no longer occur with restrictions on access, thus desired recreation experiences are likely to improve. Consequently, the value of the recreation experience on BLM could actually stay the same or slightly increase relative to the other alternatives.

Livestock Grazing

Alternative C would have a slightly lower level of estimated potential grazing opportunity than alternatives B and E and could thus support fewer average annual AUM contributions (Table 4.23-1). On an average annual basis this permitted use would support ~~*5*~~ *132* jobs and ~~*$126,000*~~ *$3.8 million* in labor

income within planning area counties (Table 4.23-3 and Table 4.23-4). While reductions in use on several allotments yields a decrease in potential permitted use, current billed activity (25,200 AUMs) could still be accommodated across the entire planning area and potentially increase under this alternative since estimated potential grazing opportunity is ~~37,775~~ *37,900* AUMs. This level of use may be less likely to occur considering current actual billed use of AUMs (25,200 AUMs; See chapter 3 discussion), nonetheless if demand for AUMs existed along with favorable forage and market conditions, the contribution from BLM livestock grazing could increase relative to current billed use under this alternative despite the reductions in use on several allotments. Regardless, decreases in use for individual operators are likely to occur with reductions in use on several allotments. Thus, while the removal of this level of livestock grazing from BLM in the planning area would not appear to impact the overall supply of forage to producers in the entire planning area (the number of cattle BLM forage could support under this alternative would constitute less than 1 percent of 2007 inventory in planning area counties; USDA 2007), smaller communities and individual operators within the planning area could experience adverse impacts. Changes to individual allotments are discussed in the *Livestock Grazing* section in Chapter 4 of this DEIS. Small changes in the levels of employment and income associated with Alternative C should not overshadow potential increases in other values as a result of livestock grazing actions under this alternative. Reducing use on several allotments under this alternative could reduce conflict and increase value to other resources. For example, the creation of ACECs would provide for other community benefits despite the loss of livestock grazing. Thus despite the potential for a small decrease in employment, labor income, and the value of forage, other benefits would accrue to other resources on BLM.

Solid Minerals (Locatable, Saleable and Solid Leaseable)

Salable mineral material from the community pit (Kelso) and Gypsum (solid leasable) would continue to be made available (Holloway Gypsum) under this alternative however, acreage with mineral potential would be restricted or closed: 14 percent, 41 percent and 13 percent of acreage with locatable, saleable and solid leasable mineral potential would be restricted or closed. While future development under this alternative is possible, the driving force behind development on available acreage is price and demand, such as nearby construction needs for salable minerals. If market conditions are favorable it is anticipated that up to 7 locatable projects, 128 saleable projects and 2 solid leasable projects would potentially be developed on BLM. If this projected development occurred, 20 jobs and $1.2 million in labor income would be supported under this alternative (Table 4.23-3 and Table 4.23-4).

Impacts to Counties

Under Alternative C annual payments to counties in the planning area would be the same as discussed under Alternative B.

Role of Amenities, Migration and Non-market Values

Under this alternative more protected area designations would occur than Alternatives A, B and E and the same as Alternative D. Therefore, this alternative would provide more protection of non-market values and natural amenities than currently and alternatives B and E. Consequently well-being associated with non-market values and potential contributions from new residents and tourists attracted by natural amenities could be more than these alternatives and the same as Alternative D.

4.23.4.2 Social

Recreation and Access

Levels of recreation anticipated under Alternative C are less than the other alternatives (the same as Alternative D) due to restrictions on OHV access and decreases in areas open to the discharge of firearms, overnight camping and unrestricted equestrian uses. Alternative C would restrict the greatest amount of acreage from camping and would provide the shortest annual length of stay, which would be half as great as under Alternative A. While recreation visitation could decrease, opportunities on BLM may be more commensurate with desired recreational experiences. For example, conflicts between recreation users and oil and gas development would no longer occur with restrictions on access, thus desired recreation experiences are likely to improve. In addition, it is anticipated that the designation of routes and site specific travel management planning will continue to accommodate other commercial and non-commercial uses of public land. Consequently no change in quality of life is anticipated for the majority of BLM users. Some users could be displaced however substitute opportunities are supplied in the planning area. In addition the potential for improvements in quality of life could result for some visitors with reduced incidence of conflict.

Preservation of Rural Characteristics and Lifestyle Associated with Grazing

Effects to quality of life and area communities from grazing management are the same as those discussed above under Impact of Alternative B.

Environmental Justice

The closure of individual active allotments under this alternative has the potential to disparately effect environmental justice populations if lessees are minorities or low income.

4.23.5Impact of Alternative D

4.23.5.1 Economic

As a result of Alternative D, about ~~3,355~~ 3,359 jobs and $~~198.171~~ $198.3 million in labor income would be generated in the impact area economy on an average annual basis from recreation, livestock grazing, fluid minerals, solid minerals, BLM expenditures and externally funded projects on BLM. In addition, contributions resulting from payments to counties would accrue from PILT, grazing payments (grazing lease fees and possessory interest taxes) and minerals royalty payments. Payments to counties would vary under this alternative (from 517 to 803 total jobs and from $27.2 to $42.3 million in total labor income) based on energy market conditions, the resulting minerals production and royalties paid and are discussed below in the subsection on Impacts to Counties. These employment and labor income contributions are lower than under the other alternatives due to slightly smaller lower bound of potential payments to counties, fewer recreation visits and lower levels of estimated potential grazing opportunity. The largest employment and labor income effects would continue to occur in the Mining and Accommodation & Food Services sectors (IMPLAN 2009).

While employment and labor income contributions under this alternative would be less than under the other alternatives, more acreage would be designated under protected area designations than the other alternatives, apart from Alternative C, where the same amount of protected areas would be designated (*Comparison of Alternatives Table*; Chapter 2). Therefore this alternative would provide more protection of non-market values and natural amenities than the other alternatives, apart from

Alternative C. While the same amount of protected area designations would occur as under Alternative C, less employment and labor income would also be supported under this alternative than under Alternative C.

Recreation

Effects to local economic conditions are expected to be the same as discussed above under Impact of Alternative C. Direct, indirect and induced effects from these contributions are displayed in Table 4.23-2 and Table 4.23-3.

Livestock Grazing

While a small amount of estimated potential grazing opportunity is depicted in Table 4.23-1 (livestock grazing managed by adjacent field offices not covered in this plan), no acres would be allocated to livestock grazing under this alternative (*Comparison of Alternatives Table*; Chapter 2). While planning area counties combined exhibit a low level of dependency on Bakersfield FO forage (the number of cattle BLM forage could support under this alternative would constitute less than 1 percent of 2007 inventory in planning area counties; USDA 2007), BLM provides a low cost and important complement to some livestock producers' other sources of forage. It is likely that individual counties and livestock producers within the planning area depend on BLM for a larger portion of their forage. Thus, while the removal of livestock grazing from BLM in the planning area would not appear to impact the overall supply of forage to producers in the entire planning area, smaller communities and individual operators within the planning area could experience adverse impacts. Changes to individual allotments are discussed in the *Livestock Grazing* section of this Chapter.

In addition to the loss of employment and income associated with the loss of Bakersfield FO forage, the loss of value to area lessees and permittees should also be considered. As noted in Chapter 3 grazing on BLM often occurs on parcels intermingled with other ownerships. Grazing operations on lands adjacent to BLM would incur additional costs under this alternative to avoid livestock trespass on BLM. Costs would vary with method of control (herding, fencing) and terrain but can be considered substantial. It is estimated that more than 1,000 miles of new fencing may be necessary to prevent livestock from entering the 402,800 acres of land allocated as unavailable for livestock grazing (see the *Livestock Grazing* section of this chapter). In addition, the removal of grazing from BLM could further affect adjacent grazing operations if livestock movement to preferential grazing areas is interrupted (e.g., livestock watering sources, loafing and bedding areas). This would further increase costs to adjacent grazing operations and ultimately make some portions of private property unusable for grazing (see the *Livestock Grazing* section of this chapter).

As noted above and in Chapter 3, private property values can be considered to be connected to BLM grazing permits. Thus, in addition to the loss of a low cost and important source of forage, lessee or permittee property values could also decrease. Value associated with these permits would be lost under this alternative. Furthermore, the BLM might experience loss of resource value with the absence of livestock grazing if allotments are no longer maintained by lessees and permittees. For example, improvements in resource value from livestock grazing, such as creating suitable animal habitat, fuel reduction and road or water development maintenance, would no longer occur. Under this alternative, payments to counties associated with grazing fees and possessory interest taxes would no longer accrue to counties; these effects are discussed below under the subsection on Impacts to Counties.

Solid Minerals (Locatable, Saleable and Solid Leaseable)

Under Alternative D the effects to communities from mineral resource management would be the same as discussed under Alternative C.

Impacts to Counties

Under Alternative D annual payments to counties in the planning area would range from approximately $44.5 to $69.1 million (Table 4.23-2) which includes a portion of PILT payments (from 5 to 3 percent) that can be attributed to BLM entitlement acreage and a portion of royalties received from the sale of mineral material (from 95 to 97 percent). Without forage for livestock grazing provided under this alternative, no grazing fee distributions or possessory interest tax payments would be made to local counties. In addition, private property values could be reduced which would reduce property taxes paid. Without grazing related payments these payments would support from 517 to 803 jobs and $27.2 to $42.3 million in labor income (Table 4.23-3 and Table 4.23-4). As discussed above this estimate is based on a range of potential prices and production. Actual production and market price cannot be projected; thus, these estimates may not be an accurate portrayal of actual impacts. Regardless, contributions from these payments are likely to remain a small but important portion of county revenue (less than one percent of total revenue in planning area counties and 3 percent or less of Kern County government revenue).

Role of Amenities, Migration and Non-market Values

Under this alternative the same acreage of protected area designations would occur as Alternative C (Table 4.23-4). Consequently well-being associated with non-market values and natural amenities would be the same as presented above for Alternative C. *In addition, the removal of livestock grazing under this alternative could further protect non-market values.*

4.23.5.2 Social

Recreation and Access

Effects to local communities and quality of life from recreation management under this alternative are expected to be the same as discussed above under Impact of Alternative C. In addition, it is anticipated that the designation of routes and site specific travel management planning will have similar effects on commercial and non-commercial uses as Alternative C.

Preservation of Rural Characteristics and Lifestyle Associated with Grazing

Individuals and communities interested in the preservation of rural characteristics and lifestyle noted the importance of continued livestock grazing use. No acres would be allocated to livestock grazing under this alternative (*Comparison of Alternatives Table*; Chapter 2). While planning area counties exhibit a low level of dependency on Bakersfield FO forage (the number of cattle BLM forage could support under this alternative would constitute less than 1 percent of 2007 inventory in planning area counties; USDA 2007) the rural character and cultural value of livestock grazing associated with BLM forage would be lost. In addition, employment and income generated from Bakersfield FO livestock grazing activities would no longer contribute to the quality of life for those depending on the industry and connected industries.

Environmental Justice

The closure of active grazing allotments under this alternative has the potential to disparately effect environmental justice populations if a majority of lessees or permittees experiencing a closure are minorities or low income.

4.23.6 Impact of Alternative E

4.23.6.1 Economic

As a result of Alternative E, about ~~3,359~~ 3,537 jobs and $~~199.9~~ $204.1 million in labor income would be generated in the impact area economy on an average annual basis from recreation, livestock grazing, fluid minerals, solid minerals, BLM expenditures and externally funded projects on BLM. In addition, contributions resulting from payments to counties would accrue from PILT, grazing payments (grazing lease fees and possessory interest taxes) and minerals royalty payments. Payments to counties would vary under this alternative (from 518 to 803 total jobs and from $27.3 to $42.3 million in total labor income) based on energy market conditions, the resulting minerals production and royalties paid and are discussed below in the subsection on Impacts to Counties. These employment and labor income contributions are slightly higher than current contributions evaluated in Chapter 3 due to larger recreation visits and larger estimated potential grazing opportunity than the other alternatives. This includes direct, indirect and induced effects as a result of BLM outputs (Table 4.23-1). The largest employment and labor income effects would continue to occur in the Mining and Accommodation & Food Services sectors (IMPLAN 2009).

While employment and labor income contributions under this alternative would be higher than the other alternatives, less acreage would be designated under protected areas (ACECs, land to be managed for wilderness character, WSR suitable segments and VRM Class I and II acres) than the other alternatives, apart from Alternative A (*Comparison of Alternatives Table*; Chapter 2). Therefore this alternative would provide less protection of non-market values and natural amenities than the other alternatives, but more than Alternative A.

Recreation

Four SRMAs would receive a greater level of management, including direct funds, additional staff, and a higher level of recreation development under Alternative E. In addition, Alternative E would provide more miles available for motorized uses than the other alternatives, open access to Temblor ERMA and the only OHV open area. Thus levels of recreation anticipated under Alternative E are more than the other alternatives due to anticipated increases in use with these changes in recreation management. It is anticipated that this management would support 287 jobs and $8 million in labor income on an average annual basis (Table 4.23-3 and Table 4.23-4). While employment and labor income contributions from recreation under this alternative would be higher than the other alternatives, incidence of conflict could remain. Thus the value of recreation experiences under this alternative could be less under this alternative than the other alternatives.

Livestock Grazing

Alternative E would have a higher level of estimated potential livestock grazing opportunity than the other alternatives (Table 4.23-1). On an average annual basis this potential livestock grazing opportunity could support ~~*the same level of employment and income as under Alternative A*~~ *147 jobs and $4.3 million in labor income within planning area counties* (Table 4.23-3 and Table 4.23-4). While reductions in use on individual allotments would occur, current billed activity (25,200 AUMs) could still be accommodated across the entire planning area, and potentially increase, under this alternative since the estimated potential grazing opportunity is ~~42,288~~ 42,300 AUMs. This potential use may be less likely to occur considering current levels of actual billed use of AUMs (25,200 AUMs; See chapter 3 discussion), nonetheless if demand for AUMs existed along with favorable forage and market conditions, the contribution from BLM livestock grazing could increase relative to current billed use under this

alternative. Regardless, decreases in use for individual operators are likely to occur with reductions in use on several allotments. Thus, while the removal of some livestock grazing from BLM in the planning area would not appear to impact the overall supply of forage to producers in the entire planning area (the number of cattle BLM forage could support under this alternative would constitute less than 1 percent of 2007 inventory in planning area counties; USDA 2007), smaller communities and individual operators within the planning area could experience adverse impacts. Changes to individual allotments are discussed in the *Livestock Grazing* section of this chapter.

Small changes in the levels of employment and income associated with Alternative E should not overshadow potential increases in other values as a result of livestock grazing actions under this alternative. Reducing use on several allotments under this alternative could reduce conflict and increase value to other resources. For example, decrease in livestock grazing occurs to protect resource values and would provide suitable habitat for sensitive species. Thus despite the potential for a relatively small decrease in employment, labor income, and the value of forage, other benefits would accrue to resources on BLM.

Solid Minerals (Locatable, Saleable and Solid Leaseable)

Salable mineral material from the community pit (Kelso) and Gypsum (solid leasable) would continue to be made available (Holloway Gypsum) under this alternative; however, acreage with mineral potential would be restricted or closed: less than one percent, 34 percent and 8 percent of acreage with locatable, saleable and solid leasable mineral potential would be restricted or closed, respectively. While future development under this alternative is possible, the driving force behind development on available acreage is price and demand, such as nearby construction needs for salable minerals. If market conditions are favorable it is anticipated that up to 18 locatable projects, 204 saleable projects and 2 solid leasable projects would potentially be developed on BLM. If this projected development occurred, 36 jobs and $2.4 million in labor income would be supported under this alternative (Table 4.23-3 and Table 4.23-4).

Impacts to Counties

Under Alternative E annual payments to counties in the planning area would be the same as discussed under Alternative B.

Role of Amenities, Migration and Non-market Values

Under this alternative less protected area designations would occur than the other Action Alternatives; however, more than exist currently under Alternative A. Therefore, this alternative would provide more protection of non-market values and natural amenities than currently but less than the other Action Alternatives. Consequently well-being associated with non-market values and potential contributions from new residents and tourists attracted by natural amenities could be more than exist currently but less than the Action Alternatives.

4.23.6.2 Social

Recreation and Access

Levels of recreation anticipated under Alternative E are more than the other alternatives due to anticipated increases in use with open public access to the Temblor ERMA and the open OHV designation. Alternative E would have less area restricted to overnight camping than Alternatives C and D but more than Alternative A. In addition, it is anticipated that the designation of routes and site specific travel management planning will continue to accommodate other commercial and non-

commercial uses of public land. Consequently no change in quality of life is anticipated for the majority of BLM users. However, incidence of conflict could remain for some users as a result of unrestricted access and uses in some areas.

Preservation of Rural Characteristics and Lifestyle Associated with Grazing

Effects to quality of life and area communities from grazing management are the same as those discussed above under Impact of Alternative B.

Environmental Justice

The closure of individual active allotments under this alternative has the potential to disparately effect environmental justice populations if lessees are minorities or low income.

4.24 Public Safety and Health

The BLM has a mandate to address known health and safety hazards occurring on public lands, including the presence of hazardous materials, abandoned mine lands, unexploded ordnance and naturally occurring hazards. In addition, the BLM is responsible for maintaining facilities and infrastructure; reducing health and safety risks to employees and the public; and protecting public lands from illegal dumping of wastes, theft, destruction of public property, and misuse of resources.

Generally public health and safety issues are addressed by policy and regulation. As such federal, state and local administrative codes, regulations, civil and criminal statutes will be recognized and enforced on public land. Where hazards are known and exposure of the public to these risks can be minimized or prevented, land use planning decisions can proactively aid in the protection of public health and safety.

METHODS OF ANALYSIS

The analysis focuses on publically accessible and intensively used lands within the Decision Area that hold elevated risks above that normally expected with visitation to public lands. These lands are generally easily accessible from the existing route network including state and county roads.

Direct impacts to public health and safety are considered to be those that reduce or eliminate risk. Indirect impacts are considered to be those that limit exposure to risk. Therefore the presence of, or accessibility to, hazards resulting from management action is used as an indicator of impacts to public health and safety.

The inherent dangers associated with visiting public lands such as trips and falls while hiking, use of OHV equipment, travel on primitive and unmaintained routes, presence of wildlife and poisonous plants, and heat and cold exposure are not addressed within this analysis.

Proposed management of the following resources, resource uses, or programs is anticipated to have an effect on Public Health and Safety: Cave and Karst, Comprehensive Trail and Travel Management, and Minerals Management. Those resources not listed are deemed to have negligible effects and, therefore, are not analyzed further.

ASSUMPTIONS

The public health and safety impact analysis is based on the following assumptions:

- Risks associated with general air quality in the San Joaquin Valley are inherent to living or recreating in this region and therefore considered outside the scope of this analysis.
- In consideration of fugitive dust regulations decisions and management actions that reduce soil disturbance or implement dust management would be expected to reduce the risk of exposure to naturally occurring soil hazards (e.g., naturally occurring asbestos and Coccidioides immitis) where present.
- Public health and safety associated with abandoned mine lands are adequately addressed through national policy and guidance implementation of which would continue in partnership with the California State Abandoned Mine Program.
- Increased public land use would result in increased exposure to a variety of hazards including: energy and mineral development, abandoned mines, hazardous materials, illegal dump sites and illegal drug production.
- Hazardous materials would be addressed through a variety of regulations such as, but not limited, to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Superfund Amendments and Reauthorization Act (SARA) and the Resource Conservation and Recovery Act (RCRA) administered by various federal and state agencies.
- BLM's oil and gas inspection and enforcement program aids in reducing the risks associated with negligent release hazardous chemicals into the environment.
- BLM's law enforcement program aids in reducing the risks associated with clandestine drug labs, marijuana gardens, and illegal dumping on public lands.

4.24.1 Impact of Alternative A (No Action)

Caves would generally remain accessible to cavers of all levels of skill and ability and cave location information would be freely available, with the exception of Granite Cave. Exposure to risk presented by caves to inexperienced or inadequately trained or equipped members of the public desiring to explore caves within the Decision Area would remain at current levels. The level of incident response to lost or injured cavers may increase if visitation increases over the long term.

Areas with intensively developed oil fields would remain open to public access continuing the exposure of the public to a hazardous industrial environment including the dangers associated with hydrogen sulfide gas and petroleum production.

Increased public access by designating routes as Motorized would increase the probability for exposure to hazards where they occur in close proximity to the route. Approximately six miles of routes occur on serpentine soils. While use of routes on serpentine soils could result in the release of asbestos fibers and create a public health and safety concern, based on the extremely low mileage of routes over these soils, impacts would be limited and localized.

4.24.2 Impacts Common to All Action Alternatives

There are no impacts considered common to all action alternatives to public health and safety beyond the assumptions made with regard to naturally occurring hazards, hazardous materials, and abandoned mine lands.

4.24.3 Impact of Alternative B

Overall, determination of significance and limitation on access to caves would reduce both the exposure to and risk presented by caves to inexperienced or inadequately trained or equipped members of the public desiring to explore caves within the Decision Area. Millerton Cave, which is considered to receive the highest visitation, would remain open to all public use therefore continuing the exposure to risk this cave presents from exploration by inexperienced cavers. The level of incident response to lost or injured cavers in Millerton Cave would be expected to continue at current levels.

Closure of approximately ~~*10,000*~~ *4,000* acres of intensively developed oil fields to public access would reduce the exposure of the public to a hazardous industrial environment including the dangers associated with hydrogen sulfide gas and petroleum production. In addition restrictions to routes such as designation as authorized use only or closed also potentially reduce the risk of exposure to hazards where these routes are within close proximity and provide opportunity endanger oneself.

Approximately five miles of routes that occur on serpentine soils would be designated as Motorized. While use of routes on serpentine soils could result in the release of asbestos fibers and create a public health and safety concern, based on the extremely low mileage of routes over these soils, impacts would be limited and localized.

4.24.4 Impact of Alternative C

Overall, determination of significance and limitation on access to all caves would reduce both the exposure to and risk presented by caves to inexperienced or inadequately trained or equipped publics desiring to explore caves within the Decision Area. The level of incident response to lost or injured cavers would be expected to decrease.

Closure of approximately 10,000 acres of intensively developed oil fields to public access would reduce the exposure of the public to a hazardous industrial environment including the dangers associated with hydrogen sulfide gas and petroleum production. In addition restrictions to routes such as designation as authorized use only or closed also potentially reduce the risk of exposure to hazards where these routes are within close proximity and provide opportunity endanger oneself.

Approximately five miles of routes that occur on serpentine soils would be designated as Motorized. While use of routes on serpentine soils could result in the release of asbestos fibers and create a public health and safety concern, based on the extremely low mileage of routes over these soils, impacts would be limited and localized.

4.24.5 Impact of Alternative D

Overall, determination of significance and limitation on access to all caves would reduce both the exposure to and risk presented by caves to inexperienced or inadequately trained or equipped publics desiring to explore caves within the Decision Area. The level of incident response to lost or injured cavers would be expected to decrease.

Closure of approximately 10,000 acres of intensively developed oil fields to public access would reduce the exposure of the public to a hazardous industrial environment including the dangers associated with hydrogen sulfide gas and petroleum production. In addition restrictions to routes such as designation as

authorized use only or closed also potentially reduce the risk of exposure to hazards where these routes are within close proximity and provide opportunity endanger oneself.

Approximately five miles of routes that occur on serpentine soils would be designated as Motorized. While use of routes on serpentine soils could result in the release of asbestos fibers and create a public health and safety concern, based on the extremely low mileage of routes over these soils, impacts would be limited and localized.

4.24.6 Impact of Alternative E

Overall, determination of significance and limitation on access to caves would reduce both the exposure to and risk presented by caves to inexperienced or inadequately trained or equipped publics desiring to explore caves within the Decision Area. Millerton Cave, which is considered to receive the highest visitation, would remain open to all public use therefore perpetuating the exposure to risk this cave presents from exploration by inexperienced cavers. The level of incident response to lost or injured cavers in Millerton Cave would be expected to continue at current levels.

Increased public access by designating routes as Motorized would increase the probability for exposure to hazards where they occur in close proximity to the route. Approximately six miles of routes occur on serpentine soils. While use of routes on serpentine soils could result in the release of asbestos fibers and create a public health and safety concern, based on the extremely low mileage of routes over these soils, impacts would be limited and localized.

Areas with intensively developed oil fields would remain open to public access continuing the exposure of the public to a hazardous industrial environment including the dangers associated with hydrogen sulfide gas and petroleum production.

Cumulative Impacts

4.25 Cumulative Impacts

The Council on Environmental Quality (CEQ) defines cumulative effects as:

The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions (40 CFR 1508.7).

The CEQ suggests cumulative impact analyses should focus on meaningful impacts, and not exhaustively analyze all possible cumulative impacts (CEQ 1997b). Therefore, the analysis in this RMP and EIS focuses on past, present, and future actions anticipated to have environmental impacts similar to the incremental impacts identified for implementing the alternatives including those resulting in meaningful impacts to historically important resources, those with a potential for violating legal standards or laws, or other identified projects or actions in the geographic area of analysis (i.e., the Cumulative Impact Assessment Area [CIAA]) that relate to the identified issues.

In order to fully understand the cumulative impacts of actions associated with this RMP each alternative must be addressed in its entirety (management common to all action alternatives and the alternative itself), rather than by individual program elements. To aid in understanding, however, programs can be

grouped by the issues addressed in this plan and described in *Chapter 1, Scoping and Planning Issues* (e.g., grouping biological, cultural, and paleontological resources addresses the cumulative impacts as they relate to Issue 3 – ensure protection of natural and cultural resources in a multiple-use environment).

METHODS OF ANALYSIS

To focus the scope of cumulative impact analysis, cumulative issues were considered in the context of baseline conditions (*Chapter 3 – Affected Environment*), the incremental impacts on individual resources described in this chapter, the actions and decisions described in the reasonable foreseeable future projects, and the following factors as modified from the CEQ's *Considering Cumulative Effects Under the National Environmental Policy Act* (CEQ 1997b):

- Does the affected resource have substantial value relative to legal protection and/or ecological, cultural, economic, or social importance?
- Are reasonable foreseeable future actions anticipated to have environmental impacts similar to the incremental impacts identified for RMP alternatives?
- Have any recent or ongoing NEPA analyses of similar actions in the geographic area identified important adverse or beneficial cumulative impact issues?
- Has the impact to the resource been historically important, such that the importance of the resource is defined by past loss, past gain, or investments to restore resources?

The cumulative impact analysis was further bound by considering the following factors:

- *Timeframe* – Timeframes are based on the duration of the direct and indirect effects of the proposed action and alternatives (the life of the RMP for most issues).
- *Geographic area* – The geographic area of analysis, or the CIAA, covers different geographic areas depending on the specific resource being evaluated. For the most part, the CIAA is the Planning Area except for (1) issues involving recreation, for which the CIAA includes the Planning Area and adjacent key recreation opportunities; (2) issues involving energy development and other land use authorizations considers the entire State of California; and (3) issues involving air quality, for which the CIAA will be the affected air basins: San Joaquin Valley, the South Central Coast, and the Mojave Desert Air Basins (eastern Kern portion).
- *Analytical assumptions* – see the Assumptions for Analysis below.

The reasonably foreseeable actions or projects consider in assessing cumulative effects include:

- Travel management planning by BLM and other federal land management agencies (e.g., West Mojave Travel Management Plan, Sierra National Forest Travel Management Plan, Sequoia National Forest Travel Management Plan, and the forthcoming Piute Mountains Travel Management Project);
- Programmatic renewable energy EISs and the reasonably foreseeable actions anticipated by these documents (e.g., Desert Renewable Energy Conservation Plan, Programmatic Wind Energy EIS, Programmatic Geothermal Leasing EIS) occurring on public lands and other renewable energy development occurring within the CIAA;

- Leasing, exploration, and development of oil and gas resources both as described in the Reasonably Foreseeable Development Scenario (Appendix M) for federal mineral estate addressed in this RMP and that occurring on private mineral estate in the CIAA;
- Recovery Plans and/or Habitat Conservation Plans (USFWS and California Department of Fish and Game)
- USACE Isabella Lake Dam Safety Modification Project
- BOR *Upper San Joaquin River Basin Storage Investigation (Temperance Flat RM 274 Reservoir)*
- Implementation of BLM and USFS Land Use Plans for areas within the CIAA (e.g., CPNM RMP, Clear Creek Management Area RMP, and the USFS Giant Sequoia National Monument Management Plan)
- Continued issuance and renewal of land use authorizations including rights-of-way.
- Plans associated with management of recreation within the CIAA (e.g., San Joaquin River Gorge Business Plan, USFS Recreation Facility Analysis).

ASSUMPTIONS

The cumulative impact analysis is based on the following assumptions:

Other federal and state agencies will continue to implement their current plans as written. Since private, industrial, and non-industrial lands are owned by a variety of individuals and entities, the BLM did not attempt to predict the various scenarios that could occur on adjacent lands across space and time. It is assumed that private lands would continue to provide the same overall amount and spatial pattern of vegetation, habitat, and disturbance over time as presently exists.

Generally, the context and intensity of non-BLM activities are not anticipated to vary by alternative because these activities do not directly depend on BLM management actions and allowable uses set forth in the RMP alternatives; however, private oil and gas and renewable energy development will somewhat depend upon BLM management.

The predictions in the reasonably foreseeable development scenarios remain unchanged across the alternatives, and the rates of development on non-BLM lands would continue at a similar rate to those currently occurring.

4.25.1 Cumulative Impacts on Resources Related to Issue 1

Adequately address the need for access to and continued availability of, public lands for multiple recreational uses and open spaces.

This issue exemplifies the need for appropriate management of recreation opportunities on public lands therefore addressing the cumulative effects on this issue serves to provide the context for the incremental direct and indirect impacts anticipated on Recreation, Visitor Services and open spaces under each alternative. To adequately address this issue, those reasonably foreseeable actions (described above) occurring within the Planning Area and to adjacent key recreational opportunities (e.g., Jawbone Canyon OHV Area, Clear Creek Management Area) is used for analysis; therefore, these areas comprise the cumulative impact analysis area (CIAA).

Public lands in the Planning Area are fragmented with limited legal public access. Access to these lands has further been diminished through development of adjacent private property and increased awareness of and litigation fears by private property owners. In addition, trends on federal and state lands available for recreation has been to restrict activities to only those desired and/or compatible with land management objectives or require remuneration to continue support of recreational programs. Examples of specific restrictions and prohibitions on recreation activities include loss of motorized recreation opportunities from travel management and special area planning (exemplified by the proposed plan for the Clear Creek Management Area, and the final travel management plans for the Sequoia National Forest) along with increases in areas congressional designated closed (i.e., increases in Wilderness acreage). Other past actions that demonstrate the decline in recreational opportunities include those resulting from the Carrizo Plains National Monument RMP that not only restrict types of motorized use, but specifically prohibited or reduced the area of opportunity for other recreational activities (e.g., prohibition of varmint hunting and restrictions on the areas where dispersed camping is allowed). Examples that demonstrate the trend of requiring remuneration or increasing the costs to users include new recreation use fees at the San Joaquin River Gorge, proposed increases to fees for service at Forest Service facilities specifically proposals to charge for use of dispersed sites around Isabella Lake and along the Kern River, and gradual increasing in fees for entrance and services at National Parks. Furthermore the levels of service have declined in the last few years with shrinking budgets and increasing costs.

Of all federal lands, those administered by the BLM historically have provided opportunities with the least restrictions. However, increased concerns over public safety and environmental resources have led to the closure of some areas to recreational use (e.g., Clear Creek Management Area). In addition, increased demands for public lands uses that exclude, or are incompatible with, recreation uses (e.g., utility scale renewable energy) could further reduce public access, open space, and recreational opportunities.

Overall the effect is a decline in access to public lands by the general public and loss of some recreation opportunities and open space. It is reasonably foreseeable that these restrictions of OHV activities, shooting sports, etc. will escalate with increased environmental awareness and incompatibility with increased visitation to popular areas.

Alternative A

Management would result in the least restrictions to specific recreational opportunities and the maintenance of existing access opportunities. Furthermore, the travel network would incorporate all routes (1,895 miles) whether previously designated or newly created, although many of these routes are not legally accessible (i.e., occur within public lands surrounded by private property) and would therefore not increase access opportunity. Identification of a significant portion of public lands (216,000 acres of the lands in the Decision Area) as potentially available for disposal or repositioning to new managers (which may impose access and recreation restrictions), however, would ultimately result in a net loss of public land and the recreational opportunities provided on these lands. Furthermore, the diversity of recreation opportunities would remain limited in designated Wilderness areas. These BLM management decisions and actions, when put in context of the analysis area (a high level of restrictions on 1,030,400 acres of National Parks, a moderate level of restrictions on 4,080,000 acres of National Forests, and potential for closure of 100,000 acres of state lands due to budget issues and 31,000 acres in the Clear Creek Management Area), could contribute up to 6% of the cumulative reduction in public access and reduce recreation opportunities provided by federal and state lands in the CIAA.

Management Common to All Action Alternatives

Management would result in restrictions to both dispersed (e.g., OHV, equestrian, camping, and shooting sports) and resource-dependent recreation opportunities (e.g., caving, specialized vehicle recreation) and prohibition of public access to both sensitive (ACECs) and dangerous (industrialized) areas. Route designations would reduce the extent of the travel network in terms of both modes of transport and allowable users (i.e., authorized users only), therefore further limiting public access. Management would, however, provide for the retention and potential acquisition of lands for recreational purposes and access easements. Furthermore, delineation and identification of specific management for intensively visited and opportunity rich areas would ensure continued access and maintenance of some recreational opportunities over the life of the plan.

These BLM management decisions and actions would shift public lands from the historic perspective as places of unrestricted, limitless recreation opportunity to a more managed and controlled environment similar to the other opportunities provided within the analysis area (National Parks and Forests). This would cumulatively accelerate loss of the diversity and increase the division (i.e., not all opportunities available at the same location) of recreational opportunities across the analysis area.

The magnitude of these cumulative impacts from BLM management decisions and actions varies marginally between action alternatives although none would be considered to be significant.

Alternative B

Alternative B would continue public access through route designations albeit with reduced miles available for all forms of transport (by approximately 42% from Alternatives A and E). The level of limitations on specific recreation activities would be reduced by 9% from those imposed under Alternatives C and D; however, the majority of intensively visited areas would have management controls applied through SRMA or ERMA designation. It is anticipated Alternative B would contribute up to 4% of the cumulative reduction in public access and recreation provided by federal and state lands in the CIAA.

Alternatives C and D

Alternatives C and D (with identical impacts) would be most restrictive on both access and opportunity through the closure of the largest area (23,000 acres) to public access and implementation of the most restrictive special and prescriptive management in ACECs and other areas of importance (236,100 acres). It is anticipated Alternatives C and D would contribute up to 4% (0.6% more than Alternative B) of the cumulative reduction in public access and recreation provided by federal and state lands in the CIAA.

Alternative E

Alternative E would be least restrictive to public access and specific recreation opportunities and provides the second largest publically available travel network (1,759 miles). It would, however, identify the largest area for specific recreation management (SRMAs and ERMAs) and would apply management controls to these areas. This alternative would also allow the largest area available for mineral and energy development that could, over the life of the plan, increase the areas of public closure, therefore reducing access and opportunities on an additional 18,000 acres as these areas become developed. It is anticipated Alternative E would contribute up to 3% (0.4% less than Alternative B) of the cumulative reduction in public access and recreation provided by federal and state lands in the CIAA.

4.25.2 Cumulative Impacts on Resources Related to Issue 2

Establish a balance between the extent of the travel network and the protection of natural and cultural resources including an appropriate allocation of routes to the various modes of transport.

This issue brings together the conflict between travel and the travel network with the protection of natural and cultural resources. Addressing the cumulative impacts on this issue serves to describe the contribution of direct and indirect impacts resulting from implementing alternatives within this plan on Comprehensive Trail and Travel Management and its relationship to Biological and Cultural Resources. In consideration of cumulative impacts on these resources, the cumulative impact analysis area (CIAA) includes reasonably foreseeable actions and projects within the Planning Area as this encompasses travel management related actions within adjacent National Forests and gives consideration to the interspersed nature of public lands with private property.

Routes are essentially linear surface disturbance that denudes areas of vegetation, interrupt wildlife movement linkages, accelerate natural soil processes, contrast with the natural visual landscape, and have the potential to damage or diminish cultural resource values. Therefore, the greater the extent of travel networks the greater the potential effect on these natural and cultural resources. In addition to surface disturbance, use of the travel network by specific modes of transport increases the ease of access to sensitive resources, causes disruption to wildlife behaviors, and contributes to diminished air quality.

Routes often start, end, or cross other agency jurisdictions and/ or private property. The routes on public lands provide both non-recreational and recreational travel utility. The recreational utility includes routes for all modes of transport (motorized through pedestrian) that either connect people across or to opportunities within public land, or provide technical challenge and travel experiences themselves. Non-recreational utility is principally motorized and associated with developments, operations, and rights-of-way; as these are authorized uses of public lands, the BLM is compelled to allow appropriate access (i.e., routes). While there would be no direct or indirect adverse impact to the extent of the route network these routes would still contribute to impacts on natural and cultural resources.

Historically, travel management has transitioned from open (cross-country) opportunities to identifying specific routes of travel. As a result of this transition, and failure of people to abide by it, is the proliferation or unintentional creation of routes that persist on the landscape through repetitive use. In an effort to quell this problem, land management agencies currently designate routes with additional limitations such as seasons of use, mode of transport restrictions, types of user limitations; most of these restrictions affect wheeled and/or motorized vehicles. This is most notably the purview of the USFS and the BLM, including route designations completed for the Giant Sequoia and Carrizo Plain National Monuments (both reducing the extent of the motorized travel network) and the Sequoia National Forest. With a key and connected role any management decision or action affecting the travel network would cumulatively affect travel opportunities within the Planning Area (e.g., closing recreational routes on public lands may shift use to National Forests). Consequently, travel management plans that ultimately close, restrict, or otherwise reduce the extent of the travel network to the various modes of transport are concurrently and will continue to be implemented over the life of this plan.

Alternative A

Management would result in a doubling of the current travel management network with no restriction to the allowable modes of transport or users except for a few specific routes (i.e., the PCNST). Cumulatively, there would be no adverse from these BLM management actions to the travel management network across the CIAA; however, unrestrained access to all existing routes would conflict with concurrent travel management plans developed by the USFS. Furthermore, acceptance of a large number of unplanned routes into the route network without consideration of the juxtaposition of these routes to natural and cultural resources and their safety, quality, and purpose would result in an unsustainable travel network over the life of the plan and unacceptable adverse impacts to natural and cultural resources.

Alternatives B, C, and D

Management would result in a 15% reduction in the extent of the current BLM travel network giving consideration to other natural and cultural resources along with the purpose and utility of individual routes. The loss to the travel network of publically available motorized routes when considered with similar losses on adjacent National Forest System lands from implementation of their travel management plans would cumulatively represent a reduction in the extent of and opportunity provided by the travel network.

The consideration given to minimizing impacts on natural and cultural resources and ensuring routes are engineered and purposeful by these and similar decisions in like planning efforts, although decreasing the extent of the network, increases its utility and sustainability in the long term.

When considered with similar travel management plans within the CIAA, Alternatives B, C, and D would have the most cumulative impact on the travel network, but would result in diminished impacts to natural and cultural resources whilst overall achieving a sustainable route network. The minor magnitude shift between Alternative B and Alternatives C and D becomes negligible when considered cumulatively with other jurisdictional actions.

Alternative E

Management would result in a near doubling of the current travel management network with few restrictions to the allowable modes of transport or users. Cumulatively, there would be negligible adverse impacts from these BLM management actions to the travel management network across the CIAA; however, unrestrained access to most of the existing routes would conflict with concurrent travel management plans developed by the USFS. Furthermore, acceptance of a large number of unplanned routes into the route network without consideration of the juxtaposition of these routes to natural and cultural resources and their safety, quality, and purpose would result in an unsustainable travel network over the life of the plan and unacceptable adverse impacts to natural and cultural resources.

4.25.3 Cumulative Impacts on Resources Related to Issue 3

Ensure appropriate protection for Threatened and Endangered species, critical habitat, other biological resources, and cultural and paleontological resources in a multiple-use environment.

This issue encompasses many of the physical, cultural, and natural resources within the Planning Area. As such, addressing cumulative impacts as they relate to this issue discloses the incremental direct and indirect adverse impacts from the alternatives when considered with other reasonably foreseeable actions and projects on Biological (including Special Status Species), Cultural, and Paleontological Resources. The CIAA for these resources includes the entire Planning Area in order to give consideration to the interspersed nature of public lands and the complex geospatial diversity of these resources.

Biological, cultural, and paleontological resources are primarily subject to degradation from human activities including surface disturbance. Historically the CIAA has been subject to human disturbances that have resulted from urban, commercial, and industrial development, and recreational use. Surface disturbing activities have primarily resulted from the large scale conversion of native habitats to agriculture (e.g., vineyards and orchards), the energy development (e.g., oil and gas field expansion, large scale solar developments), and urbanization including the increasing numbers of dispersed rural residences (e.g., expansion of small rural communities such as Three Rivers, Auberry, Cambria). These trends in disturbance are expected to continue accumulating a net loss of these resources.

Cumulatively these historic trends of adverse impact result from private, local, state, and federal actions within the CIAA. To counter these adverse impacts, however, agencies with a preservation or protection mandate plan for and implement actions to mitigate these trends (e.g., habitat conservation plans, species recovery plans, or programmatic agreements with the State Historic Preservation Officer). The actions provided for by the BLM through this RMP add to the protections of these key resources through the support, compliance with, and enhancement of these efforts. The contribution of BLM management, however, is negligible due to the area over which the RMP could take direct action being 2% of the Planning Area.

Alternative A

Although the direct and indirect adverse impacts resulting from this alternative would be confined to only 2% of the CIAA and would be anticipated to be minimal (approximately 18,000 acres of disturbance over the life of the plan) cumulatively, some localized areas with sensitive resources would be adversely affected to a greater extent when combined with reasonably foreseeable projects and actions over the life of the plan. Due to the nature of these resources, the extent and exact locations of these impacts are impossible to determine; however, the following examples (below) utilize the ACEC designations for biological and cultural relevance and importance values to typify these effects.

The BLM's contribution to cumulative impacts on special status species (e.g., California condor or Kelso Creek monkeyflower) would be greater as these relevant values would not receive protection as an ACEC in some areas and no controls would be prescribed to public visitation and recreation activities to prevent these disturbances to condors and monkeyflower habitat. This, when combined with projects and actions on adjacent lands with these habitats (e.g., oil and gas development within the Hopper Mountain area; property subdivision and development in monkeyflower habitat) would cumulatively reduce their productivity and viability for use by special status species. Similarly, the lack of prescriptive management restricting locatable mineral development and casual collection to protect cultural and paleontological resources in the Horse Canyon area in combination with potential and continued development on adjacent private lands would cumulatively diminish these values and exacerbate impacts to traditional cultural values of the area to contemporary Native Americans.

Much of the management in this alternative is designed to protect and preserve these resources (e.g., recommendation of ACECs, identification of areas of ecological importance with prescriptive

management) in concert with other land managers within the CIAA. All things considered, however, the BLM contribution is so small, the cumulative benefits resulting from these discretionary protection actions (e.g., designation of ACECs, application of fluid mineral leasing stipulations, implementation of the SOPs, implementation of conservation strategies, application of Central California Standards for Rangeland Health) would not be sufficient to prevent the significant loss (e.g., preclude species recovery or loss of eligible cultural resource) of these natural and cultural resources (including many special status species such as California condor and San Joaquin kit fox) over time, throughout the Planning Area.

Alternatives B, C, and D

These alternatives provide for the compliance with legal preservation and protection mandates; however, they also continue to allow human activities contributing to the overall trends resulting in loss of natural and cultural resources. This cumulative contribution is minimal (anticipated at or about 18,000 acres of surface disturbance over the life of the plan) and confined in its extent (2% of the CIAA) and negligible by comparison to impacts occurring across the Planning Area.

Much of the management in these alternatives is designed to protect and preserve these resources (e.g., recommendation of ACECs, identification of areas of ecological importance with prescriptive management) in concert with other land managers within the CIAA. All things considered, however, the BLM contribution is so small, the cumulative benefits resulting from these discretionary protection actions (e.g., designation of ACECs, application of fluid mineral leasing stipulations, implementation of the SOPs, implementation of conservation strategies, application of Central California Standards for Rangeland Health) would not be sufficient to prevent the significant loss (e.g., preclude species recovery or loss of eligible cultural resource) of these natural and cultural resources (including many special status species such as California condor and San Joaquin kit fox) over time, throughout the Planning Area.

Alternative E

This alternative provides for the compliance with legal preservation and protection mandates; however, it also continues to allow human activities contributing to the overall trends resulting in loss of natural and cultural resources. For example, the lack of prescriptive management restricting locatable mineral development and casual collection to protect cultural and paleontological resources in the Horse Canyon area in combination with potential and continued development on adjacent private lands would cumulatively diminish these values and exacerbate impacts to traditional cultural values of the area to contemporary Native Americans. This cumulative contribution is minimal (anticipated at or about 18,000 acres of surface disturbance over the life of the plan) and confined in its extent (2% of the CIAA) and negligible by comparison to impacts occurring across the Planning Area.

Much of the management in these alternatives is designed to protect and preserve these resources (e.g., recommendation of ACECs, identification of areas of ecological importance with prescriptive management) in concert with other land managers within the CIAA. All things considered, however, the BLM contribution is so small, the cumulative benefits resulting from these discretionary protection actions (e.g., designation of ACECs, application of fluid mineral leasing stipulations, implementation of the SOPs, implementation of conservation strategies, application of Central California Standards for Rangeland Health) would not be sufficient to prevent the significant loss (e.g., preclude species recovery or loss of eligible cultural resource) of these natural and cultural resources (including many special

status species such as California condor and San Joaquin kit fox) over time, throughout the Planning Area.

4.25.4 Cumulative Impacts on Resources Related to Issue 4

Continue to appropriately manage livestock grazing to provide for economic benefit, rural lifestyles and vegetation management while protecting other resources.

This issue focuses on the management of Livestock Grazing. Since livestock grazing occurs on private lands intermingled with public lands and across agency jurisdictions, the Planning Area provides the appropriate context and CIAA in which to analyze the contribution of the incremental direct and indirect adverse impacts in combination with the reasonably foreseeable projects and actions on Livestock Grazing.

Livestock grazing is a historic use of the majority of the CIAA which has resulted in an irretrievable change to the native plant communities and natural landscapes. As environmental awareness has increased and the economic viability of small scale livestock operations decreased the overall trend has been restriction and loss of this use. Nonetheless, these operations continue to be an important local economic activity in the region and are expected to continue to be into the foreseeable future.

Within the CIAA, livestock grazing occurs on both federally managed (USFS and BLM) and privately owned lands. Of the federally managed lands potentially available for livestock grazing in the CIAA, approximately 68% are managed by the USFS. The vast majority of public lands grazing allotments are utilized in conjunction with intermingled private lands which act as the base for the livestock operations. In many cases, the use of public lands is an integral part of these operations; that are made viable, less complicated, or enlarged through the opportunities provided on public lands.

Alternatives A, B, C, and E

Management would result in a general increase in public lands available for livestock grazing with no cumulative loss in livestock grazing opportunity. The individual livestock operations would be able continue to their operations with some expansion opportunities where newly acquired lands are allocated as available for livestock grazing. This increase, however, while important on a local scale, would have little effect on the overall downward trend seen in the CIAA.

Alternative D

Although substantial to the individual livestock operations, the elimination of livestock grazing on the public lands in the Decision Area would directly result in only a 2% loss of grazing opportunity within the CIAA. Livestock grazing on the public lands within the Carrizo Plain National Monument would continue at the levels specified in that RMP. National Forests in the CIAA would also remain available for livestock grazing based on their land management plans. While the loss of public lands to livestock grazing would be minor, it would cumulatively continue the reduction in acreage available for grazing throughout the CIAA.

Of greater concern would be the far reaching implications to livestock operations from the potential fencing or other method necessary to prevent livestock from entering the public lands. This would have repercussions beyond public lands impacting the continued function of adjacent private lands as a

grazing unit including the feasibility of continued ranching on their base property. The cumulative effect of the loss of these livestock operations to the CIAA is impossible to predict.

4.25.5 Cumulative Impacts on Resources Related to Issue 5

Balance the demand for energy development (including oil and gas, wind, and solar energy) and other land use authorizations (such as road and transmission corridor rights-of-way) with other resource values.

The demand for energy development expressed in this issue acts as an indicator for both fluid mineral and renewable energy resources and, therefore, provides a mechanism to analyze the incremental direct and indirect adverse effects of the alternatives when considered with other reasonably foreseeable projects and actions on Minerals Management and the Lands and Realty program. The varying potential for these sources of energy (i.e., high potential for oil and gas and low potential for renewable energy) on public lands within the Planning Area requires the analysis to look beyond the Planning Area boundary and give consideration to reasonably foreseeable projects and actions occurring at a larger scale. As such the CIAA of the State of California serves to frame the cumulative impacts.

Energy development within the Planning Area has generally been focused on oil and gas. Although steadily over the last decade concerns about the use of non-renewable resources and climate change have led to increased interest in renewable energy developments including wind and solar. Further strengthening this push toward renewable energy, technological advancements, economic incentives, and governmental initiatives have enabled a more serious consideration of these options.

While the rest of the State has seen increases in expressions of interest and on the ground development for renewable energy, the Planning Area as a whole (reported as having low potential for most renewable sources) has seen less activity than the rest of the State. The activity that has occurred is principally on private lands. On the contrary, advancements in the oil and gas industry (e.g., horizontal wells) have led to higher than anticipated development of these energy sources.

The areas of highest mineral potential for oil and gas occur in the southern San Joaquin Valley, primarily in Kern County. This area has been explored and developed since the 1870's and is one of the oldest and most prolific oil/gas basins in the United States. The pattern of development in the Decision Area is different from that of the rest of the country with the vast majority (98%) of wells being drilled on leases that were more than 30 years old, and in most cases, on leases that are nearly 100 years old. The trend of drilling an average of nearly 200 wells per year is reasonably foreseeable and expected to continue within the Decision Area.

The areas with the highest potential wind energy occur in the San Emigdio, Tehachapi, and Temblor mountain ranges. While utility scale wind farm developments are widespread in the Tehachapi Mountains, there are no developments on public lands in the other locations.

Alternative A

Management would result in negligible changes in the ability to explore and develop oil and gas reserves and develop renewable energy resources. There would be no cumulative effect on the oil and gas, and renewable energy industries from management decisions within this RMP.

Alternatives B, C, and D

Management would result in negligible changes in the ability to explore and develop oil and gas reserves. There would be no cumulative effect on the oil and gas industry from management decisions within this RMP.

Management would result in restrictions to the development of utility scale wind energy projects on up to 60% of public lands with high potential for wind energy within the Planning Area by giving consideration to other natural and cultural resources. In addition, these alternatives would increase the areas with ROW restrictions by over 50%. The combination of these two management allocations, however, would minimal contribution to the development of renewable energy throughout the State since areas of high potential remain on public lands in other areas.

Alternative E

Management would result in negligible changes in the ability to explore and develop oil and gas reserves and develop renewable energy resources. There would be no cumulative effect on the oil and gas, and renewable energy industries from management decisions within this RMP.

4.25.6 Cumulative Impacts on Resources Related to Issue 6

Address the impacts of Climate Change on the management of public lands including strategies that will reduce impacts and incorporate appropriate monitoring.

The cumulative impact analysis area for air resources occurs in EPA Region IX and consists of the San Joaquin Valley, the South Central Coast, and the Mojave Desert Air Basins (eastern Kern portion). This area also includes the San Joaquin Valley, CA – PM10 Maintenance area and the following areas designated nonattainment: the San Joaquin Valley, CA – Extreme 8-hour ozone area, the San Joaquin Valley, CA – PM2.5 area, the Eastern Kern County, CA – Serious 8-hour ozone area, and the Ventura County, CA – Serious 8-hour ozone area.

As opposed to other environmental impacts, emissions into the air are very short term. The air is constantly moving causing dilution and dispersal. For this reason, single small short term releases of pollutants have very little to do with overall regional pollution levels. Small scale projects that have minimal impacts that are of short-duration would not likely contribute significantly to cumulative impacts (*U.S. EPA 1999).~~EPA 315-R-99-002; May 1999~~* Regional pollution levels are the combined result of all pollutant sources in a region and those transported into the region; these pollutant concentrations represent the cumulative impact on air within the region. As indicated in emission inventories, existing emissions sources that contribute to cumulative air impacts include vehicle and equipment use, construction (residential, non-residential, and industrial), energy and mineral development, fuels management, road maintenance, recreation, pesticide use, and agriculture, including confined animal husbandry.

Based on the California ARB Almanac of Emissions and Air Quality (2009), air quality in the San Joaquin Valley and South Coast Air Basins shows dramatic improvement. Since 1990, ozone levels have decreased approximately 10% in the San Joaquin Valley and nearly 35% in the South Coast air basin, which includes the Ventura County ozone nonattainment area (CARB *2009b*). According to the SJVAPCD Annual Report to the Community (2010), the San Joaquin Valley experienced the best air quality on

record continuing a 20 year trend. All nonattainment pollutant levels are nearly half or less of what they were four years ago. Expected emissions from the oil and gas RFD scenario are low in relation to the overall activity in the region and statewide. The expected emission levels are within attainment demonstration levels in the SIPs and are not likely to result in or contribute to exceedance of the National Ambient Air Quality Standards. Furthermore, existing and new stationary and mobile source emissions are permitted by the appropriate APCD and the California ARB, respectively.

There is no generally accepted guidance for determining significance of project specific GHG impacts (SJVAPCD, 2009a). Emissions from oil and gas development in the Planning Area would be expected to be lower than the national average because of vapor recovery systems and other pollution controls (Best Performance Standards) mandated by the local air pollution control districts. Values for GHG emissions are expected to follow a similar pattern. Thus, direct GHG emissions from the proposed alternatives would be undetectable on a nationwide basis and would be expected to have a very minor influence on global climate change. This is consistent with the SJVAPCD conclusion that existing science is inadequate to support quantification of impacts that project level GHG emissions would have on global climate change (SJVAPCD 2009b).

However, the effects of project specific GHG emissions are cumulative, and without mitigation their incremental contribution to global climatic change could be considered cumulatively considerable (SJVAPCD 2009a). The SJVAPCD's best approach in addressing cumulative impacts would be to require all projects to reduce their GHG emissions, through project design elements or mitigation. The District policy for addressing GHG emissions impacts for stationary source projects indicates that the need to quantify project specific impacts is negated if emissions reductions are achieved by implementing BPS.

4.26 Irretrievable or irreversible Commitment of Resources

NEPA section 102(2)(C) and section 1502.16 of the CEQ NEPA implementing regulations require that the discussion of environmental consequences include a description of "…any irreversible or irretrievable commitment of resources which would be involved in the proposal should it be implemented."

An irreversible impact is an adverse effect for which there is no reasonable remedy or mitigation given biological, physical, socioeconomic constraints (e.g., extinction of a species or destruction of cultural resources). Similarly an irretrievable impact is a commitment of a resource that results in its loss and/or the loss of its use (e.g., the extraction of oil and gas from underground reservoirs results in the removal from the Decision Area, or the commitment of forage to areas allocated as Unavailable to livestock grazing results in the loss of its use to livestock operations). Irretrievable commitments are viewed as those in effect over the life of the plan.

Implementing any of the management plan alternatives would result in some impacts that could be characterized as irreversible or irretrievable commitments as follows:

Surface disturbing activities, including mineral, energy, rights-of-way, and route development, could result in an irreversible loss of vegetation resources, wildlife habitat, and livestock forage. This may irreversibly alter soils, concurrently increases in sediment, salinity, and nonpoint source pollution from these activities which also may result in an irretrievable degradation of water quality.

Cultural resources are by their nature irreplaceable, so altering or eliminating any such resource, be it National Register eligible or not, represents an irreversible impact.

Disposal of lands (predominately under Alternative A) would result in the irretrievable commitment of any resource present on those lands (e.g., loss of biological and cultural resource values that may be present).

The allocation of lands suitable for livestock grazing as Unavailable (predominantly under Alternative D) would represent the irretrievable commitment of forage production to other uses, and therefore, loss of livestock grazing opportunity on public lands.

The closure and withdrawal of areas from leasable, locatable, and salable mineral entry would cause an irretrievable loss of mineral extraction during the life of the plan. Conversely, the identification of lands available for all types of mineral extraction would signify the irretrievable commitment of mineral resources and their removal from the Decision Area. Furthermore, lands occupied by mineral extraction developments would permanently lose habitat values and, therefore, would have reduced carrying capacity for wildlife resources. In addition, these developments may pose substantial risk to public safety requiring their closure and subsequent irretrievable loss of public access and recreation opportunity.

Decisions to close areas to public access (predominately Alternatives C and D) would result irretrievable loss of public access and recreation opportunity in these areas over the life of the plan.

The exact nature and extent of any irreversible and irretrievable commitment of resources cannot be defined due to uncertainties about location, scale, timing, and rate of implementation, as well as the relationship to other actions and the effectiveness of mitigation measures throughout the life of the plan.

4.27 Unavoidable Adverse Impacts

NEPA section 102(C) also mandates disclosure of "any adverse environmental effects which cannot be avoided should the proposal be implemented." These are impacts for which there are no mitigation measures or impacts that remain even after the implementation of mitigation measures. Implementation of the RMP and subsequent activity- or project-specific plan implementation would result in unavoidable adverse impacts to some resources. Chapter 4 describes the potential impacts of implementing the RMP, summarized here. Many of these unavoidable impacts are also considered to be irreversible and/or irretrievable as discussed under the preceding section. These unavoidable, and potentially irreversible and irretrievable, adverse impacts include soil compaction and erosion, loss of vegetative cover, spread of invasive nonnative species, disturbance to and displacement of wildlife, visual intrusions on the landscape, and potential loss of cultural or paleontological resources from mineral extraction, energy development, vegetative treatments, OHV use, recreation use, and the extent of the travel network.

Conversely, proposed restrictions on some activities such as OHV use, energy development, and livestock grazing intended to protect sensitive resources and resource values would result in unavoidable adverse impacts to some users, operators, and permittees by limiting their ability to use public lands and potentially increasing their operating costs. These impacts, however, are not irreversible as new direction for these activities can be provided through new guidance or an updated RMP.

Truly unavoidable adverse impacts are considered to be those which no management guidance or level of implementation can avoid. These impacts may be reversible depending on the extent and severity. Examples of which are the continued dumping of household or industrial waste on public lands or the devastation caused by severe wildland fires. These unavoidable adverse impacts can be broadly defined by three categories: natural, unintentional, and illegal.

Stand-replacing wildland fires are largely unavoidable and may cause a loss of some key ecosystem components including the loss of soils following wildfires or from erosion during restoration treatments, which would be irretrievable. The effect of a high intensity wildfire or one covering many acres may only be reversible after several decades. Changes in wildlife habitat from wildfire, invasive plants, or restoration treatments may be are considered unavoidable adverse impacts resulting from a naturally occurring event.

Unintentional unavoidable impacts are those where lack of knowledge leads to an unforeseen impact to a resource. Undiscovered cultural and paleontological resources could be unintentionally affected by general use of public lands such as dispersed camping on an unmarked cultural site. These impacts could be avoided through the identification of such resources, however, identification may promote the third category of unavoidable impacts, illegal activity (e.g., looting).

Although illegal activities can be prosecuted and restitution received for some of the damages done, often the impacts far exceed any restitution paid assuming the perpetrator is caught. As such, the illegal activities on public lands are considered unavoidable. These activities range from the “looting” or vandalism of sensitive cultural resources to the conversion of natural habitats to marijuana plantations and dumping of hazardous materials or household/industrial waste.

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Oversized Maps are available online at http://www.ca.blm.gov/bakersfield, or electronically (on CD) upon request to the Bakersfield Field Office – via Telephone (661) 391-6000 or email BLM_CA_Bakersfield_RMP@blm.gov, or in writing to;

Planning and Environmental Coordinator,
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DEPARTMENT OF THE INTERIOR
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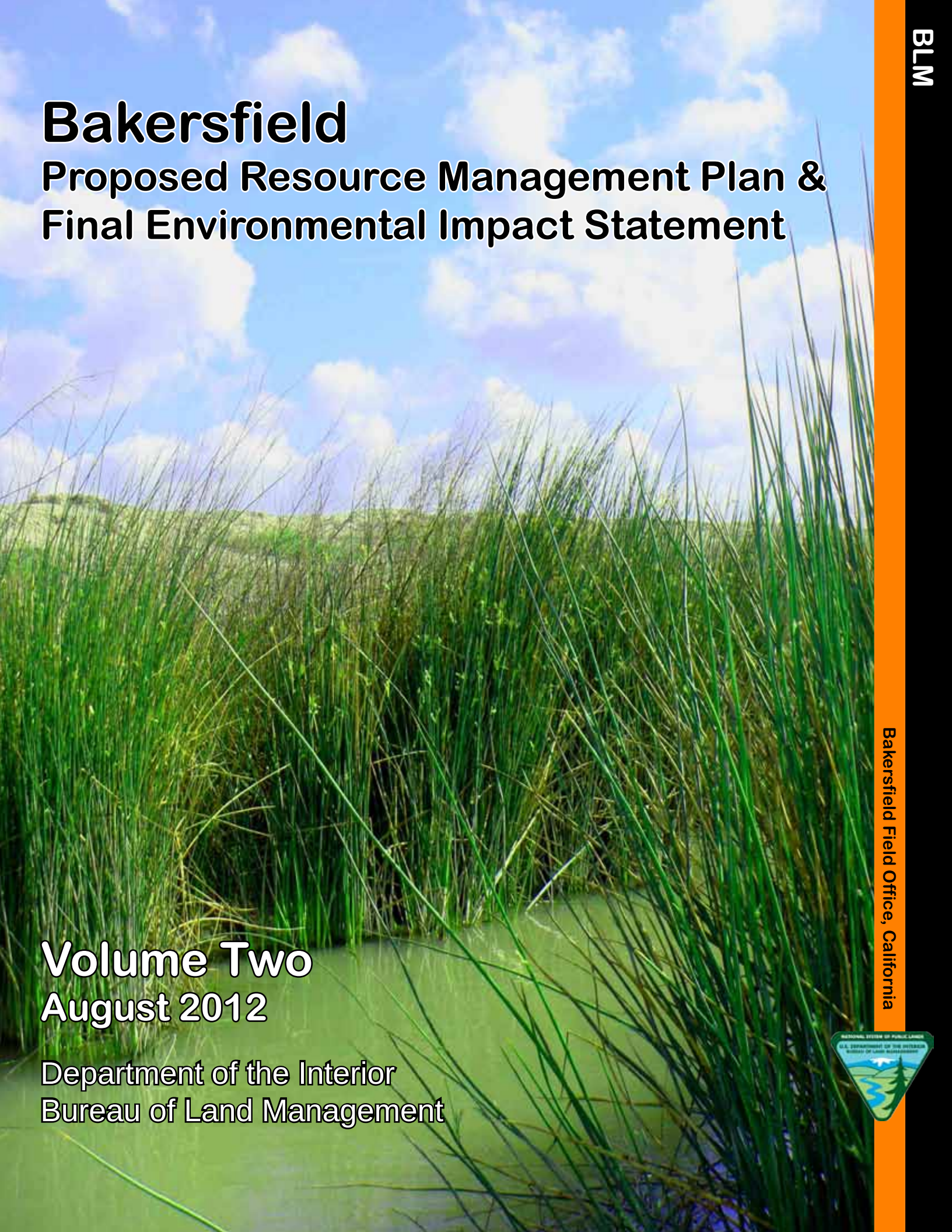

Bakersfield

Proposed Resource Management Plan & Final Environmental Impact Statement

Volume Two

August 2012

Department of the Interior
Bureau of Land Management

BLM

Bakersfield Field Office, California

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Proposed Resource Management Plan
And
Final Environmental Impact Statement
For the
Bakersfield Field Office

Volume Two

Chapters Five, Six, & Appendices

Prepared by

U.S. Department of the Interior
Bureau of Land Management
Bakersfield Field Office
California

August 2012

Table of Contents

5 Chapter Five

5.1 Introduction

Public involvement, consultation, and coordination was initiated prior to, and has occurred throughout, preparation of the RMP process. Guidance for implementing public involvement is contained in 43 CFR, 1601-1610, FPLMA Section 103(d), and the CEQ's NEPA regulations at 40 CFR, 1506.6, and is intended to ensure that federal agencies make a diligent effort to involve the public in preparing planning and NEPA documents.

This chapter is a description of the public outreach and participation opportunities made available through the development of the Proposed RMP/ Final EIS and the coordination and consultation efforts with Native Americans, government agencies, and other stakeholders that have transpired to date. It also includes the BLM response to comments generated by the formal public comment period for the Draft RMP/Draft EIS and a list of preparers of the document. There have been and will continue to be many ways for the public to participate in the planning and implementation processes for public lands under the jurisdiction of the Bakersfield FO.

5.2 Public Scoping and Outreach

5.2.1 Scoping Process

Scoping is the term used in the CEQ regulations implementing NEPA (40 CFR, Part 1500 et seq.) to define the early and open process for determining the scope of issues to be addressed in the planning process. The scoping process invites the public to be involved in identifying significant issues of land use management actions. The process also helps identify any issues that are not significant and that can thereby be eliminated from detailed analysis. The list of stakeholders and other interested parties is also confirmed and augmented during the scoping process.

5.2.2 Notice of Intent

The NOI is the legal document notifying the public of the BLM's intent to initiate the planning process and to prepare an EIS for a major federal action. The NOI invites the participation of the affected and interested agencies, organizations, and members of the general public in determining the scope and significant issues to be addressed in the planning alternatives and analyzed in the EIS. The NOI for the Bakersfield RMP was published in the Federal Register on March 4, 2008. The formal scoping period for receipt of public comments ended on May 5, 2008.

5.2.3 Press Releases

Local and regional newspapers throughout the planning area were used to disseminate information on the Bakersfield RMP scoping and planning process. The BLM prepared press releases to notify the public of the project, to announce the open houses, to request public comments, and to provide contact information.

5.2.4 Scoping Letter Mailings

The BLM mailed a letter to interested parties on April 4, 2008, to inform them of the Bakersfield FO RMP planning effort, the location of seven scoping open houses in April 2008, and the opportunity to comment. The letter was mailed to 1,138 individuals on the distribution list compiled by the Bakersfield FO. The same letter was emailed to 453 individuals on April 10, 2008, and 83 additional email addresses on April 22, 2008.

5.2.5 Scoping Meetings

The BLM held seven public scoping meetings in six locations during April 2008. The meetings were held as follows: April 8, Bakersfield (2 meetings), April 9, Taft, April 10, Lake Isabella, April 15, Fresno, April 17, Three Rivers, April 22, San Luis Obispo. Attendance totaled approximately 100 individuals, with the breakdown per meeting as follows:

- April 8, Bakersfield (two meetings): 23 attendees (total for both meetings);
- April 9, Taft: 6 attendees;
- April 10, Lake Isabella: 9 attendees;
- April 15, Fresno: 24 attendees;
- April 17, Three Rivers: 17 attendees; and
- April 22, San Luis Obispo: 7 attendees.

The meetings were held to gather information from the public on the future management of the Bakersfield RMP area. Participants were asked what they valued about these lands, what kinds of activities or uses were important to them, and how they envisioned the area being managed in the future. Each of the meetings followed a similar format, beginning with an informal open house. Members of the public were greeted at the entrance and asked to sign in. Representatives from the Bakersfield FO attended all meetings. Visitors were encouraged to look at various maps and photographic displays arranged around the room and to ask questions; BLM staff mingled and encouraged one-on-one dialogue. After a brief introduction by the Bakersfield FO Manager, staff gave a PowerPoint presentation on resources, challenges, the planning process, what the plan hoped to achieve, and the public's role in contributing to the plan direction and substance.

After the presentation, BLM staff held a question and answer period of roughly ten minutes. BLM staff then guided participants through three questions regarding identifying the publics' vision for the Bakersfield RMP area, identifying goals and common values, and suggesting specific actions for achieving those goals. Finally, the BLM Field Manager closed the meeting by thanking the participants and briefly outlined the next steps in the planning process, highlighting the role and importance of continuing public involvement. This format was followed at all of the meetings.

Attendees were encouraged to mail in written comments and questions or to fill out comment cards specific to the Bakersfield RMP. Copies of the planning criteria were also made available at the comment table.

A complete listing of the organizations and agencies that were represented among the people who signed in at the public meetings is included in the Bakersfield Resource Management Plan Scoping Report.

5.2.6 Public Scoping Results

A total of 142 responses were received, including scoping comment sheets, letters and e-mails. Twenty-one of the letters were form letters. Comments were received from 26 organizations, seven businesses, and four agencies. The scoping input was used to formulate the issues addressed in the planning process, as described in Chapter 1. Chapter 1 also provides a summary of issues, submitted during the input period, that are beyond the scope of the RMP. A full copy of the scoping report is available from the BLM or from the Web site.

5.2.7 Project Web Site

In the spring of 2008, a BKFO RMP/EIS project Web site was launched to serve as a clearinghouse for project information during the planning effort. It provided background information on the BKFO, information on the past Caliente RMP completed in 1997, an outline of the planning process, and a schedule of upcoming scoping meetings. The Web site, at http://www.blm.gov/ca/st/en/fo/bakersfield/Programs/planning/caliente_rmp_revision.html, provided a link for site visitors to submit comments about the project, cacalrmp@blm.gov.

5.2.8 Protect Telephone

A phone number, (661) 391-6022, was made available for comments or questions about the planning process; one caller submitted a comment.

5.2.9 Additional Outreach

Resource Advisory Councils (RACs) in and near the Bakersfield RMP Planning Area are participating in this planning effort. Four members of the Central California RAC, one member from the Carrizo Plain Monument Advisory RAC, and one member from the Desert Advisory Council have been participants to date. The Central California RAC receives regular updates on the progress of the planning process at their meetings.

5.3 Consultation and Coordination

The Bakersfield RMP will provide guidance for public land spread across a vast portion of central California and necessarily requires the coordination of a variety of organizations with interests in the area. Among those are governmental bodies that create, administer, and monitor policy for these lands, as well as adjacent lands. The BLM established a coordinated effort in developing the Bakersfield RMP by seeking the active participation of these parties.

In the spring of 2008, the BLM invited 16 local, state, and federal representatives to participate as cooperating agencies for the Bakersfield RMP. None of the agencies accepted this offer to participate in the Bakersfield FO planning process as cooperating agencies. Both the National Park Service and California Department of Fish and Game expressed a desire to stay involved in the planning process, but not the need to have cooperating agency status.

The following section documents the BLM's consultation and coordination efforts during the preparation of this Proposed RMP/Final EIS. Consultation is an ongoing effort throughout the entire process of developing the Bakersfield RMP.

5.3.1 Native American Consultation

Federally recognized Native American tribes have a unique legal and political relationship with the government of the United States. Executive Order 13175 requires federal agencies to coordinate and consult on a government-to-government basis with sovereign Native American tribal governments whose interests may be directly and substantially affected by activities on federally administered lands. Other laws, regulations, Department of the Interior (DOI) guidance and executive orders require consultation to identify the cultural values, the religious beliefs, the traditional practices, and the legal rights of Native American people, who could be affected by BLM actions on federal lands. These include the National Historic Preservation Act (NHPA) of 1966 (as amended), American Indian Religious Freedom Act of 1978, the Native American Graves Protection and Repatriation Act, DOI Secretarial Order No. 3215 (DOI 2000), 512 Department Manual Chapter 2 (DOI 1995), BLM Manual H-8160-1 (DOI 1994), and Executive Order 13007, Indian Sacred Sites.

Native American tribes are formally engaged in the planning process, as with many other federal actions, through a process of consultation. Legislation, policy and guidance require the BLM to consult with federally recognized Native American tribes regarding any actions conducted by the agency which have the potential to affect places of traditional or religious importance to them. As such, the Bakersfield FO initiated contact on April 4, 2008 in conjunction with the public scoping process; with both federally and non-federally recognized tribes whose traditional territories are known to lie within the Planning Area.

The federally recognized Native American tribes listed below were recontacted via certified letter in April 2011 and invited to participate in government-to-government consultation prior to the release of the Draft RMP/Draft EIS. Upon the release of the Draft RMP/Draft EIS copies were sent to each federally recognized Native American tribes and several non-recognized Native American tribes, groups, and individuals along with a package of supplemental information and maps. Follow up letters, phone calls, and emails offered to schedule one-on-one presentations, and again, extended the invitation to initiate formal government-to-government consultation to the federally recognized tribes and informal coordination and consultation with the non-recognized tribes. Informational meetings and presentations were conducted with four of the federally recognized Native American tribes and six non-recognized Native American tribes and groups. Subsequent to the end of the public review and comment period on the Draft RMP/Draft EIS, one of these groups, the Tejon Indian Tribe, became federally recognized (January 1, 2012). Prior to their formal recognition, BLM coordinated with the Tejon Indian Tribe by providing them with information, maps and guidance regarding review of the Draft RMP/Draft EIS. In addition, a formal presentation was provided for the attending members at a Tribal Council meeting. None of the federally or non-federally recognized Native American tribes chose to conduct formal government-to-government or informal consultation.

- Big Sandy Rancheria
- Cold Springs Rancheria
- North Fork Rancheria of Mono Indians
- Picayune Rancheria of Chukchansi Indians
- Santa Ynez Band of Chumash Indians
- Table Mountain Rancheria
- Tachi Yokut Tribe of the Santa Rosa Rancheria
- Tejon Indian Tribe
- Tule River Reservation

~~*This consultation included a certificated notification letter describing the RMP and planning process with follow up to include invitation to face-to-face meetings with the Field Manager and tribal leadership.*~~

~~*In addition to these federally recognized Tribes, the Bakersfield FO engaged with many non-federally recognized Native American tribes, groups, and individuals.*~~

5.3.2 Cultural Resource Consultation

The BLM has specific responsibilities and authorities to consider, plan for, protect, and enhance historic properties and other cultural properties that may be affected by its actions or actions it permits. The principal federal law addressing cultural resources is the NHPA (16 USC, Section 470), and it's implementing regulations (36 CFR, 800). These regulations, commonly referred to as the Section 106 process, describe the procedures for identifying and evaluating historic properties, for assessing the effects of federal actions on historic properties, and for guiding project proponents consulting with appropriate agencies to avoid, reduce, or minimize adverse effects. State Historic Preservation Officers (SHPOs) have responsibilities under state law and under Section 101(b)(3) of the NHPA to "consult with the appropriate Federal agencies in accordance with [NHPA] on Federal undertakings that may affect historic properties, and the content and sufficiency of any plans developed to protect, manage, or to reduce or mitigate harm to such properties." The BLM notified the California SHPO *at the initiation* of the planning process. *The SHPO was invited to review and formally consult regarding the Bakersfield Draft RMP/Draft EIS. The SHPO declined to review, comment, or consult on the Draft RMP/Draft EIS. An additional opportunity for review and consultation* will *occur during the Governor's Consistency review of the Proposed RMP/Final EIS*.

5.3.3 Special Status Species Consultation

Coordination with CDFG and USFWS is ongoing with regard to special status species. Section 7 consultation will include the preparation of a biological assessment by the BLM and a subsequent biological opinion prepared by the USFWS.

5.3.4 Air Quality Coordination

Coordination between the BLM and air regulatory agencies is ongoing with regard to air quality. Informal communications that were made by the BLM as part of this planning effort include phone and email correspondence with the EPA, Region IX, the California ARB, and San Joaquin Valley APCD staff. These air regulatory entities were initially contacted for guidance regarding conformity and its applicability at the land use planning stage*; however subsequent meetings with the local air pollution control district have specifically addressed the content of the RMP and its analysis of air resources*.

Through the recent Memorandum of Understanding Among the U.S. Department of Agriculture, U.S. Department of the Interior, and U.S. Environmental Protection Agency, Regarding Air Quality Analyses and Mitigation For Federal Oil and Gas Decisions Through the National Environmental Policy Act Process (effective June 23, 2011), signatories commit to a clearly defined approach to compliance with NEPA regarding air quality in connection with oil and gas development on Federal lands. This MOU applies to all NEPA analyses commencing after the effective date, and all NEPA analyses begun after September 23, 2011. Since the Bakersfield Draft RMP/Draft EIS was made available for public comment on September 9, 2011, during the "grace period", provisions of the MOU are not directly applicable to this NEPA analysis.

5.3.5 Travel Management Planning Coordination

The BLM hosted two trails and routes data collection workshops, one in Lake Isabella (February 25, 2009) and one in Taft (February 26, 2009). The workshops were held to allow the public to review the BLM's inventory for accuracy and completeness, to provide information on routes that are missing from the BLM's inventory, and to offer suggestions for reroutes or new trail sections that would complement the existing route system. The comment period for routes and trails data collection was open until March 13, 2009.

The BLM also extended invitations to local agencies, user groups, and authorized public lands users to discuss the route designation process. The BLM met with Stewards of the Sequoia, California, Off-Road Vehicle Association, the Taft Motorcycle Club, and a representative of Kern County. Local grazing lessees were also consulted regarding their use of routes related to grazing practices. Throughout the process, the Bakersfield FO coordinated efforts with the Sequoia National Forest, which is also designating routes on National Forest System lands.

In June 2009, the Bakersfield FO presented its route designation maps to the OHV subgroup and to the Central California RAC.

5.3.6 Social and Economic Workshops

On April 15 and 16, 2009, the Bakersfield FO hosted two social and economic workshops in Bakersfield and Lake Isabella. Nine members of the public and local government representatives attended the workshops, in addition to BLM representatives. The purpose of these workshops was to obtain input on how local populations interact with public lands. The goal for the BLM is to complete and approve a collaborative, community-based RMP that reflects careful consideration of the local and regional factors unique to the Planning Area. To this end, these workshops provided an opportunity for stakeholders from local communities to participate in the planning process. Attendees discussed economic trends in the region and developed visions for the future of their communities. The attendees also discussed how BLM management of public lands could help support economic growth in local communities.

5.3.7 State of California Consistency

The Draft RMP/Draft EIS was reviewed by appropriate State agencies for consistency with California state plans and policies. The only comment letter received from a State agency was from the Native American Heritage Commission; this letter only provided a list of Native American contacts to assure our mailing list was up to date.

The Proposed RMP/Final EIS will also undergo a 60-day governor's consistency review.

5.4 Public Review and Comment on the Draft RMP/Draft EIS

The Bakersfield Draft RMP/Draft EIS was released for public review on September 9th 2011. A *Federal Register* Notice initiated the formal 90 day public comment period which closed on December 9th 2011.

During the public comment period the BLM conducted seven public meetings to describe the plan and alternatives, and give the public an opportunity to ask any questions they may have had concerning the plan or planning process. These meetings and their attendance are described in the following table (Table 5.1):

Table 5.1
Draft RMP/Draft EIS Public Meetings

Location	Date	Attendance
Bakersfield (1400 hrs)	10/12/2011	11
Bakersfield (1800 hrs)	10/12/2011	7
San Luis Obispo	10/13/2011	14
Kern Valley (Lake Isabella)	10/17/2011	17
Three Rivers	10/18/2011	53
Taft	10/19/2011	15
Prather	10/20/2011	11

Source: BLM 2011a

In addition to the above meetings the BLM was invited to attend a number of stakeholder meetings to present the RMP and answer specific questions the stakeholder groups may have had.

As a result of the public comment period the BLM received 274 written comment letters. These letters were cataloged (Appendix P) and analyzed for substantive content. The individual substantive comments were studied by the Interdisciplinary Team and appropriate changes to the document made. The majority of non-substantive comments expressed support for Wild and Scenic River suitability determinations, or requested Alternative C to be implemented with regard to ACECs and lands managed for wilderness characteristics. These comments were brief and included no substantive supporting justification.

The majority of substantive comments concerned Comprehensive Trail and Travel Management addressing a localized concern on specific routes. Other comments included concerns over ACEC boundaries, renewable energy development, rockhounding, locatable mineral exploration and Wild and Scenic Rivers. Responses to these substantive comments are included below.

5.5 Response to Comments by Resource

5.5.1 Air and Atmospheric Values

5.5.1.1 Comment (paraphrased):

The DRMP fails to discuss the impacts of the proposed Temblor Range SRMA and associated OHV activity on air quality, specifically fine particulate dust. The decision to designate this area may be in conflict with SJVAPCB goal of significantly reducing this criteria pollutant. It should be noted the proposed SRMA is upwind of major population centers and the anticipated recreation activity will be a likely source of dust.

Comment Source(s): 198-4

Response: The PRMP has been modified to address this concern through the addition of text concerning the impact of the Temblor Range SRMA (Chapter 4, Section 4.1 – Air and Atmospheric Values). In addition, information has been added that describes sensitive

receptors (Chapter 3, Section 3.1 - Air and Atmospheric Values) and how these may be impacted by the proposed plan (Chapter 4, Section 4.1 – Air and Atmospheric Values).

5.5.1.2 Comment (paraphrased):

Comment (paraphrased): The DRMP fails to provide a rough estimate of the change in greenhouse gas emissions for Alternative D compared with the other four grazing alternatives. This missing analysis is the minimal level of analysis proposed in the Bureau of Land Management H-1604-1 Land Use Planning Handbook - Guidance on Addressing Climate Change in the Planning Process. It is critical this analysis be included in the RMP as the Food and Agriculture Organization of the United Nations has determined that livestock is responsible for 18 percent of greenhouse gas emissions world-wide (Steinfeld et al., 2006), and other authorities believe this is an underestimate of the contribution of livestock emissions to greenhouse gas emissions (Goodland, R. and Anhang, J. 2009).

Comment Source(s): 253-7

Response: The PRMP includes a qualitative approach to the analysis of climate change; this is consistent with BLM Land Use Planning Handbook (1610-1) Guidance on Addressing Climate Change in the Planning Process in that this type of analysis is in accordance with and reflective of the extent to which the climate change information is needed in order to make planning decisions.

5.5.1.3 Comment (paraphrased):

The RMP should include a “climate change mitigation and adaptation plan” to account for, minimize, and mitigate the effects of climate change. The long duration of this management plan (most likely two or three decades), and the extreme warming anticipated for the southwestern United States, warrants this plan to account for, minimize, and mitigate the effects of climate change. Furthermore, the RMP should discuss the applicability of, and utilize as appropriate, the climate change and carbon tools highlighted by the Forest Service's Climate Change Resource Center. Additional information at: http://www.fs.fed.us/ccrc/tools.

Comment Source(s): 261-4, 261-5, 261-65, 261-68, 261-69

Response: The U.S. Department of the Interior’s climate change initiative and the BLM’s approach to addressing climate change (Chapter 3, Section 3.1 – Air and Atmospheric Values) do not require a “climate change mitigation and adaptation plan” at this level of planning. The tools identified in the Forest Service’s Climate Change Resource Center are some the many tools currently used for providing implementation level analysis as appropriate.

5.5.1.4 Comment (paraphrased):

The RMP should identify options for mitigating greenhouse gas emissions and consider whether a quantitative comparison of projected emissions for the alternatives, would be useful to decision-makers and the public (if so, it should be included in the RMP). Furthermore, the RMP should adopt the alternative that minimizes and mitigates GHG emissions to the greatest reasonable extent.

Comment Source(s): 261-64, 261-66, 261-67

Response: The PRMP identifies GHG emissions mitigation along with other mitigations for air quality in Appendix A. It has been determined that, as the majority GHG emission mitigation occur at the implementation level, a quantitative comparison of projected emissions for each alternatives provides no value to the authorized officer in making land use planning level decisions.

5.5.1.5 Comment (paraphrased):

It is recommended that the RMP provides direction that the following mitigation measures, in addition to local, state and federal requirements, be included in project-specific Construction Emissions Mitigation Plans in order to reduce impacts associated with emissions of PM, NOx, ROGs and other toxics from construction-related activities:

- Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative where appropriate at active and inactive sites during workdays, weekends, holidays, and windy conditions;
- Install wind fencing and phase grading operations where appropriate, and operate water trucks for stabilization of surfaces under windy conditions; and
- Prevent spillage when hauling material and operating non-earthmoving equipment and limit speeds to 15 miles per hour. Limit speed of earth-moving equipment to 10 mph.
- Plan construction scheduling to minimize vehicle trips;
- Limit idling of heavy equipment to less than 5 minutes and verify through unscheduled inspections (Note: The California Air Resources Board has a number of mobile source anti-idling requirements, see their website at: http://www.arb.ca.gov/msprog/truck-idling/truck-idling.htm);
- Maintain and tune engines per manufacturer's specifications to perform at CARB and/or EPA certification levels, prevent tampering, and conduct unscheduled inspections to ensure these measures are followed;
- If practicable, lease new, clean equipment meeting the most stringent of applicable Federal' or State Standards. In general, commit to the best available emissions control technology. Tier 4 engines should be used for project construction equipment to the maximum extent feasible;
- Lacking availability of non-road construction equipment that meets Tier 4 engine standards, the responsible agency should commit to using CARB and EPA-verified particulate traps, oxidation catalysts and other appropriate controls where suitable to reduce emissions of diesel particulate matter and other pollutants at the construction site; and
- Consider alternative fuels such as natural gas and electricity (plug-in or battery).
- Prepare an inventory of all equipment prior to construction and identify the suitability of add-on emission controls for each piece of equipment before groundbreaking;
- Develop a construction traffic and parking management plan that maintains traffic flow and plan construction to minimize vehicle trips; and
- Identify sensitive receptors in the project area, such as children, elderly, and infirmed, and specify the means by which you will minimize impacts to these populations (e.g. locate construction equipment and staging zones away from sensitive receptors and building air intakes).

Comment Source(s): 261-21

Response: The PRMP provides (Appendix A) examples of best management practices (mitigation measures) to address air quality including some of those suggested in the comment. The application of specific best management practices varies based on the proposed project and is therefore beyond the scope of this broad scale RMP.

5.5.1.6 Comment (paraphrased):

The DRMP contains insufficient information to evaluate and disclose potential impacts to air quality (including cumulative and indirect impacts) and air quality related values for all the National Ambient Air Quality Standards for each fully evaluated alternative.

A thorough analysis of air quality is essential because the San Joaquin Valley Air Basin has some of the worst 8-hour ozone and PM2.5 problems in the nation and due to the proximity of the proposed development and its associated projected emissions to eight federal Class I areas (Yosemite, Kings Canyon and Sequoia National Parks; Kaiser, John Muir, Dome Land, San Rafael and Minarets Wilderness Areas). In addition to these sensitive areas within the RMP Planning Area, six additional Class I areas are located within 75 km of the planning boundary (p. 207). The RMP should quantify secondary PM2.5 formation resulting from nitrogen oxides, volatile organic compounds and sulfur oxides associated with all foreseeable activities, and discuss impacts to air quality related values for each Class I area identified.

Comment Source(s): 261-6, 261-7, 261-8

Response: The PRMP focuses analysis on only those National Ambient Air Quality Standards for which the Planning Area is in non-attainment or at maintenance level, and on those criteria pollutants that BLM activities have the potential to emit. Analysis of those Standards for which the Planning Area is in attainment and of those criteria pollutants for which BLM activities do not contribute to a change to the existing condition is not necessary to make a reasoned choice between the alternatives.

The quantification of secondary PM2.5 is outside the scope of this broad scale RMP and would be addressed through project specific analysis if appropriate.

The PRMP has been modified (Chapter 3, Section 3.1 – Air and Atmosphere Values) to clarify that there are no major stationary sources, as defined by the EPA on public lands within the Decision Area. As no major stationary sources exist, or are reasonably foreseeable based on the proposed plan, the PRMP does not discuss impacts for each Class I area.

5.5.1.7 Comment (paraphrased):

To address potential impacts associated with the emission increases, the RMP should include an Air Resources Management Plan, as exemplified by BLM Wyoming's recently developed Lander Air Resources Management Plan. The Lander plan could be used as a template to apply to the Bakersfield RMP. The Air Resources Management Plan outlines specific requirements, including modeling and mitigation, for proponents of projects that have the potential to generate air emissions and adversely impact air resources within the Planning Area.

Comment Source(s): 261-9, 261-12

Response: The PRMP has been modified to include an Air Resources Management Plan (Appendix A).

5.5.1.8 Comment (paraphrased):

Since the development of the DRMP, the EPA, U.S. Department of Interior and the U.S. Department of Agriculture signed a Memorandum of Understanding Regarding Air Quality Analyses and Mitigation for Federal Oil and Gas Decisions through the NEPA Process. It is noted that the DRMP was issued within 90 days of the effective date of the MOU; therefore, the MOU's provisions are not directly applicable to this RMP. Nonetheless, it is recommended that the RMP more directly integrate the standardized approach developed in the MOU. Specifically the RMP should calculate emissions from existing active wells within the Planning Area as well as the approximate 4,000 new wells expected to be drilled over the next 10 years. Confirm that the 2009 ARB emissions inventory, relied upon in Appendix A, reflects a rate of 360 new wells per year as assumed under the No Action Alternative. Furthermore, the RMP should include a discussion of the applicability (or lack of applicability) of, and integrate standardized approaches developed in, the Air Quality Analyses and Mitigation for Federal Oil and Gas Decisions MOU.

Comment Source(s): 261-10, 261-11, 261-13

Response: The PRMP has been modified to discuss the applicability of the Memorandum of Understanding Regarding Air Quality Analyses and Mitigation for Federal Oil and Gas Decisions through the NEPA Process (Chapter 1, Section 1.6.2 – Planning Process). Furthermore, additional information regarding emissions from oil and gas production has been included in Chapter 3, Section 3.1 – Air and Atmospheric Values.

The PRMP has been modified to clarify the inclusion of emissions resulting from federal actions in ARB emissions inventories (Chapter 3, Section 3.1 – Air and Atmospheric Values and Chapter 4, Section 4.1 – Air and Atmospheric Values).

5.5.1.9 Comment (paraphrased):

It is preferred that the RMP include a quantitative analysis that utilizes air quality modeling of the potential impacts of activities authorized under the RMP. However, air quality impacts can be adequately evaluated and disclosed, provided that one of the following approaches is pursued:

1) Conduct basin-wide dispersion modeling based on the emissions inventory and include this information in the RMP; or

2) Utilize representative photochemical grid modeling planned for another project with the appropriate modeling domain for the SJV to determine the contribution of the RMP activities and include this information in the RMP; or

3) Include an air resources management plan (using Landers as a template). The air resources management plan should be included in the RMP and contain additional detail clarifying how and when modeling will be performed and what mitigation could be implemented.

Comment Source(s): 261-14, 261-15

Response: The PRMP has been modified to include an Air Resources Management Plan (Appendix A).

5.5.1.10 Comment (paraphrased):

The RMP should clarify the General Conformity regulatory framework and how it applies to the proposed RMP and future project-specific implementation. The RMP should demonstrate conformity for all pollutants for which the San Joaquin and the South Central Coast Air Basin are in nonattainment or maintenance status, and whose construction or operational emissions would exceed the applicable de minimis levels. Conformity may be demonstrated by showing that the total direct and indirect emissions from the action are specifically identified and accounted for in the SIP. Furthermore, the RMP should clarify to what extent conformity analyses will be conducted on a project specific basis for actions proposed under this RMP (Section 4.1.7). If analysis of general conformity to the SIP is more appropriate at the project-specific analysis level, it is recommended that the RMP include a specific commitment to future project-specific general conformity analysis.

Comment Source(s): 261-16, 261-18, 261-19

Response: The PRMP has been modified to address this concern (Chapter 3, Section 3.1 – Air and Atmospheric Resources). Furthermore, conformity has been demonstrated by showing that the total direct and indirect emissions from the action are specifically identified and accounted for in the SIP (Appendix A).

5.5.1.11 Comment (paraphrased):

It is recommended that considering the San Joaquin Valley Air Basin's current "maintenance" attainment status for carbon monoxide, CO be incorporated into any future conformity analyses.

Comment Source(s): 261-17

Response: The PRMP has been modified to include discussion of carbon monoxide (Chapter 3, Section 3.1 – Air and Atmospheric Values and Chapter 4, Section 4.1 - Air and Atmospheric Values). Conformity analysis would only be conducted if emissions exceeded de minimus levels.

5.5.1.12 Comment (paraphrased):

In light of the exceptionally poor air quality in the majority of the Planning Area, it is recommended that the RMP include commitments to aggressive air quality mitigation measures during future project-specific construction.

Comment Source(s): 261-20

Response: The PRMP includes a commitment to design projects and authorized activities to be in conformance with SIPs and reduce emissions through the application of best management practices (Chapter 2, Section 2.1 – Air and Atmospheric Values).

5.5.2 Biological Resources

5.5.2.1 Comment (paraphrased):

The terms “seasonal closure” and “restrict equestrian use” (DRMP, page 53) without further clarification as to when and under what conditions these closures would occur, connotes the arbitrary closure of thousands of acres. The RMP should provide specific criteria under which these restrictions would be implemented. Since the BLM has these tools at their disposal, is it necessary to make these general decisions in the RMP? Furthermore, the closures and restrictions do not appear to be supported scientifically. If identifiable hazards to the environment are present these restrictions are warranted but not solely to equestrian use.

Comment Source(s): 199-3, 199-4, 199-21

Response: The decision referred to in the comment provides examples of how public lands uses may be eliminated, relocated, or redesigned pending site-specific NEPA analysis that identifies a reason for this action. This decision provides future guidance for how resource conflicts may be resolved.

5.5.2.2 Comment (paraphrased):

The DRMP proposes the prohibition of equestrian cross-country travel (page 56) at Atwell Island "for protection of sensitive biological resources and to restore retired farm land to native habitat". There is no scientific support provided as a rationale for this decision and it would seem that the prohibition, if needed, should include mechanized vehicles, hiking and camping.

Comment Source(s): 199-5

Response: While cross-country equestrian is generally allowed on public lands, the Atwell Island area is undergoing restoration and it has been determined that only on-trail equestrian use is appropriate to further the restoration objectives. Cross-country travel by motorized or mechanized vehicles is prohibited in any area designated OHV Limited or Closed. Atwell Island is within an OHV Limited area and so no further prohibition of cross-country travel is necessary. Overnight camping is also prohibited to meet restoration objectives.

5.5.2.3 Comment (paraphrased):

The RMP should adopt Alternative C with regard to the collection of firewood for camping to prevent the continued depletion of small diameter woody material in Keyesville SRMA. Woody material has already been depleted by campers resulting in the loss of habitat and reduction in numbers of some species, such as the Sierra subspecies of the night lizard. In addition, the existing prohibition against the cutting of live and dead standing trees should be more strictly enforced. BLM should use local public media to publicize the names of the violators as a deterrent to others.

Comment Source(s): 214-12, 214-23

Response: The analysis provided in the PRMP (Chapter 4, Section 4.2 – Biological Resources (Alternative B) and Chapter 4, Section 4.15 – Recreation and Visitor Services (Alternative C))

addressed both the impacts to species and the impacts to recreational experiences based on the firewood collection prohibition. The decision (Chapter 2, Section 2.2.2 – Biological Resources) limiting the collection of firewood to a specific size provides a balanced approach to benefiting both resources.

The Sierra night lizard (a rock-dwelling species) is not known to occupy the habitat provided by dead and down woody material and is restricted to a small area in the western edge of the Greenhorn Mountains near Granite Station.

Specific enforcement actions are beyond the scope of this broad scale RMP.

5.5.2.4 Comment (paraphrased):

The RMP should provide direction to maintain the Pearl Harbor Memorial exclusion fencing and manage the area as a long term habitat restoration project. Furthermore, non-natural objects and non-native trees should be removed from the area.

Comment Source(s): 214-14

Response: The requested action (fence removal) is beyond the scope of this broad scale RMP and would be addressed through site-specific planning. The PRMP does provide for the removal of non-native trees to enhance of restore habitat conditions (Chapter 2, Section 2.2.2 – Biological Resources).

5.5.2.5 Comment (paraphrased):

The DRMP fails to adequately discuss the impact of utility scale wind energy development and other resource uses at a landscape level. The analysis needs to consider the landscape context to assess the relative importance of public lands to wildlife, and to evaluate the potential cumulative direct and indirect impacts resulting from siting of wind facilities and associated infrastructure (roads, transmission lines, substations). The RMP should provide regional data and analyses— including barrier effects, habitat fragmentation, displacement and behavioral changes, population-scale impacts, and indirect effects.

Comment Source(s): 239-7

Response: The PRMP has been modified to address this concern through the clarification of the reasonably foreseeable development of wind energy within the Decision Area (Chapter 3, Section 3.12 – Lands and Realty, Chapter 4, Section 4.12 – Lands and Realty, and Appendix M – Reasonably Foreseeable Development Scenario).

5.5.2.6 Comment (paraphrased):

The DRMP, Appendix L, Section L.3.3, bullet item 7 does not distinguish between an occupied or un-occupied raptor nests for the application of seasonal restrictions on activities. This needs to be clarified to apply only to an occupied nest in the RMP.

Comment Source(s): 236-3

Response: The Best Management Practices presented in Appendix L of the PRMP are examples of implementation measures that may be used to reduce impacts. The BMP as written is intended to apply to both occupied and un-occupied raptor nests, therefore no clarification is needed. The authorized officer is not limited to the measures listed in Appendix L, nor is there any commitment to use the specific wording presented. Feasibility, application and specific wording will be determined based on site-specific conditions to meet resource objectives for specific management actions.

5.5.2.7 Comment (paraphrased):

The DRMP, Appendix L, Section L.3.3, bullet item 10 requires actions that are not always feasible. This SOP should be changed in the RMP to read: "*Pipe ends three inches or greater will be covered whenever possible. Open-ended pipes must be inspected prior to moving or welding to prevent injury to wildlife*".

Comment Source(s): 236-4

Response: Appendix L of the PRMP presents a sampling of best management practices, standard operating procedures and other measures for minimizing environmental effects of various authorized activities on public lands. The authorized officer is not limited to the measures listed in Appendix L, nor is there any commitment to use the specific wording presented. Feasibility, application and specific wording will be determined based on site-specific conditions to meet resource objectives for specific management actions.

5.5.2.8 Comment (paraphrased):

The RMP should adopt Alternative C as it places an emphasis on conserving cultural and natural resources, maintaining functioning natural systems, and restoring natural systems that are degraded. This is especially important since historically there has been too much emphasis on the extraction and deleterious practices on public lands. Furthermore, the myriad of developmental pressures on public lands are increasing and the speed of which can only be expected to accelerate.

Comment Source(s): 262-1

Response: This comment was presented as a brief request and lacks sufficient detail on which to select an alternative. The conservation of natural resources was addressed in other alternatives of the PRMP through goals and objectives aimed at protecting these resources.

5.5.2.9 Comment (paraphrased):

The RMP should clarify how adoption of the RMP will modify the administration of Southern California Gas Company's San Joaquin Valley Programmatic Biological Opinion. Specifically with regard to habitat compensation, review requirements, and avoidance and minimization measures. Furthermore, it should ensure that infeasible minimization and mitigation measures, and reporting and authorization requirements are not imposed above and beyond those already required by Southern California Gas Company's San Joaquin Valley Programmatic Biological Opinion.

Comment Source(s): 195-4

Response: The administration of the Southern California Gas Company's San Joaquin Valley Programmatic Biological Opinion is beyond the scope of this broad scale RMP. Habitat compensation, review requirements, and avoidance and minimization measures will be determined based on site-specific conditions and the applicable biological opinion or other document establishing these measures. Furthermore, minimization and mitigation measures along with reporting requirements are based on site-specific needs and would be appropriate to the resources being managed.

5.5.2.10 Comment (paraphrased):

The RMP should clarify the definition of weed (page 58). A weed is any unwanted plant. It is suggested that this language be altered to read "non-native species" if this is what is actually meant. Furthermore, the decision as written in the DRMP to "promote or require the use of weed-free hay" should be clarified to explain how vehicles and equipment arriving from "other areas" (a term that also needs term that also needs defining) could be washed on public lands – will cleaning stations be installed to allow people to comply? In addition how will compliance monitoring be achieved? Finally why are other users (not related to horse and livestock uses) exempt? Anyone travelling through an area with "weeds" can transport them on their clothing boots and vehicles.

Comment Source(s): 199-6, 199-7

Response: The PRMP has been modified to clarify the definition of "weeds" (Glossary). Implementation of the decision stated would be carried out through site-specific action and enforcement the discussion of which is beyond the scope of this broad scale RMP.

5.5.2.11 Comment (paraphrased):

The RMP should be modified to clearly apply its goals related to protecting essential habitat linkages to the Tehachapi parcels of public land. These parcels form integral part of the Tehachapi Corridor – a habitat linkage of continental importance that connects the Sierra Nevada and the Cascade Ranges with the Coastal Transverse and the Sierra Madres Ranges. Maintaining a connected landscape within the Tehachapi Corridor will enable the continuation of the many natural processes that are critical to species survival including wildlife migration, genetic exchange, adaptation in the face of climate change and range for larger mammals. Losing these parcels to development would undermine the extensive investments made to protect the critical area and compromise the many ecological functions it serves.

Comment Source(s): 217-3

Response: The PRMP has been modified to identify the Tehachapi Linkage as an area of ecological importance for the preservation of the ecological connection between the southern Sierra Nevada Mountains and foothills, and transverse ranges (Chapter 2, Section 2.2.2 – Biological Resources). Specific management needed to protect this important linkage is included in the decision.

5.5.2.12 Comment (paraphrased):

The Tehachapi's demonstrate high biodiversity, as documented by several authors (Brewer, Grinnell and Twisselmann), attributed to the unique conjunction of geography, geology and climes. The RMP should be modified to include this information and clearly apply its goal "contribute to maintaining biotic diversity" to the Tehachapis with specific management directives that provide for the protection of these public lands. Furthermore, the RMP should include more thorough biological and other resource inventories before establishing land management policy for these parcels which may foreclose the option of maintaining biotic diversity.

Comment Source(s): 217-5, 217-6

Response: The PRMP has been modified to include additional information regarding the biological resource values on public lands and their contribution to biotic diversity in the Tehachapi area (Chapter 3, Section 3.17 –ACECs). The ecological importance of the Tehachapi area has been highlighted in the PRMP and for the purposes of this decision, there is enough information to make a reasoned choice between the alternatives.

5.5.2.13 Comment (paraphrased):

The RMP should be modified to include information on, and give consideration to, the presence of Kern Primrose Sphinx Moth and California condor within the Tehachapi Mountains. Specifically the RMP should address protection of public lands parcels within close proximity to other protected lands to provide the intact landscape necessary to maintain natural process needed for the preservation of these species' habitats. Furthermore, the RMP should identity the Tehachapi Mountains as a priority area for acquisitions of Kern Primrose Sphinx Moth habitat and ensure that these public lands remain 'open space' free of structures that could conflict with condor foraging.

Comment Source(s): 221-4, 221-5, 221-6

Response: The PRMP has been modified to include additional information regarding the presence of Kern Primrose Sphinx Moth and California condor within the Tehachapi Mountains (Chapter 3, Section 3.17 –ACECs). Furthermore the identification of the Tehachapi Linkage as an area of ecological importance (Chapter 2, Section 2.2.2 – Biological Resources) provides the necessary planning level guidance to protect these public lands. In addition, the PRMP provides direction for the BLM to seek and accept acquisition of lands with high biological value this would include special status species habitat (Chapter 2, Section 2.2.12.1 – Lands and Realty).

5.5.2.14 Comment (paraphrased):

For the protection of California condor the RMP should be modified to include a prohibition on the use of lead based ammunition while engaged in hunting activities on public lands within the Tehachapi Mountains.

Comment Source(s): 221-6

Response: This proposal is outside the authority of the Bureau of Land Management. The State of California through the Department of Fish and Game manages hunting on public lands including any restriction on ammunition types.

5.5.2.15 Comment (paraphrased):

The RMP should be modified to provide permanent protection and conservation of public lands within the Tehachapi Linkage through designation as an ACEC, or other appropriate designation. Of specific importance are public lands in Township 29S, Range 33E and Township 27S, Range 32E (sections 13, 23, 24, 28, & 36). These lands are of critical importance in maintaining the biodiversity of the region and protecting the important linkage from Sequoia National Forest to the Los Padres and Angeles National Forests.

Comment Source(s): 221-8, 264-1

Response: The PRMP has been modified to address this concern through the appropriate designation of these lands for specific prescriptive management (Chapter 2, Section 2.2.2 – Biological Resources).

5.5.2.16 Comment (paraphrased):

The RMP should include new information with regard to populations of and habitat for Tehachapi slender salamander discovered by 2011 surveys (map provided with public comment). Furthermore, the RMP should ensure protection of these habitats from wind related energy development.

Comment Source(s): 223-2, 223-3

Response: The PRMP has been modified to include this new information regarding these survey results (Chapter 3, Section 3.2 – Biological Resources). The decision concerning Caliente Creek area of ecological importance has been adjusted to include these new populations and accommodate any newly discovered locations (Chapter 2, Section 2.2.2 – Biological Resources). Furthermore all these location are within a ROW avoidance area for utility scale renewable energy projects.

5.5.2.17 Comment (paraphrased):

The RMP should be modified to lessen the time period between weed decision and treatment for newly discovered weed populations. Specifically the RMP should put in place the environmental documentation, planning, and logistical capacity to streamline the response to quickly attack new infestations of non-native, invasive weeds in a much shorter time period. This should include authorization for judicious use of hand crews, equipment, and limited amounts of selected herbicides.

Comment Source(s): 264-10

Response: The comment is beyond the scope of this broad-scale RMP. The BLM has specific direction relating to the use of herbicides on public lands and the control of non-native species would be addressed through site-specific NEPA analysis.

5.5.2.18 Comment (paraphrased):

The DRMP fails to provide Desired Plant Community (DPC) objectives or guidelines as required by the 1999 Record of Decision for the Central California Standards and Guidelines. The DRMP includes a copy of the Standards and Guidelines but provides no discussion of desired plant Communities, nor does it specify if these have been established, or which, if any, grazing allotments have achieved DPC standards. The RMP should be modified to include a list and description of applicable DPC and the progress (or lack thereof) made towards reaching these DPC provided for each allotment. Without this information it is impossible for either the decision-maker or the public to determine where important species and their habitats are located, and if continued grazing is likely to benefit or impair progress to reaching DPC.

Comment Source(s): 253-4

Response: The PRMP has been modified to clarify priority plant communities and habitats are Desired Plant Communities (Chapter 2, Section 2.2.2 – Biological Resources). At this planning level, allotment-specific information is not required for the decision maker to make a reasoned choice between the alternatives. The PRMP does present a variety of information regarding the location of important species and their habitats and the appropriate tools for the protection and conservation of these resources. Specific information can be found in the following sections: Chapter 2, Section 2.2.2 – Biological Resources; Section 2.2.13 – Livestock Grazing; Section 2.2.17 – ACECs; and Chapter 3, Section 3.2 – Biological Resources.

5.5.2.19 Comment (paraphrased):

The RMP should utilize climate change models available for species of common trees and shrubs, and ecosystems (www.databasin.org) to describe impacts in on these resources in its analysis. The information could further be used to develop adaptation strategies, such as maintaining landscape connectivity.

Comment Source(s): 239-8

Response: Sufficient information is included in the PRMP concerning the impacts of climate change on important biological resources to allow the decision maker to make a reasoned choice between the alternatives. The models and analyses from Data Basin (the Southern Sierra Partnership's "Climate-adapted Conservation Plan for the Southern Sierra Nevada and Tehachapi Mountains", and the "High Terrestrial Intactness" data from the Wind, Wings and Wilderness Project) however, were used to develop the boundaries of the Tehachapi Linkage area of ecological importance.

5.5.2.20 Comment (paraphrased):

BLM should discuss with USFWS the best approach to ensure Biological Opinions are informing the decision process for the RMP. The Final RMP/EIS should provide an update on the consultation process. All updated, or new, Biological Opinions should be included as an appendix. Furthermore, mitigation and monitoring measures that result from consultation with USFWS should be included in the RMP and ultimately the ROD.

Comment Source(s): 261-54, 261-55

Response: Existing biological opinions and informal discussion with the USFWS have contributed to the development of the proposed plan. The PRMP contains information regarding the coordination and consultation with the USFWS (Chapter 1, Section 1.7.1 – Collaboration). Due to the timing and publishing requirements for the PRMP/Final EIS it is not possible to include the biological opinion as an appendix. The biological opinion will, however, be made available with the ROD and Approved RMP.

5.5.2.21 Comment (paraphrased):

The RMP should establish a monitoring and adaptive management plan for threatened and endangered species. Baseline conditions should be determined before activities that would disturb an area are authorized or initiated, and a monitoring and adaptive management plan should be established to evaluate and respond to the impacts on resources in the Planning Area. At a minimum the RMP should include a description of the monitoring and adaptive management plan, including a description of the funds required to implement them.

Comment Source(s): 261-61

Response: This request including the identification of funding sources is beyond the scope of this broad scale RMP. The USFWS establishes the overall guidance for monitoring and management of threatened and endangered species through Recovery Plans. Surveys for biological resources, biological monitoring, and post-activity reports are undertaken in association with implementation level actions.

5.5.2.22 Comment (paraphrased):

The RMP should consider restriction on all travel – not only equine, through the giant sequoia groves.

Comment Source(s): 199-22

Response: Through the analysis provided in the PRMP it has been determined that no special management for travel is required in the giant sequoia groves. As such the proposed plan alternative does not propose any special restrictions.

5.5.2.23 Comment (paraphrased):

The DRMP describes "Conserved Land Policy and Route Density Considerations" and provides these as parameters for implementation level decisions. Route designations are made utilizing the minimization criteria and Field Office specific criteria. It is assumed that limiting surface disturbance to 25% of each 640 acre of wildlife corridor area would apply to routes of travel as well as other activities. The only reference supporting a limit to surface disturbance in the Temblors is the draft Kern Valley Floor Habitat Conservation Plan (KVFHCP). Apparently this plan was never formally adopted by Kern County as the cover page describes it as a public draft. Therefore the RMP should not apply the practice of limiting surface disturbance to 25% of each 640 acres of wildlife corridor to route designation as it does not appear to be required in any of the official adopted plans for the Temblor area.

Comment Source(s): 226-13

Response: All disturbances, regardless of cause, are included in the evaluation, since all disturbances remove habitat. The BLM chooses to maintain the 90% (Reserves) and 75% (Corridors) management for reserves and corridors on public lands to meet our responsibility under Section 7(a)1 of the Endangered Species Act to use our authorities to further the purposes of the act by carrying out programs for the conservation of listed species. Although this management concept is presented in the KVFHCP a draft document, it is also discussed in the 1997 Caliente RMP and considered to be the best and appropriate management of habitats on the San Joaquin Valley Floor.

5.5.2.24 Comment (paraphrased):

The DEIS fails to take a hard look at impacts to biological resources from livestock grazing as it did not discuss the findings of relevant and important studies, including Christian et.al. (unpublished); Loesser et.al. (2006); Kimball & Schiffman (2003); Germano et.al. (2001); Loft et.al. (1991); Kie et.al. (1991); and Jones, A. (2000). In addition, the DEIS does not explain how utilization and turn-out criteria will benefit or protect each of the 85 federally listed species, 5 candidate species, 70 CESA species, 241 BLM sensitive species, and other species identified in the Planning Area. Therefore, the DRMP should be revised to explain how each of the special status species occurring in the planning area will be protected and conserved. Furthermore, the DRMP should also explain the available mitigation measures and the results of implementing these measures on the impacts to special status species from livestock grazing.

Comment Source(s): 253-6

Response: The PRMP has been modified to include the findings of relevant and important studies, such as those listed in the comment (Chapter 4, Section 4.2 – Biological Resources).

The presentation of specific special status species accounts and therefore a discussion of how each will be protected and conserved is beyond the scope of this broad scale RMP and would be addressed during project implementation through site-specific analysis. A generalized impact analysis, appropriate for the RMP, for special status species as a result of livestock grazing allocations and guidelines is presented in Chapter 4, Section 4.2 – Biological Resources, for each alternative.

Central California Standards for Rangeland Health and Guidelines for Livestock Grazing Management are described in detail in Appendix F-1 and will be implemented to ensure that watersheds are properly functioning; ecological processes are in order; water quality complies with State standards; and habitats of protected species are in order. Furthermore, Best Management Practices and Standard Operating Procedures listed in Appendix L contain measures to reduce impacts from livestock grazing. The application of these mitigation measures is an implementation level action; as such, the impacts to special status species resulting from the application of these measures would be analyzed at the project level during site specific NEPA.

5.5.2.25 Comment (paraphrased):

The RMP should be modified the remedy the false conclusions drawn with regard the impacts of livestock grazing. Specifically the section entitled General Impacts that Occur under All Alternatives, Livestock Grazing (page 387). The analysis of impacts in the section is based on two

scientific sources with questionable relevance to the area of analysis and the impacts being described. For example, the prospect that "*Livestock transport and introduce weed seed cling to their fur and in their manure. Livestock hooves break and trample soil crusts and create germination sites for weedy species. Movement of livestock across non-level landscapes results in a generalized net movement of soil down slope; even moderate slopes are likely to suffer soil erosion under moderate grazing pressure*" is cited to an article written by Mwendera, et al. 1997, which is an article which studies human impact and human waste (read untreated sewage) in either Swaziland or Zimbabwe (it's not clear which). Furthermore, the reference to Hoorman and McCutcheon, 2005, for the proposition concerning impacts to riparian areas, including loss of vegetation, soil disturbance, is a study of cattle operations in Ohio. Cattle operations in Ohio employ far different ranching methods that are different from anywhere west of the 100th Meridian (Beyond the Hundreth Meridian, Wallace Stegner, 1954, PP3, 214.). As such these studies have no real relevance or bearing on the RMP. Every conclusion in this section is unsupported by any evidence, and when one is provided, it is demonstrably false.

Comment Source(s): 199-23, 199-24

Response: The PRMP has been modified to correctly cite the 1997 Mwendera et al study in its Bibliography. This study is entitled "The effects of livestock grazing on surface runoff and soil erosion from sloping pasturelands in the Ethiopian highlands", and is relevant to the discussion of livestock grazing impacts as it studies and identifies down-slope soil movement resulting from livestock in varying levels of slope under both high and moderate grazing pressure.

The cited Hoorman and McCutcheon article is a an Ohio State University Fact Sheet entitled "Livestock and Streams - negative effect of livestock grazing riparian areas" this fact sheet summarized impacts to riparian areas from a wide variety of scientific studies conducted throughout the world under a variety of livestock grazing operations with varying applicability to the Decision Area. Many of the concepts presented in this fact sheet are relevant to the general discussion of livestock grazing impacts on riparian areas provided in the PRMP.

5.5.3 Cave and Karst Resources

5.5.3.1 Comment (paraphrased):

The possible classification of Millerton Cave under Alternative C as Class III (entry requires specific authorization that may only be provided for research and education) may result in undesirable impacts to cave resources. It has been repeatedly demonstrated that cave closures (where no physical barrier is installed) are often only adhered to be cavers and continue to be visited by those with less knowledge of caving, conservation, and outdoor ethics.

Comment Source(s): 219-1, 231-1, 235-1, 244-1, 245-1, 245-6, 247-1, 249-1, 251-1

Response: The proposed plan alternative of the PRMP proposes to designate Millerton Cave as a significant cave managed as Class I (Chapter 2, Section 2.2.3 – Cave and Karst Resources).

5.5.3.2 Comment (paraphrased):

The proposal to designate Millerton Cave as Class I (open) would continue to allow the current heavy use that may result in the loss of potential study area and habitat degradation. The unique geology of the cave provides rare research opportunities into geochemical study of granitic rock talus/bedrock erosion caves. Designation as Class III (entry requires specific authorization that may only be provided for research and education) would appropriately control access to alleviate this concern and preserve important research opportunities.

Comment Source(s): 255-1

Response: There has been no identified/documented damage to Millerton Cave based on current use. Furthermore there have been no requests beyond those generated by BLM itself for study of the unique geology of the cave. As such, the PRMP classifies Millerton Cave as Class I to continue to provide for academic, research and recreational activities.

5.5.4 Cultural Resources

5.5.4.1 Comment (paraphrased):

The RMP should clarify the process undertaken should human remains be discovered on public lands. Specifically the RMP should acknowledge the need to follow California Government Code §27460 and possibly California Government Code §27491 and California Health & Safety Code §7050.5 if applicable.

Comment Source(s): 2-3

Response: The PRMP states that all required regulations and procedures will be followed during the management of cultural resources. This includes the inadvertent discovery of human remains. In the event that human remains are discovered on BLM managed lands or during a project being administered by the BLM, BLM policy follows California State law which requires that all work must cease, the area must be secured and the County Coroner's Office of the county where the remains are located is notified. Once the determination has been made that remains are of Native American ancestry, the BLM will initiate the proper procedures required under Federal regulations regarding the disposition of the remains.

5.5.4.2 Comment (paraphrased):

The DRMP does not indicate there are any changes in the interpretation or implementation of existing regulations (e.g., NEPA, Section 106 & 110 of NHPA, NAGPRA, ARPA) or the way in which the projects are reviewed for potential adverse effects. The RMP should clarify whether projects will continue to be screened on a case-by-case basis regardless of which alternative is chosen.

Comment Source(s): 195-5

Response: The BLM administers public lands within a framework of numerous laws, including those listed in the comment. The RMP is required to be in compliance with these laws and

appropriately apply these authorities in the management of the resource. The PRMP, Chapter 4, Section 4.4 – Cultural Resources provides definitions and assumptions common to all alternatives utilized during the analysis of impacts to cultural resources, it also defines what constitutes an adverse effect in this section and states that "all proposed undertakings and authorizations will comply with BLM authorities designed to preserve and protect cultural resources".

5.5.4.3 Comment (paraphrased):

The RMP should address protection, preservation and restoration of the Walker Cabin, associated barn and other historic mining buildings to resolve issues with vandalism and destruction. This could be achieved through the establishment of a cultural resource monitor to be resident at these sites. In addition to the historic resources within the Keyesville SRMA, Native American sites and values should be protected. Coordination with the Tubatulabal tribe should occur before any action affecting these sacred sites is implemented.

Comment Source(s): 214-20

Response: The specific implementation actions required to protect historic structures and sites in the Keyesville area are outside the scope of this broad scale RMP and would be more appropriately addressed though an activity level plan (either a separate Cultural Resource Management Plan, or Recreation Area Management Plan that included cultural resource management direction).

The PRMP allocates the historic sites in Keyesville "conserve for future use until such time as stabilization and restoration work allows for public use" for interpretation and education (Chapter 2, Section 2.2.4 – Cultural Resource Management). These allocations in combination with the recreation management decisions for this area would further protect cultural resources (Chapter 4, Section 4.4 – Cultural Resource Management).

BLM policy and regulations require that Native American tribes are consulted prior to any action or authorization which could impact places of traditional or religious importance to them. This is affirmed in the PRMP in Chapter 2, Section 2.2.4 – Cultural Resource Management, under both goals and objectives for all proposed management actions, that the BLM will "(I)dentify places of religious and cultural importance to Native Americans. The BLM actively coordinates and engages in consultation with all federally recognized tribes and many non-recognized tribes for any action that may affect Native American sites and values.

5.5.5 Lands with Wilderness Characteristics

5.5.5.1 Comment (paraphrased):

The RMP should adopt Alternative B with regard to lands managed for wilderness characteristics. Specifically, Public Proposal IV which the DRMP identified as not possessing wilderness characteristics. The legal description provided for this proposal includes private property that has been actively ranched for over 100 years. This parcel should be permanently removed from any future Wilderness Character Assessment Reviews and Inventories.

Comment Source(s): 208-2

Response: As a public proposal it is important to ensure there is a clear tie between the areas analyzed and those proposed; in this case the legal description provided in the public scoping comment. Although the legal description provided was board enough to include non-federal ownership the wilderness characteristics inventory only addressed the public lands in this area. A footnote has been added to these legal descriptions stating "Inventory/Assessment addresses only public lands within this area"

The process used to establish the presence, or lack thereof, wilderness characteristics follows that outlined by agency policy and guidance. In the case of Public Proposal IV the public lands were found not to possess wilderness characteristics. The parcel cannot, however, be permanently removed from "reviews and inventories" as the FLPMA requires the BLM to keep current resource inventories on all public lands under its jurisdiction, including wilderness characteristics.

5.5.5.2 Comment (paraphrased):

The RMP should give consideration to the intact, connected landscape that encompasses the Tehachapi parcels of public land which exemplifies the wilderness characteristics that the DRMP claims to protect (Section 2.2.5). These areas, with infrequently traveled jeep trails and low impact grazing, are wild, 'unfragmented' and continue to exist as they have for centuries. Ensuring these parcels remain undeveloped, wild and intact is essential to preserving the habitat linkages and biodiversity of the Tehachapis.

Comment Source(s): 217-4

Response: The Tehachapi parcels of public lands, which although may appear to have wilderness like qualities, do not meet the specific requirements for possessing wilderness characteristics as outlined in agency policy and guidance. Chapter 3, Section 3.5 – Lands with Wilderness Characteristics Section describes these requirements. Specifically the Tehachapi parcels did not meet the size requirements (even when considered with surrounding lands, which must be protected in a similar fashion) or appear to be roadless in nature (as confirmed by public comments).

5.5.6 Paleontological Resources

5.5.6.1 Comment (paraphrased):

The RMP should include the concept set forth by the International Society of Vertebrate Paleontology, that the best place for significant fossils is in a museum repository, not weathering at the outcrop. Furthermore, the RMP should clarify the circumstances under which fossils are deposited in a museum repository, including that all vertebrate and uncommon invertebrate fossils collected under permit should be deposited in such a location. Throughout the RMP any reference to specimen collection or data recovery should be followed by the phrase "and deposited in a museum repository".

Comment Source(s): 139-1, 139-13, 139-25, 139-34

Response: The text of the PRMP/FEIS has been changed in response to this concern (Chapter 3, Section 3.6 – Paleontological Resources).

5.5.6.2 Comment (paraphrased):

The DRMP indicates the several areas of paleontological resources are subject to 'direct management' but does not describe this 'direct management'. The RMP should clarify 'direct management' through the inclusion of pro-active mutual assistance with volunteer paleontologists, site stewardship programs and cyclic prospecting and inventory. It should be noted that closure and restricted access to paleontological resource sites does not protect or preserve the resource. Fossils left in place are subject to natural weathering process which can degrade them over time. Furthermore, the RMP should expand its management options beyond those associated with project specific actions to include pro-active management, including permitting prospecting, inventory and stewardship programs.

Comment Source(s): 139-2, 139-3, 139-7, 139-8, 139-9, 139-11, 139-12, 139-42, 140-3

Response: The PRMP has been modified to clarify the phrase "subject to direct BLM management" meaning under the jurisdiction of the BLM (Chapter 3, Section 3.6 – Paleontological Resources).

5.5.6.3 Comment (paraphrased):

The inventory of paleontology formations associated with the DRMP is incomplete. Decision should not be made with an incomplete inventory. The following areas should be considered in the RMP: Kern River Formation, McKittrick tar seeps, Caliente Formation, Quatal Formation, Peace Valley/Hungry Valley Formation, and Round Mountain Silt. The omission of these fossiliferous formations from the inventory strongly suggests the need to develop a surface/subsurface Paleontological Sensitivity Map to be used in land use planning. Furthermore, the RMP should clarify how current impacts to these resources are addressed.

Comment Source(s): 139-14, 139-15, 139-16, 139-17, 139-18, 139-19, 139-20, 139-28, 139-31, 140-1

Response: The PRMP has been modified to address this concern and includes revised tables that provide a more thorough listing of formations with known paleontological sensitivity within the Decision Area. This table also includes revised PFYC designations for these formations based upon the best available information regarding the known and inferred potential occurrence of significant fossils. A Paleontological Resources: PFYC 4 & 5 Formations Map for the Planning Area (Map 3.6.1) has also been included.

5.5.6.4 Comment (paraphrased):

The DRMP does not identify any PFYC Class 5 locations in its inventory of paleontological formations. The RMP should clarify why the Maricopa tar deposit; Round Mountain silt bone beds; and the Kern River formation were not classified as PFYC Class 5.

Comment Source(s): 139-21, 139-22, 139-22, 140-2

Response: The PRMP has been modified to address this concern and the Round Mountain silt bones beds and the Kern River formation are classified as PFYC Class 5 (Chapter 3, Section 3.6 – Paleontological Resources).

5.5.6.5 Comment (paraphrased):

The RMP should identify the documentation supporting the claim that unregulated casual collection of agates has resulted in damage and destruction of paleontological resources in the Sand Canyon-Cache Creek locality (page 241). If no documentation exists a decision to close the area in the RMP is not warranted. Furthermore, the RMP should use consist naming to describe the Sand Canyon-Cache Creek (Horse Canyon) area. If a closure were enacted how would paleontological research be address in the area?

Comment Source(s): 134-07, 139-24, 139-29, 139-31, 139-37, 139-38, 139-39, 139-40,

Response: The PRMP has been modified to remove the inference that paleontological resources are being impacted in the Sand Canyon-Cache Creek locality (Horse Canyon) (Chapter 3, Section 3.6 – Paleontological Resources). The area, however, still remains closed due to sensitive cultural resources (Chapter 3, Section 3.16 – ACECs).

5.5.6.6 Comment (paraphrased):

The analysis as it related to paleontological resources in the RMP should be expanded to include a parcel specific subsurface/surface basis.

Comment Source(s): 139-24

Response: It is beyond the scope of the RMP to provide detailed assessments of potential impacts to paleontological resources based upon parcel specific locations.

5.5.6.7 Comment (paraphrased):

The RMP should ensure the term “special management” (page 448) should be defined as it relates to paleontological resource. This definition should include public education and site stewardship programs.

Comment Source(s): 139-35, 139-36, 139-41

Response: The term “special management” relates to the management attention given to areas designated as ACECs and does not relate to any management provided to paleontological resources unless they constitute to the values of the ACEC.

5.5.6.8 Comment (paraphrased):

The RMP should provide a definition of ‘significant paleontological resources’ based on the Society of Vertebrate Paleontology guidelines.

Comment Source(s): 139-5

Response: The PRMP includes clarification of what constitutes significant paleontological resources as defined by federal regulation and BLM policy regarding the management of paleontological resources (Chapter 3, Section 3.6 – Paleontological Resources).

5.5.6.9 Comment (paraphrased):

The DRMP does not identify any paleontological collecting sites. The RMP should identify the Kettleman Hills area as a place for common invertebrate collecting. This area has common invertebrate paleontological resources suitable for collection. Access to most of the public land in the Kettleman Hills area is controlled by Chevron Oil Company. As such, the RMP should provide for the development of agreement with Chevron for permitting public access to the public lands that have common invertebrate fossils.

Comment Source(s): 134-08

Response: The identification of paleontological collecting sites and the establishment of access agreements are outside the scope of the RMP. Furthermore the public lands in the Kettleman Hills area have no legal public access and it would therefore be inappropriate to direct the public to this location.

5.5.7 Soil Resources

5.5.7.1 Comment (paraphrased):

The DRMP, Appendix L, Section L.3.3, bullet item 14 requires actions that are not always feasible in emergency situations. This SOP should be changed in the RMP to read: "*To the greatest extent possible, avoid soil-disturbing activities during periods of run-off or when soils are wet and muddy, in order to minimize damage.*"

Comment Source(s): 236-5

Response: The BLM recognizes that implementing Best Management Practices (BMP) or Standard Operating Procedures (SOP) may not be feasible in emergency situations. Appendix L, Best Management Practices/Standard Operating Procedures includes a sampling of measures for minimizing environmental effects of authorized activities on public lands. As described in the PRMP Appendix L, Section L.1 - Introduction the authorized officer is not limited to utilize those measures presented in this appendix, nor is there any commitment to use the specific wording.

5.5.8 Water Resources

5.5.8.1 Comment (paraphrased):

The DRMP fails to take a hard look at impacts to water resources. Specifically, the DRMP (page 469) provides no information to explain how much fencing is required to implement the livestock exclusion from all public lands as proposed under Alternative D. Furthermore, what the potential level of soil disturbance would be as a result of installing this fencing, nor how the

potential risk from a one-time action of building fences outweighs the benefits of ending the stream bank and soil erosion conferred by fencing out the livestock.

Comment Source(s): 253-10

Response: The PRMP has been modified to address the concern amounts of fencing required to implement Alternative D (Chapter 4 – General Assumptions for Analysis). Furthermore, the PRMP has been modified to include additional analysis on the impacts to water resources (Chapter 4, Section 4.9.5 – Water Resources).

5.5.8.2 Comment (paraphrased):

The RMP should incorporate the most current and up-to-date evaluation of drinking water resources, recharge areas, aquifer sensitivity, wellhead protection areas and source water protection zones, and describe potential impacts to these resources. This analysis will maximize the ability to determine where leasing stipulations and/or mitigation and monitoring measures are needed to protect current and future drinking water resources.

Comment Source(s): 261-22, 261-23, 261-24

Response: The PRMP has been modified to address this concern to include additional information on the status and trends of groundwater resources in the Planning Area has been added (Chapter 3, Section 3.9 – Water Resources). Furthermore, additional analysis has been added to Chapter 4, Section 4.9 – Water Resources to discuss impacts on these resources. While the PRMP does not include leasing stipulations for direct protection of ground water resources, mitigation and monitoring measures would be implemented at the site-specific level; examples of which are identified in Appendix L – Best Management Practices and Standard Operating Procedures.

5.5.8.3 Comment (paraphrased):

The DRMP provides insufficient information regarding mitigation measures and monitoring that would be employed to protect groundwater resources. The RMP should provide additional information on the implementation of existing guidelines, including Conditions of Approval, for groundwater resource protection, to allow for an assessment of the adequacy of these guidelines. Furthermore, the RMP should describe the types of monitoring and/or measures that will be implemented for the protection of groundwater from oil and gas activity and the circumstances under which these will be applied.

Comment Source(s): 261-25, 261-26, 261-27, 261-31

Response: The requested information is beyond the scope of this broad scale RMP and would be addressed in site-specific NEPA analysis for individual projects. For clarity, however, Chapter 3, Section 3.9 – Water Resources has been amended to include information regarding the MOU between the BLM and the California State Water Resources Control Board for Planning and Coordination of Nonpoint Source Water Quality Policies and Activities that clarifies each agency's responsibilities related to nonpoint source water quality issues and activities. In addition, examples of the mitigation measures and monitoring that would be employed to

protect surface and groundwater resources can be found in Appendix L – Best Management Practices and Standard Operating Procedures.

5.5.8.4 Comment (paraphrased):

The RMP should list the BMPs that may be required to protect groundwater resources as oil and gas development proceeds. Consideration should be given to using the BMPs developed for Wyoming's Pinedale Anticline oil and gas field in response to monitored groundwater contamination. Furthermore, the RMP should identify circumstances under which the BMPs would be applied (e.g., wetlands, shallow water aquifers, proximity of water wells), and an explanation of how BMPs would be monitored and enforced.

Comment Source(s): 261-28, 261-29, 261-30

Response: Appendix L of the PRMP presents a sampling of best management practices, standard operating procedures and other measures for minimizing environmental effects of various authorized activities on public lands. The authorized officer is not limited to the measures listed in Appendix L, nor is there any commitment to use the specific wording presented. Feasibility, application and specific wording will be determined based on site-specific conditions to meet resource objectives for specific management actions. The application of BMPs is determined at the project level based on site-specific NEPA analysis of the proposed action.

5.5.8.5 Comment (paraphrased):

The RMP should include the requirement for monitoring to occur in private wells within one mile of an oil and gas project area (the BLM Pinedale Anticline project and the U.S. Forest Service Eagle Prospect project are examples of projects for which similar monitoring programs have been established). Furthermore, the RMP should include the commitment that future project-level NEPA analyses for oil and gas development will contain a specific comprehensive monitoring plan and program to track groundwater impacts as drilling and production operations occur.

Comment Source(s): 261-32, 261-33

Response: The requested action is beyond the scope of this broad scale RMP and would be addressed at the project level. For clarity the PRMP has been modified to describe the existing monitoring network and ongoing studies of groundwater impacts occurring with the regard to oil and gas development (Chapter 3, Section 3.9 – Water Resources). Furthermore, information regarding the BLM's MOU with the State Water Resources Control Board has been included to clarify each agency's responsibilities related to nonpoint source water quality issues and activities. The BLM will determine in partnership and through the continued development of a Water Resources Management Plan, the need for additional groundwater monitoring as it pertains to federal oil and gas development.

5.5.8.6 Comment (paraphrased):

The DRMP fails to analyze the potential impacts to groundwater resources in areas where hydraulic fracturing may occur. The RMP should include all measures to ensure groundwater

resource protection from hydraulic fracturing, and describe any steps necessary to ensure these measures are incorporated into permits and approvals.

Comment Source(s): 261-36, 261-37

Response: The PRMP has been modified to include specific information regarding hydraulic fracturing in the Decision Area and the current authorities of the BLM and DOGGR (Chapter 3, Section 3.14 – Minerals Management). The measures to ensure groundwater protection is provided for in regulation (43 CFR 3160) and Onshore Oil and Gas Orders 1-7; a discussion of these is provided in Chapter 3, Section 3. 9 – Water Resources.

5.5.8.7 Comment (paraphrased):

The RMP should identify any potential future requirements applicable to operators for gathering information on water quality and depth of useable groundwater, and subsequently complying with protective requirements, as appropriate.

Comment Source(s): 261-38

Response: Information required of operators would be established based on the specific project and site-specific analysis needs, and is therefore beyond the scope of this broad scale RMP. The measures to ensure groundwater protection is provided for in regulation (43 CFR 3160) and Onshore Oil and Gas Orders 1-7; a discussion of these is provided in Chapter 3, Section 3. 9 – Water Resources. These measures would be included in the document authorizing the activity as Conditions of Approval.

5.5.8.8 Comment (paraphrased):

The RMP should clarify the extent of surface waters within the Planning Area. Volume 2, section 4.9 states that surface water resources are "not notably extensive" in the Planning Area, and directs the reader to Volume 1, Figure 3.13 for reference. This map, which shows major drainages in the Planning Area, is not an accurate portrayal of surface waters that should be considered when assessing potential impacts. Given the size and topography of the Planning Area, there is considered to be, extensive perennial, intermittent, and ephemeral drainages that qualify as waters of the U.S. and waters of the state and that warrant consideration and protection under the RMP. Furthermore, the DRMP lists vernal pools and other ephemeral waters as upland habitats in the Biological Resources sections, and excludes them from the Water Resources sections. These inaccurate statements and maps need to be corrected

Comment Source(s): 261-39, 261-40, 261-41

Response: The PRMP has been revised to clarify the extent (mileage) of perennial, intermittent, and ephemeral waters on public lands (Chapter 3, Section 3.9 – Water Resources). Furthermore, the map depicting this has been updated (Map 3.9.1).

The Biological Resources section addressed vernal pools and riparian areas as specific habitats, whereas the Water Resources section addresses perennial, intermittent, and ephemeral water courses in their entirely without reference to specific habitat types, which is not needed to understand the impacts to these resources.

5.5.8.9 Comment (paraphrased):

The RMP should discuss and incorporate protections for ephemeral/intermittent waters.

Comment Source(s): 261-42

Response: The PRMP address this concern (Chapter 2, Section 2.2.9 – Water Resources). Furthermore, BMPs and SOPs for the protection of water resources are included in Appendix L.

5.5.8.10 Comment (paraphrased):

The RMP should specifically discuss what measures can or cannot be taken (if outside its jurisdiction) to address chloride and sodium discharges from the Santa Margarita Reservoir.

Comment Source(s): 261-43

Response: The PRMP has been modified to clarify to explain that discharges from the Santa Margarita Reservoir are outside the authority of BLM Chapter 3, Section3.9 – Water Resources).

5.5.8.11 Comment (paraphrased):

The RMP should include a preliminary assessment of wetland jurisdiction and explain that jurisdiction will be determined in future project-specific EAs/EISs. Furthermore, in the absence of a current National Wetlands Inventory for the full Planning Area, the RMP should include an inventory of aquatic resources, characteristics, functions and overall ecological health. Having such an inventory will provide greater wetland and riparian area protection in the Planning Area by providing information that can be used when authorizing surface disturbance or planning mitigation for unavoidable impacts to wetlands. As preparation of such an inventory may take time, the RMP should explain how this undertaking would occur.

Comment Source(s): 261-44, 261-45, 261-46, 261-47, 261-48, 261-49

Response: The assessment of wetland jurisdiction is outside the authority of BLM. Draft guidance defining "waters of the United States" has been recently released by the Army Corp of Engineers and has exerted jurisdiction over adjacent wetlands. The PRMP has been modified to include information on this guidance (Chapter 3, Section 3.9 – Water Resources).

A Planning Area-wide inventory of aquatic resources does not exist; however, it is not required for the authorized officer to make a reasoned choice between the alternatives. When authorizing surface disturbance and determining the application of BMPs and SOPs, aquatic resources would be addressed through site-specific inventory and analysis.

5.5.8.12 Comment (paraphrased):

The RMP should consider whether any high value wetland or riparian area would warrant protection through a No Surface Occupancy stipulation and integrate such protections.

Comment Source(s): 261-50

Response: The PRMP identifies priority plant community and habitats which include riparian areas and wetlands (Chapter 2, Section 2.2.2 – Biological Resources). The PRMP also establishes a No Surface Occupancy stipulation that would be applied to minimize or eliminate adverse effects on unique or significant natural and cultural resources (Chapter 2, Section 2.2.14 – Minerals Management). While the PRMP specifically identifies four ACECs as subject to this stipulation, other areas with unique or significant natural and cultural resources would also be identified during site-specific analysis at the leasing stage.

5.5.9 Comprehensive Trail and Travel Management

5.5.9.1 Comment (paraphrased):

The Comprehensive Trail and Travel Management goal, as stated on page 64, requires a qualifying statement to be added to temper the words “access and recreational opportunities" with words that recognize only appropriate and permitted public access would be granted, especially on private land and roads.

Comment Source(s): 263-2

Response: The goal statement in the PRMP (Chapter 2, section 2.2.11 – Comprehensive Trail and Travel Management) has been modified to read “Improved access to, and recreational opportunities on, public lands that complement the character of each geographic zone and the surrounding regions”. This should ensure the reader will understand its application is only applicable to public lands.

5.5.9.2 Comment (paraphrased):

Within the Horse Canyon area the RMP should provide direction to improve/maintain vehicular access to rock collecting locations (e.g., agate beds) and mining claims as these areas are currently, and have been, used for decades.

Comment Source(s): 9-2, 13-3, 24-3, 121-1, 134-1, 197-1

Response: The improvement/maintenance of routes is outside the scope of this broad scale RMP and would be addressed at a project-specific planning level (for example, access to mining claims would be considered with the submittal of a mining Notice or Plan of Operations or application for a right-of-way). There is currently, however, no legal public access to the rock collecting location within the Horse Canyon area: Legal public access is only gained through either direct access off a State or County road, or through acquisition of a public easement across private property.

5.5.9.3 Comment (paraphrased):

The DRMP fails to adequately describe the impacts on access to mineral collecting sites, mines and mining claims that may be used by gem and mineral societies/collectors as a result of the proposed travel management network. Closure of these routes effectively closes mines and mineral collecting sites as often they are located miles from any roads identified within the

Travel Management Plan. The analysis of these impacts should address the use of motorized vehicles, the distances of these sites from motorized routes, and Accessibility concerns.

Comment Source(s): 9-4, 134-1, 134-2

Response: The PRMP analyzes the impacts of the route designations for the routes identified on the route inventory. The inventory used in the RMP process represents the best available information, and included ample opportunity for the public, including gem and mineral societies/collectors, to review the available information and provide additional information/missing routes. Use of any routes not in the inventory is considered cross-country travel and is therefore illegal for motorized and mechanized modes of transport. Should a route accessing these areas of interest be identified it should be brought to the attention of the BLM to receive an appropriate designation through site specific analysis as described in Chapter 2, Section 2.2.11 – Comprehensive Trail and Travel Management).

As stated in the response to Comment 5.5.12.2, no inventory of mineral collecting sites, mines or mining claims used by gem and mineral collecting societies/individuals exists. That said, however, specific information regarding access to the sites identified through the public comment process has been included in the Appendix G and summarized in the analysis (Chapter 4, Section 4.15 – Recreation and Visitor Services).

5.5.9.4 Comment (paraphrased):

For clarity, the "Authorized" designation proposed for route segment numbers 2626 and 2630, which provide access to the Sandy Flat area within The Dam RMZ, should be specifically defined as to what is authorized.

Comment Source(s): 17-1, 18-1, 215-10, 227-3

Response: The PRMP has been modified to designated route segments numbers 2626 and 2630 as Motorized – Street Legal Only (Chapter 2, Section 2.2.11 – Comprehensive Trail and Travel Management). This does not change the impact of the original designation but does fully explain its intent.

5.5.9.5 Comment (paraphrased):

OHV use within the proposed Keyesville SRMA has and will continue to cause detrimental environmental effects and aggravation to private landowners in the area. The OHV users ride off of designated trails, resulting in route proliferation, ignore "private property no trespassing" signs, and operate OHV equipment that violates noise regulations. The only viable solution is to increase appropriately trained law enforcement presence and prosecute violators to the full extent of the law.

Comment Source(s): 213-2, 214-1, 214-2

Response: The RMP proposes an increased level of management in the Keyesville SRMA in order to achieve the stated objectives (Chapter 2, Section 2.2.15 – Recreation and Visitor Services). The allocation of personnel (Law Enforcement Officers) is beyond the scope of the RMP and therefore not specifically addressed.

5.5.9.6 Comment (paraphrased):

The proposed travel network within the Keyesville SRMA does not provide suitable trails for use by sandrails, which are too powerful and destructive. These vehicles should be prohibited to maintain the integrity of the trails within the SRMA.

Comment Source(s): 214-3

Response: The route designations in the RMP make only broad level determinations as to whether a route would allow motorized use, non-motorized use, or non-mechanized use. Specific restrictions on the types of vehicles allowed to travel on specific routes would be addressed in an activity level plan for the Keyesville SRMA.

5.5.9.7 Comment (paraphrased):

The single track reroute from Fence Line trail to the end of Keyesville Classic trail (GPS data provided in public comment) will keep mountain bike and trail bikes from using Pearl Harbor Drive and mixing with street legal vehicles. This will improve safety and minimize conflicts with road vehicles as desired under 43 CFR 8340.0-2. The reroute also provides the single track experience people who are riding the Keyesville Classic single track are looking for. The Keyesville Classic annual mountain bike race would also use the new route thereby avoiding large numbers of non-motorized users on Pearl Harbor Drive as well as providing a better single track experience on the reroute. The RMP should designate this reroute as open to trail bike, mountain bike, equestrian and hiker for single track use.

Comment Source(s): 227-6

Response: The GPS route information included with the public comment has been verified on the ground and added to the route inventory. The route has been designated motorized in the PRMP (Travel Management Network Map B1). Information regarding the single track nature of the route will be carried forward into activity level planning for the Keyesville SRMA.

5.5.9.8 Comment (paraphrased):

The RMP should prioritize the acquisition of a legal easement across private property for the Rocky Gorge and Tombstone Ridge trails. These trails are important as they provide the only two shuttle routes for downhill mountain-biking within Keyesville. Furthermore, modifications to these routes should be made in conjunction with the SSFTA and Keyesville Classic event organizers to keep these routes open from Keyesville Road.

Comment Source(s): 227-7

Response: The PRMP has been modified to include text addressing access across private property for these trails. (Chapter 2, Section 2.2.11 – Comprehensive Trail and Travel Management).

5.5.9.9 Comment (paraphrased):

A portion of the Vista del Lago Trail was not included in the RMP's route inventory (GPS data provided in public comment). Since this route provides truly incredible views as well as

technical challenge it should be designated as open to trail bike, mountain bike, equestrian and hikers for single track use. Furthermore, coordination with the Sequoia National Forest should occur to increase the value of this trail through greater connectivity to other trails. If connectivity with Forest Service trails is not possible, then the route should run from its eastern most point up to Second Street, as the terrain is well suited.

Comment Source(s): 227-8

Response: The GPS route information included with the public comment has been added to the route inventory. The route has been designated motorized in the PRMP (Travel Management Network Map B1). Information regarding the single track nature of the route will be carried forward into activity level planning for the Keyesville SRMA. At this time no coordination regarding this specific trail has occurred with the Forest Service, but it is hoped this would occur during the development the activity level plan for this area.

5.5.9.10 Comment (paraphrased):

The RMP should provide direction that allows the rerouting of the Keyesville Classic trail across the now defunct Pearl Harbor Memorial (map provided in public comment). This reroute would provide for a more continuous single track experience and also address a current issue of trail widening.

Comment Source(s): 227-9, 227-10, 230-2

Response: The information regarding the reroute has been incorporated in the route inventory. The PRMP designates the reroute as motorized (Travel Management Network Map B1) and the Final EIS provides the analysis of impacts. Upon signature of the ROD maintenance may occur on the route to improve it to the appropriate standard.

5.5.9.11 Comment (paraphrased):

The DRMP proposed to close trails on in the vicinity of Calf Canyon Truck Trail and limit this trail to authorized use only. There appears to be no rationale for this decision, as public use of this area has not been an issue and many adjacent land owners utilize this area and these trails for hiking, horseback riding, and hunting. A recent private acquisition of 200 acres adjacent to Highway 58 and Highway 229 could provide future general public access to the area.

The terrain is steep, hilly “badlands” covered with sooty “chamise” brush that is nearly impassible. This area of BLM land is relatively close to the towns of Santa Margarita and Atascadero, yet there are very few adjacent residences. These routes make up a trail network that allows travel around the area. If access becomes available these routes would be used by hunters, hikers and variety of outdoor enthusiasts.

Existing San Luis Obispo County zoning restrictions and the lack of public access are presently adequate to protect routes in this area from unauthorized use. Designating these routes “closed” merely imposes another set of restrictions that will require additional environmental analysis should this area become available for use in the future. Motorized use of routes in this area would require a General Plan Amendment by San Luis Obispo County.

The RMP should identifies these trails; 992, 993, 994, 996, 998, 1000, 1001,1002,1006,1007, 1011, 1012, 1013,1014,1015,1018, and 1019, as “motorized”. – add additional information from CORVA letter

Comment Source(s): 226-19, 228-1, 228-8, 271-1

Response: The PRMP has been modified to allow Motorized use of Calf Canyon Truck Trail to continue to allow for recreational access to the area. The routes stemming from this road to private property are proposed to remain closed to reduce opportunities for the spread of noxious weeds (Yellow Star Thistle), protect special status plant species and reduce opportunities for Wildland fire ignitions resulting from motorized vehicle use.

The area remains open to the specific activities requested in the public comments, hiking and horseback riding are permitted cross-county on all public lands unless otherwise closed.

Routes within this area would be re-evaluated should the proposed changes to the County zoning restrictions and the public access be granted. This would allow for the development of a sustainable trail system, addressing the concerns identified above.

5.5.9.12 Comment (paraphrased):

In the analysis of impacts from route designations DRMP fails to take into account that as routes are closed use does not diminish, but does, however, occur in a more concentrated pattern on those routes left open (i.e., more miles travel on less routes). Furthermore, this may have undesirable impacts on air quality as more concentrated use may result in greater amounts of dust and other emissions.

Comment Source(s): 17-1, 20-1, 266-1, 266-2, 266-3, 270-5

Response: The analysis provided in the PRMP concerning route closures and the concept of more concentrated use patterns, has been augmented with additional information in the following sections: Chapter 4, Section 4.1 – Air and Atmospheric Values, Section 4.7 – Soil Resources, Section 4.11 – Comprehensive Trail and Travel Management, and Section 4.15 – Recreation and Visitor Services.

5.5.9.13 Comment (paraphrased):

The RMP should recommend that all areas and trails located within the California Division of Oil, Gas and Geothermal Resources (DOGGR) Oilfield Boundaries be considered to be "Authorized Use" only consist with the proposal made in Alternative B. Active oilfields could present risks to the general public and those untrained in safety requirements for oil and gas operations. These risks could include exposure to high temperature piping and equipment, as well as potential exposure to natural gas, crude oil, and hydrogen sulfide gas. Furthermore, designating these trails as ‘open’ or ‘limited’ would complicate enforcement and potential increase already high rates of rural crime.

Comment Source(s): 206-2, 236-1, 243-2,

Response: The PRMP provides for complete closure of some public lands to the public to address human health and safety concerns presented by heavily industrialized areas (Chapter 2, section 2.2.15 – Recreation and Visitor Services). These closures occur based on the density of infrastructure related to oil and gas production. These high densities area not typical for the entire DOGGR Oilfield Boundaries and, therefore, complete closure is neither necessary nor appropriate. Furthermore, in consideration of the lack of specific documentation identifying the need for an "Authorized" designation for all routes within the DOGGR Oilfield Boundaries but outside the areas of complete public closure, it has been determined this designation does not fully address either the desires of the authorized users or that of the general public; therefore the proposed plan alternative of the PRMP has been modified.

5.5.9.14 Comment (paraphrased):

The DRMP failed to adequately address the route designation of the following trails (identified by route segment number) proposed to be closed under than preferred alternative. They should be reviewed, re-evaluated and designated "open":

3619, 3621, 3652, 3654, 3655, 3656, 3657, 3658, 3659, 3660, 3661, 3662, 3663, 3664, 3665, 3666, 3667, 3668, 3669, 3670, 3671, 3672, 3673, 3674, 3675, 3848, 3849, 3903, 3904, 3905, 3906, 3907, 3908, 3909, 3910, 3911, 3947, 3948, 3949, 3950, 3951, 3953, 3954, 3955, 3956, 3957, 3958, 3959, 3960, 3961, 3962, 3963, 3964, 3965, 3966, 3987, 4154, 4208, 5230, 5244, 5252, 5270, 5334, 5363, 5365, 5366, 5371, 5375, 5469, 5476, 5477, 5491, 5498, 5499, 5502, 6130, 6131, 6151, 6181, 6190, 6193, 6194, 6195, 6196, 6202, 6205, 6223, 6229, 6244, 6263, 6267, 6276, 6279, 6288, 6289, 6290, 6291, 6296, 6297, 6298, 6299, 6303, 6308, 6316, 6317, 6319, 6323, 6324, 6326, 6340, 6345, 6353, 6355, 6356, 6359, 6363, 6368, 6372, 6375, 6390, 6393, 6394, 6395, 6396, 6403, 6404, 6405, 6406, 6413, 6418, 6430, 6432, 6433, 6443, 6447, 6449, 6450, 6458, 6461, 6465, 6466, 6467, 6469, 6470, 6474, 6475, 6476, 6477.

Comment Source(s): 229-7, 238-7

Response: This comment was presented as a brief request and lacks sufficient detail on which to make changes to the route designations in the PRMP. As such, the PRMP does not modify these route designations unless they are specifically address in another comment that did provide such evidence or specific route information.

5.5.9.15 Comment (paraphrased):

The DRMP failed to adequately address the route designation of the following trails (identified by route segment number) as these inventoried trails do not actually exist on the ground. They should be reviewed, re-evaluated and removed from the route inventory:

1311, 1325 (although an non-inventoried trail exists beside it), 4203, 6232,

Comment Source(s): 229-4, 229-5, 229-6, 229-8, 238-4, 238-5, 238-6, 238-8

Response: The GIS information for all routes mentioned above reflects a route as identified from a 2010 aerial imagery; although there is some error that has resulted in the GIS information marking the route 15-30 feet off from its actual location. This error has been corrected (Travel Management Network Map B5). In addition, as a result of on-the-ground

investigation of these routes the designation of route 4203 (a combination of erosional feature and cow trails) has been modified to Closed in the PRMP.

5.5.9.16 Comment (paraphrased):

The RMP should clarify the route designation of route segment number 6354 and the status of route segment number 1299.

Comment Source(s): 229-3, 229-13, 238-3, 238-13

Response: The route inventory (Appendix E) for the PRMP has been modified to clarify that segment number 6354 is a mapping error and represents the same route as 6353 that is designated Closed. In addition, route segment number 1299 is designated Motorized in the PRMP.

5.5.9.17 Comment (paraphrased):

The route inventory associated with the DRMP failed to identify a number of routes that are currently used by the public. These routes should be added to the inventory and designated "open". The non-inventoried routes include routes that occur between, adjacent to or continue on from the following route segment numbers:

6193 – 6199, 6323 - 6145 (a trail that has been used for over 30 years), 6323 (upper half of trail missing)

Comment Source(s): 229-11, 229-14, 229-15, 229-16, 238-3, 238-11, 283-14, 283-15, 238-16

Response: These routes have been added to the inventory and designated appropriately in the PRMP (Travel Management Network Map B5).

5.5.9.18 Comment (paraphrased):

The DRMP fails to provide an alternative that fully addresses route designation, including using a complete inventory of trails currently in use. The RMP should review and re-evaluate the route network to ensure all existing trails are inventoried and route designations address current use patterns. The preferred alternative provides its majority of 'open' trails for hunting, ranching and utilities and does not give adequate consideration to the type of trails used by off-road motorcyclists.

Comment Source(s): 238-1

Response: The inventory used in the RMP process represents the best available information, and included ample opportunity for the public to review the available information and provide additional information/missing routes. It is understood that some routes may have still been missed and/or wrongly designated, should this be the case the public can identify these routes at any time and the BLM will address them for designation/redesignation in accordance with the process outlined in the PRMP (Chapter 2, Section 2.2.11 – Comprehensive Trail and Travel Management).

5.5.9.19 Comment (paraphrased):

The RMP should ensure that access roads within newly designated ACECs remain accessible to authorized users for the purposes of maintaining their facilities and infrastructure.

Comment Source(s): 195-1

Response: Throughout the travel management planning process existing ROW authorizations for routes have been included in the proposed route designations. These existing authorizations would continue to provide for access regardless of ACEC designations. Should a route accessing facilities and infrastructure not have a valid authorization, an authorization should be sought to ensure continued access.

Information regarding other authorizations allowing the creation and maintenance of routes such as APDs or Sundries were considered during the travel management planning process, however the information on locations of these routes is unavailable, as such errors in route designations may have occurred that will need to be rectified as they become apparent through an implementation level action following the process outlined in the PRMP (Chapter 2, Section 2.2.11 – Comprehensive Trail and Travel Management)..

5.5.9.20 Comment (paraphrased):

The RMP should avoid including mines, mineral collecting sites and the roads accessing them in any special/prescriptive management area or designation. Routes accessing these sites should be cherry-stemmed from such area/designation boundaries. Furthermore, miners and mineral collectors should be allowed to conduct route improvements and maintenance in order to access mines to conduct exploration or development under 3809 notices and plans or through Rights of Way authorizations.

Comment Source(s): 134-2

Response: Special designations and areas with prescriptive management are identified to address specific resources of concern that may be adversely impacts by various surface disturbing actions including mining and mineral collecting activities. As such, it is appropriate to include mines and mineral collecting sites within the designated areas so the resource of concern can be adequately managed. Furthermore, cherry-stemming routes out of these areas would reduce management effectiveness by unnecessarily dissecting areas and creating breaks in management that would be difficult to enforce and that could have adverse impacts on the resources of concern.

Miners and mineral collectors are permitted to conduct route maintenance and improvement through the authorization provided in either 3809 notices and plans, or ROW. The PRMP does not impact the items permitted under these authorizations, but does, however, further refine the level of authorization required under the 3809 regulations (Chapter 2, Section 2.2.14 – Minerals Management) and restricts the areas where ROW authorizations would be provided through identification of areas for ROW avoidance or exclusion (Chapter 2, Section 2.2.12 – Lands and Realty).

5.5.9.21 Comment (paraphrased):

The RMP should designate the Cyrus Canyon Trail, a portion of which was missed on the inventory (GIS information was provided with the public comment), as a non-motorized route. The terrain and slope are excellent for mountain biking and this trail has the potential to be one of the best winter rides in the region. In addition routes; 2760, 2773, 2772, 2766 should be designated 'open' in order to provide connectivity to the Cyrus Canyon Trail and a loop opportunity.

Comment Source(s): 227-43, 230-4

Response: The missing route information has been added to the Route Inventory; however the PRMP designates the entire Cyrus Canyon Trail as Closed in order to meet the ACEC objectives to protect *Mimulus shevockii* a rare, sensitive plant species (Travel Management Network Map B1). Furthermore, additional routes connecting the Cyrus Canyon Trail to the main access route have been designated Closed, apart from those needed for administrative purposes. Alternative routes may be available in the vicinity, but would require site specific analysis outside the scope of the RMP.

5.5.9.22 Comment (paraphrased):

The RMP should be modified to designate the following Keyesville trails as "open"; 2481, 2483, 2471, 2453, and include a route occurring between 2481 and 2444 currently missing from the inventory (GIS information included with comment). These routes allow better connectivity and trail flow for mountain bike and trail bike single track trail system. In addition these routes reduce conflicts and promote safety by keeping OHVs off Keyesville, as well as reducing conflict of single trackers with 4x4 users on the dirt roads 2479 and 2477. Furthermore, all routes associated with the Keyesville Classic and Southern California High School Cycling league events should remain open (GIS information provided).

Comment Source(s): 227-11, 227-12, 227-13, 227-14, 227-15, 227-16, 227-17, 227-18, 230-2

Response: The GPS route information included with the public comment has been added to the route inventory. The PRMP has been modified to reflect a Motorized designation for these routes (Travel Management Network Map B1). Furthermore, all routes associated with the Southern California High School Cycling league events are designated Motorized in the PRMP.

5.5.9.23 Comment (paraphrased):

The RMP should be modified to close trail 2490 which provides no valid use, but breaks up the system. It is an unimportant connector which encourages full size vehicles on single track

Comment Source(s): 227-19

Response: The PRMP reflects the information provided in the public comment and designates the route as Closed.

5.5.9.24 Comment (paraphrased):

The RMP should include two single track downhill route segments (GIS information included in comment). This would improve the downhill opportunity over the existing trails while eliminating the access issues and enhancing the area for events as well as everyday use.

Comment Source(s): 227-20, 230-3

Response: The route provided with the comment has been included in the route inventory. The route has been designated Motorized in the PRMP (Travel Management Network Map B1).

5.5.9.25 Comment (paraphrased):

The DRMP does not provide a designation or description for single track trails. To avoid these trails being converted to ATV trails or roads the RMP should designate existing single track trails as such and provide guidance for the appropriate signing of such routes. Failing that the RMP should provide direction for this level of designation at an implementation level both within and outside SRMAs.

Comment Source(s): 227-21, 227-22

Response: This level of detailed designation of routes within their primary route designation category (e.g., motorized routes for single track verses a full sized vehicle) requires a level of information unavailable field office wide, as such it is more appropriately handled at a smaller scale in an activity level plan, such as would be associated with the Keyesville and Temblor Range SRMAs.

5.5.9.26 Comment (paraphrased):

The RMP should reflect that user conflicts must be independently documented to avoid the concept of "user conflict" being exploited to the benefit of one user over another. Once user group should not be granted exclusive use based on another's personal objections. It should be made clear in the RMP that both sides of any conflict may be negatively impacted by the preferred resolution.

Comment Source(s): 215-6, 227-24, 227-25

Response: Clarifying language has been included in the PRMP Chapter 2, Section 2.2.11 – Comprehensive Trail and Travel Management to reflect that "conflicts" must be adequately documented, rather than just perceived.

5.5.9.27 Comment (paraphrased):

The RMP should not include Badrock Ridge Trail in any closure regarding WSA non-impairment standard since 22 years ago the WSA was studied and determined to lack wilderness quality and be unsuitable for Wilderness designation and therefore cannot impair a quality the area does not poses. The Badrock Ridge trail is an important connector trail to access a large portion of the adjacent OHV trail system in the Piute Mountain area. Furthermore, the RMP should ensure loss of OHV opportunity on trails within WSA is adequately analyzed and loss of route mileage included figures presented in the RMP.

Comment Source(s): 227-28, 227-29, 235-5

Response: The Badrock Ridge Trail remains closed in the proposed plan alternatives of the PRMP. Although the WSA in which this trail occurs was determined by BLM to be unsuitable for Wilderness designation, the BLM is still required to manage the area under non-impairment standards until congress acts on those recommendations (BLM's Interim Management Policy for Lands under Wilderness Review (H-8550-1) I.A). BLM policy further states that mechanical transport, including all motorized devices as well as trail and mountain bikes, may only be allowed on existing ways and within "open" areas that were designated prior to the passage of FLPMA (October 21, 1976). These ways or primitive routes for motorized or mechanical use that existed at the time of the passage of FLPMA are neither grandfathered uses nor valid existing rights. It is normally presumed that these ways would "disappear" upon designation of an area as wilderness as a result of discontinued use.

The PRMP has been modified to include specific route mileages resulting for implementation of the BLM's non impairment standards in WSAs (Chapter 4, Section 4.11 – Comprehensive Trail and Travel Management).

5.5.9.28 Comment (paraphrased):

The RMP should be modified to keep the following trails open in the community of Weldon that provide non-street legal OHVs to connect between the two communities; 3176, 3192, 3185, 3162, and an additional route(GIS information provided in comment) not marked on the inventory. These routes reduce conflicts and promote safety by keeping OHVs off surface streets adjacent to homes.

Comment Source(s): 17-1, 227-33, 227-34

Response: The requested access routes have been designated as Motorized in the PRMP (Travel Management Network Map B1) and the missing route added to the route inventory.

5.5.9.29 Comment (paraphrased):

The DRMP states "Only a few developed and maintained hiking trails exist in the Bakersfield FO, as follows:" (Page 270). The statement as written infers that hiking opportunities are rare in the Bakersfield FO. The RMP should be modified to recognize the fact that hikers may enjoy all developed and maintained trails regardless of designation.

Comment Source(s): 215-8, 227-35

Response: The statement reflects the actual situation, in that only a few trails have been development and maintained solely for the purpose of serving as hiking trails. Clarifying language has been included in the PRMP Chapter 2, Section 2.2.11 – Comprehensive Trail and Travel Management and elsewhere to ensure the understanding that hiking may occur anywhere (routes and/or cross-country) unless specifically restricted, thus opportunities for hiking are extensive, but opportunities as specially developed hiking trails are few in number.

5.5.9.30 Comment (paraphrased):

The RMP should be modified to close the old section of route 2425 and keep the existing reroute open (GIS information provided with public comment).

Comment Source(s): 227-38

Response: The PRMP has been modified to reflect the requested change (Travel Management Network Map B1).

5.5.9.31 Comment (paraphrased):

The RMP (pages 274, 484-485) should be modified to ensure public comments and input is sought on changes to area/route designations and planning decisions, except for time sensitive temporary emergency actions or where needed to meet legal requirements.

Comment Source(s): 227-9, 227-39, 227-40

Response: The PRMP has been modified to clarify the guidance on the involvement of publics during route designations modifications (Chapter 2, Section 2.11 – Comprehensive Trail and Travel Management). Furthermore, clarifying text has been added to Chapter 4, Section 4.11 – Comprehensive Trail and Travel Management further highlighting this concern.

5.5.9.32 Comment (paraphrased):

The RMP should be modified to include a missed route segment above the community of Squirrel Valley (GIS information provided with public comment).

Comment Source(s): 227-41

Response: The route has been added to the inventory based on the provided GIS (Appendix E).

5.5.9.33 Comment (paraphrased):

The RMP should continue to include direction to "restore the connectivity of the Long Valley Loop Road across private property". This route offers important access and extensive recreation opportunity.

Comment Source(s): 215-11, 226-26, 227-42

Response: As the proposed plan alternative of the PRMP revokes the Backcountry Byway designation for this route the prioritization of construction on this is beyond the scope of this broad scale plan.

5.5.9.34 Comment (paraphrased):

The RMP should clarify what is meant by non-motorized routes (page 64).

Comment Source(s): 199-8

Response: The PRMP includes definitions of the terms used throughout the Comprehensive Trails and Travel Management sections in Chapter 3, Section 3.11 – Comprehensive Trail and Travel Management, the Glossary of Terms and Appendix E.

5.5.9.35 Comment (paraphrased):

The RMP should not identify T32S, R25E Section 35 as an OHV staging area. The area has active oil and gas operations and the identification of this area as an OHV staging area will result in undue concentration of public activity that will exacerbate safety, enforcement and rural crime issues. Furthermore, it could potentially generate enough traffic to hinder daily operations of oil and gas facilities.

Comment Source(s): 206-3

Response: The location of specific staging areas for recreational OHV activities are beyond the scope of this broad scale RMP and would be addressed in subsequent site-specific activity level plans. With regard to the specific area noted in the comment (the proposed Temblor Range SRMA), a subsequent activity level plan would address this level of detail.

5.5.9.36 Comment (paraphrased):

The RMP should designate the following areas "Authorized Use"; T29S-R21E Sec. 31 & 32; T29S-R22E Sec. 36; T31S-R23E Sec. 6; T31S-R22E Sec. 29; T11N-R24W Sec. 3, 4, 5, 8, 9, 24; T11N-R23W Sec. 19; and T28S-R2OE Sec. 9. These areas contain oil and gas leases that represent potential future mineral development opportunities. Considering the length of time and the public comment process to change route or area designations, designating "Authorized Use" now is needed to preserve leases rights. Once developed these areas would pose safety risks and enforcement issues.

Comment Source(s): 206-5

Response: The PRMP delineates travel management areas and designates off-highway vehicle management areas in Chapter 2, Section 2.11 – Comprehensive Trail and Travel Management. The OHV management area designations consist of "open", "limited" and "closed" areas. Additionally, the PRMP closes specific public lands to the general public based on resource and human health and safety concerns (Chapter 2, Section 2.2.15 – Recreation and Visitor Services). The PRMP, however, does not make any "Authorized Use" area designations.

The areas of public closure with regard to oil and gas development are identified based on the density of wells and therefore hazardous infrastructure. Future development opportunities are currently speculative therefore public closure based on human health and safety concerns would not be appropriate at this time.

The PRMP also designates individual routes and defines limitations for travel on these routes, which include a designation for authorized use only. These are implementation level decisions, which can be made at any time through the appropriate NEPA supported decision.

The length of time or requirement for a public comment process, are not valid considerations in making these decisions. Furthermore, route and/or area designations are not needed to preserve lease rights.

5.5.9.37 Comment (paraphrased):

The RMP should clarify the process needed to change area and route designations. Given the extensive projected level of exploration activity that is proposed to occur in the central valley in the near future, the RMP needs to contain flexibility and a defined process to change area or route designations depending on the results of exploration activities and potential future developments. Furthermore the RMP should provide a process to expedite these determinations.

Comment Source(s): 206-6

Response: Area designations can only be changed through the land use planning process (Chapter 3, Section 3.11 – Comprehensive Trail and Travel Management). These area designations are a planning level decision and changes require either a land use plan amendment or revision, both of which require Federal Register publications and a full public comment process.

Route designations are implementation level decisions. The process for changing route designations is outlined in Chapter 2, Section 2.2.11 – Comprehensive Trail and Travel Management. The most expedient way to make these route designation changes in an oil field setting is through the submittal of a transportation network plan for an entire area of interest (oil field, lease, portion of lease, or multiple leases) rather than the individual application for each route of concern. Additional language has been added to Chapter 2, Section 2.2.11 – Comprehensive Trail and Travel Management, to clarify this process.

5.5.9.38 Comment (paraphrased):

The RMP should ensure routes accessing guzzlers remain open to allow for routine maintenance, specifically two routes in the Temblor area designated 'closed' in the DRMP (GIS information was provided in the public comment).

Comment Source(s): 212-2

Response: The PRMP has been modified to designate the routes accessing guzzlers identified in the public comment as Motorized to continue to allow access for maintenance of these improvements (Appendix E).

5.5.9.39 Comment (paraphrased):

The RMP should state the absolute need to coordinate travel management with the CPNM to maintain route connectivity and flow. Many (20+) routes in the proposed Urban Interface and Temblor North RMZs extend to the eastern boarder of the Carrizo Plain NM which has its own ROD & RMP and as such is beyond the scope of this RMP. Both the CPNM RMP and Bakersfield DRMP (all Alternatives) call for the Temblor Ridge Road, the majority of which lies within the CPNM, to be designated as Motorized. The stated intention of Alt. B to: develop high quality

trail system, including maintenance of many existing trail, creating additional recreation trails… (DRMP page 102) can only be realized if the overwhelming majority of the "dead-end routes" actually connect with the Temblor Ridge Road thereby allowing for multiple loop opportunities that offer users a wide variety of technical challenges.

Comment Source(s): 215-1, 228-6, 228-7

Response: The proposed plan alternative of the PRMP has been modified to address these concerns through the addition of a decision directing the coordination of travel management across the Carrizo Plain National Monument boundary to the Temblor Ridge Road.

5.5.9.40 Comment (paraphrased):

The RMP should ensure the acquisition of multiple legal accesses to the Temblors is a top priority. The DRMP states: "Some use of the public land is, however limited by the lack of legal public access across adjoining private lands" (DRMP page 192). The proposed Urban Interface RMZ has no legal public access and the proposed Temblor North RMZ only limited legal public access. It is imperative that each of the proposed RMZs have several permanent legal public access routes in addition to routes linking them together. The DRMP only addresses gaining access from the "Community of Taft" (DRMP page 103). Legal access should first and foremost address the needs of the local recreational users, by providing "green-sticker" access from both Maricopa and Taft. An additional access point to the Temblors North should also be considered as the area is remote and has different qualities than the Urban Interface RMZ.

Comment Source(s): 215-2, 226-14, 226-15, 226-16

Response: The PRMP adds clarifying language to Chapter 2, Section 2.2.11 – Comprehensive Trail and Travel Management regarding the prioritization of access acquisition to the Temblor area.

5.5.9.41 Comment (paraphrased):

Legal access to the proposed Temblor Range SRMA should first and foremost address the needs of the local recreational users, by providing "green-sticker" access from both Maricopa and Taft. An additional access point to the Temblors North should also be considered as the area is remote and has different qualities than the Urban Interface RMZ. It is however, recommended that only limited number of access routes is pursued to facilitate management – increase public contacts and ease enforcement.

Comment Source(s): 226-14, 226-15, 226-16

Response: The PRMP adds clarifying language to Chapter 2, Section 2.2.11 – Comprehensive Trail and Travel Management regarding the prioritization of access acquisition to the Temblor area.

5.5.9.42 Comment (paraphrased):

The DRMP preferred alternative (as well as alternatives C & D) reflects a one size fits all approach to route designations in the Highway 33 corridor without having relied on individual

route specific analysis. An "Authorized" designation has been applied to virtually all existing routes on BLM lands closest to Maricopa, Taft, Fellows, Derby Acres and McKittrick. It should be noted that this practice has also been utilized with the same result on BLM lands near the Lost Hills and north of Oildale. These routes have been open to the public for years, and the mineral lease holders represent that these areas pose no threat to public safety. Closing routes to public access without utilizing route specific analysis sets a terrible precedent which might well have widespread and long lasting draconian consequences negatively affecting the public's ability to access public lands throughout the country.

Comment Source(s): 215-3

Response: The proposed plan alternative of the PRMP has been modified with regard to route designations within oil field boundaries. This modification allows for continued use of these routes by all users (i.e., motorized designation) but introduces the concept of transportation plan submittal by lessees or operators for their area(s) of concern (e.g., oil field, lease, portion of lease, or multiple leases). This allows for appropriate implementation level planning and site-specific analysis that following the guidelines presented in Chapter 2, Section 2.2.11 – Comprehensive Trail and Travel Management would require opportunities for public and other stakeholder input.

5.5.9.43 Comment (paraphrased):

Currently Keyesville Road is under Kern County jurisdiction. This road is almost totally located on contiguous BLM lands and does not access any Kern County or other public holdings. Of the road's total mileage (3.8 miles) only 0.26 mile or 1375 feet is not fully on BLM land. It would be more effective for BLM rangers/law enforcement to patrol Keyesville Road since the BLM already manages all adjacent public lands. Management, enforcement and safety of both the Keyesville area and the Keyesville Road would be greatly streamlined and enhanced if this road were under BLM management. The RMP should provide the direction need for the BLM to seek jurisdiction of the Keyesville Road from BLM's east boarder (RSN 2498) to its western boarder (RSN 2499) from Kern County.

Comment Source(s): 215-4, 227-5

Response: The status of the jurisdiction of Keyesville Road is outside the scope of the RMP. This concept of route jurisdiction, however, will be carried forward into future activity level planning for the Keyesville area.

5.5.9.44 Comment (paraphrased):

The DRMP fails to provide sufficient information to explain why single track routes with high recreational values (technical challenge) are closed in the preferred alternative.

Comment Source(s): 228-5

Response: The planning process requested information from users regarding the recreational value of routes throughout the Field Office. Where this information was provided, the recreational value of the route was considered in the route designation process. In the absence of publically provided route information the BLM used public access limitation, route

connectivity, and anecdotal staff knowledge as considerations during the route designation process. The PRMP provides the rationale for all route designations in Appendix E.

5.5.9.45 Comment (paraphrased):

The RMP should not legitimize OHV activity in the Temblor Range through the designation of the Temblor Range SRMA. Currently this area experiences extensive illegal OHV use and legitimizing this use will lead to an increase in illegal activity. If an SRMA is to be established, serious law enforcement competent must be included and adequate funding in place to intensively manage the area in perpetuity.

Comment Source(s): 262-2, 262-3

Response: OHV use in the Temblor Range is currently a legitimate use of these public lands. A designation as an SRMA only provides for an elevated level of management of this existing activity. The level of law enforcement and funding required are outside the scope of the RMP; however, if designated, these issues will be fully addressed in a subsequent activity level plan.

5.5.9.46 Comment (paraphrased):

The RMP should designate an OHV park in the Santa Monica Recreation Area or close to potential users to reduce trips from LA to Taft and lessen the smog.

Comment Source(s): 270-6

Response: The Santa Monica Recreation Area is outside the Bakersfield Field Office therefore designation of an OHV park in this area is outside the jurisdiction of the BLM and the scope of the RMP.

5.5.9.47 Comment (paraphrased):

Oil producing areas are not usually thought of as a prime location for recreation, however in some cases these areas provide recreational opportunity free from significant hazards as well as access to adjacent public lands. The DRMP expressed concerns regarding public safety in heavily developed oil fields; however detailed information regarding the specific location and nature of such hazards is not available in the document. The preferred alternative proposes closure of oil producing areas to public entry if they have a well density greater than 20 wells per 40 acres. This would result in the closure of over 11,000 acres of public lands. The oil producing companies have assured local residents that these areas pose no hazard to the public. Oil producing areas are often directly adjacent to private land holdings. An effective closure of these areas will be difficult to implement, difficult to enforce, confusing to the public and to oil company employees. The RMP should therefore evaluate only the routes in these areas and implement route closures to mitigate safety concerns on a case by case basis. Furthermore, the RMP should clarify the areas proposed for closure since map 3.30 in the DRMP indicates a relatively small area depicted in red as “heavily developed oil producing areas” which do not match the oil producing areas proposed for closure to public entry shown on the Alternative maps.

Comment Source(s): 226-8, 226-9, 226-10, 226-11

Response: The rationale for the public closure of these industrialized intensively developed areas stems from a concern for public safety in these areas. Although the oil and gas industry maintains there is no threat to human health and safety from oil and gas production, workers in these area along with BLM staff require specific training and specialized equipment to enter these areas. Specifically these areas pose threats from exposure to, high temperature piping and equipment, hydrogen sulfide gas, natural gas, and crude oil.

In these areas, complete public closure was determined to be the appropriate management tool for the protection of human health and safety, since other options, such as requiring all publics to receive the specialized training and use the required equipment (H_2S monitors, fire retardant clothing, etc.) was deemed infeasible and unenforceable.

The rationale used to determine the areas proposed closed in the PRMP results from the use of well density. Well density was used as a measure of the presence of potentially hazardous equipment i.e., as well density increase so does the density of associated piping and hazardous equipment, and therefore an indicator of the level of potential hazard to human health and safety.

5.5.9.48 Comment (paraphrased):

The DRMP designates a large number of canyon trails are "closed" in Alternative B, apparently due to route density considerations, the presence of cultural sites, route crossing the CPNM boundary or due to routes being located in washes. It should be noted that there is very little precipitation in this area so these trails are not prone to erosion with subsequent impacts to watershed. When a ridge top route is selected in preference to a canyon trail this selects a much less desirable route from the recreational rider's perspective in most cases. Canyon routes must be carefully evaluated for impacts that cannot reasonably be mitigated or offset by the greater benefit they provide to the recreational user. These routes should be designated "motorized" if at all possible to assure that the system will be interesting to riders and meet the objectives set forth to create a high quality managed trail system.

Comment Source(s): 226-22, 226-23

Response: The planning process requested information from users regarding the recreational value of routes throughout the Field Office. Where this information was provided, the recreational value of the route was considered in the route designation process. In the absence of publically provided route information the BLM used public access limitation, route connectivity, and anecdotal staff knowledge as considerations during the route designation process.

The PRMP has been modified with regard to a number of canyon routes as a result of public comments provided during the public comment period. The rationale for all route designations has been included Appendix E.

5.5.9.49 Comment (paraphrased):

The DRMP fails to provide enough connector routes to the Ridge Road within the Temblor SRMA, thus reducing loop opportunities. The designation of six routes in the preferred alternative is inadequate to provide enough loop opportunities for a viable trail system in the

Temblors. Routes in both the Temblors and the CPNM boundary area North East of the Ridge Road should ultimately be addressed in a single Travel Management document to reduce confusion and allow development of a coordinated regional travel plan.

Comment Source(s): 226-24

Response: A Travel Management Plan is currently underway for the CPNM. This effort is being conducted in coordination with the route designations in the PRMP. Furthermore, with the designation of the Temblor Range SRMA a subsequent activity level plan would be developed which would further address travel management in this area.

5.5.9.50 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

#5469 - "Midway Peak" – This route is old ranch road that runs directly to the hill top near Midway Peak. Designated closed, it should be compared for recreational quality to adjacent route #5372. Both routes should be retained for motorized use unless a detailed analysis indicates that impacts to cultural and natural resources cannot be reasonably mitigated.

Comment Source(s): 226-24

Response: The PRMP designates both route numbers 5469 and 5372 as Motorized to continue to provide these recreational opportunities.

5.5.9.51 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

#5277 – "Mocal Connection" This route is designated for "administrative access" in Alternative B. It is an unnamed route through an oil field that provides access to Temblor trails #5278, 5345, and 5328 from Mocal Road.

Comment Source(s): 226-24

Response: The PRMP designates route 5277 as Motorized to continue to allow access to connected routes in the Temblor SRMA.

5.5.9.52 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

#5276 may be part of the county road and we question whether this should be closed to public access. Routes # 5278, 5345, and 5328 permit access to large sections of the North Temblor trail system. This is just one example of how many routes in oil fields need evaluation for the access they provide.

Comment Source(s): 226-24

Response: The PRMP corrects the error made in designating route 5276 and designates the route as Motorized.

5.5.9.53 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

5476 A (unclassified trail not on inventory) "XX" – This trail connects #5476 ("S&T trail") to the Ridge Road. This is an advanced level trail that is incredibly steep so it is usually ridden downhill and not used as a hill climb. The trail appears to have had little recent use, probably because of its extreme difficulty. There are very few trails on the system that are of this level of difficulty. At the bottom of this hill the grade flattens out to become a high quality single track canyon trail.

Comment Source(s): 226-24

Response: The route has been added to the route inventory based on the GIS provided and designated Motorized in the PRMP.

5.5.9.54 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

#5476 – "S&T" – This is an intermediate level single track canyon trail unique to the immediate area. It has very tight turns because of the steep canyon walls. It connects with the Ridge Road via an old ranch road which is not very steep. This route does not have a steep gradient therefore more maintainable than some other canyon trails.

Comment Source(s): 226-24

Response: Route number 5476 has been designated Motorized in the PRMP.

5.5.9.55 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

#5351 – This trail appears to be a short hill climb which is designated motorized in Alternative B. There may be other unclassified hill climbs in the area. This hill climb and possibly others in the area should be designated as 60 ft wide trails to encourage riders to confine hill climbing activity to locations where they can be maintained.

Comment Source(s): 226-24

Response: Route number 5351 is a trail over 1.3 miles in length, it is designated Motorized in the PRMP. It may include a portion of a hill climb, however the specific of the width of

designation of this and other such features are outside the scope of the RMP and would be investigated at an activity level planning stage.

5.5.9.56 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

#5501 A – (unclassified route not on inventory) "XXX" - This is an intermediate level route that runs up a valley to connect #5501 and #5482. It is an interesting trail to ride because it twists and turns to match the terrain. It has a rock step up features that add to the challenge and make the route appealing.

Comment Source(s): 226-24

Response: The route has been added to the route inventory based on the GIS provided and designated Motorized in the PRMP.

5.5.9.57 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

#5496 A - (unclassified route not on inventory) – "X-Pipe" – This route starts at #5501 and ends at #5498. It is a more technically challenging single track than the adjacent routes that runs up a deep valley and rides like a "half pipe" on a skateboard hence the name. It goes over a rise to connect with Captain Morgan #5496.

Comment Source(s): 226-24

Response: The route has been added to the route inventory based on the GIS provided and designated Motorized in the PRMP.

5.5.9.58 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

5496 "Captain Morgan" - This is a single track trail that runs up a narrow valley, then splits to connect in two locations with the Ridge Road. There are rock step up features that are challenging. This is a prime example of a "canyon trail" found only in the Temblors that is both challenging and fun to ride because it is narrow with a twisting and turning character. It is proposed closed at the fork (#5499). We recommend both forks remain designated "motorized". There are pioneer hill climbs near the top that may eventually require restoration.

Comment Source(s): 226-24

Response: Route number 5499 has been designated Motorized in the PRMP.

5.5.9.59 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

#4203 A (unclassified route) this trail segment potentially connects #4203, an access trail that dead ends on the map, with #6232. #4202 is the only connecting route up into the Temblors within 1.6 miles of adjacent trails and is designated motorized, but it will be a "dead end" trail without a connection at the Western end. The unclassified segment #4203A should be added to make #4203 a connected, useable trail. We request that this segment or the adjacent unclassified segment be designated as "motorized" to provide access unless a detailed study of the route reveals impacts to cultural or natural resources that cannot reasonably be mitigated.

Comment Source(s): 226-24

Response: Route number 4203 has been edited in the PRMP to include the missing portion connecting it to route number 6232.

5.5.9.60 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

#6406 – "Supercross Street" – This is a very popular technical challenge valley trail accessible from Taft. Most trails with these properties are found further up in the canyons in the North Temblors making this trail unusual for the area.

Comment Source(s): 226-24

Response: Route number 6406 has been designated Motorized in the PRMP.

5.5.9.61 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

#6393 – "Melon Head Extension"; this portion of the trail is the most direct route to connect the Ridge Road with #6402 "Melon Head. It is a ridge top trail. This route connects with an historic "two track" route that is on the USGS maps.

Comment Source(s): 226-24

Response: Route number 6393 has been designated Motorized in the PRMP.

5.5.9.62 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

#6393A This would be an alternative route to #6393. It is an unclassified lower elevation trail. At least one route through this area should be designated "motorized" to provide a connection with the rest of the system.

Comment Source(s): 226-24

Response: The route has been added to the route inventory based on the GIS provided and designated Motorized in the PRMP.

5.5.9.63 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

#4210 A (unclassified route); This is a single track trail not on inventory. It connects with #4210 and #6397. It is a very narrow trail that runs up a valley as #4210 which is a designated "motorized" but it is a "dead end" route in Alternative B. The unclassified segment connects with the designated section and then climbs out of the valley to connect with #6397. These features make it an unusual trail that is very primitive and appealing.

Comment Source(s): 226-24

Response: Route number 4210 has been edited in the PRMP to include the missing portion connecting it to route number 6397.

5.5.9.64 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

#5230 – "002" This trail is designated closed but runs along a ridge top and should not have resource concerns. It is a two track ranch road that provides access to the Ridge Road. It is not clear why this route is designated closed.

Comment Source(s): 226-24

Response: Route number 6393 has been designated Motorized in the PRMP.

5.5.9.65 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

#5230 A – An unclassified single track valley trail that twists and turns to connect with the Ridge Road. It would be preferred to #5230 because it is a more varied and interesting single track route instead of a two track road.

Comment Source(s): 226-24

Response: The route has been added to the route inventory based on the GIS provided and designated Motorized in the PRMP.

5.5.9.66 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

#6267 A – "Trail of Tears" – The mid portion of this trail was not included in the route inventory. It begins as #6267 which is designated closed and ends at #6281 that is designated open. The route continues up a valley and gains elevation to eventually reach the Ridge Road. This a technical "challenge" trail that is ridden only by expert riders.

Comment Source(s): 226-24

Response: The missing potion of the route has been added to the route inventory based on the GIS provided and designated Motorized in the PRMP.

5.5.9.67 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

#6461 – An interesting twisty trail that reaches an intersection near the CPNM boundary that is designated closed. It does not enter the CPNM unlike #6226 which is designated open. It would serve as an alternate route to #6226 but would be more interesting because it is a single track whereas #6226 is just another dirt road with no remarkable features.

Comment Source(s): 226-24

Response: Route number 6461 has been designated Motorized in the PRMP.

5.5.9.68 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

#6465 – "C-Span" – This trail is designated "closed" in Alt. B. This trail is in excellent condition. It is a favorite of the Taft Motorcycle Club. It is a good intermediate level trail that is not so steep that it is not sustainable. There are interesting rock step up features along the trail. The trail crosses the CPNM boundary and extends for a distance into the CPNM to intersect with the Ridge Road to provide a loop opportunity.

Comment Source(s): 226-24

Response: Route number 6465 has been designated Motorized in the PRMP.

5.5.9.69 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

#6340 – "Boydadilla Loop" - This loop trail is used by younger riders. There is an uninventoried accessory loop adjacent to the main loop. Named after the nearby landowner, it was built in the 1980's as a practice track but is used now extensively for recreational riding.

Comment Source(s): 226-24

Response: The Temblor SRMA establishes objectives allocations specifically for non-competitive OHV recreation. Having such a loop "track" does not support these non-competitive objectives and may encourage undesirable activities within the SRMA. Within, the same area are a number of trails providing a similar riding experience that connect in loops and would be suitable for use by all riders. As such, no changes have been made to the PRMP.

5.5.9.70 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

#6461 – An unnamed ridge top trail with interesting technical qualities, it is almost entirely within the planning area and connects with the Ridge Road. Unlike adjacent routes it does not enter the CPNM and so it may be preferred to adjacent routes. There are hill climbs with erosion near where the trail connects with the Ridge Road that may need to be addressed. This trail should remain designated as "motorized" to provide recreational value unless a detailed study of the route reveals impacts to cultural or natural resources that cannot reasonably be mitigated.

Comment Source(s): 226-24

Response: Route number 6461 has been designated Motorized in the PRMP.

5.5.9.71 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

#6353 – This trail runs up a valley. It is a good intermediate trail due to gradual grade. Although designated "closed" in Alt. B the trail ends at an open "green" segment near the CPNM boundary. This appears to be a mapping error. This trail should be designated "open" along its entire length from near Taft until it connects with the Ridge Road. It is one of the few continuous direct routes from near Taft to the summit

Comment Source(s): 226-24

Response: The mapping error has been corrected and the entire length of the route designated as Motorized in the PRMP.

5.5.9.72 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

#6358 – This trail is one of only 6 that connect with the Ridge Road outside the CPNM boundary. Near its origin the trail ends at a closed "red" section before connecting with several other routes. This may be a mapping error, please check this and correct to allow connection of this route with the intersection so it is useable.

Comment Source(s): 226-24

Response: This mapping error has been corrected in the PRMP.

5.5.9.73 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

#6359 – This route is "red" (closed) in Alt B but does not enter the CPNM. The terrain is not steep in this area and the trail provides a beginner level experience compared to the adjacent routes. Because of reduced grade the trail is easier to maintain and more sustainable than a steeper trail.

Comment Source(s): 226-24

Response: Route number 6359 has been designated Motorized in the PRMP.

5.5.9.74 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

#3885 – "EXP" – A named trail near Taft; regularly ridden by Taft MCC, it is an interesting connecting route from Taft to the rest of the trail system. It is limited to "administrative access" under Alternative B.

Comment Source(s): 226-24

Response: Route number 3885 has been designated Motorized in the PRMP.

5.5.9.75 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

Unclassified #2 – This trail is not on the route inventory. It is an incredible single track trail that starts as an old two track ranch access road from the Ridge Road. It makes a steep descent then climbs to connect with #3827. There are spectacular views from the hill tops and breathtaking valley vistas.

Comment Source(s): 226-24

Response: The route has been added to the route inventory based on the GIS provided and designated Motorized in the PRMP.

5.5.9.76 Comment (paraphrased):

The RMP should give consideration to the following route specific information within the Temblor SRMA (GIS information included with comment);

"Hill Climbs" – Located near the microwave station, but inside the CPNM, these old hill climb routes have been present for decades. Hill climbs should be designated as trails 60 feet wide and located in an area of soils where they can be maintained. Identifying a hill climb location will direct this activity toward a designated trail and reduce unwanted hill climbing in other areas. This historical location may not be desirable as it is within the CPNM boundary. If this area cannot be mitigated other suitable hill climb locations should be identified.

Comment Source(s): 226-24

Response: Hill climbs within the CPNM boundary are outside the scope of the RMP and would be better address in the CPNM's Travel Management Plan. Should the Temblor Range be designated an SRMA the subsequent activity level plan could address the concept of managed hill climb areas.

5.5.9.77 Comment (paraphrased):

The RMP should be modified to designated the following routes as 'open' to avoid dead-end routes at the CPNM boundary and continue to provide loop opportunities; 5476, 5499, 5230, 6469, 6461, 6465, 6447, 6372, 6363, 6353

Comment Source(s): 226-24

Response: A Travel Management Plan is currently underway for the CPNM. This effort is being conducted in coordination with the route designations in the PRMP. Furthermore, with the designation of the Temblor Range SRMA a subsequent activity level plan would be developed which would further address travel management in this area.

5.5.9.78 Comment (paraphrased):

Although the process for designating routes of travel is described in the DRMP the specific reasons for designating individual routes within limited use areas either "motorized" or "closed" are not included. Furthermore there is an absence of information in the DRMP indicating whether or not the routes proposed "closed" in Alternative B possess recreational qualities that potentially offset impacts to natural resources. The analysis is not sufficiently detailed to allow the reader to determine whether or not impacts to cultural and natural resources and potential user conflict could be reasonably mitigated The RMP should designate routes as 'motorized' (specifically those address in public comments) unless sufficient evidence is documented and a thorough analysis demonstrates that the route contributes to a failure to achieve resource goals/objectives for which there is no reasonable or feasible mitigation.

Comment Source(s): 226-2, 226-3, 226-4, 226-5

Response: The rationale for all route designations has been included Appendix E. Information regarding the recreational qualities of each route is unknown and designations based on access, connectivity and anecdotal information based on field experience. Where the public has specifically commented on a route's recreational value though the public scoping and public comment processes this information has been considered and the route designation and/or analysis updated accordingly.

5.5.9.79 Comment (paraphrased):

The RMP should give adequate consideration of the fact that implementation level decisions set forth, such as route closures, will have a significant impact on recreational users that will potentially take years to change. Given the limited time available to conduct inventory and analysis of nearly 2000 miles of route the Field Office elected to develop the Travel Plan without considering the physical condition of the routes, suitability for use by allowable modes of transport, and ability to access the route. Although it is agreed that these factors may need to be considered at a later stage it should be pointed out that opening a closed route requires NEPA analysis with the associated surveys by resource specialists, public notice, opportunity for comment and appeal. This process is lengthy, complex, and accompanied by significant costs. In contrast closing a route can be done emergently with justification. Although this approach is intended to protect cultural and natural resources it can place recreational users at a significant disadvantage when they seek to open new routes. The RMP should leave as many routes open as possible and address resource damage, and user conflict on a case-by-case basis.

Comment Source(s): 226-6, 226-7

Response: The PRMP has been modified to in several places to ensure route designations more accurately reflect known route information. Specifically, information on routes gained throughout the public comment process has been considered in making route designations, and those routes with documented recreational values designated as motorized where no other valid resource concern exists. Should these or any route pose significant issues in the future, the process outlined in Chapter 2, Section 2.2.11 – Comprehensive Trail and Travel Management, for changing route designations would be followed.

5.5.10 Lands and Realty

5.5.10.1 Comment (paraphrased):

Public land within the Tehachapi Mountains are a set of scattered in-holdings surrounded by private property (primarily ranchlands with low-impact grazing and recreational uses), and almost no paved roads or development. Allowing these isolated parcels to be developed for wind energy projects, either through allowing utility scale renewable energy right-of-ways or making these lands available for acquisition would force major changes to the surrounding private properties and the residents' way of life. The RMP should exclude utility scale renewable energy projects, specifically wind energy, from public lands in the Tehachapi Mountains and make these parcels unavailable for acquisition.

Comment Source(s): 122-1, 123-1

Response: The PRMP addresses this issue by designating avoidance and exclusion areas for rights-of-way including utility scale renewable energy development. Any proposals received for utility scale renewable energy development and rights-of-way outside of avoidance or exclusion areas will require public involvement as well as completion of a site specific NEPA analysis, which includes a cumulative effects analysis discussing connected and reasonably foreseeable actions.

The DRMP also eliminates most public lands (those with special designations, in wildlife corridors, with important habitat and values, etc.) within the decision area from disposal. All other proposed disposals will require public involvement as well as completion of a site specific NEPA analysis which includes a cumulative effects analysis discussing connected and reasonably foreseeable actions.

5.5.10.2 Comment (paraphrased):

The RMP should include direction to change the name of Pearl Harbor Drive back to its original name – Jackpot Road. This change needs to occur as its namesake the Pearl Harbor Memorial (once located off this road) has been relocated to Tank Park in Lake Isabella.

Comment Source(s): 214-13

Response: This request is outside the scope of this broad scale RMP, because it is not a planning level or implementation level decision, but rather an administrative decision that requires coordination with other entities including Kern County.

5.5.10.3 Comment (paraphrased):

Considering the high likelihood of increased utility scale energy development and rights-of-way within the Lake Isabella and Tehachapi regions over the next two decades, the DRMP fails to adequately address the potential direct and indirect impacts, and how the preferred alternative would address this activity. If the RMP is to defer wind energy decisions to the outcomes of the Desert Renewable Energy Conservation Plan (DRECP) an amendment to the Bakersfield RMP would need to occur, the DRMP made no mention of this. The RMP should acknowledge public lands included in the Conservation Biology Institute (CBI) study area require more in-depth conservation planning before utility scale wind development or other resource uses are permitted.

Comment Source(s): 239-1, 239-3, 264-11

Response: The PRMP addresses this issue by designating avoidance and exclusion areas for rights-of-way including utility scale renewable energy development throughout the Decision Area. Any proposals received for utility scale renewable energy development and rights-of-way outside of avoidance or exclusion areas will require public involvement as well as completion of a site specific NEPA analysis, which includes a cumulative effects analysis discussing connected and reasonably foreseeable actions.

The relationship between the Bakersfield RMP and the Desert Renewable Energy Conservation Plan (DRECP) has been clarified in Chapter 1, Section 1.6.2 – Relationship to BLM, Policy, Plans, and Programs. Any specific project proposals would be subject to a site-specific analysis to address resources on public lands that may be impacted.

5.5.10.4 Comment (paraphrased):

Various maps in the DRMP incorrectly represent at least a part of the CPNM boundary. On these maps, the Stubblefield Ranch property is mostly subsumed into the Monument. A provided map (commenter provided map) illustrates the correct boundary of the Stubblefield Ranch. The maps in the RMP should be modified, so that they correctly reflect current ownership in this area.

Comment Source(s): 262-4

Response: The maps in the PRMP have been reviewed and any appropriate corrections have been made.

5.5.10.5 Comment (paraphrased):

The DRMP states that resource specific BMPs may be applied on ROW authorizations. It is unclear whether individual projects must be submitted for prior approval and case-by-case authorization. If case-by-case authorizations are required, this stipulation has the potential to significantly slow down the project approval and construction process, which is a concern in cases of emergency or CPUC mandated activities.

Comment Source(s): 195-2

Response: The PRMP has been changed to clarify this decision (Chapter 2, Section 2.2.12 – Lands and Realty). Every request for use or occupancy of BLM managed lands requires completion of an application which is processed at the field office level. A case-by-case site specific NEPA analysis is required to process each application and to grant an authorization. BLM regulations and policy have established procedures for compliance with NEPA in emergency situations that require immediate action to protect public health or safety, property, or important resources. While a project mandated by a regulatory agency may have a higher priority over others, full NEPA compliance is still required.

5.5.11 Livestock Grazing

5.5.11.1 Comment (paraphrased):

The DEIS (pages 496 and 498) states that “new information” has emerged concerning compatibility of livestock grazing in portions of Kaweah ACEC causing the areas to be classified as Unavailable. This “new information” requires clarification if it is to be used to support the allocation decisions especially where the same rationale is used to support a different allocation in the Blue Ridge ACEC.

Comment Source(s): 199-29

Response: The PRMP has been modified to address this concern through the addition of clarifying text to Chapter 4, Section 4.13 – Livestock Grazing.

5.5.11.2 Comment (paraphrased):

The DRMP presents a short list of Bakersfield FO specific livestock grazing guidelines (page 98) but fails to provide an explanation of how and where these guidelines would be applied. Furthermore, three of these management guidelines do nothing more than apply the Central CA Guidelines for Livestock Grazing Management, which the Bakersfield FO has had to comply with for all grazing authorizations since 1999.

Comment Source(s): 253-6

Response: The PRMP presents this decision as an explanation of "how" the guidelines are applied throughout the Decision Area to specific allotments and/or habitats/populations for certain species. When a guideline indicates that it is applying the Central CA Guidelines for Livestock Grazing Management it means that there is no special livestock management beyond meeting the Standards for Rangeland Health needed for that species. This provides bases for comparisons between Alternatives in which the species specific management may change to better meet the goals and objectives of the Alternative.

5.5.11.3 Comment (paraphrased):

Remove Alternative D from consideration in the Bakersfield RMP as it does not meet with the BLM's multiple use policy and would result in widespread economic distress.

Comment Source(s): 7-2

Response: The PRMP includes a no grazing alternative (Alternative D) in accordance with current BLM guidance.

5.5.11.4 Comment (paraphrased):

The newly acquired Richards/Edgar properties should be allocated as available for livestock grazing to reduce the density of thatch which appears to be choking out new growth at the east end of the meadow.

Comment Source(s): 23-1

Response: Any new acquisitions would be allocated to match allocations given to the surrounding or adjacent lands, except where land is unsuitable for livestock grazing or the purpose for which the land was acquired is incompatible with livestock grazing including restrictions placed on future use through acquisition documents (Chapter 2, Section 2.2.13 – Livestock Grazing).

5.5.11.5 Comment (paraphrased):

The DRMP fails to provide reasonable rationale for the closure to livestock grazing of the Horse Canyon ACEC under Alternative B. Livestock grazing in this area predates BLM, and with no supporting rationale the necessity for this closure requires additional clarification.

Comment Source(s): 199-13

Response: Public lands within the Horse Canyon ACEC were made unavailable for livestock grazing under the 1997 Caliente RMP. The purpose for the allocation was to protect cultural resources and values within the ACEC and is applicable to public lands within the ACEC only. The Bakersfield RMP continues that allocation for the same purpose, protection of the relevant and important values that establish the ACEC designation.

5.5.11.6 Comment (paraphrased):

In accordance with Land Use Planning Handbook (H-1601-1) Appendix C, IIB Livestock Grazing Land Use Plan Decisions, consideration of five factors should be used when identifying lands as Available or not Available for livestock grazing. Furthermore, FLPMA requires that a basic inventory of the resources present on public lands is maintained so that a 'hard look' at the direct, indirect, and cumulative impacts of actions can be conducted. The DRMP fails to identify on which of the 116 allotments in the planning area "resources that may require special management or protection, such as special status species, special recreation management areas (SRMAs), or ACECs" occur. Without disclosure this inventory the adequacy of analysis of impacts is in question.

Comment Source(s): 253-5

Response: The PRMP identifies resources that may require special management through the establishment and designation of ACECs (Chapter 2, Section 2.2.17 – ACECs), SRMAs (Chapter 2, Section 2.2.15 – Recreation and Visitor Services) and the identification of areas of ecological importance (Chapter 2, Section 2.2.2 – Biological Resources). Furthermore, the PRMP provides Bakersfield FO–specific livestock grazing management decisions for all areas that contain resources that may require special management or protection regardless if those resources or conditions are currently known to exist on a grazing allotment (Chapter 2, Section 2.2.13 – Livestock Grazing).

The PRMP did consider the factors presented in the Land Use Planning Handbook when making livestock grazing allocations, however, there is no requirement to present information as it relates to specific allotments at this planning level. The maps provided throughout the PRMP can be used to identify the overlap between the resources that may require special management and the livestock grazing allotments.

5.5.11.7 Comment (paraphrased):

The cumulative impacts analysis is reduced to series of generalized responses to a selective list of "issues raised in scoping" that BLM has listed in DRMP. This is simply inadequate. The cumulative effects analysis is a key component of any NEPA analysis. The RMP must analyze the cumulative effects of livestock grazing in combination with other extractive uses on all of the resources that FLPMA requires BLM to manage, including special status species, wildlife, vegetation, soils and soil crusts, riparian resources, invasive species, air quality, public safety, ACEC, wilderness quality, cultural and archeological resources, aesthetic and recreational resources, and climate change.

Comment Source(s): 253-11

Response: The PRMP describes the cumulative impacts of the proposed alternatives extractive uses in Chapter 4.24.3 – Cumulative Impacts Issue 3. This analysis is broad and encompassing of all BLM management (including livestock grazing) when considered with other reasonably foreseeable actions within the Cumulative Impact Analysis Area (CIAA). This analysis fulfills the purposes of disclosing cumulative impacts with regard to the issues raised during the scoping process (as described in Chapter 4, Section 4.24 – Cumulative Impacts) and is appropriate for this level planning.

5.5.11.8 Comment (paraphrased):

The RMP analysis should reflect best science with regard to the impact of livestock grazing on Monkey Flower. Any relevant studies into these impacts should be cited. Where information is lacking studies should be completed prior to any action to close off these areas to livestock grazing. In addition the RMP should give consideration to management methods implemented by Ridgecrest and within Tulare County to balance livestock grazing with populations of Monkey Flower. The RMP should document the rational for the removal of cattle from the area prior to the completion of supporting studies.

The BLM should also reconcile or explain the inconsistency between the DRMP and Environmental Assessment CA-160-00-0001, which stated "no new impacts would occur to Kelso Creek Monkey Flower with cattle grazing".

Comment Source(s): 273-1, 273-2, 237-3, 273-4, 273-5

Response: The PRMP has been modified to include addition narrative describing the sensitivity of the *Mimulus shevockii* (Kelso Creek Monkey Flower) in Cyrus Canyon (Chapter 3, Section 3.16 – ACECs). The management direction provided in the PRMP is based on biological and ecological knowledge; a published paper is not required for this knowledge to be considered "best science". Should any future scientific study be completed establishing species specific management guidelines this information would be considered in any future changes to management in areas supporting these populations.

There is no inconsistency between the PRMP and the cited environmental assessment as the environmental assessment tiered to the analysis discussed in the existing RMP. Tiering allows for the impacts to be disclosed at the Land Use Planning level and referred to in subsequent NEPA analysis as the baseline against which to measure "new" impacts from the proposed action. The cited language is only a portion of a paragraph that states

"…impacts of grazing on Kelso Creek monkeyflower were addressed in the EIS for the Caliente RMP. No new impacts would occur to Kelso Creek monkeyflower from the proposed action."

This simply describes the fact that there are no new impacts beyond those already disclosed in the RMP.

5.5.11.9 Comment (paraphrased):

The DRMP fails to provide an adequate range of practical alternatives for livestock grazing. Specifically the DRMP did not consider an alternative that would exclude livestock grazing from

all sensitive areas such as Wilderness, ACEC, cultural resources, and important wildlife habitat; an alternative that would reduce total acreage grazed from 80% of the resource area to 40% of the resource area. The DRMP did not address any alternative involving reduced grazing levels. Furthermore, the DRMP did not give adequate consideration to the no grazing alternative, considering it 'impractical'.

The RMP should be revised to consider a full review of all reasonable livestock grazing alternatives. In addition it should consider retiring vacant allotments and consider a mechanism to allow for third-party buyout and voluntary relinquishment of grazing privileges from those allotments where grazing conflicts with other uses or impacts resource values.

Comment Source(s): 253-1, 253-2, 253-3

Response: The PRMP provides the rationale for the range of livestock grazing alternatives in Chapter 2, Section 2.6.4 – Alternatives Considered but not analyzed in Detail (Modified Grazing Alternative). Alternative D (no grazing) was analyzed in detail in the EIS. All appropriate environmental consequences were considered and fully analyzed.

Livestock grazing allocations (Available/Unavailable) are based on the five considerations presented in Land Use Planning Handbook (H-1601-1) the lack of a current authorization is not one of these considerations.

Mechanisms for voluntary relinquishment are outside the scope of the RMP and provided for in BLM policy. Voluntary relinquishment of grazing preference is always allowed, however, relinquishment itself also does not does not warrant changing the allocation from available to unavailable for livestock grazing without a resource concern which makes livestock grazing an incompatible use of the lands where rangeland health standards cannot be achieved under any level or management of livestock use.

5.5.11.10 Comment (paraphrased):

The RMP should reflect that a prohibition on livestock grazing for the protection of the Tehachapi slender salamander populations is unnecessary. Healthy populations of salamanders continue to live in Caliente Creek drainage, as well as further south on the Tejon Ranch, where they have successfully co-existed with active grazing operations for over a century. This healthy coexistence demonstrates the fact that prohibiting grazing is not necessary to ensure their continued survival.

Comment Source(s): 217-8

Response: The proposed plan alternative in the PRMP does make these areas unavailable for livestock grazing; however specific livestock management guidelines may be applied to ensure grazing use is compatible with the objectives for special status species and riparian resource.

5.5.11.11 Comment (paraphrased):

The RMP should be modified to remove cattle from the Keyesville area. The Keyesville area is too small to handle the impact the cows are having on the ecosystem.

Comment Source(s): 214-15

Response: This request lacks sufficient detail on which to base any changes to livestock grazing in the Keyesville area. In the last assessment the area was meeting all standards for rangeland health (Appendix F-3A - Wagy Flat, #00090).

5.5.11.12 Comment (paraphrased):

The RMP should include a description of the protection measures and management actions to facilitate the recovery and protection of riparian and wetland areas that are functioning at risk in a static or downward trend as a result of livestock grazing.

Comment Source(s): 261-70

Response: The PRMP includes a description of the protection measures and management actions used by BLM to facilitate recovery and protection of riparian and wetlands areas (Chapter 2, Section 2.2.13 – Livestock Grazing and Appendix F-1) and in special/prescriptive management for specific areas (Chapter 2, Section 2.2.2 – Biological Resources and Section 2.2.17 – ACECs).

5.5.12 Minerals Management

5.5.12.1 Comment (paraphrased):

The DRMP is not clear concerning which areas mineral collection, exploration or development will be prohibited or restricted. Furthermore, which mineral collecting areas and mines would be removed from casual use, exploration or development? A detailed map of these locations should be provided to aid in understanding the impacts of these closure and restriction decisions.

For the areas closed for mineral collection, exploration, and development the DRMP does not provide sufficient rationale for the closure. The RMP should specifically explain why each area was chosen for closure and what other alternatives to closure were considered. Was restricted access by permit considered as an alternative to total closure? Within closed areas would permit for collection by academic and research establishments still be issued? A list of known sites and summary of access restrictions for each site should be included to clarify the context of these closures. Furthermore, the RMP should include information for the 92 sites submitted (Appendix H).

Comment Source(s): 9-4, 13-2, 15-2, 24-2, 25-2, 29-2, 30-2, 31-2, 33-2, 121-2, 134-4

Response: The PRMP, Chapter 2, Sections 2.2.14.2 – Minerals Management (Locatable Minerals) lists the locations where specific restrictions to activity conducted under 43 CFR 3809 are applied. Information regarding the sites identified in public comment is included in the PRMP in Appendix H.

5.5.12.2 Comment (paraphrased):

The DRMP fails to provide a complete inventory of mineral collecting sites and mines in the Decision Area. A map including location information (county, township, range, section, and latitude/longitude) so the impact of the proposed closures and restrictions can be quantified and appropriate areas set aside for use and access by gem and mineral societies and collectors. Furthermore, the RMP should include in the inventory the 92 sites submitted (Appendix H).

Comment Source(s): 9-4, 13-2, 24-2, 25-2, 29-2, 30-2, 31-2, 33-2, 121-2

Response: With regard to the specific location of mine sites the BLM does not encourage or condone general public access to abandoned mines due the inherent risks to public health and safety associated with these sites, specific information of these hazards is included in Chapter 3, Section 3.24 – Public Safety and Health. BLM recognizes that mineral prospectors and researchers have legitimate reasons for entering abandoned mines. Access for such purpose is encouraged by BLM when professionals follow standard MSHA safety procedures and use adequate safety equipment.

Regarding mineral collecting sites, no inventory of locations or specific information is provided as no such inventory exists. The BLM inventory consists of compilations of information on mine sites by the former U.S. Bureau of Mines and the U.S. Geological Survey. BLM also has information on geology and geologic formations that are known to have mineral deposits in them. The BLM does not specifically identify surface occurrences of collectable minerals. For planning purposes, and in the absence of other data, BLM uses the mine inventories as a proxy for mineral collecting sites. Only anecdotal information regarding recreational collecting opportunities is collected with little to no knowledge of frequency of use, thus any analysis utilizing this secondary information would be speculative at best. That said, however, specific information regarding the sites identified by public comment has been included in Appendix XX.

5.5.12.3 Comment (paraphrased):

Uncontrolled “casual use” mining along Hogeye Gulch within the Keyesville SRMA has resulted in irreversible destruction of the natural environment and will continue to do so as the price of gold increases. This destruction is evident by the undercutting of the creek bank, uprooting and felling of trees, and the excavation of large holes that pose risks to public safety. The DRMP should provide direction to extinguish all existing mining claims along Hogeye Gulch and prevent the filing of new ones.

Comment Source(s): 214-5

Response: All mining claims are considered by BLM to be valid until they are examined using the procedures identified in BLM Manual 3891. The suggestion that BLM should “extinguish” claims is prejudicial, and would constitute an unlawful taking of rights now provided existing mining claimants by law and regulation. The PRMP provides direction for the management of both mining activities authorized under the 3809 regulations (including refinement of the definition of casual use) and casual collection of mineral specimens (rock hounding). Specific guidance provided for these activities can be found in Chapter 2, Section 2.2.14.2 – Minerals Management and Section 2.2.15 – Recreation and Visitor Services.

5.5.12.4 Comment (paraphrased):

The RMP should be modified to prohibit the 'hard' permanent closure of abandoned mine features (shafts, adits, drifts, declines etc.). Hard closures of these features make it impossible for miners, mineral collectors, geologist and other researches to access underground mine workings. These mine features are important for studying geology as they provide exposures of subsurface rock units that haven't been weathered as significantly as surface exposures. In most cases these mine features can be made safe without the need for a hard closure.

Comment Source(s): 134-09

Response: Determining the method of closure for abandoned mine land features is an implementation action and therefore outside the scope of the RMP. Prior to any "hard" closure a site-specific environmental analysis will be conducted to ensure any impacted resource is adequately addressed. Furthermore, the BLM does not encourage or condone public access to abandoned mines by the general public due to the inherent risks to public health and safety associated with these sites, specific information of these hazards is included in Chapter 3, Section 3.24 – Public Safety and Health.

Access to, or concerns over the use of, specific mining features for educational and research activities should be brought to the attention of BLM and authorized/permitted appropriately.

5.5.12.5 Comment (paraphrased):

The new fluid mineral lease stipulation "Controlled Surface Use — Existing Surface Use/Management" should be revised in the RMP to remove the term 'public highway' from the list of locations where there the stipulation would be applied. Furthermore, the situation should align with applicable DOGGR policies regarding split estate fluid mineral development and/or existing surface occupancy; as opposed to city/county ordinances; and/or the 200 foot standard proposed in the DRMP.

Comment Source(s): 243-3

Response: The PRMP modifies the Controlled Surface Use – Existing Surface Use/Management stipulation to be in conformance with existing state, county, and local statutes, regulations, and ordinances, including those for "public highways." (Chapter 2, Section 2.2.14.1.1 – Minerals Management (Fluid Minerals))

5.5.12.6 Comment (paraphrased):

The fluid mineral lease stipulation "Controlled Surface Use — Sensitive Species" should be revised in the RMP to align with other buffer zones established in appendix L (i.e., 200ft). A proposed revision to the language could read as follows:

"Presence of habitat or species may result in the proposed action being moved. Buffer zones will be established on a project-by-project basis set forth by BLM in consultation with the lessee, and shall not exceed 200 feet."

Comment Source(s): 243-4

Response: The intent of this stipulation is not to establish a buffer but rather to reserve the right or option to move the proposed activity beyond the 200 meters or delay the activity more than 60 days currently provided in the general lease language. This stipulation is required balance protection of the sensitive species with protection of the lessees' rights granted under the lease.

5.5.12.7 Comment (paraphrased):

The RMP should not consider the withdrawal from mining claim location under the general mining law of any lands proven (through historic use) to be gold bearing. Specifically lands within the Keyesville SRMA.

Comment Source(s): 266-9, 266-10

Response: The presence or historic development of any locatable mineral is given consideration in determining proposed withdrawals; however, if resource concerns cannot be addressed through any other method then withdrawal is the appropriate tool to protect these resources. The PRMP provides direction for the management of both mining activities authorized under the 3809 regulations (including refinement of the definition of casual use) and casual collection of mineral specimens (rock hounding). Specific guidance provided for these activities can be found in Chapter 2, Section 2.2.14.2 – Minerals Management and Section 2.2.15 – Recreation and Visitor Services.

5.5.12.8 Comment (paraphrased):

The withdrawal of public lands to the location of mining claims eliminates the opportunity for commercial mining operations which could improve the economic conditions of the area and the country. Although the DRMP states some withdrawals would be assigned to a recreational use (casual use) this would still have undesirable economic impacts. The RMP should make available additional lands to the location of mining claims rather than reducing the opportunities for causal use and commercial mining.

Comment Source(s): 266-4, 266-5, 266-8

Response: The PRMP has been modified to address this concern through the reduction in areas proposed for withdrawal from the General Mining Law (Chapter 2, Section 2.2.12.3 – Lands and Realty).

5.5.12.9 Comment (paraphrased):

The RMP should clarify the rationale for the restriction of highbanking as a form of casual use. Specifically the RMP should document why an activity that has historically been permitted would now be prohibited. Furthermore, the RMP should state that highbanking and other small prospecting equipment should be allowed and encouraged. As long as miners are ensuring their activities are reasonably incident to prospecting operations, and the miner fill exploration holes the requirement to avoid unnecessary or undue degradation under regulations should be sufficiently met.

Comment Source(s): 266-6

Response: The PRMP further defines casual use in Chapter 2, Section 2.2.14.2 – Minerals Management. The intent is to restrict casual use to those activities that will not create no or negligible degradation of resources. Therefore, the rationale for the restriction on highbanking and certain types of equipment is due to their potential impact on soil, water, vegetation, cultural and wildlife resources. Therefore, the additional clarity provided by the PRMP is designed to minimize these risks.

5.5.12.10 Comment (paraphrased):

The RMP should clarify how mineral potential was established and the actual mechanism by which the proposed boundaries for the mineral withdrawals have been determined. There seems to be little basis in the geology. For example, the proposals do not seem to reflect the actual minerals inventory and classification. These classifications should reflect the geology, and especially the mineral potential of adjoining areas where virtually identical geological conditions (and hence mineralization potential) exist.

Comment Source(s): 134-10, 266-6

Response: Mineral potential maps were created for the PRMP analysis using mineral location data available from the U.S. Geological Survey. This data, in addition to information available to the BLM on recent and historic mineral exploration and activity were used to identify areas where potential for economically viable mineral exploration and development is likely to occur in the life of the Plan. The mineral potential areas were adjusted based on the geologic formation boundaries of rock types known to contain valuable mineral deposits.

5.5.12.11 Comment (paraphrased):

The RMP should define the term “non-routine” with regard to Hydraulic Fracturing on a federal mineral lease to ensure consistent applicability or the provision in Appendix L.7.5 – Oil and Gas Standard Operating Procedures-Hydraulic Fracturing, should be removed.

Comment Source(s): 243-5

Response: The term “nonroutine fracturing jobs” is found in 43 CFR 3162.3-2(a), however, there is no definition provided. A description of the types of activities that may be considered routine is provided in Chapter 6, Glossary.

5.5.12.12 Comment (paraphrased):

The DRMP fails to adequately establish and analyze the levels of mineral collecting and mining activity that could be achieved without restrictive policies and regulations. This analysis is important to understand the full impact of the decisions made in the RMP as they relate to the national economy and the Administration’s priorities for economic recovery.

Comment Source(s): 134-13

Response: All alternatives in the PRMP include some level of restriction imposed on mineral collection and mining activity beyond the scope of the RMP, e.g., Congressional withdrawals associated with designated Wilderness or county and state restrictions/requirements, additional

information regarding restrictions beyond the control of the BLM has been added to Chapter 3, Section 3.14 – Minerals Management. As such the level of mineral collecting or mining activity that could be achieved without such restrictions is would serve no purpose in making a reasoned choice between the alternatives presented in the PRMP. The PRMP therefore only provides analysis of the incremental impacts of the Proposed Plan actions when added to the existing restrictions (Chapter 4, Section 4.14 – Minerals Management).

5.5.12.13 Comment (paraphrased):

The DRMP fails fully address the impacts on the academic and research communities due to proposed closures of paleontological and casual use collection sites.

Comment Source(s): 15-3

Response: The PRMP has been modified to address this concern through text added to Chapter 2, Section 2.2.16 – Interpretation and Environmental Education. Access to, or concerns over the use of, areas for paleontological or casual use collection by academic and research communities should be brought to the attention of BLM and authorized/permitted appropriately. Access may be granted on a temporary basis.

5.5.12.14 Comment (paraphrased):

The actual or indirect (as a result of route restrictions) closure of mines and mineral collecting sites are unnecessary to protect non-mineral values. Competing resources could receive protection on an “as needed” bases addressed at a project specific level. The RMP should allow miners and mineral collectors to submit projects demonstrating how mineral exploration or develop can occur without damaging non-mineral resource.

Comment Source(s): 134-3

Response: The PRMP has been modified to address this concern through the reduction in areas proposed for withdrawal from the General Mining Law (Chapter 2, Section 2.2.12.3 – Lands and Realty) and through the direction for the management of both mining activities authorized under the 3809 regulations (including refinement of the definition of casual use) and casual collection of mineral specimens (rock hounding). Specific guidance provided for these activities can be found in Chapter 2, Section 2.2.14.2 – Minerals Management and Section 2.2.15 – Recreation and Visitor Services. There is no indirect impact on activities conducted under 3809 regulations as access to mining claims can be authorized without the existence of a route. Furthermore, causal collection is not impacted by route closures, as in accordance with 43 CFR 8365.1-5 a permit may be issued to authorized motorized access to collecting areas.

5.5.12.15 Comment (paraphrased):

The RMP should clarify the statement in Appendix L, Section 3.5, bullet 6: states "All oil spills will be contained closest to the source as possible. The USFWS will be notified within 48 hours of any oil spill." Need to clarify notification requirement is for reportable spills, and clarify who will notify USFWS. Recommend the bullet be changed to the following:

"*All oil spills will be contained closest to the source as possible. The USFWS will be notified by BLM staff within 48 hours of any reportable oil spill in habitat.*"

Comment Source(s): 236-6

Response: The PRMP has been modified to reflect that the BLM will notify USFWS of reportable spills in habitat (Appendix L, Section 3.5).

5.5.12.16 Comment (paraphrased):

The RMP should clarify how the proposed withdrawals meet the BLMs policy. Specially policy indicates that withdrawals are only appropriate for areas of high mineral potential where another resource exists that can only be protect through withdrawal of an area to the General Mining Law.

Comment Source(s): 134-11

Response: The presence of any locatable mineral is given consideration in determining proposed withdrawals; however, if resource concerns cannot be addressed through any other means then in accordance with BLM policy withdrawal is the appropriate tool to protect these resources. The PRMP has been modified to address this concern through the reduction in areas proposed for withdrawal from the General Mining Law (Chapter 2, Section 2.2.12.3 – Lands and Realty).

5.5.12.17 Comment (paraphrased):

The DRMP fails to fully analyze the cumulative impact of restrictive management, both discretionary and non-discretionary on mineral collecting and mining.

Comment Source(s): 134-12

Response: The PRMP has been modified to address this concern through the addition of narrative describing the direct, indirect, and cumulative impacts to mineral collecting and mining activities (Chapter 4, Section 4.14 – Minerals Management, Section 4.15 – Recreation and Visitor Services, and Sections 4.26.1 & 4.26.5 – Cumulative Impacts).

5.5.12.18 Comment (paraphrased):

The DRMP fails to address the potential impact of the alternatives on dominant mineral interests of an existing mineral rights holder holding a lease or owning minerals that do not currently have surface use restrictions. The issues of reasonableness as it pertains to reasonable surface occupancy should be discussed considering increased costs associated with the alternatives that have the potential to make minerals uneconomical to recover.

Comment Source(s): 206-4

Response: The analysis of economic viability of oil and gas recovery is beyond the scope of the PRMP. The BLM has neither the propriety data nor the capacity to determine at which point an activity becomes unfeasible.

5.5.13 Recreation and Visitor Services

5.5.13.1 Comment (paraphrased):

Due to their unique and localized nature, rock, gem, mineral and fossil collecting locations should be excluded from closure or restriction as no practical mitigation is available for loss of access to such areas to the rock and mineral collection hobbyist. Furthermore, motorized access to these locations, including spur roads, should be maintained.

Comment Source(s): 13-1, 24-1, 25-1, 29-1, 30-1, 31-1, 33-1, 121-3

Response: Closure of rock, gem, mineral and fossil collecting locations is an appropriate tool for the management of other resources that are adversely impacted by these activities and activities associated with collection, such as motorized access. Closure is however, not the only tool to achieve these protective management objectives, and throughout the PRMP other restrictions in lieu of complete closure are implemented.

5.5.13.2 Comment (paraphrased):

The closure of 10,965 acres to public access within heavily developed producing oilfields under Alternative B (page 101) to address public safety concerns should be backed by scientific reasoning and documentation to justify the closure. It is suggested that prior to implementation public hearings should be held for any such closure.

Comment Source(s): 199-12

Response: The rationale for the public closure of these intensively industrialized areas stems from a concern for public safety in these areas. Specifically, these areas pose threats from exposure to, high temperature piping and equipment, hydrogen sulfide gas, natural gas, and crude oil. In these areas, complete public closure was determined to be the appropriate management tool for the protection of human health and safety, since other options, such as requiring all publics to receive the specialized training needed to be in these areas and use the required equipment (H_2S monitors, fire retardant clothing, etc.) was deemed infeasible and unenforceable.

The rationale used to determine the areas proposed closed in the PRMP results from the use of well density. Well density was used as a measure of the presence of potentially hazardous equipment e.g., as well density increase so does the density of associated piping, and therefore an indicator of the level of potential hazard to human health and safety.

5.5.13.3 Comment (paraphrased):

The DRMP (page 127), in all Alternatives, seeks to prohibit public access to recreation sites along the North Fork of the Kaweah River. These recreation sites include historic sites relative to the original Kaweah Colony, to which access should be allowed and developed for increased use. These sites provide an opportunity to educate the public about the historical significance of the area, along with effects of unchecked harvesting of the sequoia forests. Furthermore, closure of these sites effectively shuts off access to the river anywhere in the community of Three Rivers, unless access is achieved through private property. There is no documented environmental

justification for this closure. In addition, closure of these recreational sites prohibits the "Recreational" aspect and eliminates the “Scenic” aspect of the proposed Wild and Scenic River designation, which seems to be counterproductive to the proposal as only those in trespass would be able to experience the Recreational qualities of the river and appreciate the Scenic values.

Comment Source(s): 199-15

Response: Closure of the recreation sites along the North Fork of the Kaweah does vary by alternative, ranging from open, to seasonally closed, to complete closure. The intent of the seasonal restrictions and closure is to protect both the important cultural resources and sensitive ecological resources of the area from exceedance of the viable carrying capacity of these sites. As it notes in Chapter 3, Section 3.15.4.3 – Recreation and Visitor Services, the topography and terrain in which these sites are located make them only suitable for a small number of vehicles and visitors; furthermore it is infeasible to remedy this through future development. When these sites were open (prior to 2007) the limited capacity of these sites was frequently exceeded during the summer season, resulting in dangerous parking situations and critical issues of public health and safety. Additional details concerning the undesirable impacts of overuse are found in Chapter 3, Section 3.4 – Cultural Resource, and Chapter 3, Section 3.15.4.3 – Recreation and Visitor Services.

Additional text has been added to Chapter 4, Section 4.4 – Cultural Resource to clarify the beneficial impact of the proposed management.

5.5.13.4 Comment (paraphrased):

The DRMP does not provide sufficient rationale and documentation for the closure of areas to rock hounding including the casual collection of fossils, mineral agates, and semi-precious stones. The DRMP does not provide sufficient evidence to support the need to close these areas in order to protect archaeological features and artifacts. In order to maintain public access to collection areas while still allowing for control of this activity, the RMP should accommodate scheduled collection periods for the general public. These scheduled periods should be appropriated for the geographic area (i.e. when average daytime temperatures are between 50 – 85 degrees F). For example, access to rock collecting areas in Horse Canyon (proposed closed in Alternative B), should be allowed one weekend in Spring and Fall.

Comment Source(s): 3-2, 9-3, 13-4, 24-4, 25-4, 29-4, 30-4, 31-4, 33-4, 121-5

Response: The rationale for closure of areas to rock hounding is including in the PRMP in Chapter 4 under the impacted resources section. The rationale for closure is described by the impacts incurred under the alternative(s) under which no closure is proposed (e.g., Alternative E for Horse Canyon ACEC).

The proposed plan alternative (Chapter 2, Section 2.2.17 – ACECs) in the PRMP still includes closure of casual collection (43 CFR 8365.1-5) in the Horse Canyon and Chico Martinez ACECs this does not preclude other authorizations for activities including research, education and recreation.

5.5.13.5 Comment (paraphrased):

The DRMP page 79 proposes to close The Dam RMZ to overnight camping, which includes Sandy Flat (a large flat area with direct access to the lower Kern River). Although the RMP is accurate in the assessment that the area would benefit from additional restrictions and rehabilitations efforts, limited overnight camping should still be allowed as the area has historically been used for this activity and the site provides a rare opportunity within the Keyesville SRMA to camp directly adjacent to the Kern River.

Comment Source(s): 18-1, 215-10, 227-3

Response: The proposed plan alternative in the PRMP has been modified to allow for limited designated camping on Sandy Flat (Chapter 2, Section 2.2.15 – Recreation and Visitor Services).

5.5.13.6 Comment (paraphrased):

The DRMP fails to cite any scientific reason for prohibition of overnight camping, campfires, and the discharge of firearms within the Kaweah River recreation sites. These restrictions appear to contradict the objectives of the North Fork ERMA (page 159). Furthermore, the prohibition on the discharge of firearms is in conflict with recent directives by the President, Secretary of Interior, and the Director of BLM.

Comment Source(s): 199-18

Response: The basis for limiting recreation activities and access rests with the needs for visitor management. The objectives for the ERMA (Alternative E) facilitate fishing, hunting and water play. The Kaweah ACEC in Alternative E prohibits the "discharge of firearms except the legal taking of game species", therefore is complimentary to the ERMA objectives for hunting. Campfires and overnight camping were not considered necessary for full participation in the targeted activities. Furthermore, State laws restrict the discharge of firearms within specific distances from man-made objects (roads, trails, structures etc.) and dwellings for safety reasons. As these recreation sites meet these criteria for restriction under State law, the prohibition in this decision is not conflict with recent Executive directives.

5.5.13.7 Comment (paraphrased):

The DRMP proposes severe restrictions on hunting and shooting throughout the Decision Area. These decisions appear to be in direct conflict with recent directives by the President, Secretary of Interior, and the Director of BLM.

Comment Source(s): 199-2

Response: The PRMP proposes coordination with California Department of Fish and Game regarding possible prohibition of hunting; it does not, however, effectuate a prohibition on hunting. In the three areas proposed for closure to hunting, two are intensively visited recreation sites where the discharge of firearms is already prohibited by State law; the final area (Atwell Island) is in the process of habitat restoration and would allow for hunting under special circumstances.

The PRMP has been modified (Chapter 3, Section 3.15 – Recreation and Visitor Services) to reflect that the discharge of firearms (shooting sports), except for the legal taking of game, is already prohibited within numerous areas that meet the criteria for "unsafe shooting areas" based on State law which accounts for the majority of the acres where this restriction would apply.

5.5.13.8 Comment (paraphrased):

The RMP should not designate the Urban Interface RMZ as a formal OHV use area as no previous attempts have been made to control OHV use in this area, nor does the DRMP fails to adequately describe how OHV use would be controlled or contained. If the RMP be implemented as described in Alternative B, conflicting uses (hunting and OHV use) may be superimposed upon one another in an area that has historically primarily been used for hunting.

Comment Source(s): 212-4

Response: The specific measures used to manage the Temblor SRMA and subsequently the Urban Interface RMZ would be described in an activity level plan. Without supporting decisions identifying the boundaries and outlining the board objectives of these areas the subsequent level of planning would not take place. Therefore, in order to provide for future management of OHV use in this area decisions (designations) need to be made within the RMP. Any previous failure to address OHV issues in this area can be partially attributed to having no existing land use planning level guidance for this area that addresses this issue.

Hunting and OHV activities are both uses of public lands that are allowable and currently occurring within the proposed Urban Interface RMZ without any provisions in the existing 1997 Caliente RMP. Any conflicts between these uses would have to be documented and addressed on a case-by-case basis.

5.5.13.9 Comment (paraphrased):

It is unclear in the DRMP whether hunting would still be allowed in the Urban Interface RMZ of the Temblor Range SRMA as this activity is not listed as a targeted activity in the Appendix H Matrix and Management Framework for this RMZ. This area should remain open to hunting as this area has been a popular area for upland bird hunting for over 70 years by local hunters and those from other areas in Kern County. In addition, the Urban Interface RMZ has the highest density of guzzlers that were provided by California Dept. of Fish and Game in conjunction with local sportsmen groups.

If hunting is curtailed in the Urban Interface RMZ the decrease in hunting opportunities and impact of displaced hunters should be addressed.

Comment Source(s): 212-5, 212-6, 212-7

Response: Activities listed as "targeted" in the SRMA/RMZ objectives provide future guidance for the development of activity level plans and focus management on the activities that most require it. Not listing an activity as targeted does not prohibit the activity from the area. As such, hunting would still be allowed in the Urban Interface RMZ and analysis of impacts to hunters/hunting opportunity as a result of closure of this area is not needed.

5.5.13.10 Comment (paraphrased):

Due to the access configuration of the Keyesville SRMA (i.e., one road in/out) evacuation of the public during an emergency such as a wildland fire would be extremely difficult on heavy use weekends. Furthermore, access into the area by emergency vehicles would prove difficult when use is high. These facts pose serious risks to public health and safety that could only be alleviated by controlling the amount of visitation at any one time.

Comment Source(s): 214-4

Response: Establishment of a visitor carrying capacity for the Keyesville area is impractical as Keyesville Road is a county road providing access to numerous private properties and National Forest System lands. A subsequent activity level plan for the Keyesville SRMA would address visitor controls which may indirectly limit visitor numbers in specific areas.

5.5.13.11 Comment (paraphrased):

Abandoned campfires have the potential to ignite wildfires especially during the hot, dry summer season when use at the Keyesville SRMA is highest, thus adding to concerns over public safety within the SRMA. To address concerns over abandoned campfires the DRMP should prohibit campfires within the Keyesville SRMA during the summer season.

Comment Source(s): 214-10

Response: Use of campfires is managed through the California Campfire Permit program, which allows for enforcement actions associated with abandoned campfires. Should a complete restriction on campfires be necessary during hot dry weather, the BLM in coordination with other fire prevention entities would issue a temporary restriction on the activity (campfire ban). These two management tools are deemed sufficient to manage campfire use within the Keyesville SRMA.

5.5.13.12 Comment (paraphrased):

The RMP should ensure that permitted special events occurring within the Keyesville SRMA are managed appropriately.

Comment Source(s): 214-18

Response: Competitive and organized group events within the Keyesville SRMA are managed under Special Recreation Permit. The specific management special recreation permits is covered by BLM policy and guidance (H-2930-1 – Recreation Permit Administration) and is therefore outside the scope of the RMP.

5.5.13.13 Comment (paraphrased):

The DRMP does not provide an accurate description of visitation within the Keyesville SRMA. The visitation numbers provided in Table 3.15-5 appear to be grossly exaggerated.

Comment Source(s): 214-21

Response: The visitation data for the Keyesville area presented in the RMP is gathered by electronic vehicle counters placed at the entrances to Keyesville South and Keyesville North. These numbers are then multiplied by the number of people in the vehicle (a factor provided by the Bureau of Transportation Statics for Recreation Visits). It is acknowledged that there is margin for error in this collection method as a result of administrative, authorized and residential visits that also get counted. Also the fact that a single vehicle may leave the area and return multiple times in the same day results in a duplicate counting That said however, electronic vehicle counters still provide the most feasible method of achieving estimated visitation data.

5.5.13.14 Comment (paraphrased):

The decision to charge fees is an implantation level decision and is required to be fully vetted under the Federal Lands Recreation Enhancement Act (FLREA) before the fees can be implemented. Stating an intention to charge new fees in the RMP is premature as decisions made during the implementation phase including identifying other funding sources may preclude the need for a fee. All references to fees should be removed from the RMP.

Comment Source(s): 215-5, 227-1, 227-2, 274-2

Response: In general, statements concerning fees in the RMP are there to disclose the possibility that specific recreational sites and areas may, at some future point, charge for services. This would of course, occur after the full process to establish fees in accordance with the prevailing law (currently FLREA) had been completed. It is important that the RMP disclose the potential for fees to allow the public to fully understand the implications of assigning specific objectives to recreational areas.

For clarification additional language has been added to the PRMP stating that "the establishment of fees will be fully addressed in an area specific activity level plan and in accordance with the current regulation guiding the establishment of recreational use fees."

5.5.13.15 Comment (paraphrased):

The RMP should weigh the burden of negotiating fees against the potential revenue that would be received. It is recognized that it is appropriate for users to contribute to the cost of managing public lands they use however; the concern is that if fees are assessed local residents might be forced to assume an unequal share of the management costs. Local users are generally more invested in helping to manage the area than visitors. Furthermore the process necessary to establish fees under FLREA is complex.

Comment Source(s): 226-17

Response: The PRMP suggests the possible use of fees as a management tool in several areas. These suggestions are made to allow the public to realize the potential future consequences of the proposed management. That said the process of establishing fees is separate from that of the RMP and would be conducted at an activity planning level where consideration of local users' verses visitors could be weighed against the management needs.

5.5.13.16 Comment (paraphrased):

The RMP should reconcile the conflicting information provided with regard to river access to the North Fork of the Kaweah River from the Advance Colony archeological site (page 235) in light of the existing closure (since 2007) and proposal to permanently eliminate access. Furthermore, the rationale for the closure of North Fork of the Kaweah River recreation sites should be clarified as lack of resources is not an environmental concern. Budgetary issues should be address at a federal level, whereas RMP planning should focus on carrying out the agencies mission.

Comment Source(s): 199-19

Response: The PRMP has been modified to include addition information concerning the closure of the recreation sites along the North Fork of the Kaweah River (Chapter 3, Section 3.15.4.3 – Recreation and Visitor Services). The rational for the proposed closure of these sites in the proposed plan alternative is provided in several places throughout the PRMP including Chapter 4, Section 4.4 – Cultural Resources, and Section 4.15 – Recreation and Visitor Services.

5.5.13.17 Comment (paraphrased):

The RMP should be modified with regard to the Case Mountain ERMA to reference valuable passive recreational activities such as wildlife and nature observation, photography, picnicking, nature education, pond fishing and simple, quiet enjoyment of the natural setting. The Case Mountain area offers rare example of these opportunities not generally found on public lands.

Comment Source(s): 274-5

Response: The proposed plan alternative in the PRMP has been modified to reflect this concern (Chapter 2, Section 2.2.15 – Recreation and Visitor Services).

5.5.13.18 Comment (paraphrased):

The RMP should clarify the level of involvement the proposed Temblor Range SRMA would hold in the process to review and approve oil and gas proposals (i.e., ADPs), facilities improvements and Rights-of-way requests. Furthermore, how much control over access would the BLM maintain, as a 'new' proposal may result in a significant increase in traffic and recreational use? Finally, the RMP should clarify how funding for the SRMA would be secured and if funding to maintain the management of the SRMA is currently available.

Comment Source(s): 256-1, 256-2, 256-3, 256-4

Response: The designation of the Temblor Range SRMA does not change the process by which oil and gas proposals, facility improvements and rights-of-way requests are handled. Recreational values and opportunities, along with the health and safety of public lands users, are currently required to be considered in the NEPA process for all the aforementioned actions and would continue to be address through specific mitigations, "conditions of approval" and "terms and conditions". The designation of the Temblor Range SRMA does however provide specific objectives (Chapter 2, Section 2.2.15 – Recreation and Visitor Services) and allows for

the development of an activity level plan which will focus the analysis conducted on any authorization to ensure it meets these objectives.

As to, the question of controlling access, the RMP provides specific direction to seek legal public access to the area (Chapter 2, Section 2.2.11 – Comprehensive Trail and Travel Management). It does not provide for any limitations on number of visitors or the methods of transport they choose to visit in. The RMP does however make decisions to restrict the issuance of Special Recreation Permits to control competitive and commercial users in the SRMA (Chapter 2, Section 2.2.15 – Recreation and Visitor Services).

Funding for the SRMA is not specifically addressed, other than the assertion that a user fee may be required (Chapter 2, Section 2.2.15 – Recreation and Visitor Services (Key Implementation Decisions)) as the issue of funding is outside the scope of the RMP and is addressed through activity level planning.

5.5.13.19 Comment (paraphrased):

The RMP should be modified to remove the Temblor Range SRMA and ERMA from the document. Furthermore, any reference, map or exhibit that depicts the boundary of the Temblor Range SRMA/ERMA should also be removed from the document. The DRMP states (pages 371 and 372) that rules for enforcement, funding and allocation of personnel have not yet been established for this area. As such, without securing these resources, including the budget commitment to funding, the RMP should not designate this area. Identification of this area on planning maps becomes an open invitation to the unmanaged and unregulated public to overrun the Temblor Range resulting in; increased harassment of livestock, trampling of forage, vandalism to infrastructure, and increased risk of fire. Presentation of planning maps in the RMP (Maps 2.5, 2.6, or 2.10) will be mistaken as a designated managed area, which is currently only an undeveloped and unbudgeted objective.

Comment Source(s): 263-4

Response: It is acknowledged that presentation of "draft" and "proposed" ideas provides information to the public that may be misinterpreted as "actual fact". The agency however, has no control over the interpretation of this material by the public beyond the efforts it makes to aid in understanding the process and proposed decisions contained in the document. It does however, have a duty to provide management guidance for public lands and address all reasonable management alternatives in its RMPs. As such, presentation of these designations and decisions, including all maps and reference, in the DRMP and PRMP is required to aid the public in reviewing, understanding and providing feedback on the proposed management of the Temblor Range area.

The comment implies there are already issues with "unmanaged and unregulated public" within the Temblor Range area resulting in "harassment of livestock, trampling of forage, vandalism to infrastructure… etc." As such, management of the existing uses of this area is required to resolved any perceived issues and designation of the area as either an SRMA or and ERMA is the appropriate tool to allow for this management. The precise details concerning the allocation of staff, enforcement, funding etc. are beyond the scope of the RMP, and generally established in an activity level plan. Without direction and designation provided in the RMP the activity level

plan for the area would not occur and the area would continue to go relatively unmanaged (Chapter 4, Section 4.15.1 – Recreation and Visitor Services).

5.5.13.20 Comment (paraphrased):

The RMP should be modified to reduce the size of the proposed Temblor Range SRMA/ERMA. The DRMP provides no supporting documentation to explain why this area is designated, especially with the large portion of private land on the northern end of the area. The modified boundary should be much small and solely encompass public lands. It is recommended that the designation is further limited to only the area known as the Urban Interface RMZ and eliminate any mention of the Temblor Range SRMA/ERMA.

Comment Source(s): 263-5, 263-7, 263-8

Response: The maps included with the DRMP erroneously included additional private property outside a potential BLM acquisition and have been corrected in the PRMP (Maps 2.5 and 2.2.8). The boundary of the Temblor Range SRMA was established based on existing recreational use (Chapter 3, Section 3.15.5 – Recreation and Visitor Services), consideration of future use, and the need to provide landscape level management (i.e., at a large enough scale to effectively manage the use, experiences and opportunities). The boundary was generally restricted to public land; however it did include private property to the north based on the assumption that that property would be acquired, as the acquisition process was already underway.

Urban Interface RMZ would not provide the ability to manage at a landscape level, furthermore elimination of any mention of the Temblor Range SRMA/ERMA would not comply with existing agency policy and guidance as RMZs are distinct sub-units of SRMAs.

5.5.13.21 Comment (paraphrased):

The DRMP makes a significant omission in its assumptions (pages 371 and 372) in that “it should assume that the private land owners will not cooperate with the BLM”. Since the private land owners were unaware of this designation the BLM should make no assumption as to the potential cooperation or lack of cooperation afforded by these land owners.

Comment Source(s): 263-6

Response: The addition of a general assumption regarding the cooperation or lack thereof, of private land owners adds no value to the PRMP. In fact, the vision provided by the multiple use mandate can only be achieved with the cooperation of all stakeholders. The agency therefore assumes that both public lands users and those invested in the management of public lands will corporate in the management of those lands. Without working under this assumption, the agency would work in isolation; loose the innovation, creativity and flexibility it has to resolve issues to make multiple use work; and alienate those serves.

The RMP process, specifically the publishing of the DRMP and associated public meetings are the tools by which the agency makes public lands stakeholders aware of the “proposed” actions of a plan. By participating in this process and providing feedback a commentor is cooperating in

the future management decisions and allocations made by the agency. As such, the assumption that stakeholders, including private land owners, will cooperate is an accurate statement.

5.5.13.22 Comment (paraphrased):

The RMP should remove the inference that there is "generally little difference between the areas managed for recreation across the action alternatives" (page vi) or complete the statement by acknowledging some action alternatives would result in a significant reduction of route miles and thus opportunity for many users.

Comment Source(s): 215-7, 227-31

Response: The statement "there is generally little difference…" refers only to "areas" (read acres of SRMAs and ERMAs) managed for recreation across the action alternatives. The statement is true with the greatest difference being approximately 2,000 acres. Both the preceding line – "… action alternatives increase the level of opportunity specific restrictions… " – and the sentence several paragraphs prior – "Route designations within the alternatives range from a sizeable increase in the amount of routes designated for motorized use…" – speak to the increase/decrease in opportunity. For clarity the parenthetical qualifier "(acres of SRMA/ERMAs)" has been added.

5.5.13.23 Comment (paraphrased):

The RMP should consider providing additional access to public lands for shooting sports. Opportunities are lacking in western Kern County which forces participants to travel extensive distances to take part in these activities.

Comment Source(s): 197-2

Response: All public lands, unless otherwise closed, are available for shooting sports provided the activity is conducted in conformance with State laws. The restrictions on shooting sports are identified in prescriptive and special management for areas of ecological importance, Recreation Management Areas and ACECs (Chapter 2, Section 2.2.2 – Biological Resources, Section 2.2.15 – Recreation and Visitor Services, Section 2.2.17 – ACECs).

5.5.14 Areas of Critical Environmental Concern

5.5.14.1 Comment (paraphrased):

The RMP should clarify the need for special management within the Bitter Creek ACEC with regard to oil and gas development. The statements in the Reasonably Foreseeable Development Scenario contradict the findings of the ACEC report i.e., special management required due to proximity to Cuyama Basin (high potential for oil and gas) versus no new development anticipated outside of existing leases, and need to be reconciled.

Comment Source(s): 209-6

Response: The PRMP has been modified to clarify the need for special management within the Bitter Creek ACEC with regard to oil and gas development (Chapter 3, Section 3.17 – ACECs).

5.5.14.2 Comment (paraphrased):

The DRMP inappropriately includes privately owned land within the boundaries of Areas of Critical Environmental Concern (ACECs). The inclusion of private lands, regardless of the resources they contain, is an overreach of federal authority and these lands should not be included within ACEC designations without the permission of the private landowner. Furthermore, the DRMP inadequately describes the impact on private property owners from these decisions such as impairment of property values and hindrance of the ability to conduct private business. The RMP should clearly state "the BLM has no jurisdiction on private property" and "that lawful activities conducted on private property adjacent to BLM ACEC's are not subject to any policies contained in the RMP".

Comment Source(s): 7-1, 129-1, 130-1, 208-1, 209-1, 209-11, 210-3, 210-4, 257-1

Response: The PRMP clearly states in numerous locations including Chapter 1, Section 1.3.2 – Decision Area and Chapter 2 – Introduction that the management direction provided throughout the document applies only to federal interests. For clarity the boundaries of Bitter Creek and Chico Martinez ACECs have been reduced to include only federal interests (public lands surface and federal mineral estate).

5.5.14.3 Comment (paraphrased):

The RMP should prohibit hunting and target shooting in the Case Mountain portion of the proposed Kaweah ACEC. The area is highly visited on a daily basis by hikers, mountain bikers and horse riders (including neighbors out walking their dogs and kids playing). In addition, the area is densely wooded and crisscrossed with single-track trails. Should hunting be needed or desirable activity within the area, could it be restricted to specific types of hunting that would be more compatible with ACEC values and visitation.

Comment Source(s): 32-2, 274-7, 274-8, 274-9, 274-10

Response: The proposed plan alternative in the PRMP identifies the entire Kaweah ACEC, inclusive of the Case Mountain area, as availalable for some shooting sports including hunting. It does, however, require air-soft or paintball activities be authorized by BLM. Additionally, State laws restricting firearms use for safety in effect prohibit the activity on certain areas of public lands meeting these requirements. Finally, the proposed supplementary rules are designed to better manage shooting sports activities throughout the Field Office (Appendix N). No recommendation for a closure to hunting to CDFG is proposed due to the large size of the area and the determination that safe hunting practices are sufficient to protect other uses of these areas.

5.5.14.4 Comment (paraphrased):

The RMP should adopt Alternative C with regard to the Salinas River ACEC to ensure its continued protection from the degradation as a result of mining activities. The removal of the ACEC designation in the DRMP's preferred alternative is assumed to be an indication that there

are foreseeable development proposals for this area, which would be curtailed by an ACEC designation.

Comment Source(s): 198-2

Response: The PRMP Chapter 4, Section 4.17.3 – ACECs describes how the Salinas River would be adequately protected by prescriptive management provided through its identification as an area of ecological importance. Without the need for special management attention, the ACEC designation would not be warranted.

5.5.14.5 Comment (paraphrased):

The RMP should adopt Alternative C with regard to the Rusty Peak and Irish Hills proposed ACEC designations. It is critical to protect the rare serpentine plant communities that are worthy of exceptional conservation standards provided only through ACEC designation.

Comment Source(s): 198-3

Response: The PRMP Chapter 4, Section 4.17.3 – ACECs describes how the Rusty Peak and Irish Hills areas would be adequately protected by prescriptive management provided through its identification as an area of ecological importance. Without the need for special management attention, the ACEC designation would not be warranted.

5.5.14.6 Comment (paraphrased):

The RMP should modify the preferred alternative with regard to the Upper Cuyama ACEC in the following respects: (1) Close the area to fluid mineral leasing. Oil and gas drilling currently does not exist in this area, and the introduction of intensive industrial resource extraction would be incompatible with the preservation of rare plants and animals in this area and would detract from the important and relevant values for which this ACEC was nominated. Importantly, the stipulations proposed for this area – CSU-Protected Species and CSU-Sensitive Species – are not adequate to protect the ACEC's values, since these stipulations can be excepted or modified. (2) Expand the identification of lands as unavailable for livestock grazing to include all suitable habitat of California jewelflower or Kern primrose sphinx moth. (3) Add special management restrictions for other activities that could potentially harm California jewelflower or Kern primrose sphinx moth, such as restrictions on road construction and maintenance and OHV use. (4) Expand the ACEC boundary to encompass federal mineral estate in T8N, R24W, Section 17 and public lands at the base of Goode and Tennison canyons. These additional lands contain the same values as those within the ACEC and it is appropriate to include them or provide an explanation as to why they are not included.

Comment Source(s): 220-11, 220-13, 220-14, 220-15

Response: The closure to the Upper Cuyama Valley ACEC to fluid mineral leasing is not necessary to protect the relevant and important values for which this area was recommended. The CSU stipulations sufficiently protect the special status species and exception would not be granted or modification made unless the proposed activity could be demonstrated to have no effect on these species.

The PRMP has been modified (Chapter 2, Section 2.2.13 – Livestock Grazing) to clarify that in addition to the area that contains California jewelflower and Kern primrose sphinx moth, the no grazing guideline may also be applied to adjacent areas that are determined to 1) have similar habitat characteristics and are likely to contain the species, or 2) directly influence or affect the habitat conditions in the area containing the species.

The PRMP includes area-wide objectives and decisions addressing other activities that could potentially harm relevant and important values of the ACEC, however, since these objectives and decisions apply Decision Area-wide they are not considered to be "special management attention".

The PRMP has been modified to include some of the additional federal interests within the ACEC boundary, where those lands have the same relevant and important values (Chapter 2, Section 2.2.17 – ACECs).

5.5.14.7 Comment (paraphrased):

The RMP should adopt Alternative C with regard to Chico Martinez ACEC. The Area has historically been designated an ACEC due to the important and relevant cultural, paleontological, geological, and biological resources as documented in both the 1984 Coast Valley RMP and the 1997 Caliente RMP. Loss of this ACEC designation would result in reduced attention and protection for these relevant and important values.

Comment Source(s): 220-16

Response: The PRMP has been modified based on new information resulting from research in the Chico Martinez ACEC to continue to recommend continued designation as an ACEC in the proposed plan (Chapter 2, Section 2.2.17 – ACECs).

5.5.14.8 Comment (paraphrased):

The DRMP fails to adequately explain why the Chimineas Ranch publically proposed ACEC does not meet the importance criteria for designation. The DRMP states "it does not present more than locally significant assemblages of threatened and endangered species habitat and is not particularly vulnerable to adverse change as it is surrounded by CDF&G Ecological Reserve and USFS lands" (page 317). The arrival at this conclusion is questionable as the surrounding CDF&G Ecological Reserve was acquired as a State Ecological Reserve because of its state-wide significance. Furthermore, the California Wildlife Conservation Board ("WCB") recognized the regional, statewide, and national importance of this area, stating that the lands were important "for the protection of several sensitive plant and animal species and to provide a direct link between the Los Padres National Forest and the CPNM. In addition, the arrival at the conclusion that the area is not vulnerable to adverse change is also questionable considering the 2010 Environmental Assessment for the North Chimineas Allotment (BLM 2010) documents the area is not meeting a variety of standards for rangeland health due to livestock grazing. The RMP should clarify its findings and designate the area as an ACEC with special management aimed at curtailing the significant impacts occurring in the area as a result of livestock grazing.

Comment Source(s): 220-18

Response: The statements, conclusions and determinations made by CDF&G or WCB with their own purpose, scope and intent, are not used by BLM nor the ACEC relevance and importance criteria found in 43 CFR 1610.7-2 and BLM Manual 1613.1. As such the determination made in the ACEC Report (Appendix I of the Draft RMP/Draft EIS, 2011) has not been modified in the PRMP and no "special management attention" is required to protect resources in the area.

5.5.14.9 Comment (paraphrased):

The DRMP fails to adequately explain why the East Temblor Range publically proposed ACEC does not meet the relevance and importance criteria for designation. The DRMP states that the rare plant association known as the upper Sonoran sub-shrub scrub community occurs in the proposed area, however, this community "is located in several regions of southern California" (Appendix I-52). In actuality this plant community is found only in the Temblor Range, the nearby San Emidgio Range, and on a very limited basis in the Greenhorn Mountains. Additionally, a rare woodland community known as Tucker oak woodland extends from the Carrizo Plain National Monument down the east side of the Temblors through the proposed area. Furthermore, the area is identified as a wildlife corridor in the San Joaquin Valley Recovery Plan and as a NCLWMA expanding its significance. The area continues to require special management to address increase in OHV use. The RMP should clarify its findings and designate the area as an ACEC.

Comment Source(s): 220-21, 220-22

Response: The PRMP has been modified to clarify the extent of the upper Sonoran sub-shrub scrub community and Tucker Oak woodlands (Chapter 3, Section 3.17 – ACECs). The extent as described by Twisselmann's *A Flora of Kern County* and Holland (1986) is consistent with the determination that the importance of the populations of this plant community is not of more than local significance.

The proposed plan alternative of the PRMP provides prescriptive management for the area as a Special Recreation Management Area that addresses the management of OHV use. As such the determination made in the ACEC Report (Appendix I of the Draft RMP/Draft EIS, 2011) has not been modified in the PRMP and no "special management attention" is required to protect resources in the area.

5.5.14.10 Comment (paraphrased):

The RMP should provide a more thorough analysis of the relevance and importance criteria to fully comply with guidelines relating to evaluating and designating ACECs. This analysis should include discussions as to how the alternate sizes of ACECs and management prescriptions are sufficient to protect the identified values. Finally the analysis should explicitly state the justification for not recommending an ACEC for designation as appropriate.

Comment Source(s): 220-23

Response: The PRMP has been modified to included additional information generated through the public comments and internal review with regard to relevant and important values for some proposed ACECs (Chapter 3, Section 3.17 – ACECs).

As stated in the "Methods of Analysis" (Chapter 4, Section 4.17 – ACECs), the analysis focuses on relevance and importance criteria as a whole and if these criteria would receive adequate protection without special management derived from ACEC designation. The relevant values themselves are not expressly analyzed as an ACEC Section but are included in the discussion of the parent resource (Chapter 4, Section 4.2 – Biological Resources, Section 4.4 – Cultural Resources, Section 4.6 – Paleontological Resources). This analysis is deemed to be sufficient for the authorized officer to make a reasoned choice between the alternatives.

The determinations made with regard to relevance and importance criteria in the ACEC Report (Appendix I of the Draft RMP/Draft EIS, 2011) are explicitly presented in tabular format including the rationale for the determination. Furthermore, Chapter 4, Section 4.17 – ACECs has been modified to explicitly state, as appropriate under each alternative, whether the need for management attention beyond that generally prescribed by that alternative is required over the life of the Plan in order to adequately protect the relevant and important values for each area.

5.5.14.11 Comment (paraphrased):

The RMP should include the following information omitted from the evaluation of the proposed Hopper Mountain ACEC: the area includes one of the last remaining intact stands of black walnut in southern California. This value – coupled with the area's habitat value for California condors – indicates the presence of natural processes or systems (i.e., "rare, endemic or relic plants, or plant communities"). Therefore, the "No" response listed in the Relevance Criteria Determination should be changed to "Yes" to indicate that these values are present in the area, further demonstrating the necessity of designating this area as an ACEC.

Given the importance of area to California condors and the significant impacts drilling has on these critically imperiled species the RMP should modify the preferred alternative in regard to special management of the Hopper Mountain ACEC to close the area to further oil and gas leasing.

Comment Source(s): 220-4, 220-5

Response: The PRMP has been modified to include information regarding the presence of black walnut (Chapter 3, Section 3.17 – ACECs). All federal mineral estate within the Hopper Mountain ACEC is currently under oil and gas lease; therefore, a closure to future leasing would not prevent development under these current leases.

5.5.14.12 Comment (paraphrased):

The RMP should modify the preferred alternative with regard to the boundary of the proposed Bitter Creek ACEC in so that it is slightly enlarged to encompass other adjacent public lands. Specifically, the boundary should be adjusted westward to include the federal surface and mineral estate in T9N R24W and T10N R24W, and northward to include the federal surface and mineral estate in T11N R23W and T11N R24W. These areas are adjacent to the Bitter Creek National Wildlife Refuge, and should be included in the ACEC boundary for the very same reasons that apply to the proposed ACEC. Expanding the boundaries would also ensure connectivity between the Bitter Creek ACEC and the proposed Upper Cuyama Valley ACEC. If the boundary is not enlarged the RMP should contain an explanation as to why these areas were not included in the proposed ACEC.

Comment Source(s): 220-6, 220-7

Response: The PRMP has modified the Bitter Creek ACEC boundary to include all BLM administered surface and mineral estate within the Congressionally Approved Acquisition Boundary for the Bitter Creek National Wildlife Refuge (Chapter 2, Section 2.2.17 – ACECs). There is no BLM administered surface or mineral estate inside the Approved Acquisition Boundary within T9N, R24W and T10N, R24W; and T11N, R23W and T11N, R24W are outside the Approved Acquisition Boundary.

5.5.14.13 Comment (paraphrased):

The RMP should designate public lands within the Tehachapi Mountains as an ACEC, or other appropriate designated, to contribute to the preservation of the Tehachapi Linkage. The existing uses in this area are generally compatible with wildlife movement; however more intensive uses, such as mineral extraction or energy production, are not compatible.

Comment Source(s): 221-7

Response: The PRMP has been modified to address this concern through the identification of the Tehachapi area as an area of ecological importance with appropriate prescriptive management for the preservation of the ecological connection between the southern Sierra Nevada Mountains and foothills, and transverse ranges (Chapter 2, Section 2.2.2 – Biological Resources).

5.5.14.14 Comment (paraphrased):

The RMP should discuss the need for acquisition of private inholdings and adjacent private parcels within the Kaweah ACEC. The acquisitions are needed to ensure the highest protection of Giant Sequoia groves and other important and relevant values.

Comment Source(s): 274-3

Response: The PRMP provides sufficient guidance to facilitate the acquisition of private inholdings from willing sellers within all ACECs and for other resource purposes (Chapter 2, Section 2.2.12 – Lands and Realty).

5.5.14.15 Comment (paraphrased):

If combining the North Fork and Case Mountain areas into a single ACEC the RMP should recognize the distinct difference between the two geographically separate areas.

Comment Source(s): 274-1

Response: The PRMP has been modified to address this concern (Chapter 3, Section 3.17 – ACECs).

5.5.14.16 Comment (paraphrased):

The RMP should consider livestock grazing as a potential management tool in maintaining populations of *Mimulus shevockii* within the proposed Cyrus Canyon ACEC. Livestock grazing has

been a historic use of the area that may have contributed to the continued success of this plant in the area. Furthermore, to provide additional protection for these plant populations OHV trespass routes should be closed at the improved country road.

Comment Source(s): 264-6, 264-7, 269-1, 269-2

Response: The PRMP did consider a range of livestock grazing alternatives for the Cyrus Canyon area which included continued grazing of the general area and excluding the *Mimulus shevockii* populations. Furthermore, no documentation was provided to support the claim that livestock grazing may contribute to the success of this plant in Cyrus Canyon.

The proposed plan alternative of the PRMP has been modified to close many of the routes in this area for the protection of this plant species (Appendix E).

5.5.14.17 Comment (paraphrased):

The public lands in the planning area include some of the last remaining native habitats in the Central Valley. The DRMP itself admits that, "Overall, the trend within the Planning Area is a continued fragmentation, degradation and loss of natural habitats, followed by a reduction in biodiversity" (page 220). It is of critical concern therefore that as much of this remaining habitat is fully protected to help offset the reduced biodiversity. The RMP should modify the preferred alternative to include designation of all the 108,377 acres of ACEC in the 22 area described in Alternative C. In addition the RMP should also designate all "special management areas" that contain special status species habitat as ACECs. Furthermore, the RMP should include clear language allowing for the expansion of each ACEC to encompass any adjacent, suitable lands that may become available.

Comment Source(s): 253-9, 261-57, 261-58

Response: The designation of all areas containing special status species habitat as ACECs would be inconsistent with BLM policy and guidance (BLM Manual 1613) as to be recommended an area must meet three conditions: possess relevant values, meet importance criteria, and require special management attention. The proposed plan alternative of the PRMP has been modified to include additional ACEC acreage (Chapter 2, Section 2.2.17 – ACECs). Language allowing for the expansion of these ACECs, however, has not been included as this evaluation and recommendation for designation of these areas would be subject to site-specific NEPA, public review, and a RMP amendment.

5.5.14.18 Comment (paraphrased):

The RMP should be modified to exclude all livestock grazing from the Kaweah ACEC to protect sensitive biological, geological and cultural resources.

Comment Source(s): 253-9

Response: This comment was presented as a brief request and lacks sufficient detail on which to modify the grazing allocation in the Kaweah ACEC. The alternatives provide a full array of measures to protect sensitive biological, geological and cultural resources; many of which would be implemented on a site-specific level based on a demonstrated need.

5.5.14.19 Comment (paraphrased):

The RMP should ensure that continued access is allow within and across ACECs, specifically Lo-Kern and Compensation Lands ACECs, to access existing facilities and infrastructure. Routes that are the only connection to these facilities and infrastructure should be designated as 'Authorized'.

Comment Source(s): 236-2

Response: Access to private property across public lands, whether within an ACEC or not, requires an authorization. Those routes with such authorization will be designated accordingly as motorized or motorized - authorized. Any routes that have been incorrectly designated in the PRMP will be corrected through a process associated with reviewing these authorizations. Any routes without such authorization that have been designated closed but are needed for continued operations should be brought to BLM's attention through the appropriate authorization request.

5.5.14.20 Comment (paraphrased):

The RMP should be modified to exclude wind energy development from all ACECs, as the required infrastructure to support these developments is larger than the foot-print of the wind turbine alone.

Comment Source(s): 239-6

Response: The PRMP identifies all ACECs as ROW exclusion areas for utility scale renewable energy projects (Chapter 2, Section 2.2.17 – ACECs).

5.5.14.21 Comment (paraphrased):

The RMP should discuss the short- and long- term benefits to watershed health, recreation and preservation of natural and cultural resources, resulting from the additional protection of WSAs and ACECs.

Comment Source(s): 261-60

Response: The PRMP includes brief descriptions of the short and long-term benefits of protective management provided by the alternatives including designation of ACECs (Chapter 4, Section 4.2 – Biological Resources, Section 4.4 – Cultural Resources, Section 4.9 – Water Resources, and Section 4.15 – Recreation). It should be noted that there would be no additional protection from WSAs as the existing condition does not change.

5.5.14.22 Comment (paraphrased):

The ACEC maps in the DRMP are at too large a scale to determine the lands impacts by ACEC expansions. For clarity the RMP should provide smaller scale maps for each ACEC.

Comment Source(s): 227-26

Response: Due to printing and budgetary constraints providing maps with greater detail is not possible; however, electronic sources of the PRMP include boundary maps for ACECs in KML/KMZ (Google Earth) format.

5.5.14.23 Comment (paraphrased):

The RMP should not expand the Piute Cypress ACEC and not apply special management that closes the area to all modes of travel except by foot. It is well documented there is a 700 acre Piute Cypress Grove in the area. Depending, however, on which section of the DRMP one reads the existing Piute Cypress ACEC is 1104 acre (page 107 & 307 DRMP) or 930 acres (page 48 DRMP) and would seem to be sufficient to protect the 700 acre grove. Thus questioning the suitability of expanding the existing ACEC by 1587 acres, which the BLM have erroneously characterized this as a "slight expansion" (DRMP page 92). In reality this more than doubling of this ACEC may just be expanding the ACEC to fit the arbitrary BLM boundary rather than the boundary of the Piute Cypress area. Furthermore, the area is not well suited to foot travel, thus the "special management" essentially closes the area. The area has large elevation changes, no water and is not especially scenic compared to numerous others. Closing the area to motorized, mechanized and equestrian uses shuts down the only access from the Lake Isabella community to the extensive OHV opportunity on Forest Service lands in the Piute Mountains.

Comment Source(s): 227-30, 227-32

Response: The PRMP has been modified to include additional information regarding the locations of newly discovered Piute Cypress groves (Chapter 3, Section 3.17 – ACECs). The proposed plan alternative of the PRMP includes no special management attention related to the restriction of travel within the ACEC (Chapter 2, Section 2.2.17 – ACECs). Routes may be designated as closed or for authorized use based on other resource concerns unrelated to the relevant and important values of the ACEC.

5.5.15 Back Country Byways

5.5.15.1 Comment (paraphrased):

Continue the designation of Canebrake and Long Valley Loop Road as the Chimney Creek Backcountry Byway and maintenance of the road as a Type II Byway (Alternative E). Furthermore, restore access along the road where it crosses private property.

Comment Source(s): 216-2

Response: The BLM has determined it to be infeasible to restore the connectivity of the Long Valley Loop Road during the life of this RMP as is maintenance of this road to the standards of a Type II Byway.

5.5.16 Wild and Scenic Rivers

5.5.16.1 Comment (paraphrased):

The DRMP did not meet its statutory obligation to cooperate with affected state and local agencies (including ACWA members), therefore the associated Wild and Scenic Rivers Suitability Study must be reinitiated so that state and local agencies can participate as full partners.

Comment Source(s): 222-1, 254-2

Response: During the scoping phase for the RMP a number of public notifications including; a Federal Register Notice of Intent; press releases; and individual mailings/emails, indicated the preparation of the RMP and indicated the fact that Wild and Scenic Rivers would be addressed in the document. In addition, open public scoping meetings were held to explain the planning process and involve interested parties in establishing what specific issues the RMP should address. Furthermore, a number of agencies with interests in the planning area were invited to participate in the planning process as a cooperating agency; however, each agency invited declined the opportunity. Additional details on the scoping process and the result of scoping are provided in Chapters 1 and 5. The ample opportunity to raise concerns and efforts made during the scoping phase meet any obligations the agency has in preparing both the RMP and the included Wild and Scenic Suitability Report.

The public comment period on these draft documents (in which this comment was received) provided further opportunity for agency and interested party cooperation in these documents, allowing these entities to specific provide feedback, propose edits and question the specific information included in these documents. These comments are addressed and contribute to the PRMP/FEIS.

5.5.16.2 Comment (paraphrased):

The RMP should consider and clarify the potential impacts on power generation, and those dependent on such power, as a result of proposed wild and scenic river recommendations.

Comment Source(s): 218-1

Response: The RMP analyzed the impacts of its recommendation of all suitable rivers for inclusion in the NWSRS. As part of this analysis specific consideration on impacts to hydroelectric power generation and therefore indirect economic impacts to electricity users was not given, since no action had identifiable impacts on any existing generation facilities, authorizations or valid rights that those involved in power generation may have. Furthermore, reasonably foreseeable actions were considered in this analysis; however there is no knowledge of any reasonably foreseeable actions related to hydroelectric power generation. Even in regard to the San Joaquin River there is no specific information available for potential for hydroelectric power generation associated with BORs feasibility study of Temperance Flat RM274.

With regard to other types of power generation the impact of Wild and Scenic River recommendations and the associated exclusion zone for utility scale renewable energy projects

were fully analyzed. There were however, no reasonably foreseeable actions to be analyzed related to other types of power generation (gas, coal, nuclear etc.).

5.5.16.3 Comment (paraphrased):

The RMP should consider importance of recommending the Lower Kern River for Wild and Scenic designation. The suitability report fails to recognize the value of combining the 3.5 river miles of the lower Kern that are contained within public lands with the 30 miles downstream that are contained on Forest Service lands and already determined suitable by the Forest Service. It simply makes sense to have the entire lower Kern, from Lake Isabella to the mouth of the canyon, under the same Wild and Scenic designation. The report also highlights the significant increase in recreation on this reach. It is exactly because of the significance of this recreational resource that this section of the lower Kern deserves Wild and Scenic protection.

Comment Source(s): 265-2

Response: The proposed plan alternative of the PRMP has been modified to recommend the Lower Kern River for inclusion in the NWSRS (Chapter 2, Section 2.2.21 – Wild and Scenic Rivers). This determination was made based on consideration of the proposed management of the Keyesville SRMA including in the PRMP; which when fully implemented would alleviate that management concerns presented in the suitability report.

5.5.16.4 Comment (paraphrased):

The RMP should include clarification as to how suitable wild and scenic river segments will be managed.

Comment Source(s): 261-52

Response: Information concerning how suitable Wild and Scenic River segments would be managed is included in both Chapter 2, Section 2.2.21 – Wild and Scenic Rivers and Chapter 3, Section 3.21 – Wild and Scenic Rivers.

5.5.16.5 Comment (paraphrased):

The RMP should be modified to include additional information concerning ORVs for the San Joaquin River. There is abundant evidence that the San Joaquin River Gorge Segments 1-2 possess outstandingly remarkable scenic, recreation, educational, cultural, wildlife, botanical, and ecological values. These findings should be recognized in the RMP. Furthermore, the ORVs for this river segment should be consistently identified through the RMP

Comment Source(s): 267-3, 267-8, 272-1

Response: This comment was presented as a brief request and lacks sufficient detail and documentation on which to adjust the PRMP. The PRMP has, however, been modified to consistently identify the ORVs for the San Joaquin River (Chapter 3, Section 3.21 – Wild and Scenic Rivers).

5.5.16.6 Comment (paraphrased):

The RMP should describe attempts to coordinate joint suitability studies and reconsider coordination with the National Park Service and National Forest Service regarding the suitability study of the North Fork of the Kaweah River, East Fork of the Kaweah River, Middle Fork of the Kaweah River, and Lower Kern River. Joint studies should be conducted by all three agencies as indicated in the Caliente ROD, 1997. When jointly studied suitability findings for these rivers may change given the additional federal management capability and resources contributing the ORVs present.

Comment Source(s): 6-2, 267-8, 267-13, 267-14, 267-16, 267-17, 267-21, 267-24, 267-26

Response: The BLM invited both the National Park Service and U.S. Forest Service to cooperate on the Bakersfield RMP, including Wild and Scenic River studies and determinations. Both agencies declined the opportunity to cooperate. As such, the BLM completed suitability determinations in accordance with its land use planning and wild and scenic rivers policies and guidance, without specific coordination with these agencies.

In light of the jurisdictional division (western stream bank BLM, eastern bank NPS) of the North Fork of the River above the section studied and determined suitable in the PRMP, this segment will at some future point undergo a separate eligibility study, and if appropriate suability study.

5.5.16.7 Comment (paraphrased):

Due to the vertical separation between the North Fork of the Kaweah River and North Fork Drive, and the extensive stretch of this river segment boarded by WSA the preliminary category of the river should be change from Recreational to Scenic.

Comment Source(s): 267-10

Response: The PRMP has been modified to change the preliminary category of the North Fork of the Kaweah River to Scenic in light of the restrictions placed on the North Fork recreation sites and the vertical separation between North Fork Drive and the river itself.

5.5.16.8 Comment (paraphrased):

Due to the vertical separation between the East Fork of the Kaweah River and adjacent road, the preliminary category of the river should be changed from Recreational to Scenic.

Comment Source(s): 267-18

Response: The PRMP has been modified to change the preliminary category of the East Fork of the Kaweah River to Scenic in light of the vertical separation between Mineral King Road and the river itself.

5.5.16.9 Comment (paraphrased):

The RMP should clarify the conflict between intensive recreational use of the Keyesville area and recommendation of the Lower Kern River as suitable for inclusion in the NWSRS. Intensive recreation opportunities, including whitewater boating, dispersed camping, recreational mining,

shooting and OHV use, constitute the recreational ORVs and should therefore infer eligibility of the segment.

Comment Source(s): 267-20

Response: The conflict between intensive recreational use and the Lower Kern River recommendation was based on the ability or inability of the BLM to appropriately manage this use while protecting the rivers ORVs. The PRMP makes determination that, in consideration of the proposed management of the Keyesville SRMA, when fully implemented, would be remedy this conflict. As such, the PRMP recommends the Lower Kern River for inclusion in the NWSRS (Chapter 2, Section 2.2.21 – Wild and Scenic Rivers).

5.5.16.10 Comment (paraphrased):

The RMP should afford protection to the 3 mile segment of the San Joaquin River below the Kerkoff Powerhouse. This segment, rich in natural history and equally scenic, is deserving of preservation and should be protected from possible inundation due to enlarging Millerton Reservoir.

Comment Source(s): 267-20

Response: The three mile section of the San Joaquin River below the Kerkoff Powerhouse is withdrawn to BOR and managed by the BLM through a management agreement. As such, the final eligibility/suitability determination should be made cooperatively with BOR. Due to time, budget and staffing restraints this cooperation could not occur; therefore the RMP makes no determinations on this segment of river.

5.5.16.11 Comment (paraphrased):

The RMP should re-evaluate the eligibility of the San Joaquin River, as the eligibility findings appear to be in conflict with the existing conditions along the river and therefore the San Joaquin River does not meet the Criteria for designation. Specifically;

1) The identified segment of the San Joaquin River is not free-flowing. The San Joaquin River has been diverted and dammed since the mid-19th century. Hydroelectric power interests began exploring the San Joaquin River in the late 1890s. Currently, 19 powerhouses and 18 related reservoirs with a total storage capacity of over 1.1 million acre feet (MAF) exist in the upper San Joaquin River basin at and upstream of Friant Dam. (Upper San Joaquin Storage Investigation - Initial Alternatives Information Report, Hydropower Technical Appendix, June 2005 -- U.S. Bureau of Reclamation, California Department of Water Resources, page 2-1.) Because of the extensive existing development in this area, Segment 1 of the San Joaquin River cannot be considered "free-flowing."

2) Segment 1 of the Upper San Joaquin River does not possess any outstandingly remarkable values. First, the visual features of the identified segment of the river are neither notable nor exemplary within this geographic region, particularly since the river has undergone such extensive prior development for hydropower and water storage uses. Second, as residents of the San Joaquin Valley can attest, the recreational opportunities afforded by this remote segment of the river are not unusual enough to attract visitors to the region, nor are visitors

willing to travel long distances to use the river resources for recreational purposes. Third, the geologic features of the identified segment are not unusual or unique; rather, they are commonplace within this region. Fourth, because of the extensive development for hydropower and water storage uses, the area does not produce or contain habitat for resident, indigenous, and/or anadromous fish species. Fifth, the identified segment of the river likewise does not include nationally or regionally important populations of resident or indigenous wildlife species dependent on the river environment, nor does it include exceptionally high quality habitat for wildlife of national or regional significance, unique habitat or a critical link in habitat conditions for State, federally listed, or candidate threatened and endangered species. Finally, the area is devoid of either cultural or historic resources. Consequently, Segment 1 of the San Joaquin River does not possess the requisite outstandingly remarkable values to qualify it for consideration for inclusion within the NWSRS.

Comment Source(s): 222-2, 222-3, 222-4, 222-5

Response: The San Joaquin River was studied for eligibility in accordance with BLM Manual 8351. This includes the determination of whether the studied river segment is in "free-flowing" condition as defined by the Wild and Scenic Rivers Act of 1968. "Free-flowing" condition allows for the existence of small dams, diversion works, or other minor structures and does not require the river to be naturally flowing (i.e., flowing without upstream manipulation). Segment 1 of the San Joaquin River from the base Kerckhoff Dam to Kerckhoff Powerhouse tailrace was studied for eligibility and determined to be in "free-flowing" condition.

The segment of river studied (from the base Kerckhoff Dam to Kerckhoff Powerhouse tailrace) is located in a remote, undeveloped area. Any prior development for hydropower and water storage is not visible from the majority of the studied segment. As such, when considered against other public lands within the geographic region, the scenic quality is both notable and exemplary, indicating an Outstandingly Remarkable Value of Scenic. In addition, based on knowledge of Native American Values in the area the eligibility study found the studied segment of the river to possess an Outstandingly Remarkable Value of Cultural. The presence of these ORVs is sufficient to qualify this segment for consideration for inclusion within the NWSRS.

Based on the findings of the eligibility report the PRMP continues to address suitability of this segment of river and proposed plan alternative recommends the river segment as suitable.

5.5.16.12 Comment (paraphrased):

The RMP should re-evaluate the suitability of the San Joaquin River, as the suitability findings appear to be in conflict with the existing conditions along the river and therefore the San Joaquin River does not meet the Criteria for designation. As designation cannot protect free flowing character and outstandingly remarkable values that do not exist. Furthermore, the DRMP fails demonstrate that BLM gave appropriate consideration to the reasonably foreseeable Temperance Flat RM274 project when evaluating the suitability of Segment 1 for WRS designation. The DRMP lists only potential negatives effects of the Temperance Flat RM 274 Reservoir on ORVs; there is no mention of the projects potential benefits as described in numerous Reclamation and DWR documents. The draft RMP therefore fails to demonstrate the suitability of Segment 1 for inclusion in the NWSRS.

Comment Source(s): 222-6, 222-7, 254-1

Response: The eligibility study on Segment 1 of the San Joaquin River found this river segment from Kerckhoff Dam to Kerckhoff Powerhouse as eligible with both free-flowing character and outstandingly remarkable values.

The suitability report did consider reasonably foreseeable uses of the land and related waters that would be enhanced, foreclosed, or curtailed if the area were included in the NWSRS. This section of the report specifically addresses the Upper San Joaquin River Storage Basin Project; the lack of a published draft or final Proposed Action, however, brings into question "reasonably foreseeable" status of this project. Analysis of projects that are not considered reasonable foreseeable would be speculative at best and are not required by NEPA.

Based on the findings of the eligibility report and suitability study the PRMP continues to recommend to congress the river segment as suitable for inclusion in the NWSRS. This recommendation does not guarantee a final designation and ultimately congress will determine the future of this river segment.

5.5.16.13 Comment (paraphrased):

The RMP should clarify through documentation the assertion that the San Joaquin River Gorge does not possess a recreation ORVs. The implication is that the Gorge is not sufficiently unusual to attract visitors to the geographic region, but no data is provided in support of this inference. Furthermore, the RMP doesn't recognize whitewater kayaking as a significant recreation use of this river.

Comment Source(s): 267-5, 267-6

Response: There is no documentation to support the assertion that the studied segment of the San Joaquin River possesses a recreational ORV. Information regarding recreational use of this segment of river is anecdotal at best and insufficient to document the presence of such an ORV. Information reporting use of the public lands within the San Joaquin River Gorge is provided in Chapter 3, Section 3.15 – Recreation and Visitor Services, but does not necessarily pertain to the river segment itself.

5.5.16.14 Comment (paraphrased):

For the San Joaquin River Gorge the RMP should clarify the region (analysis area) used to establish the ORVs as many of the ORVs are dependent on being important at a regional or national level.

Comment Source(s): 267-7

Response: The region or analysis area used to establish the presence of ORVs for the San Joaquin River Gorge varied based on the resources being evaluated. Further clarification for the eligibility report is not required in order to determine suitability and ultimately for the authorized officer to make a reasoned choice between the alternatives.

5.5.16.15 Comment (paraphrased):

The DRMP claims the need for "flexible" management to deal with potential changes in TES species status then argues that "other administrative protections are more appropriate for protecting the identified values" (RMP pg. 3-28). The plea for flexible management needs clarification.

Comment Source(s): 267-22

Response: Flexible management is required for the segment of the Lower Kern River based on the density of resource values in the area that may at times be in direct conflict e.g., intense recreational use and protection of natural and cultural resources. The management provided by the proposed plan of the PRMP has been determined to adequately address this need and as such the proposed plan alternative includes the recommendation of the Lower Kern River as suitable for inclusion in the NWSRS (Chapter 2, Section 2.2.21 – Wild and Scenic Rivers).

5.5.17 Wilderness and Wilderness Study Areas

5.5.17.1 Comment (paraphrased):

The wilderness boundary signs for the newly acquired Richards/Edgar properties have been installed in the wrong place – too close to the paved road without adequate space for safe public parking. To remedy this situation, a trailhead needs to be established as soon as possible. Furthermore, the wilderness boundary should be moved east to the area of the existing foundations and water well.

Comment Source(s): 23-2

Response: The proposal to move the wilderness boundary is outside the authority of the BLM and would require Congressional intervention. The placement of wilderness boundary signs is beyond the scope of this broad scale RMP as it is an implementation action.

5.5.17.2 Comment (paraphrased):

The designation of new Wilderness Areas in proximity to existing utility corridors facilitates inevitable conflicts between maintenance activities and resource management whilst enabling motorized trespass into Wilderness areas. These concerns could be remedied by the establishment of a half mile “buffer” on either side of existing utility infrastructure between designated Wilderness areas.

Comment Source(s): 195-3

Response: Designation of new Wilderness areas is beyond the authority of the BLM and requires a Congressional/Presidential action, during which consideration is given to wilderness boundaries to determine appropriate access to existing facilities, uses and authorizations. The RMP does not designation any new Wilderness areas.

5.5.18 Social and Economic Considerations

5.5.18.1 Comment (paraphrased):

How did BLM calculate the economic impacts of mineral collecting and mineral exploration and development? Did BLM consider that mineral collectors' contribute to local economies by their exploration activities and collecting? In the information provided in DRMP the economic contribution of mining and mineral collecting is underestimated. There are hundreds of mineral collecting clubs and mining companies operating in California and thousands of mining claims. These individuals and companies spend money to maintain operations and bring income into the adjacent rural communities.

Comment Source(s): 9-4, 13-2, 25-2, 30-2, 33-2, 121-2, 134-13

Response: The BLM utilized the IMPLAN input-output model to estimate the economic contribution from solid mineral (locatable and saleable minerals including recreational prospecting) removal from BLM-administered lands in the Planning Area. The most recent data available for BLM outputs and expenditures (current and reasonable foreseeable) was used to estimate the economic contribution of the BLM programs within the Planning Area, however, consideration of the economic contribution of mining and mineral collecting statewide is outside the scope of this RMP. The economic contribution from solid mineral activity in the RMP Decision Area is described in the PRMP, Chapter 3, Section 3.X.X – Social and Economic Resources (Mining).

The economic contribution from the expenditures of local recreational mineral collectors was not considered since they do not to bring "new money" into local economies as described in Chapter 3, Section 3.23 – Social and Economic Resources (Tourism and Recreation). The contribution of non-local recreational mineral collectors was considered in the tourism and recreation analysis.

5.5.18.2 Comment (paraphrased):

The DRMPs use of $16.40 as the average statewide price per AUM for private land has no relevance to the productivity of public lands, particularly in western Kern County. The RMP should remove this comparison or adjust appropriately.

Comment Source(s): 208-5

Response: The statewide average price per AUM for private land is a statistic from the U.S. Department of Agriculture and is used to illustrate the difference between the value of private grazing lands and public grazing lands with no reference to the productivity of public lands. Productivity differences contribute to the differences in costs that are realized by area ranchers with public land grazing permits or leases (Chapter 3, Section 3.23 – Social and Economic Resources (Livestock Production)).

5.5.18.3 Comment (paraphrased):

The RMP should clarify the statement "this federal land is the least expensive grazing land available, hence use and access is coveted by area ranchers even though additional costs are usually incurred to use these lands." The term coveted is a value laden statement and should be removed from the document. The situation with regard to federal inholdings and the origin of federal ownership should be clearly represented so that ranchers will not be misrepresented.

Comment Source(s): 208-4

Response: The text of the PRMP has been changed in response to this concern (Chapter 3, Section 3.23– Social and Economic Resources (Livestock Production)).

5.5.18.4 Comment (paraphrased):

The DRMP fails to sufficiently document the broad public and economic benefits derived from livestock grazing and from on-site business owners and operators. Livestock grazing is critical in mitigating the potential for wildfires that can cause harm to life, air and property. Experts have also recognized that herding animals play a beneficial role in brittle environment stability and productivity, such as the conditions found on the public land. Cattle hooves break up and loosen crusted soils and trample down old plant parts, thereby creating mulch and an ideal seed bed, allowing water to penetrate. Cattle also fertilize the soil through deposits of urine and manure. Cattle grazing encourages plant diversity when cattle graze down the taller aggressive plants, preventing them from shading out and overpowering more vulnerable plants. The document does not adequately recognize the economic, cultural and community benefits that are accrued from the long-term specialized economies like the cattle ranching business who, in spite of the mounting challenges associated with operating amongst the checker-boarded inholdings of the public lands, manage to produce beef, support the tax base and local economy, participate in the community life and contribute to the continuity and stability of the area.

Comment Source(s): 208-3

Response: The broad public benefits derived from livestock grazing are discussed in terms of non-market value. The PRMP has been modified to incorporate the new approach to estimating the economic contributions of livestock grazing (Chapter 4, Section 4.23 - Social and Economic Resources).

5.5.18.5 Comment (paraphrased):

The socio-economic analysis in the DRMP fails to consider the benefits of ending livestock grazing to the tourism, hunting and recreation sectors, on scarce water resources, and to the wildlife, rare plant, rare habitats and other resources that the no grazing alternative would protect. This deficiency should be rectified in the RMP.

Comment Source(s): 253-8

Response: The text of the PRMP has been changed in response to this concern and addresses the non-market values of the cessation of livestock grazing under Alternative D (Chapter 4, Section 4.23 – Social and Economic Resources).

5.5.18.6 Comment (paraphrased)

The DRMP does not fully explain the impacts on local residence and businesses resulting from restrictions in the Temblor Range on access and route usage. The locals that traverse the lands for off-road fun, hunting, and occasional sightseeing will experience an increased level of discontent if restrictive plans are implemented. In addition, the land receives numerous visitors at a continual rate throughout the year that infuse Taft's local economy through avenues such as hotels, restaurants, convenience stores, and grocery stores. The reduction in legally accessible recreational trails will unmistakably reduce this influx.

Comment Source(s): 232-1

Response: There is no evidence to support a decline in recreational visits to the Temblor area as a result of the management prescribed in the PRMP. Visitation figures are reported Decision Area wife and changes in visitation patterns may result in lower visitation in some areas and higher visitation in others but net gain in visitation (Chapter 4, Section 4.23 – Social and Economic Resources (Recreation)). Chapter 3, Section 3.17 – Recreation and Visitor Services predicts recreational visits field office-wide will increase in a similar rate and fashion throughout the life of the plan as they have in previous years. As such, there is no anticipated impact on Taft's local economy as a result of the proposed management of the Temblor Range.

5.6 Completion of the Planning Process

Release of the Proposed RMP/Final EIS initiates a 30-day protest period for proposed land use plan-level decisions. The 30-day protest period begins on the date the EPA publishes its Notice of Availability (NOA) for the Proposed RMP/Final EIS in the *Federal Register*. During this protest period, any person who participated in the planning process and has an interest that may be adversely affected by approval of the land use plan-level decisions may submit a protest.

Instructions for filing a protest regarding the Proposed RMP/Final EIS are provided in 43 CFR 1610.5-2. A protest may only raise those issues that were submitted for the record during the planning process. Emailed and faxed protests will not be accepted as valid protests, unless the protesting party also provides the original letter by either regular or overnight mail postmarked by the close of the protest period.

After protests are resolved, the BLM California State Director will publish the Approved RMP and Record of Decision. Its availability will be announced through the mailing list, Web site, and regional media.

5.7 List of Preparers

Name	Role/Responsibility
Bureau of Land Management	
Tim Smith	Field Office Manager
Steve Larson	Assistant Field Office Manager (Resources); Socioeconomics
Sue Porter	RMP Project Lead (08/09- present); ACECs; Socioeconomics
Lisa Ashley	Air &Atmospheric Values; Soil Resources; Water Resources
Kim Cuevas	Cultural Resources; Native American Religious Concerns and Consultation; Paleontology
Peter De Witt	Recreation; Comprehensive Trails and Travel Management; Visual Resources; Cave and Karst Resources; Wilderness Characteristics, Special Designations
Karen Doran	Livestock Grazing
Glenn Harris	Air and Atmospheric Values
Denis Kearns	Biological Resources – Vegetation
Amy Kuritsubo	Biological Resources - Wildlife; ACECs
Sue Lopez	Lands and Realty
Jeff Prude	Minerals (oil and gas)
Tracy Rowland	San Joaquin River Gorge Manager
Chris Ryan	Wildland Fire Ecology
Larry Saslaw	Biological Resources – Wildlife
Diane Simpson	Lands and Realty; Renewable Energy
Kent Varvel	Hazardous and Solid Waste
Larry Vredenburgh	GIS and Mapping
Tamara Whitley	Cultural Resources; Native American Religious Concerns and Consultation; Paleontology
Gregg Wilkerson	Minerals; Geology/Paleontology
Katherine Worn	RMP Project Lead (06/08 – 01/09)
Consultants	
Henry Eichman	
Tetra Tech, Inc.	
EMPSi	

6 Chapter Six

6.1 References

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6.2 Glossary

ADAPTIVE MANAGEMENT. A type of natural resource management in which decisions are made as part of an ongoing science-based process. Adaptive management involves testing, monitoring, and evaluating applied strategies and incorporating new knowledge into management approaches that are based on scientific findings and the needs of society. Results are used to modify management policy, strategies, and practices.

AMBIENT AIR. Outdoor air in locations accessible to the general public.

AMBIENT AIR QUALITY STANDARDS. A combination of air pollutant concentrations, exposure durations, and exposure frequencies that are established as thresholds above which adverse impacts on public health and welfare may be expected. Ambient air quality standards are set on a national level by the US Environmental Protection Agency. Ambient air quality standards are set on a state level by public health or environmental protection agencies as authorized by state law.

ANIMAL UNIT MONTH (AUM). The amount forage necessary to sustain one cow or its equivalent for one month. A full AUM’s fee is charged for each month of grazing by adult animals if the grazing animal (1) is weaned, (2) is six months or older when entering public land, or (3) will become 12 months old during the period of use. For fee purposes, an AUM is the amount of forage used in one month by five weaned or adult sheep or goats or one cow, bull, steer, heifer, horse, or mule. The term AUM is commonly used in three ways: (1) stocking rate, as in X acres per AUM, (b) forage allocation, as in X AUMs in allotment A, and (3) utilization, as in X AUMs consumed from Unit B.

ANNUAL PLANT. A plant that completes its life cycle and dies in one year or less.

ACQUIRED LANDS. Lands in federal ownership that were obtained by the government through purchase, condemnation, or gift or by exchange. Acquired lands constitute one category of public lands.

AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC). An area established through the planning process, as provided in the Federal Land Policy and Management Act of 1976, where special management attention is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage to important historic, cultural, or scenic values; or to fish and wildlife resources or other natural systems or processes; or to protect life and afford safety from natural hazards.

AREA OF ECOLOGICAL IMPORTANCE. An administrative delineation of public lands sharing common resources to aid in the management of these resources based on Appendix C, BLM Land Use Planning Handbook H-1601-1 direction to: (1) identify areas of ecological importance for vegetation H-1601-1 and (2) identify ecologically important areas for Special Status Species.

ATTAINMENT AREA. An area that has air quality as good as or better than a national or state ambient air quality standard. A single geographic area may be an attainment area for one pollutant and a nonattainment area for others.

AVOIDANCE AREA. An environmentally sensitive area where rights-of-way may be granted only when no feasible alternative route is available.

BEDROCK MORTAR. An outcrop of bedrock used by Native Americans for processing vegetal materials.

BEST MANAGEMENT PRACTICE (BMP). A suite of techniques that guide, or that may be applied to, management actions to aid in achieving desired outcomes. BMPs are often developed in conjunction with land use plans, but they are not considered a land use plan decision unless the land use plan specifies that they are mandatory. They may be updated or modified without a plan amendment if they are not mandatory (BLM Handbook H1601-1; Glossary).

BIOLOGICAL CRUST. A complex mosaic of living organisms—algae, cyanobacteria (blue-green algae), bacteria, lichens, mosses, liverworts, and fungi—that grow on or just below the soil surface.

CAVE. Any naturally occurring void, cavity, recess, or system of interconnected passages that occurs beneath the surface of the earth or within a cliff or ledge (including any cave resource therein, but not including any mine, tunnel, aqueduct, or other man-made excavation) and that is large enough to serve as habitat for wildlife. Such term includes any natural pit, sinkhole, or other feature that is an extension of the entrance.

CONDITION CLASS. A classification of a vegetation community's variance or departure from historic fire conditions. Fire Condition Classes can be Fire Condition Class 1, representing low departure from a historic fire regime; Fire Condition Class 2, representing moderate departure from a historic fire regime; or Fire Condition Class 3, representing high departure from a historic fire regime.

CONFINE STRATEGY. The strategy employed in response to wildland fire where a fire perimeter is managed by a combination of direct and indirect actions and use of natural topographic features, fuel, and weather factors.

CONTAINMENT. The status of a wildfire suppression action signifying that a control line has been completed around the fire and any associated spot fires, which can reasonably be expected to stop the fire's spread.

CONNECTIVITY. The degree to which habitats for a species are continuous or interrupted across a spatial extent, where habitats defined as continuous are within a prescribed distance over which a species can successfully conduct key activities, and habitats defined as interrupted or outside the prescribed distance.

CRITERIA POLLUTANT. An air pollutant for which there is a national ambient air quality standard. Criteria pollutants are carbon monoxide, nitrogen dioxide, ozone, sulfur dioxide, inhalable particulate matter, fine particulate matter, or airborne lead particles.

CRITICAL HABITAT. Habitat designated by the US Fish and Wildlife Service under Section 4 of the Endangered Species Act and under the following criteria: 1) specific areas within the geographical area occupied by a species at the time it is listed, on which are found those physical or biological features essential to the conservation of the species and that may require special management or protection; or 2) specific areas outside the geographical area of a species at the time it is listed but that are considered essential to the conservation of the species.

CULTURAL RESOURCES. Locations of human activity, occupation, or use. Cultural resources include archaeological, historic, or architectural sites, structures, or places with important public and scientific uses and locations of traditional cultural or religious importance to specific social or cultural groups.

CULTURAL RESOURCES INVENTORY. A procedure to assess the potential presence of cultural resources. There are three classes of surveys:

Class I. An existing data survey is an inventory of a study area to (1) provide a narrative overview of cultural resources by using existing information and (2) to compile existing cultural resources site record data on which to base the development of the BLM's site record system.

Class II. A sampling field inventory designed to locate, from surface and exposed profile indications, all cultural resource sites within a portion of an area so that an estimate can be made of the cultural resources for the entire area.

Class III. An intensive field inventory designed to locate, from surface and exposed profile indications, all cultural resource sites in an area. On completion, no further cultural resources inventory work is normally needed.

CUMULATIVE EFFECTS. The direct and indirect effects of a proposed project alternative's incremental impacts when they are added to other past, present, and reasonably foreseeable actions, regardless of who carries out the action.

DIRECT PROTECTION AREA (DPA). A concept developed by federal and state fire protection agencies to help resolve the management and fiscal complexities of wildland fires burning across intermingled and adjacent areas of state and federal responsibility. Within DPAs, federal and state agencies assume fire protection responsibility for the lands of another agency, along with their own. The agencies also, as nearly as possible, represent the other agencies' interests and objectives; therefore, each agency must recognize, know, and understand each other's mission objectives, policies, and authorities.

DISPOSAL. A transaction that leads to the transfer of title to public lands from the federal government.

DIVERSITY. The relative abundance of wildlife species, plant species, communities, habitats, or habitat features per unit of area.

ECOLOGICAL HEALTH. The degree to which the integrity of the soil and ecological processes of ecosystems are sustained.

ELIGIBLE RIVER SEGMENT. A section of a river that qualifies for inclusion in the National Wild and Scenic Rivers System through determination that it is free flowing and, with its adjacent land area, possesses at least one river-related value considered to be outstandingly remarkable.

ENDANGERED SPECIES. Any species that is in danger of extinction throughout all or a significant portion of its range.

ENVIRONMENTAL ASSESSMENT (EA). A concise public document prepared to provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact. It includes a brief discussion of the need for the proposal, the alternatives considered, the environmental impact of the proposed action and alternatives, and a list of agencies and individuals consulted.

ENVIRONMENTAL IMPACT STATEMENT (EIS). A formal public document prepared to analyze the impacts on the environment of a proposed project or action and released for comment and review. An EIS must meet NEPA requirements, CEQ guidelines, and the directives of the agency responsible for the proposed project or action.

EPHEMERAL STREAM. Stream reaches where water flows for only brief periods during storm runoff.

EROSION. Detachment or movement of soil or rock fragments by water, wind, or gravity. Accelerated erosion is much more rapid than normal or natural or than geologic erosion, primarily as a result of the influence of surface-disturbing activities of people, animals, or natural catastrophes.

EXCHANGE. A transaction whereby the federal government receives land or interests in land in exchange for other land or interests in land.

EXCLOSURE. A fence or other device that completely surrounds a relatively small area, such as a wetland or research plot, to exclude large animals, such as deer, cattle and burros.

EXCLUSION AREA. An environmentally sensitive area where rights-of-way would be granted only in cases where there is a legal requirement to provide such access.

EXTENSIVE RECREATION MANAGEMENT AREA (ERMA). A public lands unit identified in land use plans containing all acreage not identified as a Special Recreation Management Area. Recreation management actions within an ERMA are limited to only those of a custodial nature.

FEDERAL LAND POLICY AND MANAGEMENT ACT OF 1976 (FLPMA). Public Law 94-579 signed by the President on October 21, 1976. It establishes public land policy for managing lands administered by the BLM. FLPMA specifies several key directions for the BLM, notably (1) management on the basis of multiple-use and sustained yield, (2) land use plans prepared to guide management actions, (3) public lands managed for the protection, development, and enhancement of resources, (4) public lands retained in federal ownership, and (5) public participation used in reaching management decisions.

FIRE MANAGEMENT UNIT. A fire planning unit in which preparedness strategies are designed to meet watershed or resource management objectives, designated by logical fire control or containment criteria, such as watershed basins, subbasins, ridgetops, topographic features, roads, or vegetation changes.

FIRE SUPPRESSION. Management action to extinguish all or part of a fire or confine its spread.

FLUID MINERALS. Oil, gas, geothermal resources, carbon dioxide, and coalbed methane.

FORAGE. All browse and herbaceous growth available and acceptable to grazing animals or that may be harvested for feeding. Forage includes pasture, rangelands, and crop aftermath. Feed includes forage, hay, and grains.

GRAZING. Consumption of forage from rangelands or pastures by livestock, wild horses, burros, or wildlife.

GRAZING ALLOTMENT. An area of land where one or more lessees or permittees graze their livestock. The number of livestock and period of use are stipulated for each allotment.

GRAZING PERMIT/LEASE. Official written permission to graze a specific number, kind, and class of livestock for a specified period on a defined rangeland.

GREENHOUSE GAS. A gaseous compound that absorbs infrared radiation and radiates a portion of that back toward the earth's surface, thus trapping heat and warming the earth's atmosphere.

GROUNDWATER. Water beneath the land, in the zone of saturation.

GUZZLER. General term for a natural or artificially constructed structure or device to capture and hold naturally flowing water to make it accessible to small and large animals. Most guzzlers involve aboveground or below ground piping, storage tanks, and valves.

HABITAT. A specific set of physical conditions that surround a single species, a group of species, or a large community. In wildlife management, the major components of habitat are considered to be food, water, cover, and living space.

HABITAT CONSERVATION PLAN (HCP). a comprehensive planning document pursuant to Section 10(a)(2) of the Endangered Species Act that is a mandatory component of an incidental take permit for a project with no federal nexus. (See Multi-Species Conservation Plan.)

HABITAT MANAGEMENT PLAN. A written and approved activity plan for a geographical area that identifies habitat management activities to be implemented in achieving specific objectives of planning decisions.

HAZARDOUS MATERIAL. A substance, pollutant, or contaminant that, due to its quantity, concentration, or physical or chemical characteristics, poses a potential hazard to human health and safety or to the environment if released into the workplace or the environment.

HYDRAULIC FRACTURING. An operation in which a specially blended liquid is pumped down a well and into a formation under pressure high enough to cause the formation to crack open, forming passages through oil can flow to the wellbore.

IMPACT. The effect, influence, alteration, or imprint caused by an action.

INDIAN TRUST ASSETS. Legal interests in property, physical assets, or intangible property rights held in trust by the United States for Indian tribes or individual Indians.

INDICATOR. Components of a system whose characteristics (presence or absence, quantity, distribution) are used as an index of an attribute (e.g., rangeland health attribute) that are too difficult, inconvenient, or expensive to measure.

INTERDISCIPLINARY TEAM. A formation of varied land use and resource specialists providing a coordinated integrated information base for overall land use planning and management.

INVASIVE SPECIES. An alien species whose introduction causes or is likely to cause economic or environmental harm or to harm human health.

KARST. A geologic formation composed of soluble rocks, such as limestone or gypsum, that is often rich in caves.

LAND TENURE. Refers to ownership of a parcel of land. For example, BLM-managed public lands are owned by the United States government for the citizens of the United States.

LEASABLE MINERALS. Those minerals or materials designated as leasable under the Mineral Leasing Act of 1920. They include coal, phosphate, asphalt, sulphur, potassium and sodium minerals, and oil and gas. Geothermal resources are also leasable under the Geothermal Steam Act of 1970.

LITHIC SITE. An archaeological site containing debris left from the manufacture, use, or maintenance of flaked stone tools.

LOCATABLE MINERALS. Minerals or materials subject to claim and development under the Mining Law of 1872, as amended. Generally include metallic minerals, such as gold and silver, and other materials not subject to lease or sale, such as some bentonites, limestone, talc, and some xeolites. Whether a particular mineral deposit is locatable depends on such factors as quality, quantity, mineability, demand, and marketability.

LONG-TERM EFFECT. This could occur for several years after implementation of an alternative.

MAINTENANCE AREA. An area that meets federal ambient air quality standards but that was previously designated as a nonattainment area. Federal agency actions occurring in a maintenance area are still subject to Clean Air Act conformity review requirements.

MECHANICAL WEED TREATMENT. The use of tractors, crawler-type tractors, mowing tools, or specially designed vehicles with attached implements for mechanical vegetation treatments. Treatment types can include burial, tillage, and mowing.

MEMORANDUM OF UNDERSTANDING (MOU). A written "handshake" agreement between the BLM and another entity or entities that confirms the use of cooperative management policies or procedures to provide mutual assistance or to exchange results for the promotion of common endeavors.

MINERAL ENTRY. Claiming public lands (administered by the BLM) under the Mining Law of 1872 for the purpose of exploiting minerals. May also refer to mineral exploration and development under the mineral leasing laws and the Material Sale Act of 1947.

MINERAL MATERIALS. Common varieties of such commodities as sand, building stone, gravel, clay, and moss rock obtainable under the Minerals Act of 1947, as amended.

MINING LAW OF 1872. Provides for claiming and gaining title to locatable minerals on public lands. Also referred to as the General Mining Laws or Mining Laws.

MINERAL WITHDRAWALS. Closure of land to mining laws, including sales, leasing, and location, subject to valid existing rights.

MITIGATION. Alleviation or lessening of possible adverse effects on a resource by applying appropriate protective measures or adequate scientific study. Mitigation may be achieved by avoidance, minimization, rectification, reduction, and compensation.

MONITORING. The timed collection of information to determine the effects of resource management and to identify changing resource conditions or needs.

MULTIPLE USE. Management of the various surface and subsurface resources so that they are jointly used in the manner that will best meet the present and future needs of the public, without permanently impairing the productivity of the land or the quality of the environment.

NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS). The allowable concentrations of air pollutants specified by the federal government. The air quality standards are divided into primary standards (based on the air quality criteria and allowing an adequate margin of safety and requisite to protect the public health) and secondary standards (based on the air quality criteria and allowing an adequate margin of safety and requisite to protect the public welfare) from any unknown or expected adverse effects of air pollutants.

NATIONAL ENVIRONMENTAL POLICY ACT OF 1969 (NEPA). Public Law 91-190. Establishes environmental policy for the nation. Among other things, NEPA requires federal agencies to consider environmental values in decision making.

NATIONAL HISTORIC PRESERVATION ACT (NHPA). The primary federal law providing for the protection and preservation of cultural resources. The NHPA established the National Register of Historic Places, the Advisory Council on Historic Preservation, and the State Historic Preservation Office.

NATIONAL HISTORIC TRAILS. Established to identify and protect historic routes, these follow as closely as possible the original trails or routes of travel of national historic significance.

NATIONAL REGISTER OF HISTORIC PLACES (NRHP). A listing of architectural, historical, archaeological, and cultural sites of local, state, or national significance, established by the Historic Preservation Act of 1966 and maintained by the National Park Service.

NATIONAL RECREATION TRAILS. Established to provide a variety of outdoor recreation uses in or reasonably accessible to urban areas.

NATIONAL SCENIC TRAILS. Established by an act of Congress, these are intended to provide for maximum outdoor recreation potential and for the conservation and enjoyment of nationally significant scenic, historical, natural, and cultural qualities of the areas through which these trails pass. National Scenic Trails may represent desert, marsh, grassland, mountain, canyon, river, forest, and other areas, as well as land forms that exhibit significant characteristics of the physiographic regions of the nation.

NATIONAL WILD AND SCENIC RIVERS SYSTEM (NWSRS). Rivers with outstanding scenic, recreational, geologic, fish and wildlife, historic, cultural, or similar values designated by Congress under the Wild and Scenic Rivers Act of October 2, 1968, for the preservation of their free-flowing condition.

NATIVE SPECIES. A plant or animal species that naturally occurs in an area and was not introduced by humans.

NATURALIZED SPECIES. Those exotic species that are already occurring within defined areas in a self-sustaining wild state.

NONATTAINMENT AREA. An area that does not meet a federal or state ambient air quality standard. Federal agency actions occurring in a federal nonattainment area are subject to Clean Air Act conformity review requirements.

NONNATIVE SPECIES. Those species having originated in a different region and have acclimated to a new environment. Also see, Naturalized species.

NO SURFACE OCCUPANCY (NSO). A mineral leasing stipulation that prohibits occupancy or disturbance on all or part of the lease surface in order to protect special values or uses.

NOXIOUS PLANT (WEED). An unwanted plant specified by federal or state laws as being undesirable and requiring control. Noxious weed refers to any plant that, when established, is highly destructive, competitive, or difficult to control by cultural or chemical practices. Noxious weeds are usually nonnatives and are highly invasive.

OFF-HIGHWAY VEHICLE (OHV) (AKA. OFF-ROAD VEHICLE). Any motorized vehicle capable of, or designed for, travel on or over land, water, or other natural terrain, excluding (1) any nonamphibious registered motorboat; (2) any military, fire, emergency, or law enforcement vehicle being used for an emergency; (3) any vehicle whose use is expressly authorized by an officer or otherwise officially approved; (4) vehicles in official use; and (5) any combat or combat support vehicle being used for national defense.

OFF-HIGHWAY VEHICLE AREA DESIGNATIONS. Administrative designation of public lands as Open, Limited, or Closed for OHV use.

Open—An area where all types of vehicle use is permitted at all times, anywhere in the area, subject to the operating regulations and vehicle standards set forth in 43 CFR, Subparts 8341 and 8342.

Limited—An area restricted at certain times, in certain areas, or to certain vehicular use. These restrictions may be of any type but can generally be accommodated within the following type of categories: numbers of vehicles, types of vehicles, time or season of vehicle use, permitted or licensed use only, use on existing roads and trails, use on designated roads and trails, and other restrictions.

Closed—An area where off-road vehicle use is prohibited. Use of off-road vehicles in Closed areas may be allowed for certain reasons, but such use should be made only with the approval of the authorized officer.

OUTSTANDINGLY REMARKABLE VALUE (ORV). Listed in Section 1(b) of the Wild and Scenic Rivers Act are "scenic, recreational, geological, fish and wildlife, historical, cultural, or other similar values. . . ." Other similar values that may be considered include botanical, hydrological, paleontological, or scientific.

Professional judgment is used to determine whether values exist to an outstandingly remarkable degree. In order for a stream segment to be eligible for inclusion in the National Wild and Scenic Rivers System, it must possess one or more ORV. Guidelines for determining ORVs are found in BLM Manual 8351, Wild and Scenic Rivers—Policy and Program Direction for Identification, Evaluation, and Management.

PALEONTOLOGICAL RESOURCES. The physical remains or other physical evidence of plants and animals preserved in soils and sedimentary rock formations. Paleontological resources are important for correlating and dating rock strata and for understanding past environments, environmental change, and the evolution of life.

PM_{10} (INHALABLE PARTICULATE MATTER). A fractional sampling of suspended particulate matter that approximates the extent to which suspended particles with aerodynamic equivalent diameters smaller than 50 microns penetrate the lower human respiratory tract (tracheo-bronchial airways and alveoli in the lungs). In a regulatory context, PM_{10} is any suspended particulate matter collected from the air by a certified sampling device having a 50 percent collection efficiency for particles with aerodynamic equivalent diameters of 9.5 to 10.5 microns and a maximum aerodynamic diameter collection limit less than 50 microns. Collection efficiencies are greater than 50 percent for particles with aerodynamic diameters smaller than 10 microns and less than 50 percent for particles with aerodynamic diameters larger than 10 microns.

$PM_{2.5}$ (FINE PARTICULATE MATTER). A fractional sampling of suspended particulate matter that approximates the extent to which suspended particles with aerodynamic equivalent diameters smaller than 6 microns penetrate the alveoli in the lungs. In a regulatory context, $PM_{2.5}$ is any suspended particulate matter collected from the air by a certified sampling device having a 50 percent collection efficiency for particles with aerodynamic equivalent diameters of 2.0 to 2.5 microns and a maximum aerodynamic diameter collection limit of less than 6 microns. Collection efficiencies are greater than 50 percent for particles with aerodynamic diameters smaller than 2.5 microns and less than 50 percent for particles with aerodynamic diameters larger than 2.5 microns.

PERENNIAL PLANT. A plant that has a life cycle of three or more years.

PERENNIAL STREAM. A stream that flows throughout the year for many years.

PLANNING AREA. The geographical area for which land use plans and RMPs are developed and maintained. The BKFO planning area encompasses about 17 million acres throughout Kings, San Luis Obispo, Santa Barbara, Tulare, Ventura, Madera, eastern Fresno, and western Kern Counties and includes all lands within the BKFO administrative boundary regardless of jurisdiction or ownership.

PLANNING ISSUES. Disputes or controversies about existing and potential land and resource allocations, levels of resource use, production, and related management practices. Issues include resource use, development, and protection opportunities for consideration in the preparation of the RMP.

POTENTIAL FOSSIL YIELD CLASSIFICATION (PFYC) SYSTEM. A system used by the BLM to classify geologic units based on the relative abundance of vertebrate fossils or scientifically significant invertebrate or plant fossils and their sensitivity to adverse impacts, with a higher class number indicating a higher potential.

PRESCRIBED FIRE TREATMENTS. Any fire ignited by management actions to meet specific objectives. A written, approved, prescribed fire plan must exist, and NEPA requirements (where applicable) must be met before the fire is started.

PRIMITIVE ROAD. A linear route managed for use by four-wheel drive or high-clearance vehicles. Primitive roads do not normally meet any BLM road design standards.

PUBLIC LAND. Any lands or interest in lands (outside of Alaska) owned by the US and administered by the Secretary of the Interior through the BLM. For the purpose of this document, this term refers to BLM-administered surface estate.

RANGELAND. A type of land on which the native vegetation, climax, or natural potential consists predominately of grasses, grasslike plants, forbs, or shrubs. Rangeland includes lands revegetated naturally or artificially to provide a plant cover that is managed like native vegetation.

RANGELAND HEALTH. The degree to which the integrity of the soil, vegetation, water, and ecological processes of the rangeland (land) ecosystem are balanced and sustained. Integrity is defined as maintenance of the structure and functional attributes characteristic of a locale, including normal variability.

RECREATION EXPERIENCES. Psychological outcomes realized either by recreation-tourism participants as a direct result of their on-site leisure engagements and recreation-tourism activity participation or by nonparticipating community residents as a result of their interaction with visitors and guests within their community or interaction with the BLM and other public and private recreation-tourism providers and their actions.

RECREATION OPPORTUNITIES. Favorable circumstances enabling visitors to engage in a leisure activity to realize immediate psychological experiences and to attain more lasting, value-added beneficial outcomes.

RECREATION SETTING CHARACTER CONDITIONS. The distinguishing recreational qualities of any landscape, objectively defined along a continuum, ranging from primitive to urban landscapes, expressed in terms of the nature of the component of its physical, social, and administrative attributes. These recreational qualities can be both classified and mapped. This classification and mapping process should be based on variation that either exists (for example, setting descriptions) or is desired (for example, setting prescriptions) among components of the various physical, social, and administrative attributes of any landscape. The recreation opportunity spectrum is one of the tools for doing this.

RECREATION SETTINGS. The collective distinguishing attributes of landscapes that influence, and sometimes actually determine, what kinds of recreation opportunities are produced.

RECREATION MANAGEMENT ZONE (RMZ). In recreation management, an area with four defining characteristics: (1) it serves a different recreation niche within the primary recreation market, (2) it produces a different set of recreation opportunities and facilitates attaining different experiences and benefit outcomes, (3) it has a distinctive recreation setting character, and (4) it requires a different set of recreation provider actions to meet primary recreation market demand.

REPOSITIONING. A general term for the land tenure adjustment process that includes land exchanges, land sales, jurisdictional transfers to other agencies, and cooperative management agreements and leases.

RESOURCE MANAGEMENT PLAN (RMP). A land use plan that establishes multiple-use guidelines and management objectives for a given planning area.

RESTORATION. The return or recovery of a habitat from a degraded state to its original community structure, natural complement of species, and natural functions.

RIGHT-OF-WAY (ROW). Land authorized to be used or occupied for the construction, operation, maintenance, and termination of a project, pursuant to a right-of-way authorization.

RIPARIAN. Situated on or pertaining to the bank of a river, stream, or other body of water. Normally describes plants of all types that grow rooted in the water table or the subirrigation zone of streams, ponds, and springs.

ROAD. A linear route managed for use by low-clearance vehicles having two or more wheels and that has been improved and maintained by mechanical means to ensure relatively regular and continuous use. (A way maintained strictly by the passage of vehicles does not constitute a road.)

ROADLESS. Refers to the absence of roads that have been constructed and maintained by mechanical means to ensure regular and continuous use.

ROAD MAINTENANCE. Includes blading, brush removal, scarification, gravelling, water barring, spur ditching, establishing low water crossings, seeding, and installing cattle guards and culverts.

RUNOFF. A general term used to describe the portion of precipitation on the land that ultimately reaches streams; may include channel and nonchannel flow.

SALABLE MINERALS. Minerals that may be sold under the Material Sale Act of 1947, as amended. Included are common varieties of sand, stone, gravel, and clay.

SCOPING PROCESS. An early and open public participation process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action.

SEEDING. A vegetation treatment that includes the application of grass, forb, or shrub seed, either by air or from the ground. In areas of gentle terrain, ground applications of seed are often accomplished with a rangeland drill. Seeding allows native species or placeholder species to become established and for disturbed areas to be restored to a perennial-dominated cover type, thereby decreasing the risk of subsequent invasion by exotic plant species. Seeding would be used primarily as a follow-up treatment in areas where disturbance or the previously described treatments have removed exotic plant species and their residue.

SEEPS. Groundwater discharge areas. In general, seeps have less water flow than a spring.

SHORT-TERM EFFECT. The effect occurs only during or within five years after implementation of the alternative.

SOILS. (1) The unconsolidated mineral material on the immediate surface of the earth that serves as the natural medium for the growth of land plants; (2) the unconsolidated mineral matter of the surface of the earth that has been influenced by genetic and environmental factors, including parent material,

climate, topography, all acting over time and producing soil that differs from the parent material in physical, chemical, biological, and morphological properties and characteristics.

SOIL COMPACTION. A decrease in the volume of soil as a result of compression stress.

SPECIAL MANAGEMENT AREA (SMA). A legacy term from the Caliente RMP for an area containing resources or opportunities that warrant a level of mangement narrowly focused on a localized resource or resource use concern. These are carried forward into this RMP in the No Action alternative and affected environment description to provide continuity with the Caliente RMP.

SPECIAL RECREATION MANAGEMENT AREA (SRMA). A public lands unit identified in land use plans to direct recreation funding and personnel to fulfill commitments made to provide specific, structured recreation opportunities (that is, activity, experience, and benefit opportunities). Both land use plan decisions and subsequent implementing actions for recreation in each SRMA are geared to a strategically identified primary market—destination, community, or undeveloped.

SPECIAL RECREATION PERMIT. A permit that authorizes the recreational use of an area and is issued pursuant to the regulations contained in 43 CFR, Subpart 8372, and 36 CFR, Part 71. Under the Land and Water Conservation Fund Act, implemented by these regulations, special recreation permits are required for all commercial use, for most competitive events, and for the individual noncommercial use of special areas where permits are required.

SPECIAL STATUS SPECIES. BLM sensitive species are designated by the State Director under 16 USC, 1536(a)(2). Sensitive species are managed so they will not need to be listed as proposed, threatened, or endangered. They are given the same level of protection as candidate species (BLM Manual 6840).

SPECIES COMPOSITION. The proportions of plant species in relation to the total on a given area. It may be expressed in terms of cover, density, or weight.

SPLIT ESTATE. Lands on which the mineral estate remains with the federal government (BLM), while the surface has been transferred out of the public domain.

STANDARD OPERATING PROCEDURE (SOP). A written procedure or set of written procedures providing direction for consistently and correctly performing routine operations. These written procedures set forth methods expected to be followed during the performance of the particular task.

STANDARDS FOR RANGELAND HEALTH. Expressions of levels of physical and biological condition or degree of function required for healthy lands and sustainable uses; define minimum resource conditions that must be achieved and maintained.

SUITABLE RIVER. A river segment found, through administrative study by an appropriate agency, to meet the criteria for designation as a component of the National Wild and Scenic Rivers System, specified in Section 4(a) of the Wild and Scenic Rivers Act.

SUSTAINABLE DEVELOPMENT. Post-operational land uses that intend to benefit local communities and economies, while ensuring the well being of the environment.

TENTATIVE CLASSIFICATION. During the eligibility phase of a Wild and Scenic Rivers study, stream segments determined to be free flowing and to have at least one ORV are assigned one of three tentative

classifications: Wild, Scenic, or Recreational. Classification is based on the type and degree of human developments associated with the river and adjacent lands as they exist at the time of the evaluation. The principal attributes and management objectives of each category are described in BLM Manual 8351, Wild and Scenic Rivers—Policy and Program Direction for Identification, Evaluation, and Management.

TOTAL DISSOLVED SOLIDS. Salt or an aggregate of carbonates, bicarbonates, chlorides, sulfates, phosphates, and nitrates of calcium, magnesium, manganese, sodium, potassium, and other cations that form salts.

TRADITIONAL CULTURAL PROPERTIES. A cultural property that is eligible for inclusion in the National Register of Historic Places because of its association with a living community's cultural practices or beliefs that (1) are rooted in that community's history and that (2) are important in maintaining the community's continuing cultural identity.

TRAIL. A linear route managed for human power (such as hiking or bicycling), stock (such as horses), or OHVs or for historical or heritage values. Trails are not generally managed for use by four-wheel-drive or high-clearance vehicles.

TRESPASS. Any intentional unauthorized use of public land.

UNDERSTORY. That portion of a plant community growing underneath the taller plants on a site.

UNIQUE GEOLOGIC RESOURCES. The BLM does not have a specific management definition for this term. It is used to highlight geologic resources, such as landmarks, areas of scientific interest, paleontological localities, and cave systems, for planning and management consideration.

UPLAND. Land at a higher elevation than the alluvial plain or low stream terrace; all lands outside the riparian-wetland and aquatic zones.

USE OF WILDLAND FIRE. Management of either wildfire or prescribed fire to meet resource objectives specified in RMPs. Wildland fire may be used to protect, maintain, and enhance resources, consistent with management objectives.

UTILITY CORRIDOR. Tract of land varying in width and forming a passageway through which various commodities, such as oil, gas, and electricity, are transported.

VEGETATION TYPE. A plant community with immediately distinguishable characteristics based on and named after the apparent dominant plant species.

VIEWSHED. The panorama from a given viewpoint that encompasses the visual landscape, including everything visible within a 360-degree radius.

VISUAL RESOURCES. The visible physical features on a landscape, (topography, water, vegetation, animals, structures, and other features) that make up the scenery of the area.

VISUAL RESOURCE INVENTORY (VRI). A process to provide BLM managers with a means for determining visual values. The inventory consists of a scenic quality evaluation, a sensitivity level analysis, and a delineation of distance zones. Based on these three factors, BLM-administered lands are placed into one of four visual resource inventory classes, which represent the relative value of the visual resources.

VISUAL RESOURCE MANAGEMENT (VRM). The inventory and planning actions taken to identify visual resource values and to establish objectives for managing those values and the management actions taken to achieve the visual resource management objectives.

VISUAL RESOURCE MANAGEMENT CLASSES. VRM classes identify the degree of acceptable visual change within a characteristic landscape. A classification is assigned to public lands based on the guidelines established for scenic quality, visual sensitivity, and visibility.

VRM Class I—Preserves the existing characteristic landscape and allows for natural ecological changes only. Includes congressionally authorized areas (wilderness), WSAs and areas approved through the RMP where landscape modification activities should be restricted.

VRM Class II—Retains the existing characteristic landscape. The level of change in any of the basic landscape elements due to management activities should be low and not evident.

VRM Class III—Partially retains the existing characteristic landscape. The level of change in any of the basic landscape elements due to management activities may be moderate and evident.

VRM Class IV—Provides for major modifications of the characteristic landscape. The level of change in the basic landscape elements due to management activities can be high. Such activities may dominate the landscape and be the major focus of viewer attention.

WATERSHED. Topographical region or area delineated by water draining to a particular watercourse or body of water.

WEEDY SPECIES. Any plant growing in an area to the injury of the desired vegetation. See also, Nonnative species.

WETLANDS. Permanently wet or intermittently water-covered areas, such as swamps, marshes, bogs, potholes, swales, and glades.

WILDERNESS. An area formally designated by Congress as a part of the National Wilderness Preservation System.

WILDERNESS CHARACTER. Identified by Congress in the Wilderness Act of 1964, namely, size, naturalness, outstanding opportunities for solitude or a primitive and unconfined type of recreation, and supplemental values, such as geological, archaeological, historical, ecological, scenic, or other features.

WILDERNESS STUDY AREA (WSA). A roadless area that has been inventoried but not designated by Congress and found to have wilderness characteristics, as described in Section 603 of FLPMA and Section 2(c) of the Wilderness Act of 1964.

WILDFIRE. An unplanned ignition caused by lightning, volcanoes, unauthorized and accidental human-caused actions, and escaped prescribed fires.

WILDLAND FIRE. Any nonstructure fire that occurs in the wildland. A general term that includes both prescribed fire and wildfire.

WILDLAND-URBAN INTERFACE (WUI). The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.

WITHDRAWAL. An action that restricts the use of public land and segregates the land from the operation of some or all of the public land and mineral laws. Withdrawals are also used to transfer jurisdiction of management of public lands to other federal agencies.

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Appendices

[1] This Appendix included a complete standalone document in its final version and remains available in published format associated with the Draft RMP/Draft EIS. As such, this document has been removed from the Proposed RMP/Final EIS to reduce redundancy and duplication.

[2] This Appendix included maps that have been relocated to the body of the PRMP/FEIS in Chapter 2 – Alternatives.

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Appendix A

Air and Atmospheric Values

Appendix A- Air and Atmospheric Values

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A.1 Introduction

Air quality indicators include air pollutant concentration and air quality related values (AQRV) such as visibility. This RMP addresses air quality within the Planning Area, focusing on BLM activities and programs in the Decision Area that potentially effect air quality and result in changes from the existing situation.

The Planning Area is divided into five air basins that are generally grouped by similar geographic and meteorological conditions. Air basins within the Planning Area include the San Joaquin Valley Air Basin, the Mojave Desert Air Basin (eastern Kern County part), South Central Coast Air Basin, and small portions of the North Central Coast Air Basin (Monterey County) and the Great Basin Valley Air Basin (Inyo County) (Map 3.1). The majority of the Decision Area occurs within the San Joaquin Valley Air Basin and the eastern portion of Kern County, in the Mojave Desert Air Basin. In Monterey County, BLM manages the federal mineral estate under Camp Roberts. Surface management of lands in the Inyo County portion of the Planning Area is the responsibility of the U.S. Forest Service. Regulatory oversight authority for air quality matters rest at the local level with various air districts (see Table.3.1-1.), at the state level with the California Air Resources Board (CARB), and at the federal level with the U.S. Environmental Protection Agency (EPA), Region IX. Air resource laws and national air quality regulations are summarized below:

Federal Land Policy and Management Act of 1976, 43 U.S.C. §§1701-1785. This Act outlines the BLM's role as a multiple use land management agency and provides for management of the public lands under principles of multiple use and sustained yield. Congress' policy objective is to manage the public lands "in a manner that will protect the quality of…air and atmospheric… values." The Act specifically calls for the periodic and systematic inventory of public land resources by directing the Secretary to "maintain on a continuing basis an inventory of all public lands and their resource and other values (including, but not limited to, outdoor recreation and scenic values)." The Act also calls on the Secretary to "provide for compliance with applicable pollution control laws, including State and Federal air, water, noise, or other pollution standards or implementation plans" in the development and revision of land use plans. The Act further directs the Secretary of the Interior to take any action necessary to prevent unnecessary or undue degradation of the lands.

Clean Air Act of 1955, 42 U.S.C. §§ 7401-7671q. One of the purposes of the Clean Air Act is to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population. The Act focuses on reducing both criteria air pollutants and hazardous air pollutants, and designates EPA as the primary regulatory authority responsible for air quality (including visibility) management. Compliance and enforcement of these Federal requirements may be delegated to applicable Tribal, State and local regulatory agencies. The Clean Air Act also allows these agencies to establish regulations which are more, but not less, stringent than the Federal requirement. As required by the Clean Air Act, EPA has established National Ambient Air Quality Standards (NAAQS), as presented in Table 3-1-2. Primary standards are set at the level required to protect human

health with an "adequate margin of safety" and must safeguard the public as a whole. Secondary standards are set at the level that protects public welfare, which is defined to include all forms of environmental damage, including but not limited to effects on visibility, water, soil, and climate. Areas which persistently exceed the NAAQS are designated as nonattaiment, and must implement programs to reduce air pollution and achieve the standards. Maintenance areas are former nonattainment areas, and must implement programs to assure continuing achievement of the standards.

In order to prevent all areas to be allowed to deteriorate up to the level of the NAAQS, the Clean Air Act includes provisions for the Prevention of Significant Deterioration (PSD). A classification system was established identifying allowable amounts of additional air quality degradation (increments) which would be allowed above legally established baseline levels. PSD Class I areas have the greatest limitations, with a very limited amount of additional degradation allowed. Mandatory federal PSD Class I areas were identified in the Clean Air Act, primarily large national parks and wilderness areas (as of August 7, 1977) and cannot be redesignated. The remainder of the nation (outside nonattainment and maintenance areas) was designated as PSD Class II areas, where moderate deterioration and controlled growth is allowed. The Clean Air Act also established procedures by which PSD Class II areas could be redesignated as Class I, or as Class III, where a greater amount of deterioration would be allowed. To date, very few PSD Class II tribal lands have been redesignated as Class I, and no areas have been redesignated as Class III. In addition to establishing the PSD increments, the U.S. Congress established the National Visibility Goal of “the prevention of any future, and the remedying of any existing impairment of visibility, in mandatory class I areas which impairment results from manmade air pollution.” PSD Class I areas in and around the Planning Area include:

- Kaiser Wilderness Area;
- Yosemite National Park;
- John Muir Wilderness Area;
- Kings Canyon National Park;
- Sequoia National Park;
- Dome Land Wilderness Area;
- San Rafael Wilderness; and
- Minarets Wilderness Area.

Additional mandatory PSD Class I areas occur outside the Planning Area, but within 75 km of the FO boundary (refer to Map 3.6); these include Pinnacles Wilderness Area, Ventana Wilderness, Hoover Wilderness Area, Emigrant Wilderness Area, San Gabriel Wilderness, and Cucamonga Wilderness. Most lands in mandatory PSD Class I visibility protection areas are managed by the National Park Service and the U.S. Forest Service. BLM does not currently have or anticipate any stationary sources subject to PSD review in the Decision Area. There are no major stationary sources within 50 km of these Class I areas.

The Clean Air Act section 118(a) requires that each agency and employee of the Federal government comply with all Federal, State, interstate, and local requirements, administrative

authority, and process and sanctions respecting the control and abatement of air pollution in the same manner, and to the same extent as any nongovernmental entity. The Clean Air Act also authorizes the EPA to assess civil penalties against federal agencies for violations of the Act or its implementing regulations. The BLM, as a Federal land manager, has an "affirmative responsibility to protect the air quality and related values (including visibility)" of a PSD Class I area that it administers, and to consider whether a proposed major emitting facility will have an adverse impact on those values. The BLM has a responsibility to consider potential air quality impacts on the public lands through the New Source Review permitting process, especially within mandatory federal PSD Class I areas. Any project that is anticipated to result in emissions that constitute a "major source" would be reviewed for potential impacts to sensitive receptors, including mandatory Class I areas. This would be completed at the site-specific NEPA stage

The BLM also has a responsibility to conduct General and Transportation Conformity analyses (and when applicable, issue formal Determinations) prior to conducting or approving activities within designated nonattainment or maintenance areas. Certain public land uses on BLM-administered lands may require an air quality permit from the State or local air pollution control district (APCD). Compliance with applicable State law should be a term and condition of the BLM's authorization.

A.2 National Air Quality Regulations

The Clean Air Act gives EPA the authority to establish regulations, policy, and guidance to protect air quality. Relevant requirements are found in Title 40 (Protection of Environment) of the Code of Federal Regulations, Parts 50 through 52.

National primary and secondary ambient air quality standards. 40 CFR 50.1 to 50.14

The National primary and secondary ambient air quality standards are set forth in this part. National primary ambient air quality standards define levels of air quality necessary, with an adequate margin of safety, to protect the public health. National secondary ambient air quality standards define levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. Such standards are subject to revision, and additional primary and secondary standards may be promulgated as necessary to protect the public health and welfare.

Prevention of significant deterioration of air quality. 40 CFR 51.166

Establishes emission limitations and other necessary measures to prevent significant deterioration of air quality, based on Class I or II incremental increases above legally defined baseline values, applicable to construction (or modification) of major stationary sources within attainment or unclassifiable areas. The Federal Land Manager responsible for management of Class I areas have "an affirmative responsibility to protect the air quality related values (including visibility) of any such lands and to consider, in consultation with the Administrator, whether a proposed source or modification would have an adverse impact on such values."

Protection of Visibility. Purpose and applicability. 40 CFR 51.300

Assures reasonable progress toward meeting the national goal of "preventing any future, and remedying any existing, impairment of visibility in mandatory Class I Federal areas which impairment results from manmade air pollution." This addresses visibility impairment in two principal forms: ``reasonably attributable'' impairment (i.e., impairment attributable to a single source/small group of sources) and regional haze (i.e., widespread haze from a multitude of sources which impairs visibility in every direction over a large area).

Inspection/Maintenance Program Requirements. Vehicle coverage. 40 CFR 51.356

Employee- and agency-owned vehicles which are operated within an I/M program area shall be tested, regardless of whether the vehicles are registered in the State or local I/M area, except for visiting agency, employee, or military personnel vehicles for a period not to exceed 60 calendar days per year. Proof of compliance (certificate) is required.

Transportation conformity. Implementation plan revision. 40 CFR 51.390

Proposed federal transportation projects (direct or authorized) within designated nonattainment or maintenance areas must analyze (and may be required to conduct a formal Determination process) in order to demonstrate the project would: (1) comply with an implementation plan's purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards, and achieving expeditious attainment of such standards; and (2) assure that such activities will not: (a) cause or contribute to any new violation of any standard in any area; (b) increase the frequency or severity of any existing violation of any standard in any area; or (c) delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

General conformity Prohibition. 40 CFR 51.580

No department, agency or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license or permit, or approve any activity which does not conform to an applicable implementation plan. This includes payment of necessary fees. Within designated nonattainment or maintenance areas, the Federal agency must make a determination that general Federal actions conform to the applicable implementation plan in accordance with the requirements of this subpart before the action is taken (see Transportation Conformity above.)

Prevention of significant deterioration of air quality. 40 CFR 52.21

Requires written notification to a Federal land manager: 1) if a state wants to redesignate lands under their jurisdiction, and allows adequate opportunity for federal comments and recommendations; or 2) upon receipt of any permit application for a new (or modified) proposed major stationary source which may affect a Class I area. The federal land manager may: 1) determine a proposed source would have an adverse impact on the air quality-related

values (including visibility) even if the PSD Class I increments are not exceeded; or 2) determine a proposed source would not have an adverse impact on the air quality-related values (including visibility) even if the PSD Class I increments would be not exceeded. In the first case the permit application would be denied, and in the second case the permit application could be processed.

Implementation plans Violation and enforcement. 40 CFR 52.23

Failure to comply with any approved regulatory provision of an implementation plan, or with any permit condition or permit denial, or with any permit limitation or condition, shall render the person or governmental entity to be in violation and subject to enforcement action.

Criteria Pollutants

Criteria pollutants are defined as those pollutants for which the federal and state governments have established air quality standards, or criteria, for concentrations in order to protect public health. The federal National Ambient Air Quality Standards (NAAQS) include both primary and secondary standards for several "criteria pollutants." The primary standards are designed to protect human health with an adequate margin of safety. The secondary standards are designed to protect property and ecosystems from the effects of air pollution. Ambient air is the air that is accessible to the general public, and may not include areas inside fenced industrial areas, or buildings (like factories). Under the federal CAA, NAAQS are established by the EPA. NAAQS have been established for seven criteria pollutants: ozone, respirable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), carbon monoxide, nitrogen dioxide, sulfur dioxide, and lead. These standards are used to classify all areas as to whether they are in attainment, nonattainment, or unclassified for any of the NAAQS. The State of California has established California Ambient Air Quality Standards for the same federal criteria pollutants, plus an additional 3 pollutants (hydrogen sulfide, sulfates, and visibility reducing particles). Current federal air quality standards are indicated on the EPA website http://www.epa.gov/air/criteria.html. State ambient air quality standards are provided on the CARB website at http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.

Air pollutants covered by federal and state ambient air quality standards can be categorized by the nature of their toxic effects as follows:

- Irritants (such as ozone, particulate matter, nitrogen dioxide, sulfur dioxide, sulfate particles, and hydrogen sulfide) that affect the respiratory system, eyes, mucous membranes, and skin;
- Asphyxiants (such as carbon monoxide and nitric oxide) that displace oxygen or interfere with oxygen transfer in the circulatory system, affecting the cardiovascular and central nervous systems;
- Necrotic agents (such as ozone, nitrogen dioxide, and sulfur dioxide) that directly cause cell death; or

- Systemic poisons (such as lead particles) that affect a range of tissues, organs, and metabolic processes.

Air quality is affected by both the amount and location of pollutant emissions and by meteorological conditions that influence movement and dispersal of pollutants. Atmospheric conditions, such as wind speed, wind direction, and air temperature gradients, along with local topography, provide the link between air pollutant emissions and air quality. Air pollution generally refers to additional chemical compounds, gases and particulates that may have been added to the air. Pollutant sources can be from vegetation (biogenic, geological (geogenic), or man caused (anthropogenic). Pollution can also be classified as to the category of the emissions source. The two major categories of emissions are mobile sources and stationary sources. Mobile sources include on-road automobiles and trucks, off highway vehicles (OHV), aircraft, trains, construction equipment and recreational vehicles. Stationary sources include point sources such as large stack emissions from industrial sources and power generation, and area sources which represent an accumulation of many small point sources over a larger area.

Specific monitoring protocols, known as reference (or equivalent) methods, must be followed to determine compliance with NAAQS and California AAQS. CARB and regional air districts perform regulatory monitoring throughout the State of California for CO, NO_2, O_3, PM_{10} and $PM_{2.5}$. Generally, CARB monitors smaller districts in the state. Within the Planning Area, regulatory monitoring is conducted primarily by the San Joaquin Valley Unified Air Pollution Control District (APCD), San Luis Obispo County, Santa Barbara County, and Ventura County APCDs. Descriptions of air quality indicators that are monitored and their effects follow:

- Carbon Monoxide (CO): CO is essentially inert to plants and materials but can have significant effects on human health because it combines readily with hemoglobin and thus reduces the amount of oxygen transported in the bloodstream. Effects on humans range from slight headaches to nausea to death.

  The major sources of carbon monoxide are combustion processes, such as fuel combustion in motor vehicles and industrial processes, agricultural burning, prescribed burning, and wildfires. Motor vehicles and other internal combustion engines are the dominant source of CO emissions in most areas. High CO levels develop primarily during winter when periods of light winds combine with ground-level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. CO is also created during refuse, agricultural, and wood stove burning, and by some industrial processes.

  Carbon monoxide is a public health concern because it combines readily with hemoglobin in the blood and thus reduces the amount of oxygen transported to body tissues. Relatively low concentrations of carbon monoxide can significantly affect the amount of oxygen in the bloodstream because carbon monoxide binds to hemoglobin 200 to 250 times more strongly than oxygen. Both the cardiovascular system and the central nervous system can be affected when 2.5 to 4.0 percent of the hemoglobin in the blood is bound to carbon monoxide rather than to oxygen. Because of its low

chemical reactivity and low solubility, indoor carbon monoxide levels usually are similar to outdoor levels.

- Lead (Pb): The primary historical source of lead emissions has been the use of leaded gasoline in motor vehicles, as well as certain industrial sources. Because leaded gasoline has been phased out of use, the processing of metals containing trace amounts of lead is now the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturing plants. The effects of lead exposure include brain and other nervous system damage, and children exposed to lead are especially at risk.

- Nitrogen Dioxide (NO_2): Oxides of nitrogen, including nitric oxide (NO) and NO_2 are formed when naturally occurring atmospheric nitrogen and oxygen are combusted with fuels in automobiles, power plants, industrial processes, as well as home and office heating. At high exposures, NO_2 causes respiratory system damage of various types, including bronchial damage. Its effects are displayed by increased susceptibility to respiratory infection and lung function changes. Within the atmosphere, NO_2 may be seen as reddish-brown haze, and also contributes to visibility impacts in distant sensitive areas. NO_2 (and other NOx compounds) also form nitric acid, a component of atmospheric deposition (e.g., acid rain.).

- Ozone (O_3): Ozone is not emitted directly, but is formed by a photochemical reaction of precursor air pollutants emitted into the atmosphere. Ozone precursors, which include VOC and NOx, react in the atmosphere in the presence of sunlight to form ozone. The ozone precursors VOC and NOx are emitted by mobile sources and by stationary combustion equipment. Ozone is produced year-round, but because photochemical reaction rates depend on the concentrations of NOx and VOC, as well as the intensity of ultraviolet light and air temperature, ozone concentrations are generally greatest during the summer in urban areas. Ozone concentrations can be elevated in winter snow-covered rural areas. Ozone is a severe eye, nose, and throat irritant. Ozone is a potent oxidant that increases susceptibility to respiratory infections and may cause substantial damage to vegetation (leaf discoloration and cell damage) and other materials (attacking synthetic rubber, textiles, paints, etc).

  Common fuel combustion sources include fuel combustion in motor vehicles, fuel combustion in industrial processes, agricultural burning, prescribed burning, and wildfires. Combustion processes are the major source of emissions for nitrogen oxides.

- Particulate Matter: Particulate matter includes PM_{10} (inhalable particles and aerosols less than 10 microns in diameter) and $PM_{2.5}$ (fine particles and aerosols less than 2.5

microns in diameter). The combustion sources tend to produce smaller particulates (less than 5µ) while fugitive sources tend to produce larger particles (larger than 5µ).

- PM_{10}: Particulate matter (PM_{10}) impacts include deposition (soiling), localized visibility reduction, potential corrosion, and health effects from particulate matter which is small enough to reach the lungs when inhaled. PM_{10} emissions are generated by a variety of sources including agricultural activities, industrial emissions, and road dust suspended by vehicle traffic. Within the planning area, primary sources of PM_{10} include smoke from wildland and prescribed fire, residential wood burning, street sand, physically disturbed soils, and unpaved road dust.
- $PM_{2.5}$: Fine particulate matter (smaller-sized $PM_{2.5}$) poses the greatest health concern because it can pass through the nose and throat and get deep into the lungs. However, $PM_{2.5}$ emissions are primarily generated by internal combustion and diesel engines, high slit/clay content soils, and secondary aerosols formed by chemical reactions in the atmosphere. $PM_{2.5}$ also contributes to visibility impacts in distant sensitive areas.

The major emission source categories for suspended particulate matter include combustion sources (fuel combustion in motor vehicles and industrial processes, agricultural burning, prescribed burning, and wildfires); soil disturbance by construction equipment, recreational and other vehicles and equipment; mining and other mineral extraction activities; and wind erosion from exposed soils and sediments. Suspended particulate matter is also formed by the types of atmospheric chemical reactions that produce ozone and acidic compounds.

The physical and chemical composition of suspended particulate matter is highly variable, resulting in a range of public health concerns. Many components of suspended particulate matter are respiratory irritants. Public health concerns for suspended particulate matter focus on the particle size ranges likely to reach the lower respiratory tract or the lungs. Inhalable particulate matter (PM_{10}) represents particle size categories that are likely to reach either the lower respiratory tract or the lungs after being inhaled. Fine particulate matter ($PM_{2.5}$) represents particle size categories likely to penetrate to the lungs after being inhaled. The “10” in PM_{10} and the “2.5” in $PM_{2.5}$ are not upper size limits but refer to the particle size range collected with 50 percent mass efficiency by certified sampling devices; larger particles are collected with lower efficiencies, and smaller particles are collected with higher efficiencies.

In addition to public health impacts, suspended particulate matter causes a variety of material damage and nuisance effects: abrasion; corrosion, pitting, and other chemical reactions on material surfaces; soiling; and transportation hazards due to visibility impairment.

- Sulfur Dioxide (SO_2): Sulfur dioxide is a colorless gas having a pungent odor. Prolonged exposure to high levels of SO_2 can lead to respiratory failure, and plays an important

role in the aggravation of chronic respiratory illnesses such as asthma. SO_2 is emitted primarily from stationary sources which burn fossil fuels (i.e.; coal and oil) containing trace amounts of elemental sulfur. Other sources of SO_2 include metal smelters and petroleum refineries. SO_2 is also emitted on occasion from natural sources such as volcanoes. In the atmosphere, SO_2 converts to sulfuric acid, a component of atmospheric deposition (acid rain), as well as forming secondary aerosols, thus contributing to visibility impacts in distant sensitive areas.

Nitrogen and Sulfur Compounds: Other air pollutants of interest include nitrogen compounds such as particulate nitrate (NO_3), nitric acid (HNO_3) and ammonium (NH_4), and sulfur compounds such as particulate sulfate (SO_4) and sulfur dioxide (SO_2). Although monitoring of these air pollutants typically does not adhere to reference methods, these concentration data contribute to our understanding of air quality.

- Volatile Organic Compounds (VOC): VOCs include a variety of chemicals, some of which may have adverse health effects. Concentrations of many VOCs are consistently higher indoors than outdoors. VOCs are emitted from thousands of products, including paints, cleaning supplies, pesticides, building materials, office equipment, glues and permanent markers (EPA, 2009; http://www.epa.gov/iaq/voc.html).

Air pollutant concentration usually refers to the mass of pollutant present in a volume of air and is often reported in units of micrograms per cubic meter (µg/m3). Concentration may also be reported on a volume basis as parts per million or parts per billion (ppb). Air pollution concentration monitoring networks in the Planning Area and statewide include the State & Local Air Monitoring System (SLAMS), ozone and Photochemical Assessment Monitoring Stations (PAMS), Tribal monitoring networks, and the Clean Air Status & Trends Network (CASTNet). SLAMS stations are located in urban areas and measure “criteria pollutants”. The SLAMS network stations are operated by respective air districts in the Planning Area to establish compliance with regulatory concentration standards. Monitoring stations are listed and mapped on the ARB website at http://www.arb.ca.gov/adam/netrpt/. CASTNet stations are located in remote areas and measure concentrations of compounds that are of interest to ecosystem health. The status of CASTNet monitoring stations and their locations are indicated at http://java.epa.gov/castnet/epa_jsp/sites.jsp.

Emissions inventory data from these monitoring networks are utilized to determine if areas meet federal standards (NAAQS). These standards are used to classify all areas as to whether they meet (attain) or exceed (nonattainment) the thresholds established for these pollutants. Based on current EPA designations, the pollutants of concern in the Planning Area are 8-hour Ozone, PM 10, and PM 2.5 (Table 3.1-3.). For analysis purposes, the RMP air resource analysis focuses on nonattainment pollutant emissions. The remaining criteria pollutants are either unclassified, or in attainment with NAAQS in the Planning Area.

Hazardous Air Pollutants

Hazardous air pollutants (HAPs) are those pollutants that are known or suspected to cause cancer or other serious health problems, such as chronic respiratory disease, reproductive disorders or birth defects. The EPA has classified 189 air pollutants as HAPs, including formaldehyde (CH_20), benzene, toluene, ethyl-benzene, xylene, and n-hexane. Air quality programs based on regulation of hazardous substances typically address chemicals used or produced by limited categories of industrial facilities. Programs regulating HAPs focus on substances that alter or damage the genes and chromosomes in cells (mutagens), substances that affect cells in ways that can lead to uncontrolled cancerous cell growth (carcinogens), substances that can cause birth defects or other developmental abnormalities (teratogens), substances with serious acute toxicity effects, and substances that undergo radioactive decay, resulting in the release of ionizing radiation. Federal air quality management programs for HAPs focus on setting emission limits for particular industrial processes rather than setting ambient exposure standards. Federal emission standards for HAPs have been promulgated as National Emission Standards for Hazardous Air Pollutants (NESHAPS) and as Maximum Available Control Technology (MACT) standards. The NESHAPS and MACT standards are implemented through federal and state air quality permit programs.

A.3 Expected Emissions

Projected Ozone, PM_{10} and $PM_{2.5}$ emissions were modeled using the following calculations:

Calculation of Emissions from Energy Development

As part of the inventory provided by the ARB there is information on the methodology used to estimate the inventory data. The ideal would be to have actual measurements of all sources. In reality this is impossible. As a result, much of the information is generated from models. The general equation for emission estimation is:

E = A x EF x (1-ER/100)
where:
E = emissions,
A = activity rate,
EF = emission factor, and
ER= overall emission reduction efficiency, %.

ER is further defined as the product of the control device destruction or removal efficiency and the capture efficiency of the control system. When estimating emissions for a long time period (e. g., one year), both the device and the capture efficiency terms should account for upset periods as well as routine operations.

An emission factor is a representative value that attempts to relate the quantity of a pollutant released to the atmosphere with an activity associated with the release of that pollutant. These factors are usually expressed as the weight of pollutant divided by a unit weight, volume,

distance, or duration of the activity emitting the pollutant (e. g., kilograms of particulate emitted per metric ton of coal burned). Such factors facilitate estimation of emissions from various sources of air pollution. In most cases, these factors are simply averages of all available data of acceptable quality, and are generally assumed to be representative of long-term averages for all facilities in the source category (i. e., a population average).

The calculation of estimated emission from oil and gas development is a complicated process. There is no set formula that allows one to crank in numbers of expected wells and have an expected emission to pop out the end number. EPA and a number of others indicate that the best data comes from direct measurements of emissions from a source. Data exists on measurements taken from the various operations associated with oil and gas production. The USEPA lists the following steps in Oil and Gas operations: Exploration and production, Processing, Combustion, Storage and transport. Each of these steps consists of a number of variable components. As an example, production consists of site preparation, mobilization, drilling, testing, finishing, demobilization, equipment installation and pumping. Each of these components is further broken down into jobs such as development of access if necessary, heavy equipment for pad prep if necessary, support vehicle use and so on. There are many variables in the process including what size of drill is necessary and the design of the drill rig and its power source. The state ARB lists 66 different engines and emissions for drill rigs. There are emission factors for various types of valves (which average 15 per site). The BLM data indicates that most of the wells would be in shallow formations where little site preparation is necessary and the drilling normally only takes 2 to 4 days.

At the RMP planning stage most of the specific information that would be inputs to models is unknown. As result, BLM has chosen to use existing inventory data and apply percentage change to achieve an estimate of expected emissions. The baseline BLM emissions (Table A-1) came from the use of the State ARB emission inventory multiplied by the percentage of the total active wells that were BLM. The percentage of active wells came from a combination of the state DOGGR and BLM well data.

Table A-1
Existing Inventory Data for Criteria Pollutants (California ARB, DOGGR & BLM)

Activity (Source)	Pollutant	Total Emissions from Inventory (tons/year)	Emissions from BLM (tons/year)	% of Total Inventory	Location (Air District)	Notes
Oil and Gas Production in the Planning Area	NOx	4916.55	373.386	7.6%	SJVAPCD	
	SOx	876	68.01	7.8%		
	ROG	14877.4	1230.54	8.27%		
	PM_{10}	846.85	60.971	7.2%		
	$PM_{2.5}$	839.5	60.971	7.2%		

NOx	1171.65	25.01053	2.13%	San Luis Obispo & Santa Barbara South Central Coast	This area is classified "attainment" for all criteria pollutants.
SOx	2876.2	3.37041	0.12%		
ROG	1934.5	33.73732	1.74%		
PM_{10}	127.75	1.01105	7.2%		
$PM_{2.5}$	109.5	1.01105	7.2%		
NOx	131.4	10.86678	8.27%	VCAPCD	
SOx	32.85	2.41484	7.35%		
ROG	1306.7	69.1248	5.29%		
PM_{10}	14.6	1.20742	8.27%		
$PM_{2.5}$	14.6	1.20742	8.27%		

Currently there are 7259 (December 2011) active wells on BLM in the plan area. BLM currently approves approximately 360 new applications for permit to drill per year. The proposed action is projected to result in an estimate of 4,000 wells over the next 10 year period, or an average of 400 wells per year. This would result in 40 new wells which is an increase of 0.55% beyond the current baseline of 7259 wells. The number of wells authorized has varied considerably over the last 20+ years. An analysis of data contained in the Public Lands Statistics shows that over the last 5 years, of the wells approved, 89% were drilled and 50% became producing wells in the inventory. During the last 28 years, the data also shows that the oil production has remained nearly static from federal lands. Based upon the data, BLM believes that the estimate of emissions as a result of the proposed action, which is based on approvals, is likely overestimated. It should be noted that not all wells authorized in a given year are drilled in the same calendar year, and some never get drilled. Based upon existing estimates for oil and gas development, the proposed action to approve an additional 40 new wells per year would generate an estimated 0.34 tons per year of PM_{10} emissions and 2.06 tons of NOx per year in the San Joaquin Valley Air Basin, and 0.007 tons per year of PM_{10} and 0.06 tons per year of NOx in the Ventura County nonattainment area. Oil and gas emissions estimates are provided in Table A-2.

Table A-2
Projected BLM and Total Emissions by Criteria Pollutant

Pollutant	Total Emissions from Inventory (tons/year)	Emissions from BLM (tons/year)	% Increase Expected on BLM	Projected Emissions increase over baseline from BLM	Location (Air District)	Notes
NOx	4916.55	373.3	0.55%	2.057507	SJVAPCD	Non-attainment for Ozone, $PM_{2.5}$; Maintenance for PM_{10}
SOx	876	68.01		0.374762		
ROG	14877.4	1230.54		6.779193		
PM_{10}	846.85	60.971		0.335975		
$PM_{2.5}$	839.5	60.971		0.335975		
NOx	1171.65	25.01053	0.55%	0.05988	San Luis Obispo & Santa Barbara South Central Coast	This area is classified "attainment" for all criteria pollutants
SOx	2876.2	3.37041		0.018572		
ROG	1934.5	33.73732		0.185906		
PM_{10}	127.75	1.01105		0.005571		
$PM_{2.5}$	109.5	1.01105		0.005571		
NOx	131.4	10.86678	0.55%	0.05988	Ventura Co	Non-attainment for 8 hour ozone
SOx	32.85	2.41484		0.013307		
ROG	1306.7	69.1248		0.380905		
PM_{10}	14.6	1.20742		0.006653		
$PM_{2.5}$	14.6	1.20742		0.0066533		
				0.0066533		

Calculation of emissions from unpaved roads

From USEPA AP-42 (11.2.2 Fugitive sources Unpaved road dust.) http://www.epa.gov/ttnchie1/ap42/. The Emissions factors are estimated with the following equation:

Emissions=$K(s/12)(S/30)(W/3)^{0.7}(w/4)^{0.5}$ (d/365) Emissions are in lbs of PM (<30 microns)
Where K =5.9 for lbs/VMT (VMT = vehicle miles traveled)
s = Silt content of road surface
S = Vehicle Speed (default is 30 mph)
w = number of wheels
W = Vehicle weight in tons
d = number of dry day per year where there is <0.01 inches of rain

Calculations:

s = 5 to 15% (from USEPA) used **10%**
S = 30 mph
w = 2 for motorcycles and 4 for others recreation vehicles (like ATVs, 4x4 and buggies)

W = 0.23 for motorcycles (460 lbs with rider) 0.4 for ATVs (800 lbs w/rider) and 2.5 for others (5,000 lbs)
d = 325 40 days with rain (from USEPA AP-42 figure 11.2.1-1)

Motorcycles:

$E=5.9(10/12)(30/30)(0.23/3)^{0.7}(2/4)^{0.5}(325/365)$ E = 0.513 lbs PM per VMT

ATVs

$E=5.9(10/12)(30/30)(0.4/3)^{0.7}(4/4)^{0.5}(325/365)$ E = 1.068 lbs PM per VMT

Other recreation vehicles

$E=5.9(10/12)(30/30)(2.5/3)^{0.7}(4/4)^{0.5}(325/365)$ E = 3.853 lbs PM per VMT

The BLM travel management alternatives represent a reduction in the number of designated routes; this is consistent with the local APCD attainment strategies for PM and ozone which recognize that mobile source emission reductions will be achieved by implementing land use policies that reduce vehicle miles traveled (refer to Table A-3 below).

Table A-3
Emissions of PM, PM_{10} and $PM_{2.5}$ by Alternative for Unpaved Roads

	Miles of Road	VMT (miles X 10)[1]	Emission Factor	Emissions PM TPY	Emissions [2] PM_{10} TPY	Emissions [3] PM2.5 TPY	% change
Alternative A (existing)	1,895	6,317	0.513 (MC)	1.6	0.6	0.06	
		6,317	1.068 (ATV)	3.4	1.2	0.12	
		6,317	3.853 (other)	12.2	4.4	0.44	
		Total		**17.2**	**6.2**	**0.62**	**0%**
B	1,589	5,297	0.513 (MC)	1.4	0.5	0.0	
		5,297	1.068 (ATV)	2.8	1.0	0.1	
		5,297	3.853 (other)	10.2	3.7	0.4	
		Total		14.4	5.2	0.5	-16.1%
C	656	2,187	0.513 (MC)	0.6	0.2	0.0	
		2,187	1.068 (ATV)	1.2	0.4	0.0	
		2,187	3.853 (other)	4.2	1.5	0.2	
		Total		5.9	2.1	0.2	-65.4%
D	656	2,187	0.513 (MC)	0.6	0.2	0.0	
		2,187	1.068 (ATV)	1.2	0.4	0.0	
		2,187	3.853 (other)	4.2	1.5	0.2	
		Total		5.9	2.1	0.2	-65.4%
E	1,683	5,610	0.513 (MC)	1.4	0.5	0.1	
		5,610	1.068 (ATV)	3.0	1.1	0.1	
		5,610	3.853 (other)	10.8	3.9	0.4	
		Total		15.2	5.5	0.5	-11.2%

Note 1. ARB uses factor of 10 vehicles/day Mileage assigned 1/3 each to Motorcycles, ATV and other
2. From AP-42 factor = 0.36 for PM_{10}
3. From AP-42 factor = 10% of PM_{10} for $PM_{2.5}$

A.4 Conformity Determination

Section 176(c) of the Clean Air Act requires federal agencies to ensure that actions undertaken in nonattainment or maintenance areas are consistent with the Clean Air Act and with federally enforceable air quality management plans. The EPA has promulgated separate rules that establish conformity analysis procedures for highway/mass transit projects (40 CFR Part 93, Subpart A) and for other (general) federal agency actions (40 CFR Part 93, Subpart B). General conformity requirements are potentially applicable to many federal agency actions but apply only to those aspects of an action that involve ongoing federal agency responsibility and control over direct or indirect sources of air pollutant emissions.

The EPA conformity rule establishes a process that is intended to demonstrate that the proposed federal action:

- Would not cause or contribute to new violations of federal air quality standards;
- Would not increase the frequency or severity of existing violations of federal air quality standards; and
- Would not delay the timely attainment of federal air quality standards.

The EPA general conformity rule applies to federal actions occurring in nonattainment or maintenance areas when the total direct and indirect emissions of nonattainment pollutants (or their precursors) exceed specified thresholds. The conformity rule applies to BLM management proposed in five federal nonattainment areas and one federal maintenance area. The emission thresholds that trigger requirements of the conformity rule are called *de minimis* levels (refer to Table 3.1-4). Emissions associated with stationary sources that are subject to permit programs incorporated into the SIP are not counted against the *de minimis* threshold.

Compliance with the conformity rule can be demonstrated in several ways. Compliance is presumed if the net increase in direct and indirect emissions from a federal action would be less than the relevant *de minimis* level. If net emissions increases exceed the relevant *de minimis* value, a formal conformity determination process must be followed. Federal agency actions subject to the general conformity rule cannot proceed until there is a demonstration of consistency with the SIP through one of the following mechanisms:

- By dispersion modeling analyses demonstrating that direct and indirect emissions from the federal action will not cause or contribute to violations of federal ambient air quality standards;
- By showing that direct and indirect emissions from the federal action are specifically identified and accounted for in an approved SIP;
- By showing that direct and indirect emissions associated with the federal agency action are accommodated within emission forecasts contained in an approved SIP;
- By showing that emissions associated with future conditions will not exceed emissions that would occur from a continuation of historical activity levels;

- By arranging emission offsets to fully compensate for the net emissions increase associated with the action;
- By obtaining a commitment from the relevant air quality management agency to amend the SIP to account for direct and indirect emissions from the federal agency action; or
- In the case of regional water or wastewater projects, by showing that any population growth accommodated by such projects is consistent with growth projections used in the applicable SIP.

BLM utilizes a ten-step process for demonstrating conformance with applicable SIPs. These ten steps are: (1) Determine spatial and jurisdiction applicability, (2) Describe SIP status and content, (3) Develop any necessary background information, (4) Develop air quality impact analysis, (5) Compare activity to applicable SIP provisions and rules, (6) Develop conclusion statement, (7) Prepare a formal determination, (8) Conduct an agency/public review, (9) Submit the determination to appropriate regulatory agencies and (10) Archive the results. Steps 1-6 have been completed as part of this EIS. In accordance with (40 CFR 93.153 (b) (1&2)), Steps 7-10 of this process will not be completed since total emissions are less than *de minimis* levels.

SIPs are not single documents; rather they are compilations of new and previously submitted plans, programs (such as air quality monitoring, modeling, permitting, etc.), district rules, state regulations, and federal emission controls. Although SIPs are limited to measures necessary to attain NAAQS, SIP provisions and commitments are federally enforceable. In California, local APCDs and/or regional air quality management districts are responsible for developing the overall attainment strategy in their respective geographic areas. The ARB compiles air quality plans for nonattainment areas into the SIP submitted to EPA. Many of California's air quality plans rely on the same core set of control strategies, including emission standards for motor vehicles and stationary internal combustion engines, fuel regulations, and limits on emissions from consumer products. The ARB California SIP webpage includes links to each plan by pollutant and nonattainment area (http://www.arb.ca.gov/planning/sip/sip.htm).

CFR Title 40, Chapter I, Part 52, Subpart F, Section 52.220, lists all the items and elements included in the California SIP. The control measures in ARB's State Strategy (adopted September 27, 2007) target passenger vehicles, trucks, construction equipment, agricultural equipment, goods movement, fuels, recreational vehicles and boats, and pesticides (refer to Appendix H of California's 2007 SIP). A comprehensive list of measure descriptions in the State Strategy is available at http://www.arb.ca.gov/planning/sip/2007/2007sip.htm. Existing district and statewide emission inventories for air basins within the Planning Area were utilized by BLM to determine applicable emission source categories. Areas meeting NAAQS are not required to prepare SIPs. Attainment areas within the Planning Area include Inyo and Monterey Counties; no emission inventories were reviewed for these attainment areas.

Each implementation plan includes emission inventories and identifies source categories and control measures that bring actions into conformance with attainment or maintenance strategies. During SIP development air quality data, emissions inventory, and computer

modeling results are evaluated to determine the rules and programs needed to reach federal standards by specific deadlines. Rules and programs are then implemented to reduce unhealthful pollutant concentrations. BLM management actions and authorized activities must comply with all permitting requirements of the respective air district, including current controls (e.g. Rules and Regulations). Comprehensive rule lists by air district are available on line at http://www.arb.ca.gov/drdb. Applicable district control measures and rules are summarized by SIP below.

Existing SIPs were evaluated in determining the conformance of BLM management activities associated with four broad categories of emissions: 1) energy development (oil and gas, non-energy minerals); 2) vehicle use on unpaved roads; 3) wildland fire ecology and fuels management; and 4) livestock grazing. The applicable implementation plans include the *San Joaquin Valley Air Pollution Control District 2007 Ozone Plan*, the *San Joaquin Valley Air Pollution Control District 2007 PM_{10} Maintenance Plan and Request for Redesignation*, the *San Joaquin Valley Air Pollution Control District 2008 $PM_{2.5}$ Plan*, and the *Ventura County Air Pollution Control District FINAL Ventura County 2007 Air Quality Management Plan*. Some anticipated BLM emissions contribute to larger source categories, as identified in existing emission inventory data. Examples of applicable source categories include Oil and Gas Production, Oil and Gas Production (Combustion), and Miscellaneous Processes such as Construction and Demolition, Paved Road Dust, Unpaved Road Dust, Fugitive Windblown Dust, Fires (to a limited extent), On-Road Motor Vehicles, and Other Mobile Sources. The SIPs deemed applicable are summarized below.

San Joaquin Valley Air Pollution Control District 2007 Ozone Plan

Based on the ARB 2009 Almanac of Emissions and Air Quality, air quality in the San Joaquin Valley air basin shows a dramatic improvement. Ozone levels in the San Joaquin Valley have decreased approximately 10% since 1990 (ARB 2009). Improved air quality is indicated by air quality data and emissions inventories, grouped by source categories. Emission inventories are used to develop control strategies; determine effectiveness of permitting & control programs; provide input into various models (ambient receptor, aerosol, photochemical, and statistical models); and to fulfill reasonable further progress (RFP) requirements.

EPA designated and classified the SJVAB as serious nonattainment for the federal 8-hour ozone standard, effective June 15, 2004. As a serious area, the SJV is required to attain the standard as expeditiously as practicable, but no later than June 15, 2013. Although this is the first SJV plan to address 8-hour ozone, the SJVAPCD has adopted ozone plans in the past. Although the 1-hour ozone standard was revoked by EPA in 2005, the SJVAPCD continues to implement control measures identified and contained in the *Extreme Ozone Attainment Demonstration Plan* (adopted October 8, 2004). Control measures cannot be removed from the SIP solely because of revocation, and the measures included in the 1-hour ozone plan will also contribute to the District's 8-hour ozone strategy.

Consistent with CAA Section 182(c)(2)(A) requirements, federally approved photochemical modeling was completed by the San Joaquin Valley APCD for attainment planning(refer to

Chapter 3 and Appendix F of the *2007 Ozone Plan*). These modeling results are utilized to develop a corresponding control strategy

Since ozone is formed by a chemical reaction with NOx or VOCs, there is no ozone emission inventory. As such, the control strategy for ozone requires emission inventory for NOx and VOCs. The *2007 Ozone Plan* calls for a 75% NOx reduction (already reduced by nearly 50% as of plan date). NOx reductions will be achieved by implementing regulatory measures for mobile & stationary sources. Regulatory measures are expected to reduce NOx by 61% in 2023; the remaining 14% reduction would come from incentives and the deployment of advanced technologies. Full plan implementation will reduce VOC emissions by 25% through regulatory measures. As the plan is implemented, over 50% of Valley's population will see attainment in 2015; over 90% of the Valley's population is expected to reach attainment in 2020.

Improvements in air quality are the result of effective reductions resulting from over 500 district and state rules and rule amendments, including NSR and ISR. However, since 80% of Valley's total NOx emissions are from mobile sources, the bulk of necessary emission reductions must come from state and federal control measures for mobile sources. Mobile source emissions will be reduced by implementing land-use and transportation policies that reduce vehicle miles traveled. Continued reduction of mobile source emissions is critical to the plan's success and the San Joaquin Valley ability to meet NAAQS for ozone (and PM 2.5).

Beyond the 500 plus rules and amendments, innovative programs to reduce mobile source emissions are detailed in Chapter 8 of the *2007 Ozone Plan*. All local control measures proposed in the *2007 Ozone Plan* will be adopted before 2012; the plan addresses the 8-hour ozone standard. Examples of these programs include Green Contracting, Expanded Spare–the-Air, Employer based trip reduction, Heat Island Mitigation, Alternative Energy Production, Energy Conservation, Enhanced ISR, and Advanced Emission Reduction Options (AERO).

San Joaquin Valley Air Pollution Control District 2007 PM_{10} Maintenance Plan and Request for Redesignation

The PM attainment strategy focused on reducing directly emitted PM_{10} and NO_x. Measures implemented in *2003 PM_{10} Plan* presented the attainment strategy by December 31, 2010. The SJVAPCD has adopted all control measure commitments identified in the amended *2003 PM_{10} Plan* (refer to Appendix B, *2007 Maintenance Plan*). Adopted measures resulted in a decline in PM_{10} air pollution in the San Joaquin Valley. The *2006 PM_{10} Plan* re-evaluated the Valley's control strategy with updated emission inventory, air quality monitoring data and air quality modeling. The *2006 PM_{10}* Plan updated the 2003 modeling analysis protocol and confirmed the strategy to attain the PM_{10} NAAQS before the 2010 deadline. The modeling protocol follows EPA revised guidance and can be found in the *Amended 2003 PM_{10} Plan*, Appendix K.

PM_{10} emissions decreased, in spite of substantial population growth and vehicle miles traveled. Valley's improvement in PM_{10} air quality was due to permanent and enforceable emission reductions achieved through District & ARB Rules & Regulations. In 2006, EPA issued a Final Rule and verified through Federal Register notice all monitors in the San Joaquin Valley attained

the PM_{10} NAAQS. Maintenance of the standard is expected to continue as a result of other plan control measures and reductions; for example, the *SJVAPCD 2008 $PM_{2.5}$ Plan* (proposed) will also lower PM_{10} emission inventories in the future.

The *2007 PM_{10} Maintenance Plan* includes an attainment emissions inventory, maintenance demonstration & verification of continued attainment by modeling 10 years out. The plan also includes detailed conformity calculations and evaluates future emissions growth and control up to 2020. For conformity purposes, the (motor vehicle) emissions budget for PM_{10} includes regional entrained dust from travel on paved and unpaved roads, vehicular exhaust, and road construction (Sec 93.122(d)(2) of 40 CFG Part 51, Subpart T requires that PM_{10} from construction related fugitive dust be included in the regional PM_{10} emission analysis). The PM_{10} Maintenance Plan provides for continued attainment through 2030, and is likely to exceed the life span of our RMP. Continued attainment will be verified through Annual Reports (per the 2007 Ozone Plan, Ch. 5).

As identified in the SJVAPCD *PM_{10} Maintenance Plan*, compliance with Regulation VIII will adequately reduce PM_{10} emissions associated with BLM management actions and program activities. The current control measures established and implemented to reduce PM_{10} emissions apply to construction equipment, vehicles, and unpaved road dust.

San Joaquin Valley Air Pollution Control District 2008 $PM_{2.5}$ Plan (proposed March 13, 2008)

The CAA requires states to attain the 1997 $PM_{2.5}$ standard beginning in 2010, and no later than April 5, 2015. The *2008 $PM_{2.5}$ Plan* (proposed March 13, 2008) builds upon the *2007 Ozone Plan* and focuses on the strategy to attain the 1997 $PM_{2.5}$ standard. In 2006 EPA revised the 24-hr standard for $PM_{2.5}$ (from 65mg/m3 in 1997 to 35 mg/m3); as a result, a SIP for the 2006 $PM_{2.5}$ standard is due to EPA in 2012-2013. Additional actions to meet the revised $PM_{2.5}$ standard will accelerate compliance with the ozone standard. The ozone control strategy to attain 8-hr NAAQS is determined to include NOx emissions reductions close to what are needed for $PM_{2.5}$ standards; aligning of $PM_{2.5}$ and ozone efforts will ensure that resources are used efficiently and effectively.

The *2008 $PM_{2.5}$ Plan* analyzes a comprehensive and exhaustive list of regulatory and incentive based measures to reduce ozone precursor emissions throughout the San Joaquin Valley and identifies new controls for further $PM_{2.5}$ and precursor (NOx & SOx) reductions. The $PM_{2.5}$ control strategy includes regulatory control measures for stationary sources, incentive based strategies, and innovative programs, in conjunction with local, state, and federal partnerships. The SJVAPCD currently manages agricultural burning, prescribed burning, and residential wood burning to avoid adding smoke emissions when meteorological conditions are unfavorable. The *2008 $PM_{2.5}$ Plan* further proposes measures (trip reduction, green contracting, and enhanced Indirect Source Review) to provide additional mobile source emissions reductions.

$PM_{2.5}$ levels have been decreasing since monitoring began in 1999 through District emission controls. Air quality improvement is challenging in the SJV, made more difficult by population

growth that comes with inherent emissions increases and jurisdictional limits that restrict the comprehensiveness of regional efforts. In spite of these challenges, the *2008 $PM_{2.5}$ Plan* indicates that the SJV complied with 24-hr standard, based on data from 2004-2006. Improvements in air quality have resulted from the regulation of agricultural operations, residential fireplace use, and stringent limits on engines, boilers, turbines, furnaces, etc. Such reductions are deemed a major accomplishment, given a 37% population increase over the same time period.

The *2008 $PM_{2.5}$ Plan* estimates that in 2011, 71% of the San Joaquin Valley's population resides in areas that meet federal standards. Analysis of modeling results and control measures (as of 2008 plan date) shows the SJV can attain the annual $PM_{2.5}$ NAAQS by 2014. Modeling approaches are consistent with EPA guidance and utilize an annual emission inventory (SIP planning projections). The EPA list of suggested $PM_{2.5}$ control measures is included in Chapter 6 and is detailed in Appendix I of the *2008 $PM_{2.5}$ Plan*; most federal control measures have corresponding District equivalents. Since 80% of NOx emissions come from mobile sources (heavy-duty diesel trucks), this requires additional reduction from mobile sources, under state & federal agency jurisdiction.

State control measures include Expanded Off-Road Recreational Vehicle Emissions Standards; Vapor Recovery for Above Ground Storage Tanks; Cleaner In-Use Heavy Duty Truck and Off-Road Equipment; Heavy Duty truck idling limits; Carl Moyer Program reductions; and passenger vehicle and truck measures in the Adopted 2007 State Strategy. Local $PM_{2.5}$ control measures that are relevant to BLM activities and programs include Indirect Source Review (ISR); existing Indirect Source Mitigation; Boilers, Steam Generators and Process Heaters; and Prescribed Burning and Hazard Reduction Burning.

Ventura County Air Pollution Control District Final Ventura County 2007 Air Quality Management Plan

Local, State and federal control programs together have resulted in dramatic improvements in ozone air quality over the last 20 years. The number of federal 8-hour exceedance days in Ventura County decreased 85 percent between 1988 and 2006. Ambient concentrations declined about 30 percent during this same period. Existing control programs were expected to reduce the Ventura County's ROG and NOx emissions by about eight and ten percent, respectively, by the year 2010. Emissions trends and the ambient trends both indicate that ROG and NO_x precursors have decreased over time; these decreases have resulted in improved ozone air quality. These trends are expected to continue improving with implementation of South Coast and statewide emissions control strategies.

Ventura County is currently classified as a Moderate nonattainment area for the federal 8-hour ozone standard and has a nominal attainment date of June 15, 2010. CAAA Section 181(b)(3) allows federal nonattainment areas to voluntarily reclassify (bump up) to higher nonattainment classifications (e.g., from moderate to serious). This provision gives areas additional time to attain if they are doing everything practicable to attain but are not able to do so by their

statutory attainment dates. The Ventura County Air Pollution Control District requested a reclassification ("bump up") to Serious, with an attainment date of June 15, 2013. Section 182(c)(2)(A) of the federal CAAA requires that moderate and above ozone nonattainment areas attain the federal 8-hour ozone standard by specific dates based on their ozone nonattainment designations. Moreover, serious and above ozone nonattainment areas, including Ventura County, must use a photochemical grid model to show attainment. The photochemical modeling protocol is provided in Appendix D of the 2007 AQMP.

Based on photochemical modeling and supporting analyses, Ventura County can expect to reduce its design value to 0.084 ppm and attain the federal 8-hour ozone standard by 2013. Attainment by 2013 can be projected because emissions estimates and ambient precursor data show that both ROG and NO_x have declined, demonstrating the effectiveness of past emissions reductions. In addition, emissions estimates indicate a continued decline in precursor emissions over the next decade. The emissions inventory indicates that the adopted measures from ARB's mobile source program will provide emissions reductions beyond those needed for Ventura County's RFP demonstration. Specifically, the Oil & Gas Production emission inventory category forecasts a decline in ROG through 2012 although NO_x emissions are expected to be fairly consistent. Detailed analysis indicates furthermore that existing rules meet the state CAA "every feasible measure" requirement.

Current control measures identified in the Ventura County Air Quality Management Plan (AQMP) for ozone that are applicable to BLM management activities include Boilers, Steam Generators and Heaters; Crude Oil Storage Tank Degassing Operations; Vapor Recovery for Above Ground Storage Tanks; Soil Decontamination Operations; and Managed Burning and Disposal. In addition, a new rule under development will address the control of VOCs from oil wells prior to repair work in Ventura County. Unlike other district attainment emissions projections, Ventura County's include growth factors for livestock waste (range).

Conclusion

Calculated emissions for the activities proposed in the PRMP indicate that total direct and indirect emissions from BLM management and activities are below *de minimis* threshold values. As a result, no conformity determination is required. The BLM's projected emissions do not exceed any air quality standards, and are not expected to contribute substantially to an existing air quality violation, or result in a cumulatively considerable net increase of any criteria pollutant for which a geographic area is designated non-attainment. Furthermore, estimated emissions are not anticipated to conflict with or obstruct implementation of applicable air quality plans.

Table A.4
Summary of BLM projected emissions for oil and gas production and vehicle travel on unpaved roads compared to applicable Clean Air Act General Conformity *de minimis* threshold values (tons per year).

Activity (Source)	Location (Air Basin)	Pollutant	Projected Emissions Increase over Baseline from BLM (tons/year)	Applicable CAA *de minimis* Threshold Value(s) (tons/year)
Oil and Gas Production	San Joaquin Valley	NO_x	2.058	10
		SO_x	0.375	10
		ROG	6.779	10
		PM_{10}	0.336	100
		$PM_{2.5}$	0.336	100
	South Central Coast San Luis Obispo & Santa Barbara Counties	NO_x	0.060	100
		SO_x	0.019	100
		ROG	0.186	100
		PM_{10}	0.006	100
		$PM_{2.5}$	0.006	100
	Ventura County	NO_x	0.060	50
		SO_x	0.013	50
		ROG	0.381	50
		PM_{10}	0.007	100
		$PM_{2.5}$	0.007	100
Vehicle Use on Unpaved Roads	San Joaquin Valley	PM_{10}	2.55	100
		$PM_{2.5}$	0.255	100

A.5 Air Resources Management Plan

A.5.1 Purpose

The purpose of this air resources management plan is to address air quality issues identified by the Bureau of Land Management (BLM) in its analysis of potential impacts to air resources for the Bakersfield Resource Management Plan (RMP). This plan outlines the specific requirements for managing air resources and authorizing activities that have the potential to adversely impact air resources within the Bakersfield Field Office Planning Area.

A.5.2 Air Quality Issues

The BLM based its identification of air quality issues on the following information:

- Current ambient air quality in portions of the Planning Area exceeds National Ambient Air Quality Standards (NAAQS) for ozone and $PM_{2.5}$.
- Designated nonattainment areas for ozone and $PM_{2.5}$ occur within the Planning Area.
- Majority of the Planning Area is a designated maintenance area for PM_{10}.

- The entire Planning Area is a designated maintenance area for CO.
- Historic and continued development of fluid mineral resources, based on the Reasonably Foreseeable Development (RFD) Scenario for Oil and Gas (Appendix M), and projected levels and locations of development identified in Chapters 3 and 4 of the Proposed RMP/ Final Environmental Impact Statement.

A.5.3 Magnitude of Emissions

Existing emissions inventories, maintained by regional air pollution control districts, and the California Air Resources Board (CARB) statewide emissions inventory were compiled for the Planning Area. In conjunction with Public Land Statistics (PLS) well and production data and the California Division of Oil, Gas, and Geothermal Resources (CDOGGR) state well inventory, these emissions inventories were used to determine the extent and magnitude of BLM's total air pollutant emissions and to compare emissions between alternatives. Emissions were calculated using conservative assumptions; air emissions from oil and gas activities assume that all of the potential development identified in the RFD will occur. The RFD is based upon known geologic conditions, current development technology, and industry-provided data about future planned development. Future pricing and economic or technical viability of geologic plays were not taken into account. Assumptions regarding the use of air emission control technologies were also very conservative. For example, air emissions from drilling activities assume a mixture of Tier 1 – Tier 3 diesel engines. However, it is likely that significant emissions reductions will occur over the life of the plan as a result of existing regulatory measures and controls, and may be further reduced through the use of alternative drilling technologies.

As a result, the compiled air emissions inventory represents the emission of air pollutants based on best available but very speculative information for future development projections. It is very likely that emissions inventory over-estimates projected future emissions due to the conservative assumptions used. However, it is valid for contrasting the impact of management actions and strategies on air resources among alternatives. It is also useful for identifying those activities that are likely to be major contributors to increased air emissions and developing management actions to minimize their impact to air resources.

Despite the limitations of the air emissions inventory, it supports the following conclusions:

1. For the management actions and activities analyzed, oil and gas development activities are the major contributor to total air emissions;
2. Comprehensive trails and travel management activities (vehicle use on unpaved roads) are the major contributor to particulate emissions; and
3. There is not a substantial difference in total air emissions among alternatives.

The reason there is not a substantial difference in total air emissions among alternatives is the result of several factors:

- The RFD scenario for oil and gas does not vary by alternative.
- Oil and gas development in the Planning Area is primarily focused in discrete areas, mainly in existing oil and gas fields that have been developed and produced for 50-100 years. The constraints placed on oil and gas development under all alternatives to protect other resources do not vary greatly; therefore, the projected emissions do not vary greatly.

- Under all alternatives, existing sources of emissions are assumed to continue to comprise a substantial portion of total projected emissions.
- The air quality analysis focuses on impacts that result from a change in current management.

While the BLM has discretion to make allocative decisions in these areas under any alternative, due to the high percentage of existing leases in areas with potential oil and gas development, the ability to implement substantial restrictions on development is primarily limited to mitigation measures that can be applied during project approval. Such restrictions include cooperative development of project-specific measures to minimize impacts to air resources as outlined in the plan and compliance with existing air regulatory agency and permitting requirements.

A.5.4 Pollutants of Concern

The emissions inventory compiled for each alternative shows that estimated emissions from BLM authorized activities such as oil and gas development have the potential to cause or contribute to increased levels of ozone which may contribute to exceedances of the ozone standard due to increased emissions of ozone forming precursors. Therefore, the BLM has identified ozone and its precursors (nitrogen oxides (NOx) and volatile organic compounds/reactive organic gases (VOCs/ROG)), and particulate matter (PM_{10} and $PM_{2.5}$), as pollutants of concern to be addressed through specific management actions described in this plan.

A.5.5 Air Emission Generating Activities

Air emissions were considered for four (4) broad categories of activities that BLM authorizes, allows, or performs and that have the potential to emit regulated air pollutants. These categories include energy development, vehicle use on unpaved roads, fire and fuels management, and livestock grazing. For activities that have the potential to contribute to increases (or decreases) in concentrations of regulated air pollutants, the estimated emissions were used to determine those activities that warrant specific management strategies for minimizing air quality impacts.

Under each alternative, oil and gas development activities were identified as the major contributor to increases in emissions of NO_x and VOC/ROG. Although Comprehensive Trails and Travel Management designations generally reduce the number of routes available for vehicle use over current management, vehicle use on unpaved roads was identified as the major contributor to increased particulate matter emissions.

A.5.6 Geographic Areas of High Potential for Development

The decision area (acres) for minerals management varies by the specific mineral or mineral group and is therefore addressed separately by mineral program. Fluid minerals include oil, gas, and geothermal resources. Solid (non-energy) minerals include leasable, locatable, and salable mineral resources. Mineral occurrence and development potential in the Planning Area is based on past exploration and development, particularly for oil and gas. The RFD Scenarios (Appendix M) identified geographic areas of high, moderate, and low development potential for conventional oil and gas, geothermal, solid (non-energy) leasable minerals, locatable minerals, and salable minerals.

Areas identified within the Planning Area as high potential for conventional oil and gas development are located in the southern San Joaquin Valley, mainly in Kern County. This area has been explored and developed since the 1870's and is comprised of numerous existing oil and gas fields and development

units. Moderate to high potential for fluid minerals occurs outside the San Joaquin Valley region throughout the Coast Range; however, the southern Sierra Nevada Mountains (in the eastern portion of the planning area) are considered to have little to no potential for oil and gas. Oil and gas potential and the areas currently closed to oil and gas leasing in the Decision Area are illustrated in Map 3.21.

Based on the RFD scenario, oil and gas development is anticipated to occur mainly in Kern County and Ventura County. The fact that future development is expected to occur in areas that are already developed and producing provides the following benefits to air resources:

- Future oil and gas development in areas of existing production reduces impacts to air quality from new construction, new production facilities, and new sources that would be required in undeveloped fields.
- Based on low mineral potential in the eastern portion of the Planning Area and the RFD Scenario, oil and gas development is not likely to occur in proximity to federally designated Class I areas (refer to Map 3.5 and Map 3.21).

The potential for geothermal resources occurs throughout the mountainous and coastal regions of the Planning Area (Map 3.22). Although there is known potential, there are currently no federal geothermal leases in the Decision Area. Discretionary closures to geothermal development include the Case Mountain ACEC and all other ACECs which were closed to geothermal leasing in the Record of Decision for the Geothermal PEIS (BLM 2008). Geographic areas of mineral estate are classified as potentially valuable for solid (leasable) minerals that are open for exploration and development. Areas classified as potentially valuable for phosphate occur mainly within the southern Coast Ranges, and three (3) areas are identified as potentially valuable for sodium and potassium (Map 3.23). In addition to non-discretionary closures, the Bakersfield Field Office has also identified areas that would be closed to solid (leasable) mineral development.

Geographic areas of high, moderate, and low potential for locatable (gold, copper, tungsten, asbestos, mercury, magnetite, chromite, and uranium) and salable minerals (specifically sand, gravel, aggregate, lime, cinders and building stone) were identified within the Planning Area. Potential for locatable minerals exists throughout the mountainous and coastal regions (Map 3.24). Suitability of potential salable minerals is determined by geology, proximity to areas of demand, and presence or absence of access roads. Generally, salable minerals in the Planning Area are found in the southern Sierra Nevada and Coast Ranges (Map 3.25). Areas currently withdrawn from the location of mining claims and/or closed to salable mineral development include the non-discretionary withdrawal of Wilderness Areas and the Piedras Blancas Light Station. The Bakersfield Field Office has also identified specific areas that would be closed to mineral materials disposal and locatable withdrawals within each of the alternatives. Because particulate matter emissions are the primary pollutant of concern associated with non-oil and gas mineral development throughout the Planning Area, there is a potential for such activities to contribute to short term increases in fugitive dust emissions from storage piles, wind erosion, and construction or other surface disturbing activities.

A.5.7 Summary of Air Quality Issues

- Concentrations of ozone precursor emissions (NO_X) and $PM_{2.5}$ within the Planning Area have exceeded current NAAQS (primary).

- The geography of the San Joaquin Valley, the majority of the Planning Area, is highly conducive to the formation of air pollutants.
- A majority of the Planning Area is a designated non-attainment area for ozone.
- Portions of the San Joaquin Valley are designated nonattainment for $PM_{2.5}$.
- The San Joaquin Valley is a designated PM_{10} maintenance area.
- The entire Planning Area is designated maintenance for carbon monoxide (CO).
- Emissions calculations showed potentially substantial increases in estimated emissions of ozone forming pollutants (NO_X and VOCs/ROG) which could result in increased concentrations of ozone based on the RFD scenario.
- The air analysis for the RMP showed that oil and gas development activities have the potential to be the major contributor to estimated NO_X, VOCs, and particulate emissions. Vehicle use on unpaved roads is the major contributor to estimated PM emissions.

A.5.8 Field Office Air Resource Management Requirements

The Bakersfield Field Office has the responsibility to implement the decisions of the RMP in a manner that protects air quality while recognizing valid and existing leasing rights. Within the Planning Area, most areas with high and moderate oil and gas development potential are already leased. While the BLM has limited ability to alter the conditions of existing leases, it can require specific actions and measures necessary to protect air quality in response to identified or anticipated adverse impacts at the project level stage.

Development and implementation of appropriate protection measures is most effective at the project approval stage, because the proposed action has been defined and impacts to air quality are better able to be identified through National Environmental Policy Act (NEPA) analysis. As part of the project approval process the BLM will identify project-specific measures in response to identified impacts to air resources, as outlined in this air resources management plan.

A.5.9 Authorization of Air Emission Generating Activities

BLM has the authority and responsibility under the Federal Land Policy and Management Act (FLPMA) to manage public lands in a manner that will protect the quality of air and atmospheric values. Therefore, the BLM may manage the pace, place, density, and intensity of leasing and development to meet air quality goals.

BLM will, prior to authorization of any activity that has the potential to emit any regulated air pollutant, consider the magnitude of potential air emissions from the project or activity, existing air quality conditions, geographic location, and issues identified during project scoping to identify pollutants of concern and to determine the appropriate level of air analysis to be conducted for the project. In addition to any applicable regulatory requirements, standards, or emission limits, this analysis would include mitigation measures and may include obtaining additional air monitoring data, air dispersion modeling, and/or photochemical grid modeling.

BLM will require project proponents to comply with the requirements under Section A.4 of this air resources management plan. BLM will review any project specific emissions inventory submitted as required under Section A.4.1 to determine its completeness and accuracy.

BLM will require the proponent for projects that have the potential to emit the pollutant or precursors to the pollutant to comply with (a) or (b) below:

a) Demonstrate that the project will result in no net increase in area annual emissions of the pollutant for the life of the project (e.g. through the application of emission control technologies, offsets, or other air emission reducing strategies) or
b) Demonstrate that the project will not cause or contribute to a violation of the ambient air quality standard through a quantitative air quality analysis (e.g. air dispersion modeling, photochemical grid modeling or an equivalent level of air analysis).

Prescribed fire projects will be required to minimize impacts to air quality, and will comply with local and state smoke management plans and regulations.

A.5.10 Monitoring

As part of this comprehensive air management plan for the Planning Area, BLM commits to the following measures with regards to ambient air monitoring:

- BLM may require project proponents to conduct pre-construction and/or project air modeling as described in Section A.4.2.
- BLM will work cooperatively with federal, state, and local air regulatory agencies to determine the best mechanism to submit, track, and approve project-specific monitoring data required in a project specific record of decision (ROD).

A.5.11 Modeling

BLM recognizes that air dispersion and photochemical grid models are useful tools in predicting project specific impacts to air quality, predicting the potential effectiveness of control measures and strategies, and for predicting trends in regional concentrations of some air pollutants. As part of this comprehensive air management plan for the Planning Area, BLM commits to the following with regards to air quality modeling:

- BLM will require project specific air quality modeling as outlined in Section A.4, consistent with the requirements of the Air Quality MOU for Oil and Gas.
- BLM will ensure that project specific modeling is carried out in accordance with US EPA modeling guidelines and in cooperation with the air quality interagency review team.
- BLM will support and participate in regional modeling efforts through multi-state and/or multi-agency organizations such as the Western Governors Association – Western Regional Air Partnership, and the Federal Leadership Forum.

A.5.12 Mitigation

BLM recognizes that many of the activities that it authorizes, permits, or allows generate air pollutant emissions that have the potential to adversely impact air quality. The primary mechanism to reduce air quality impacts is to reduce emissions (mitigation). As part of this comprehensive air management plan for the Planning Area, the BLM commits to the following with regards to reducing emissions:

- BLM will require project proponents to include measures for reducing air pollutant emissions in project proposals.
- BLM will require project proponents to comply with air regulatory agency rules, regulations, and permits and reporting requirements; operators are responsible for obtaining necessary air permits prior to project implementation.
- BLM will require additional air emission control measures and strategies within its regulatory authority and in consultation with the US EPA, the California Air Resources Board (CARB), and pertinent local air pollution control districts.
- BLM will ensure that air pollution control measures and strategies (both operator committed and required mitigation) are enforceable by including specific conditions in a ROD.

A.5.13 Project Specific Requirements

BLM has identified activities and pollutants of concern for the Planning Area and this section contains specific requirements for project proponents. Mineral development activities, specifically oil and gas development, have been identified as having the potential to contribute to increases in ambient concentrations of ozone, and slight increases in PM_{10} and $PM_{2.5}$. Proponents of mineral development projects are required to comply with A.4.1 and A.4.4.1 at a minimum.

A.5.14 Emissions Inventory

The proponent of a mineral development project will be required to provide the BLM an emissions inventory that quantifies emission of regulated air pollutants from all sources related to the proposed project, including fugitive emissions and greenhouse gas emissions, estimated for each year for the life of the project. BLM will use this estimated emissions inventory to identify pollutants of concern and to determine the appropriate level of air analysis to be conducted for the proposed project.

The BLM may require an emissions inventory for other actions depending on the magnitude of potential air emissions from the project or activity, proximity to federally mandated Class I area, sensitive Class II area, population center, location within a non-attainment or maintenance area, meteorological or geographic conditions, existing air quality conditions, magnitude of existing development in the area, or issues identified during project scoping.

A.5.15 Monitoring

The BLM may require the proponent of a mineral development project to conduct baseline or life of the project monitoring depending on the magnitude of potential air emissions from the project or activity, proximity to a federally mandated Class I area, sensitive Class II area, or population center, location within a non-attainment or maintenance area, meteorological or geographic conditions, existing air quality conditions, magnitude of existing development in the area or issues identified during scoping.

A.5.16 Modeling

The proponent of a mineral development project may be required to conduct air quality modeling for any pollutant(s) of concern, as determined by the BLM, unless the project proponent can

demonstrate that the project will result in no net increase in emissions of the pollutant(s) of concern. BLM, in cooperation with the interagency review team, will determine the parameters for modeling analysis through the development of a project specific modeling protocol.

BLM may require air quality modeling if other criteria that warrant an air dispersion or photochemical modeling analysis are identified for purposes of analyzing project direct, indirect, and cumulative impacts to air quality. Such criteria may include the magnitude of potential air emissions from the project or activity, proximity to a federally mandated Class I area, sensitive Class II area, or population center, location within a non-attainment or maintenance area, meteorologic or geographic conditions, existing air quality conditions, magnitude of existing development in the area or issues identified during scoping.

A.5.17 Mitigation

The proponent of a mineral development project will be required to minimize air pollutant emissions by complying with all applicable state and federal regulations and may be required to apply mitigation including but not limited to best available control technology, best management practices, emissions offsets, and other control technologies or strategies identified by the BLM and/or federal, state and local air regulatory agencies with delegated regulatory authority.

The proponent of a mineral development project that has the potential to emit any regulated air pollutant will be required to provide a detailed description of operator committed measures to reduce project related air pollutant emissions including greenhouse gases and fugitive dust. Project proponents for oil and gas development projects should refer to the mitigation measures included in Appendix L of the RMP (and in Table A.1, “Mitigation for Oil and Gas Development Activities” below) as a reference for potential control technologies and strategies. The list is not intended to preclude the use of other effective air pollution control technologies that may be proposed. Additional mitigation measures for air quality are included in Appendix L. Best Management Practices (BMP)/Standard Operating Procedures (SOP).

Table A.1
Mitigation for Oil and Gas Development Activities

Mitigation Measure	Environmental Benefits	Environmental Liabilities	Feasibility
Control Strategies for Drilling and Compression			
Directional Drilling	Reduces construction related emissions (dust and vehicle and construction equipment emissions). Decreases surface disturbance and vegetation impacts (dust and CO2 and nitrogen flux). Reduces habitat fragmentation.	Could result in higher air impacts in one area with longer sustained drilling times.	Depends on geological strata.
Improved engine technology (Tier 2 or better) for diesel drill rig engines	Reduced NO_x, PM, CO, and VOC emissions	--	Dependent on availability of technology from engine manufacturers.
Selective Catalytic Reduction (SCR) for drill rig engines and/or compressors	NO_x emissions reduction, decreased formation of visibility impairing compounds, decreased formation of ozone. NO_x control efficiency of 95 percent achieved on drill rig engines. NO_x emission rate of 0.1 grams per horsepower achieved for compressors	Potential NH_3 emissions and formation of visibility impairing ammonium sulfate. Regeneration/disposal of catalyst can produce hazardous waste.	Not applicable to 2-stroke engines.
Non-selective catalytic reduction (NSCR) for drill rig engines and/or compressors	NO_x emissions reduction, decreased formation of visibility impairing compounds, decreased formation of ozone. NO_x control efficiency of 80-90 percent achieved for drill rig engines. NO_x emission rate of 0.7 grams per horsepower hour achieved for compressor engines	--	Not applicable to lean burn or 2-stroke engines.

	greater than 100 horsepower.		
Natural Gas fired drill rig engines	NO_x emissions reduction, decreased formation of visibility impairing compounds, decreased formation of ozone.	--	Requires onsite processing of field gas.
Electrification of drill rig engines and/or compressors	Decreased emissions at the source. Transfers emissions to more efficiently controlled source (EGU)	Displaces emissions to EGU.	Depends on availability of power and transmission lines.
Improved engine technology (Tier 2 or better) for all mobile and non-road diesel engines.	Reduced NO_X, PM, CO, and VOC emissions.	--	Dependent on availability of technology from engine manufacturers.
Green (also known as closed loop or flareless completions)	Reduction in VOC and CH_4 emissions. Reduces or eliminate flaring and venting and associated emissions. Reduces or eliminates open pits and associated evaporative emissions. Increased recovery of gas to pipeline rather than atmosphere.	Temporary increase in truck traffic and associated emissions.	Need adequate pressure and flow. Need onsite infrastructure (tanks/dehydrator). Availability of sales line.
Green workovers	Same as above.	Same as above.	Same as above.
Minimize venting and/or use closed loop process where possible during “blow downs”	Same as above.	--	
Reclaim/remediate existing open pits, no new pits	Reduces VOC and GHG emissions. Reduces potential for soil and water contamination. Reduces odors.	May increase truck traffic and associated emissions.	Requires tank and/or pipeline infrastructure.
Electrification of wellhead compression/pumping	Reduces local emissions of fossil fuel combustion and transfers to more easily controlled source.	Displaces emissions to EGU	Depends on availability of power and transmission lines.
Renewable power	Low or no emissions.	May require	Depends on

(solar or wind) for compressors		construction of infrastructure. Potential visual and/or wildlife impacts.	availability of power and transmission lines.
Control Strategies Utilizing Centralized Systems			
Centralization (or consolidation) of processing facilities (separation, dehydration, etc.)	Reduces vehicle miles traveled (truck traffic) and associated emissions. Reduced VOC and GHG emissions from individual dehydrator/separator units.	Temporary increase in construction associated emissions. Higher potential for pipe leaks/groundwater impacts.	Requires pipeline infrastructure.
Liquids Gathering Systems (for condensate and produced water) and water delivery systems	Reduces vehicle miles traveled and associated emissions. Reduced VOC and GHG emissions from tanks, truck loading/unloading, and multiple production facilities.	Temporary increase in construction associated emissions. Higher potential for pipe leaks/groundwater impacts.	Requires pipeline infrastructure.
Control Strategies for Tanks, Separators, and Dehydrators			
Eliminate use of open top tanks	Reduced VOC and GHG emissions.	--	Required by local Air Districts as a BACT for produced water in some areas.
Capture and control of flashing emissions from all storage tanks and separation vessels with vapor recovery and/or thermal combustion units	Reduces VOC and GHG emissions.	Pressure build up on older tanks can lead to uncontrolled rupture.	
Capture and control of produced water tank emissions	Reduces VOC and GHG emissions.	--	
Capture and control of dehydration equipment emissions with condensers, vapor recovery, and/or thermal combustion	Reduces VOC, HAP, and GHG emissions.	--	
Control Strategies for Misc. Fugitive VOC Emissions			
Install and maintain low VOC emitting	Reduces VOC and GHG emissions.	--	--

seals, valves, hatches, etc. on production equipment			
Initiate an equipment leak detection and repair program (including use of FLIR cameras, grab samples, organic vapor detection devices, visual inspection, etc.)	Reduction in VOC and GHG emissions.	--	
Install or convert gas operated pneumatic pumps and/or devices to electric, solar, or instrument (or compressed) air driven pumps and/or devices/controllers.	Reduces VOC and GHG emissions.	Electric or compressed air driven operations can displace or increase combustion emissions.	
Use "low" or "no bleed" gas operated pneumatic devices/controllers.	Reduces VOC and GHG emissions.	--	
Use closed loop system or thermal combustion for gas operated pneumatic pump emissions.	Reduces VOC and GHG emissions.	--	
Install vapor recovery on truck loading/unloading operations at tanks.	Reduces emissions of VOC and GHG emissions.	Pressure build up on older tanks can lead to uncontrolled rupture.	
Control Strategies for Fugitive Dust and Vehicle Emissions			
Unpaved surface treatments including watering, chemical suppressants, and gravel	20 – 80 percent control of fugitive dust (particulates) from vehicle traffic.	Potential impacts to water and vegetation from runoff of suppressants.	--
Use remote telemetry and automation of wellhead equipment	Reduces vehicle traffic and associated emissions.	--	--
Speed limit control and enforcement on unpaved roads	Reduction of fugitive dust emissions.	--	--
Reduce commuter vehicle trips through car pools, commuter	Reduced combustion emission, reduced fugitive dust emissions,	--	--

vans or buses, or innovative work schedules.	reduced ozone formation, reduced impacts to visibility.		
Miscellaneous Control Strategies			
Use of ultra-low sulfur diesel in engines, compressors, construction equipment, etc.	Reduces emissions of particulates and sulfates.	--	--
Reduce unnecessary vehicle idling	Reduced combustion emissions, reduced ozone formation, reduced impacts to visibility.	--	--
Reduced pace of (phased) development	Peak emissions of all pollutants reduced.	Emissions generated at a lower rate but duration of impacts is longer.	May not be economically feasible if multiple mineral interests.

Definitions

CO_2 Carbon Dioxide	NH_3 Ammonia
NO_x Nitrous Oxides	BACT Best Available Control Technology
CO Carbon Monoxide	GHG Greenhouse Gas
EGU Electrical Generating Unit	HAP Hazardous Air Pollutant
VOC Volatile Organic Compound	CH_4 Methane

Appendix B

Biological Resources

Appendix B – Biological Resources

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B.1 Introduction

This appendix contains a strategy for how public lands will be managed to contribute to the conservation of special status species in the Bakersfield Field Office (FO) Decision Area in general and in the Southern San Joaquin Valley specifically. Also, specific biological resource information including a detailed overview of plant and animal species and natural communities and specific species accounts for special status species (federal and state listed and California BLM sensitive) are presented to supplement the information in the affected environment (Chapter 3, Section 3.2).

B.2 Conservation Strategy

The scattered pattern of public lands in the Decision Area provides numerous opportunities for public lands to contribute to local and regional conservation programs. The BLM will seek out partnerships with other public and private entities to conserve and recover landscapes, natural communities, special status species, and other important biological resources. Examples of focal areas for specific special status species and their habitats are Los Osos, Hopper Mountain, Bitter Creek, South Fork of the Kern River, Table Mountain and Kennedy Table, Atwell Island, Lokern-Buena Vista Valley, Kettleman Hills, Caliente Creek, and Cyrus Canyon. Other efforts focus on natural landscapes, assemblages of species and communities, and biological resources of regional importance. Areas with these focuses are the Irish Hills, the Tulare Lake Basin, the Salinas River, and the Tehachapi Linkage. The BLM will manage public lands to contribute to the objectives of local and regional conservation plans, where external objectives are consistent with the management objectives of this plan.

Background

Public land in the San Joaquin Valley portion of the Bakersfield FO constitutes a substantial amount of the remaining natural land in the southern San Joaquin Valley. These natural lands provide important habitat for several federal and state listed plant and animal species, as well as many other species that are endemic to the region.

The Endangered Species Act of 1973 mandates that federal agencies, including the BLM, utilize their authorities to further the purposes of the ESA by carrying out programs for the conservation and recovery of threatened and endangered species. BLM policy, as stated in the BLM Manual 6840, and policy statements, such as BLM's Fish and Wildlife 2000, further guides how BLM will manage public lands to meet the mandate for conservation programs and multiple uses of public land resources.

The Endangered Species Act also directs the USFWS to develop recovery plans for threatened and endangered species. These recovery plans provide the strategy that all agencies and organizations can implement to ensure a coordinated and comprehensive approach to species conservation and recovery. In 1998 the USFWS completed *the Recovery Plan for Upland Species of the San Joaquin Valley, California* (USFWS 1998). This multispecies recovery plan provides a framework for recovery efforts within the San Joaquin Valley. Local governments, industry, private landowners and local offices of state and federal agencies determine how the regional recovery and conservation framework could be implemented for their jurisdiction. Part of the concept is to develop local plans, such as for the Southern San Joaquin Valley, for consistent application by local, state, and federal governments within the local planning area. BLM managed public land in the Southern San Joaquin Valley plays a key role in the recovery plan and in many of these local plans. This section describes the San Joaquin Valley recovery plan strategy and

addresses how the regional recovery and conservation framework will be implemented by BLM in coordination with these local plans.

San Joaquin Valley Recovery Plan Conservation Strategy

The *Recovery Plan for Upland Species of the San Joaquin Valley, California*, uses an ecosystem-level strategy to address recovery and conservation of 11 listed species and 23 additional special status species. The strategy includes several elements that relate to the management of public land:

- The primary focus of recovery should be on publically owned lands;
- Conservation efforts should focus on fewer larger blocks of land rather than smaller more numerous parcels;
- Blocks of conservation lands should be connected by natural land or land with compatible uses that allow for movement between blocks;
- Emphasis should be placed on the San Joaquin kit fox as an umbrella species. Since most other species require less habitat, fulfilling the management and habitat needs of the San Joaquin kit fox will also meet the needs of many other species;
- The giant kangaroo rat and San Joaquin kangaroo rat are keystone species in their communities. Protection of these keystone species should be a high priority since they provide an important or essential function for many other listed and special status species;
- Uses and actions on public land, such as livestock grazing, oil, gas, and mineral exploration and extraction, hunting, and recreation should occur so as minimize degradation of habitat for special status species;
- Use specialty preserves or small reserves to manage species with highly restricted geographic ranges or specialized habitat requirements or that are vulnerable to traditional land uses;
- Target existing natural lands occupied by special status species over unoccupied natural land and retired farm land for conservation;
- Coordinate carefully agricultural land retirement with endangered species recovery for species where sufficient occupied natural land does not exist, but where it is needed to increase population size or promote movement between populations;
- Enhance landscape features that allow successful survival and movement from population centers on the valley floor to the valley perimeter for species such as the kit fox that can live in or move through the farmland matrix; and
- Implementing the recovery plan should be complementary to existing and future habitat conservation plans.

The foundation of the regional conservation strategy is a system of reserves and connecting corridors. Through assessments of remaining natural land habitats, a reserve system concept was developed to conserve the best remaining habitats of the San Joaquin Valley natural communities (USFWS 1998). Several large keystone reserves, several small specialty reserves, and connecting corridors linking many of the reserves have been established or proposed. The large reserves are intended to maintain and conserve multiple plant and animal listed species as a natural community, while the small reserves are designed to conserve a particular species or unique natural feature. These reserves would be managed for long-term conservation of the listed plants and animals and the natural communities on which they

depend, but would allow for a variety of land uses managed in a compatible manner. Both large and small reserves are necessary to conserve the valley's biological resources.

Reserves include both large multispecies reserves and small specialty reserves that would be managed *primarily* for listed plants and animals. While other compatible resource uses could occur, habitat quality and species' populations would be maintained through implementing specific design features for these resource uses. Management of the reserves would be assured by fee acquisition, by federal, state, or local agencies, chartered conservation organizations, conservation easements, or long-term cooperative agreements with landowners. The goal is to maintain a certain percentage of the native lands as high quality habitat and to rehabilitate lands with nonnative species as they become available for purchase, easement, or agreement. A threshold for habitat disturbance from energy mineral development, roads, and facilities would be established. Reserves and connecting corridors would have different thresholds for habitat disturbance. Compensation for new habitat disturbance within the threshold would be at a standard rate for uses that are considered permanent habitat loss and at another standard rate for temporary habitat loss. Compensation is generally in the form of preserving additional habitat to make up for the loss of habitat associated with approved projects.

Connecting corridors are composed of native and agricultural lands to be managed for maintaining interchange and gene flow between the primary reserves and for maintaining supplemental populations between reserves. Emphasis is to maintain a certain percentage of native lands as moderate- to high-quality habitat and to maintain a certain percentage of the agricultural lands in agricultural production or fallow. A certain percentage of these lands would be available for urban, industrial, or other land uses that are considered permanent habitat loss. Land use design would maintain corridor integrity as extant habitat and for wildlife movements. Permanent habitat loss from urban-industrial uses would not sever wildlife corridors. Compensation for habitat loss in corridors would be directed to the reserve areas; however, limited compensation could be directed back to the corridor. The compensation ratio is the same as for reserves. Corridors would not normally involve purchase but would be secured through conservation easements and agreements. However, some parcels essential to maintain corridors or buffers may need to be purchased.

As part of the recovery plan (USFWS 1998), a generalized reserve system map has been developed that identifies the keystone reserves, small specialty reserves, and connecting corridors. A number of reserves and connecting corridors are targeted for protection in the recovery plan; several of which contain or are next to public lands within the Decision Area: Elk Hills and Buena Vista Valley, Western Kern County (including Lokern), Pixley National Wildlife Refuge (NWR)/Allensworth Natural Area, Kettleman Hills, Kern NWR/Semitropic Ridge Natural Area, Upper Cuyama Valley/Santa Barbara Canyon, Bitter Creek NWR, Devil's Den, Lost Hills-Buena Vista Slough, and Caliente Creek.

On native lands outside the reserve and corridor system, management for the retention of habitat values has not been the focus. Most of these lands have some habitat value, and many of these areas may be valuable sources of plant and animal populations in the short term. Most of these values will continue to exist, unless there are dramatic changes in current land uses.

Bakersfield FO Conservation Program

Land use plan decisions in this RMP are designed to be consistent with BLM's mandate to utilize its authorities to conserve and recover listed species, and to be consistent with the objectives and recommended actions in approved recovery plans (including the *Recovery Plan for Upland Species of the San Joaquin Valley*), conservation strategies, MOUs, and applicable biological opinions. To promote

consistency, BLM has taken into consideration and adopted certain terms and concepts from the San Joaquin Valley recovery plan and its regional conservation strategy.

Within the landscape of the San Joaquin Valley regional conservation strategy, some BLM-administered lands are located within the boundary of a number of reserve areas, habitat corridors, and specialty preserves. While BLM land management authorities do not recognize these terms, based on direction in the BLM Land Use Planning Handbook (H-1610-1, Appendix C), the BLM-administered lands currently found within the boundaries of reserves and corridors are identified as ecologically important areas in this RMP (labeled "Conserved Lands"). In addition, some of these areas are proposed for designation as Areas of Critical Environmental Concern (ACECs): Ancient Lakeshores, Compensation Lands, Kettleman Hills, Lokern-Buena Vista, and Upper Cuyama Valley, based on their relevant and important resource values and need for special management attention (see Chapter 3 of the FEIS).

The BLM will manage its public lands in the reserves and corridors (see Map 3.2.1) for the long-term conservation of listed plants and animals and the natural communities on which they depend, while still allowing compatible land uses. Also, the BLM will retain and manage additional lands acquired for conservation, whether by appropriations, donation, exchange, transfer, or compensation in a manner consistent with the terms of the acquisition or consistent with surrounding BLM land management. If compensation lands are acquired by BLM, such as through donation or transfer, they would be recommended for ACEC consideration if there is evidence that the area meets the relevance and importance criteria. Upon completion of NEPA, public review and a plan amendment, they would become part of the Compensation Lands ACEC.

A key component of the reserve and corridor linkage strategy is to maintain suitable amounts of habitat that are largely undisturbed by development activities. Habitat disturbance thresholds are criteria for maintaining long-term suitability of reserve areas (red zones) and habitat corridors (green zones). Limiting the amount of habitat (and ground) disturbance will allow sufficient habitat to remain intact, keep ecosystem processes functioning properly, and connect viable species populations across the landscape. Within the reserve areas (generally Lokern-Buena Vista ACEC and portions of Compensation Lands and Upper Cuyama Valley ACECs), habitat disturbance is limited to 10% of the surface area of individual BLM parcels or 10% of adjoining BLM parcels. Parcels that adjoin only at one corner are considered separate parcels. Most remaining public lands within the southern San Joaquin Valley have been identified in the regional conservation strategy as connecting corridors. The BLM would manage public lands in these corridors as links between reserve areas. In the corridor areas, habitat disturbance is limited to 25% of the surface area of individual BLM parcels or 25% of adjoining BLM parcels.

In addition to limiting habitat disturbance, BLM's goal is to maintain or add to the amount of secured lands within the reserve or corridor system so that species can be downlisted or delisted. In order to meet this goal, the BLM requires the following compensation ratios:

- Permanent habitat loss = 3:1
- Temporary habitat loss = 1.1:1
- Within the western Kern County kit fox core area = an additional 1:1
- Vernal pool habitat = 5:1, with a replacement element

In addition to compensation, BLM requires an additional 1:1 replacement of habitat when ground disturbance occurs on public land within reserves or corridors. This replacement is in addition to any compensation that is required as a result of permanent or temporary habitat loss. BLM's compensation

ratios are consistent with compensation ratios established by USFWS and Department of Fish and Game for the San Joaquin Valley listed species. BLM may modify compensation ratios and requirements in collaboration and coordination with USFWS and Department of Fish and Game.

Over time, BLM, in collaboration and cooperation with the wildlife agencies, may need to reconfigure the reserve and corridor design and boundaries based on new information or changing environmental conditions. This new information or these changing environmental conditions and any potential resulting reconfiguration may require additional land use planning and RMP amendment. BLM may also identify certain areas of high intensity oil and gas development within reserves and corridors and manage them separately. The Bakersfield FO's policy is to conserve lands outside the reserve and corridor system because they serve as important remnants of listed species habitat and natural communities and, therefore, may manage areas outside the reserve and corridor system as corridors. BLM may also reposition public lands to meet reserve and corridor design changes so long as ownership or management changes do not reduce the amount of BLM land in reserves or corridors.

The BLM has been an active partner in implementing the *Recovery Plan for Upland Species of the San Joaquin Valley, California*. The BLM has contributed toward inventorying and monitoring, conducting research, enhancing habitat, acquiring and restoring land, and protecting habitat. When authorizing, funding or carrying out activities, BLM's policy is to first apply on-site mitigation to avoid or minimize project impacts to biological resources, especially special status species. When on-site mitigation alone is insufficient, off-site mitigation, such as compensation, is also required. The BLM has been responsible for over fifteen hundred acres of off-site habitat compensation to be acquired and protected. In collaboration with the USFWS, CDF&G, species experts, and other biologists, BLM has cooperatively developed a number of survey, avoidance, mitigation, compensation, monitoring, and reporting protocols. BLM has determined that implementation of these protocols is in the best interest of public land management.

B.3 Biological Resources Overview

Vegetation

The presence of a plant community at a site is the combined function of precipitation patterns, soil characteristics, aspect, site disturbance history, and land uses. North-facing slopes have more water and support vegetation with higher water requirements, such as woodlands, while drier adjacent south-facing slopes are covered with scrub communities or grassland. Rare soils often host unique vegetation. Disturbances such as fire and invasions of non-native species from ground disturbances may work jointly to convert oak woodlands or chaparral scrub communities to grasslands dominated by non-native species (Brooks 1999). Grazing facilitates conversion of scrub communities to non-native grasslands (Sankary and Barbour 1972; Twisselmann 1956; USFWS 1998) and deterioration of oak woodlands (Dahlgren et al. 1997; Hall et al. 1992; Pavlik et al. 1991). Roads and other infrastructure often alter water flow in watersheds and change the distribution and patterns of vegetation. Climate change appears to shift precipitation patterns and temperature regimes and subsequently alter the composition and structure of plant communities. Overall, the Decision Area is expected to be hotter and drier (Christensen et al. 2007), and vegetation communities are expected to respond accordingly (Kueppers et al. 2005).

Vegetative Communities

Multiple vegetation alliances (Sawyer and Keeler-Wolf) occur within the Decision Area. These alliances are best grouped into more generalized vegetation communities because of their high diversity. Overall, vegetation on public lands is forms oak woodlands, conifer woodlands, grasslands, chaparral, scrubland, or riparian communities. A number of less common specialized alliances of vegetation are associated with unusual soils, such as those derived from serpentinite, wind-deposited dune sands, soils with high alkali content, or soils underlain by impermeable clays. Besides the four grassland alliances dominated by introduced grasses, there are three additional alliances where invasive exotic plants outcompete the native flora.

OAK WOODLAND

On public lands within the RMP decision area, there are 11 tree alliances that have oak as a major component. Dominant oaks in these tree alliances include, black oak (*Q. kelloggii*), blue oak (*Q. douglasii*), canyon live oak (*Q. chrysolepis*), coast live oak (*Q. agrifolia*), interior live oak (*Q. wislizeni*), and valley oak (*Q. lobata*). These oak woodlands generally have grass- or herb-dominated understories, sometimes have chaparral elements as associated species, and may contain other hardwoods, such as California buckeye (*Aesculus californica*) and California bay laurel (*Umbellularia californica*), or conifers, such as foothill (gray) pine (*Pinus sabiniana*). As elsewhere in California, oak regeneration appears depressed. Factors contributing to the general decline in oaks include grazing effects, competition and fires associated with introduced annual grasses, and predation by pigs and gophers (Bartolome 1987; Borchert et al. 1989; Dahlgren et al. 1997; Hall et al. 1992; Pavlik et al. 1991; Rousset and Lepart 2000). Deer have also been shown to depress the growth of small oaks (Pavlik et al.1991; Ripple and Beschta 2008). Oak vegetation is particularly well represented in the Coast and Sierra Regions, with only a small amount found in the Valley Region.

CONIFER WOODLAND

Within the RMP decision area are 15 vegetation alliances dominated by Bishop pine (*Pinus muricata*), Coulter pine (*P. coulteri*), foothill (gray) pine, Jeffrey pine (*P. jeffreyi*), ponderosa pine (*P. ponderosa*), piñon pine (*P. edulis*), incense cedar (*Calocedrus decurrens*), Sargent cypress (*Cupressus sargentii*), California juniper (*Juniperus californica*), giant sequoia (*Sequoiadendron giganteum*), Santa Lucia fir (*Abies bracteata*), and white fir (*A. concolor*). Most of these communities are either in the Coast or Sierra Regions, but the foothill pine alliance is present in both Coast and Sierra Regions, while the California juniper alliance is present in both Valley and Sierra Regions. Understory species are similar to those in the oak woodlands. Oaks and other hardwoods may also be components. Conifer woodland habitats in the RMP decision area fall within three roughly defined groups: 1. Relatively moist sites at higher elevations in the Sierra Nevada (giant sequoia, incense cedar, and Jeffrey and ponderosa pines), 2. Relatively dry slopes in the Sierra Nevada and Coast Ranges (piñon pine (Sierra Nevada only), California juniper, and to a lesser extent, foothill and Coulter pines), and 3. Sites with specialized soils or supporting small remnant populations of previously more widespread species (Bishop pine, Santa Lucia fir, and Piute (*Cupressus arizonica* spp. *Nevadensis*) and Sargent cypress). The drier types of conifer woodland often have bare or sparsely vegetated soils between the trees. Fire, grazing, the spread of invasive non-native plants, climate change, and disease outbreaks indirectly caused by insects have altered conifer woodlands.

RIPARIAN WOODLAND

Eight riparian tree alliances are present on public lands in the RMP decision area. Dominant trees are willows (*Salix* spp.), cottonwoods (*Populus* spp.), ashes (*Fraxinus* spp.) and California sycamores (*Platanus racemosa*). All alliances are associated with water-saturated soils. Although not very prominent in coverage, they are important biologically by providing food, water, habitat, and cover for wildlife, by protecting stream banks from erosion, and by preventing sedimentation in waterways. Most riparian woodland alliances are present in all three regions. Associated species include a number of herbaceous obligate wetland species such as rushes (*Juncus* spp.), sedges (*Carex* spp.), and spikerushes (*Eleocharis* spp.). Human activities, including water diversion, pollution, and habitat destruction from grazing have significantly affected riparian areas. Invasive species, such as tamarisk (*Tamarix* spp.), have also been a problem in some areas.

HARDWOOD WOODLAND

There are only four non-oak hardwood alliances within the RMP decision area and they form only a small portion of the overall vegetation. Dominant species include California bay, California buckeye, California walnut (*Juglans californica*), and tree-sized birchleaf mountain-mahogany (*Cercocarpus montanus* var. *glaber*). All four series are present in the Coast Region, while the mountain-mahogany and buckeye series are also present in the Sierra Region. Understories are similar to the oak alliances.

DESERT WOODLAND

There is only a single desert woodland alliance present on public lands in the RMP decision area, dominated by mesquite (*Prosopis* spp.) and found in small amounts in the Valley Region. The presence of mesquite in the San Joaquin Valley appears to be a recent development (approximately 120 years ago) and is probably associated with the historical passage of livestock through the valley (Holland 1987, 1988).

CHAPARRAL

Twenty-eight shrub alliances fall under the general heading of chaparral. These alliances are dominated or co-dominated by ceanothus (*Ceanothus* spp.) (12), manzanita (*Arctostaphylos* spp.) (7), scrub oak (*Quercus* spp.) (4), redshank (*Adenostoma sparsifolium*) (3), chamise (*A. fasciculatum*) (6), or oceanspray (*Holodiscus discolor*) (1). The chaparral alliances tend to be dense, growing 6 to 20 feet high, and are found in areas drier than woodlands but moister than grasslands. Chaparral shrubs often possess drought-tolerant adaptations like sclerophyllous leaves, and many species, shrubs and herbs alike, are adapted to recurring fires. Fire adaptations include stump-sprouting and fire-induced seed germination. Chaparral communities usually have a herbaceous “fire-follower” flora that appears after fires and diminishes or disappears altogether as the shrub component regenerates. Chaparral vegetation is diverse and well developed in the Coast and Sierra Regions. A few alliances are present within the western Valley Region. Loss of habitat due to development, changing fire regimes due to human activities, invasion by introduced annual grasses, and grazing have altered many chaparral communities.

COASTAL SCRUB

Smaller drought-deciduous shrubs, such as sage (*Salvia* spp.), California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), coyote bush (*Baccharis pilularis*), and California brittlebush (*Encelia californica*) dominate the seven shrub alliances in the Coast Region . Bare ground is common around many shrubs due to from germination-inhibiting chemicals produced in the leaves (allelopathy). A robust flora of herbaceous understory species occurs in many coastal scrub communities where gaps in shrub cover occur. Many species also have fire adaptations, such as stump-sprouting. Much coastal scrub habitat in California has been lost due to development and grazing.

Invasive annual grasses and shorter fire return intervals are also a concern because they convert coastal scrub communities to grasslands dominated by introduced species.

ALKALI SCRUB

Six alliances of alkali scrub vegetation are present, all within the Valley Region. Soils with a high alkali or salt content host alkali scrub and shrubs in the goosefoot family (Chenopodiaceae) predominate, primarily saltbush (*Atriplex* spp.) but also greasewood (*Sarcobatus vermiculatus*) and iodine bush (*Allenrolfea occidentalis*). The level of salt in the soil affects the vegetation community; higher salinity tends to favor iodine bush over saltbush. The extent of these communities in the San Joaquin Valley has greatly diminished due to the conversion of large amounts of alkali scrub to agriculture and oil field development. Fire, overgrazing, and vehicle trespass have also been responsible for habitat loss. Most of these communities are rare and provide important habitat for sensitive animal species in the San Joaquin Valley. Public land plays an important role in conserving these rare habitats.

RIPARIAN SHRUB

Four alliances of riparian shrub vegetation are present, dominated by willow species, arrowweed (*Pluchea sericea*), mulefat (*Baccharis salicifolia*), or buttonwillow (*Cephalanthus occidentalis*). These riparian shrub communities are within all the regions, except for the arrowweed alliance, which is only in the Coast Region. All riparian shrub communities are characterized by saturated soils and have willow as a major component. Changes and threats to this type of vegetation are similar to those of the woodland riparian alliance.

WEED-DOMINATED SHRUB

Two alliances are dominated by non-native shrubs (broom [*Cytisus* spp., *Genista* spp.] and tamarisk (*Tamarix* spp.). Tamarisk is a concern only in the Valley Region. Broom is a concern in the Sierra Region, although it is also a problem within the Coast Region but is not present on public lands.

MISCELLANEOUS SHRUB

The remaining eight shrub alliances on public lands within the RMP decision area do not readily fall into one convenient grouping. The rubber rabbitbrush (*Ericameria nauseosa*) and scalebroom (broomsage) (*Lepidospartum squamatum*) alliance are found in disturbed habitats, such as washes and roadsides and are often early successional communities. Others are dominated by distinctive elements (blue elderberry [*Sambucus mexicana*]), are desert-type alliance (Joshua trees [*Yucca brevifolia*], big sagebrush [*Artemisia tridentata*], black bush [*Coleogyne ramosissima*], and bladderpod-California ephedra-narrowleaf goldenbush), are found in coastal dunes (dune-lupine-goldenbush alliance), or just do not easily fit into other categories. Weeds are an issue in some areas. Fire has been an ongoing concern with Joshua trees and black bush communities because their regeneration is limited following recent fires. Grazing is a problem in some areas and has resulted in the loss of shrubs and the conversion of shrub communities to nonnative-dominated grassland.

GRASSLAND

Thirteen grassland alliances are present on public lands in the RMP decision area. Seven are characterized by the dominance of one or more native bunchgrass, two by the dominance of native rhizomatous grass, and the remaining four by the dominance of introduced grasses. Grasses also provide the understory for many tree alliances and occur as patches within many shrub communities. Grasslands are well represented in all three regions and occupy major parts of the landscape. Drier sites tend to support annual grasses, usually introduced, while more mesic sites support native perennial grasses. Grazing has been a major force in the alteration of native perennial grasslands, the spread of weedy

species, and the maintenance of introduced annual grassland communities. Fire and grazing have been explored as tools to manage California grasslands, with varying levels of success.

RIPARIAN HERB

Ten herb-dominated riparian alliances are present on public lands within the RMP decision area, and most occur in all three regions. Habitats for these alliances range from areas of saturated soils to running or standing water and include seeps, streams, rivers, and ponds. Wetland species, such as sedge, spikerush, bulrush (*Scirpus* spp.), and cattail (*Typhus* spp.), are common dominants. Two riparian alliance associated with ponds are dominated by small floating ferns (*Azolla* spp.) or duckweeds (*Lemna* spp.). Changes and threats to the herb-dominated riparian communities are similar to those of the woodland riparian alliance.

MISCELLANEOUS HERB

Three additional herbaceous alliances are present on public lands within the RMP decision area. Two occur on coastal sands; one is dominated by native sand verbena (*Abronia* spp.) and beach bursage (*Ambrosia chamissonis*), the other by introduced iceplant (*Carpobrotus* spp.), which has replaced the former community in many areas along the coast. The final herb alliance, dominated by perennial pickleweed (*Salicornia virginica*), occurs in alkali areas within the Valley Region and has similar habitat characteristics and species composition as the alkali shrub communities.

Special Status Plant Species

The RMP decision area provides habitat for many special status species include federally listed species and candidates for listing, state listed species, and BLM sensitive species (which correspond to list 1B species in the California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California [2009b]). Sixty-five BLM special status species are found within the RMP decision area; and another 32 species are suspected to occur (Table B-4, Special Status Plant Species in the Bakersfield FO Planning Area). Inventories for all special status plants are incomplete for the RMP decision area, therefore, information on the distributions, habitat requirements, pollinators, and general biology of these species are based on the best available information and professional judgement regarding the potential for the presence or absence of a particular plant.

There are 41 federally listed plant species reported as being within the RMP Planning Area boundary (CNPS 2009b; Table B-1, Federally Listed Plants on Public Lands in the RMP Planning Area), including ten known to occur on public lands in the RMP Decision Area, nine suspected to occur, thirteen with the potential to occur, and ten that are unlikely to occur. One delisted plant also occurs on BLM lands. There are an additional two species that have been reported within the RMP Planning Area (CNPS 2009b; Consortium of California Herbaria 2009), but these records are incorrect. Of the listed species within the Bakersfield FO Planning Area boundary, critical habitat has been established for twenty (USFWS 2009a) and recovery plans have been published for twenty-seven (USFWS 2009b) of these species.

Table B-1
Federally Listed Plants on Public Lands within the RMP Planning Area

Scientific Name **(Common Name)**	**Federal/State Status**	**Likelihood of Occurrence**
Arctostaphylos morroensis (Morro manzanita)	T/--	C
Arenaria paludicola (marsh sandwort)	E/E	P
Astragalus brauntonii (Braunton's milk-vetch)	E/--	U

Table B-1
Federally Listed Plants on Public Lands within the RMP Planning Area

Scientific Name **(Common Name)**	**Federal/State Status**	**Likelihood of Occurrence**
A. pycnostachyus **var.** ***lanosissimus*** (Ventura marsh milk-vetch)	E/E	U
Calyptridium pulchellum (Mariposa pussypaws)	T/--	S
Castilleja campestris **var.** ***succulenta*** (succulent owl's-clover)	T/E	C
Caulanthus californicus (California jewelflower)	E/E	C
Chamaesyce hooveri (Hoover's spurge)	T/--	P
Chlorogalum purpureum **var.** ***purpureum*** (purple amole)	T/--	S
C. p. **var.** ***reductum*** (Camatta Canyon amole)	T/--	P
Chorizanthe pungens **var.** ***pungens*** (Monterey spineflower)	T/--	P
Cirsium fontinale **var.** ***obispoense*** (Chorro Creek bog thistle; San Luis Obispo fountain thistle)	E/E	C
C. loncholepis (La Graciosa thistle)	E/T	S
Clarkia speciosa **ssp.** ***immaculata*** (Pismo clarkia)	E/R	P
C. springvillensis (Springville clarkia)	T/E	C
Cordylanthus maritimus **ssp.** ***maritimus*** (salt marsh bird's-beak)	E/E	P
Deinandra increscens **ssp.** ***villosa*** (Gaviota tarplant)	E/E	S
Dudleya cymosa **ssp.** ***agourensis*** (Santa Monica Mountains dudleya, Agoura Hills dudleya)	T/--	U
D. c. **ssp.** ***marcescens*** (marcescent dudleya)	T/R	U
D. parva (Conejo dudleya)	T/--	U
D. verity (Verity's dudleya)	T/--	U
Eremalche parryi **ssp.** ***kernensis*** (Kern mallow)	E/--	C
Eriastrum hooveri (Hoover's woolystar)	DL/--	C
Eriodictyon altissimum (Indian Knob mountainbalm)	E/E	C
E. capitatum (Lompoc yerba santa)	E/R	S
Eriogonum kennedyi **var.** ***austromontanum*** (southern mountain buckwheat)	T/--	P
Lasthenia conjugens (Contra Costa goldfields)	E/--	U
Layia carnosa (beach layia)	E/E	P
Lupinus nipomensis (Nipomo mesa lupine)	E/E	U
Monolopia congdonii (San Joaquin woollythreads)	E/--	C
Nasturtium gambelii (Gambel's water cress)	E/E	P
Navarretia fossalis (Moran's navarretia)	T/--	P
Opuntia basilaris **var.** ***treleasei*** (Bakersfield cactus)	E/E	P
Orcuttia inaequalis (San Joaquin Valley Orcutt grass)	T/E	C

Table B-1
Federally Listed Plants on Public Lands within the RMP Planning Area

Scientific Name **(Common Name)**	**Federal/State Status**	**Likelihood of Occurrence**
O. pilosa (hairy Orcutt grass)	E/E	P
Pentachaeta lyonii (Lyon's pentachaeta)	E/E	U
Pseudobahia bahiifolia (Hartweg's golden sunburst)	E/E	S
P. peirsonii (Tulare pseudobahia)	T/E	S
Sidalcea hickmanii **ssp.** ***parishii*** (Parish's checkerbloom)	C/R	S
S. keckii (Keck's checkerbloom)	E/--	S
Suaeda californica (California seablite)	E/--	U
Tuctoria greenei (Greene's tuctoria)	E/R	P

Source: CNPS 2009b

Status:
E = endangered
T = threatened
C = candidate
R = rare
DL = delisted
-- = no status

Likelihood of occurrence
C = confirmed
P = potential
S = suspected
U = unlikely

The Bakersfield FO manages public lands that are within three designated critical habitats (six designated critical habitats when mineral estate is included) (Table B-2, Critical Habitat on Public Lands within the RMP Planning Area). The three species with critical habitat BLM-administered surface are vernal pool species. For the remaining 14 species, either the BLM has no lands within the designated critical habitat (six species) or the critical habitat is not within the RMP planning area boundaries.

Table B-2
Critical Habitat on Public Lands within the RMP Planning Area

Species (*Scientific Name*)	**Fresno County**	**Tulare County**	**San Luis Obispo County**
Succulent owl's-clover *(Castilleja campestris* var. *succulent)*	S,ME		
Hoover's spurge *(Chamaesyce hooveri)*		ME	
Camatta Canyon amole *(Chlorogalum purpureum* var. *reductum)*			ME*
San Joaquin Valley Orcutt grass *(Orcuttia inaequalis)*	S, ME	ME	
Hairy Orcutt grass *(O. pilosa)*	S, ME	ME	
Keck's checkerbloom *(Sidalcea keckii)*	ME		

S = BLM surface ownership, ME = Mineral Estate only
*Includes ¼ of critical habitat. There are also two BLM surface parcels nearby: one at less than a tenth of a mile and one less than a mile away.

Several Habitat Conservation Plans (HCPs) are being prepared to address the conservation and recovery needs of listed species in the San Joaquin Valley (plants and animals). The Bakersfield Metro HCP was recently completed and addresses the concerns for Bakersfield cactus (*Opuntia basilaris* var. *treleasei*) in a portion of its range. The conservation of significant populations outside the metro area, however, has not as yet been addressed. The Kern County and Pleasant Valley HCPs are in progress.

Areas, including and adjacent to public lands, that are important for the long-term protection, enhancement, and recovery of the federally listed plants are Lokern Road (Kern County) for Kern mallow; Wheeler Ridge (Kern County) for Bakersfield cactus; Carrizo Plain (San Luis Obispo County) and Cuyama Valley (San Luis Obispo and Santa Barbara Counties) for San Joaquin woolly-threads and California jewelflower; and Kettleman Hills (Kings County) for San Joaquin woolly-threads.

B.4 Listed Species Accounts

The following short accounts cover the one delisted and 41 listed plants that are found within the RMP Planning Area (Table B-1, Federally Listed Plants on Public Lands in the RMP Planning Area). Ten of the listed species are considered unlikely to occur within the RMP decision area, but they may possibly occur on some surface or mineral estate or on lands acquired in the future and, therefore, are included in the species accounts below. There are an additional two species that have been reported within the RMP Planning Area, but these records are incorrect. The Kern County citation of *Atriplex coronata* var. *notatior* (San Jacinto Valley crownscale) (Consortium of California Herbaria 2009) is based on a misidentified specimen (Wilkins 2009). The San Luis Obispo County citation of *Brodiaea filifolia* (thread-leaved brodiaea) (CNPS 2009b) is not verified by any specimen in California Natural Diversity Database, nor in the Consortium of California Herbaria (2009). As such, neither species is described below.

Arctostaphylos morroensis (Morro manzanita)
Federal threatened, no state status

Morro manzanita is an evergreen shrub found in maritime chaparral at an elevation of 15 to 670 feet. The species is found in San Luis Obispo County, in the Irish Hills and Los Osos Valley within five miles of Morro Bay, with a total occupied habitat estimated to cover less than 350 acres. A small population occurs on public land in the Los Osos parcel. Morro manzanita is threatened by urbanization, the alteration of fire regimes (Odion and Tyler 2002), and habitat encroachment by the nonnative purple veldtgrass (*Ehrharta calycina*).

Arenaria paludicola (marsh sandwort)
Federal endangered, state endangered

Marsh sandwort is a perennial stoloniferous herb found in marshes, swamps, and sandy openings at an elevation of 10 to 560 feet. The species has been previously collected in Los Angeles, San Bernardino, Santa Cruz, and San Francisco Counties. Extant populations are restricted to Mendocino County at Inglenook Fen and San Luis Obispo County, near Arroyo Grande south to Oso Flaco Lake and Guadalupe Dunes. The species is not currently known to occur on public lands but has a slight potential to occur on the Point Sal parcel. Marsh sandwort is threatened by development, erosion, and nonnative plants.

Astragalus brauntonii (Braunton's milk-vetch)
Federal endangered, no state status

Braunton's milk-vetch is a perennial herb found in chaparral, coastal scrub, and valley and foothill grassland, in recent burns or disturbed areas, usually sandstone with carbonate layers at an elevation of 0 to 2,100 feet. The species is known from the Transverse and Peninsular Ranges of Ventura, Los Angeles, Orange, and Riverside Counties. Within the RMP planning area, it is known from the Medea Creek area near Thousand Oaks, Ventura County. It is unlikely to occur within the RMP decision area but may be possible on small surface or mineral estate. Braunton's milk-vetch is threatened by development, vegetation, and fuel management activities and alteration of local fire regimes (CNPS 2009b).

A. pycnostachyus* var. *lanosissimus (Ventura marsh milk-vetch)
Federal endangered, state endangered

Ventura marsh milk-vetch is a perennial herb found in coastal dunes and coastal scrub and on the edges of coastal marshes and swamps at an elevation of 4 to 120 feet. The species was rediscovered near Oxnard in 1997; it is now known from only one natural occurrence of 30 to 50 reproductive plants. It is unlikely to occur within the RMP decision area but may be possible on small surface or mineral estate in the Ventura County coastal strand. Ventura marsh milk-vetch is threatened by development, herbivory, cucumber mosaic virus, and nonnative plants (CNPS 2009b).

Calyptridium pulchellum (Mariposa pussypaws)
Federal threatened, no state status

Mariposa pussypaws is an annual herb found in sandy or gravely areas within chaparral or cismontane woodland, at an elevation of 1,300 to 4,000 feet. The species is known from fewer than ten occurrences in Fresno, Madera, and Mariposa Counties. It is not currently known to occur on public land but is suspected to occur within the San Joaquin River Gorge and potentially other public lands within Fresno and Madera Counties. Mariposa pussypaws is threatened by development, grazing, and vehicles.

Castilleja campestris* var. *succulenta (succulent owl's-clover)
Federal threatened, state endangered

Succulent owl's-clover is an annual hemiparisitic herb found in vernal pools at an elevation of 165 to 2,500 feet. The species is found in Fresno, Madera, Merced, Mariposa, San Joaquin, and Stanislaus Counties and has been documented on the BLM Big Table Mountain parcel. Succulent owl's-clover is threatened by urbanization, agriculture, flood control, grazing, and trampling.

Caulanthus californicus (California jewelflower)
Federal endangered, state endangered

California jewelflower is an annual herb found in grassland, chenopod scrub, and piñon-juniper woodland habitats at an elevation of 200 to 3,300 feet. The species is often associated with the burrow systems of giant kangaroo rats (*Dipodomys ingens*) (Mazer and Hendrickson 1993; Cypher 1994; USFWS 1998). The species was previously widespread but now is restricted to three areas: Santa Barbara Canyon near Cuyama Valley (Santa Barbara County), the Carrizo Plain (San Luis Obispo County), and the Kreyenhagen Hills (Fresno County). Occurrences on public lands include lands in the Cuyama Valley and Carrizo National Monument. The population in the Kreyenhagen Hills is managed by the Hollister BLM

Field Office. Previously documented populations in the San Joaquin Valley (Kings, Kern, and Tulare County) were lost due to overgrazing or conversion of habitat to agricultural use (USFWS 1998). California jewelflower is threatened by development, agriculture, and grazing.

Chamaesyce hooveri (Hoover's spurge)
Federal threatened, no state status

Hoover's spurge is an annual herb found in vernal pools at an elevation of 80 to 800 feet. The species is known from Butte, Colusa, Glenn, Merced, Stanislaus, Tehama, and Tulare Counties. It has the potential to be found on public lands in Tulare County. Hoover's spurge is threatened by grazing, agriculture, and nonnative plants (CNPS 2009b).

Chlorogalum purpureum* var. *purpureum (purple amole)
Federal threatened, no state status

Purple amole is a perennial herb found in gravelly or clay soils in chaparral, cismontane woodland, and valley and foothill grassland at an elevation of 650 to 1,150 feet. The species is known from Monterey and San Luis Obispo Counties and is suspected to be on public lands in the Santa Lucia Mountains (San Luis Obispo County). Purple amole is threatened by habitat fragmentation, habitat conversion, nonnative plants, foot traffic, vehicles, and military activities. It is potentially threatened by grazing (CNPS 2009b).

C. p.* var. *reductum (Camatta Canyon amole)
Federal threatened, no state status

Camatta Canyon amole is a perennial herb found in cismontane woodland and valley and foothill grassland at an elevation of 1,000 to 2,000 feet. The species is known from only two occurrences in the La Panza Range (San Luis Obispo County) and has the potential to be on public lands in the La Panza Range. Camatta Canyon amole is threatened by grazing, habitat fragmentation, habitat conversion, nonnative plants, road maintenance, and vehicles (CNPS 2009b).

Chorizanthe pungens* var. *pungens (Monterey spineflower)
Federal threatened, no state status

Monterey spineflower is an annual herb found in sandy soils in maritime chaparral, cismontane woodland, coastal dunes and scrub, and valley and foothill grassland at an elevation of 10 to 1,500 feet. Monterey spineflower is currently known from Monterey and Santa Cruz Counties, although there was one collection in 1842 from San Luis Obispo County (Consortium of California Herbaria 2009). There is a low probability that the species could be found on public lands in San Luis Obispo County near the border with Monterey County. Monterey spineflower is threatened by urbanization, recreational development and activities, agriculture, military activities, and nonnative plants (CNPS 2009b).

Cirsium fontinale* var. *obispoense (Chorro Creek bog thistle; San Luis Obispo fountain thistle)
Federal endangered, state endangered

Chorro Creek bog thistle is a perennial herb found in serpentinite seeps and drainages within chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland at an elevation of 100 to 1,250 feet. Chorro Creek bog thistle is known from fewer than 20 occurrences in San Luis Obispo County and is

known to occur on public lands there. The species is threatened by grazing, development, and proposed water diversions (CNPS 2009b).

C. loncholepis (La Graciosa thistle)
Federal endangered, state threatened

La Graciosa thistle is a perennial herb found in mesic sandy sites in cismontane woodland, coastal dunes, and scrub, marshes and swamps, and valley and foothill grassland habitats at an elevation of15 to 700 feet. La Graciosa thistle is known from fewer than twenty occurrences in the area between Arroyo Grande and Lompoc (San Luis Obispo and Santa Barbara Counties). The species is reported by CNPS (2009) to also be in Monterey and Ventura Counties, but no specimens are on record (Consortium of California Herbaria 2009). La Graciosa thistle is suspected to be present on public lands in San Luis Obispo County. It is threatened by development, vehicles, groundwater pumping, and nonnative plants and is possibly threatened by grazing (CNPS 2009b).

Clarkia speciosa* ssp. *immaculata (Pismo clarkia)
Federal endangered, state rare

Pismo clarkia is an annual herb found in sandy openings in chaparral cismontane woodland and valley and foothill grassland, at an elevation of 80 to 600 feet. The species is known from less than 20 occurrences between Morro Bay and Arroyo Grande in San Luis Obispo County, and it has the potential to be found on public lands. Pismo clarkia is threatened by development, road maintenance, and grazing (CNPS 2009b).

C. springvillensis (Springville clarkia)
Federal threatened, state endangered

Springville clarkia is an annual herb found in granitic soils in chaparral, cismontane woodland, and valley and foothill grassland, at an elevation of 800 to 4,000 feet. The species is known from fewer than twenty occurrences in the Tule and Kaweah River drainages in Tulare County and is found on public lands. Springville clarkia is threatened by nonnative plants, overgrazing, vehicles, road maintenance, logging, and residential development (CNPS 2009b).

Cordylanthus maritimus* ssp. *maritimus (salt marsh bird's-beak)
Federal endangered, state endangered

Salt marsh bird's-beak is an annual hemiparasitic herb found in coastal dunes, marshes and swamps at an elevation of 0 to 100 feet. The species is known from coastal California, from San Luis Obispo to San Diego County. It is also reported from San Bernardino and Santa Clara County (Consortium of California Herbaria 2009), but these last are based on specimens collected over 100 years ago, and their correct identification is questionable. Salt marsh bird's-beak has a low potential to occur on public lands in San Luis Obispo County. It is threatened by vehicles, road construction, foot traffic, nonnative plants, and loss of salt marsh habitat (CNPS 2009b).

Deinandra increscens* ssp. *villosa (Gaviota tarplant)
Federal endangered, state endangered

Gaviota tarplant is an annual herb found in coastal scrub, coastal bluff scrub, and valley and foothill grassland habitats at an elevation of 100 to 1,400 feet. The species is known from western coastal Santa

Barbara County and is suspected to be present on the BLM Point Sal parcel. Gaviota tarplant is seriously threatened by energy development and nonnative plants (CNPS 2009b).

Dudleya cymosa* ssp. *agourensis (Santa Monica Mountains dudleya, Agoura Hills dudleya)
Federal threatened, no state listing

Santa Monica Mountains dudleya is a perennial succulent found in rocky volcanic areas within chaparral and cismontane woodland at an elevation of 650 to 1,600 feet. The species is known from the western Santa Monica Mountains in Ventura and Los Angeles Counties. It is unlikely to occur within the RMP decision area but may be possible on small surface or mineral estate in Ventura County. There are no listed threats for this species, but development is probably an issue (CNPS 2009b). The species is considered to be a synonym of *Dudleya cymosa* ssp. *ovatifolia* in *The Jepson Manual* (Hickman 1993).

D. c.* ssp. *marcescens (marcescent dudleya)
Federal threatened, state rare

Marcescent dudleya is a perennial succulent found in rocky volcanic areas within chaparral at an elevation of 500 to 1,700 feet. The species is known from fewer than ten occurrences in the Santa Monica Mountains of Ventura and Los Angeles Counties. It is unlikely to occur within the RMP decision area but may be possible on small surface or mineral estate in Ventura County. Marcescent dudleya is threatened by development and foot traffic (CNPS 2009b).

D. parva (Conejo dudleya)
Federal threatened, no state listing

Conejo dudleya is a perennial succulent found in rocky or gravely clay or volcanic sites within coastal scrub and valley and foothill grassland at an elevation of 200 to 1,450 feet. The species is known from about ten occurrences from the western end of Simi Hills to Conejo Grade in Ventura County. It is unlikely to occur within the RMP decision area but may be possible on small surface or mineral estate. Conejo dudleya is threatened by horticultural collecting, recreation, vehicles, and urbanization. The species is federally listed as *Dudleya abramsii* ssp. *parva* (CNPS 2009b).

D. verityi (Verity's dudleya)
Federal threatened, no state listing

Verity's dudleya is a perennial succulent found in volcanic rocky sites within chaparral, cismontane woodland, and coastal scrub at an elevation of 200 to 400 feet. The species is known from only three occurrences near Conejo Mountain in Ventura County. It is unlikely to occur within the RMP decision area but may be possible on small surface or mineral estate. Verity's dudleya is threatened by mining, flood control activities, and development (CNPS 2009b).

Eremalche parryi* ssp. *kernensis (Kern mallow)
Federal endangered, no state status

Kern mallow is a small annual herb found in chenopod scrub and valley and foothill grassland habitat at an elevation of 230 to 3,300 feet. The exact definition of the species has been a matter of some disagreement. Reports, papers, and taxonomic treatments have varied in the exact description of the species, which populations should be included, and what the actual distribution is. The upcoming treatment for the Jepson Manual (Andreasen, in press), based on morphological and genetic analyses,

indicates that Kern mallow occurs in both Kern and San Luis Obispo Counties (Andreasen 2005). There are a number of specimens from the Carrizo Plain that fall within this circumscription of the species. An earlier evaluation concluded that the Carrizo Plain population should warrant recognition as a separate rare subspecies, worthy of protection (Leonelli 1986). One specimen collected on the Elkhorn Plain is identified as Kern mallow (Consortium of California Herbaria 2009). Other specimens from the Carrizo Plain do not indicate subspecies and may or may not be Kern mallow. The species is considered to be seriously threatened by agriculture, grazing, and oil development (CNPS 2009b).

Eriastrum hooveri (Hoover's woolystar)
Federal delisted, no state status

Hoover's woolystar is an annual herb found in chenopod scrub, piñon and juniper woodland, and valley and foothill grassland at an elevation of 160 to 2,300 feet. The species is known in the San Joaquin Valley from Merced south (Fresno, Kings, Kern, and San Benito Counties), the Carrizo Plain and Cuyama Valley (San Luis Obispo and Santa Barbara County), and an area north of Lancaster (Los Angeles County). Hoover's woolystar is found on public lands in the Valley Region and is threatened by agriculture, urbanization, energy development, and vehicles (CNPS 2009b). Following the delisting of Hoover's woolystar (USFWS 2003), and in accordance with recovery plan objectives (USFWS 1998), the BLM designated the species as sensitive, and, as such, it continues to be protected. Projects in *Eriastrum hooveri* habitat must comply with specific mitigation measures designed to protect the species.

Eriodictyon altissimum (Indian Knob mountainbalm)
Federal endangered, state endangered

Indian Knob mountainbalm is an evergreen shrub found in sandstone in chaparral cismontane woodland and coastal scrub habitats at an elevation of 260 to 900 feet. The species is known from six occurrences in the Irish Hills and Indian Knob, San Luis Obispo County, and is known on the BLM Irish Hills parcel. Indian Knob mountainbalm is threatened by urbanization, energy development, and vehicles, and possibly by alteration of fire regimes and nonnative plants (CNPS 2009b).

E. capitatum (Lompoc yerba santa)
Federal endangered, state rare

Lompoc yerba santa is an evergreen shrub found in maritime chaparral and closed-cone coniferous forest at an elevation of 130 to 3,000 feet. The species is known from western Santa Barbara County and is suspected to be on some public lands in the area. No threats to the species have been identified by CNPS (2009b), but development is a likely issue.

Eriogonum kennedyi **var.** ***austromontanum*** (southern mountain buckwheat)
Federal threatened, no state status

Southern mountain buckwheat is a perennial herb found in gravelly areas in lower montane coniferous forest, at an elevation of 6,000 to 9,500 feet. The species is known from Ventura and San Bernardino Counties and has the potential to be on public lands or BLM mineral estate in the Transverse Range. Southern mountain buckwheat is threatened by vehicles, development, grazing, nonnative plants, recreational activities, and road maintenance (CNPS 2009b).

Lasthenia conjugens (Contra Costa goldfields)
Federal endangered, no state listing

Contra Costa goldfields is an annual herb found in playas and vernal pools within cismontane woodland and foothill and valley grassland at an elevation of 0 to 1,500 feet. The species is known primarily from the counties surrounding San Francisco and in the vicinity of Monterey, but extirpated populations are also known from Mendocino County and near Goleta and Carpinteria in Santa Barbara County. It is unlikely to occur within the RMP decision area but may be possible on small surface or mineral estate in the Coastal Region. Contra Costa goldfields is currently threatened by development, habitat alteration, hydrological alterations, overgrazing, and nonnative plants. Many historical occurrences were extirpated by development and agriculture (CNPS 2009b).

Layia carnosa (beach layia)
Federal endangered, state endangered

Beach layia is an annual herb found in coastal dunes and scrub at an elevation of 0 to 200 feet. The species is known from scattered locations along the coast of Humboldt, Marin, San Francisco, Monterey, and Santa Barbara Counties. It has the potential to be found on the BLM Point Sal parcel and is threatened by coastal development, foot traffic, vehicles, and nonnative plants (CNPS 2009b).

Lupinus nipomensis (Nipomo mesa lupine)
Federal endangered, state endangered

Nipomo mesa lupine is an annual herb found in coastal dunes at an elevation of 30 to 160 feet. The species is known from less than ten occurrences from the Guadalupe Dunes/Nipomo Mesa area in San Luis Obispo County. It is unlikely to occur within the RMP decision area but may be possible on small surface or mineral estate in the coastal plain of San Luis Obispo County. Nipomo mesa lupine is threatened by development, vehicles, and nonnative plants (CNPS 2009b).

Monolopia congdonii (San Joaquin woollythreads)
Federal endangered, no state status

San Joaquin woollythreads is an annual herb found in chenopod scrub and valley and foothill grassland at an elevation of 200 to 2,600 feet. The species is previously known from Fresno, Kings, Kern, Santa Barbara, San Benito, San Luis Obispo, and Tulare Counties. Its historic range was throughout the southern San Joaquin Valley, the Carrizo Plain, and the upper Cuyama Valley (Taylor 1989). The current distribution of San Joaquin woollythreads is four metapopulations and several small isolated populations, the largest being in the Carrizo Plain (USFWS 1998). The species is present on public lands in the Valley Region and is threatened by agricultural conversion, energy development, urbanization, grazing, trampling, and vehicles (CNPS 2009b).

Nasturtium gambelii (Gambel's water cress)
Federal endangered, state endangered

Gambel's water cress is a rhizomatous herb found in marshes and swamps at an elevation of 15 to 1,100 feet. The species is nearly extinct in the US; it is known in California from only four occurrences. The Black Lake Canyon and Little Oso Flaco Lake (San Luis Obispo County) populations were not seen in 1998 and are possibly extirpated. There is the very slight potential for this species to occur in seeps within the

BLM Point Sal parcel. Gambel's water cress is seriously threatened by habitat loss, erosion, and eucalyptus that may be altering hydrology at Black Lake Canyon (CNPS 2009b).

Navarretia fossalis (Moran's navarretia)
Federal threatened, no state status

Moran's navarretia is an annual herb found in shallow playas and vernal pools within chenopod scrub at an elevation of 100 to 4,300 feet. The species is known from San Luis Obispo to Baja California, and has the potential to be found on public lands or BLM mineral estate in San Luis Obispo County. Moran's navarretia is threatened by urbanization, agriculture, road construction, grazing, flood control, nonnative plants, illegal dumping, foot traffic, and vehicles. The species is potentially threatened by hydrological alterations (CNPS 2009b).

Opuntia basilaris* var. *treleasei (Bakersfield cactus)
Federal endangered, state endangered

Bakersfield cactus is a perennial succulent found in sandy or gravelly soils in chenopod scrub, cismontane woodland, and valley and foothill grassland at an elevation of 400 to 1,800 feet. The species is known from Kern County and is potentially present on public lands in Kern County. Bakersfield cactus is threatened by energy development, agricultural conversion, grazing, vehicles, and especially urbanization in the Bakersfield area (CNPS 2009b).

Orcuttia inaequalis (San Joaquin Valley Orcutt grass)
Federal threatened, state endangered

San Joaquin Valley Orcutt grass is an annual grass found in vernal pools at an elevation of 30 to 2,500 feet. The species is known from Fresno, Madera, Merced, Solano, Stanislaus, and Tulare Counties (CNPS 2009b). San Joaquin Orcutt grass has been documented from the BLM Table Mountain parcel in Madera County and is seriously threatened by agriculture, development, overgrazing, channelization, and nonnative plants (CNPS 2009b).

O. pilosa (hairy Orcutt grass)
Federal endangered, state endangered

Hairy Orcutt grass is an annual herb found in vernal pools at an elevation of 160 to 660 feet. The species is known from Tehama to Fresno Counties and has the potential to be found on public lands or BLM mineral estate in Madera and Fresno Counties. Hairy Orcutt grass is seriously threatened by agriculture, urbanization, overgrazing, nonnative plants, and trampling (CNPS 2009b).

Pentachaeta lyonii (Lyon's pentachaeta)
Federal endangered, state endangered

Lyon's pentachaeta is an annual herb found in rocky or clay openings in chaparral, coastal scrub, and valley and foothill grassland at an elevation of 100 to 2,000 feet. The species is known from the Santa Monica and Santa Susana Mountains in Los Angeles and Ventura Counties. It is unlikely to occur within the RMP decision area but may be possible on small surface or mineral estate in Ventura County. Lyon's pentachaeta is threatened by development, alteration of fire regimes, trampling, vehicles, nonnative plants, and recreational activities (CNPS 2009b).

Pseudobahia bahiifolia (Hartweg's golden sunburst)
Federal endangered, state endangered

Hartweg's golden sunburst is an annual herb found in clay soils that are often acidic, in cismontane woodland and valley and foothill grassland at an elevation of 50 to 500 feet. Hartweg's golden sunburst is known from the foothills of the Sierra Nevada from Yuba to Kern Counties. It is suspected to be present on some public lands and is seriously threatened by development, agriculture, overgrazing, and trampling (CNPS 2009b).

P. peirsonii (Tulare pseudobahia)
Federal threatened, state endangered

Tulare pseudobahia is an annual herb found in adobe clay in cismontane woodland and valley and foothill grassland at an elevation of 300 to 2,600 feet. The species is known from the foothills of the Sierra Nevada in Fresno, Kern, and Tulare Counties. It is suspected to be present on some public lands and is seriously threatened by agriculture, grazing, development, nonnative plants, road construction and maintenance, and flood control activities (CNPS 2009b).

Sidalcea hickmanii* ssp. *parishii (Parish's checkerbloom)
Federal candidate, state rare

Parish's checkerbloom is a perennial herb found in chaparral, cismontane woodland, and lower montane coniferous forest at an elevation of 3,300 to 8,200 feet. The species is known from Santa Barbara, San Bernardino, and San Luis Obispo Counties. It is suspected to be present on some public lands in the Coast Range in Santa Barbara and San Luis Obispo Counties. Parish's checkerbloom is threatened by urbanization, recreational activities, vegetation/fuels management, alteration of fire regimes, grazing, trampling, and road maintenance (CNPS 2009b).

S. keckii (Keck's checkerbloom)
Federal endangered, no state status

Keck's checkerbloom is an annual herb found in clay and serpentinite soils in cismontane woodland and valley and foothill grassland at an elevation of 400 to 1,400 feet. Although the CNPS (2009b) indicates that the species is known only from three occurrences in Fresno, Tulare, and Merced Counties, specimens identified as *Sidalcea keckii* from Solano, El Dorado, and Napa Counties are in California herbaria (Consortium of California Herbaria 2009). Keck's checkerbloom is suspected to be present on some public lands in the Sierra Region. No information is available on potential threats to the species (CNPS 2009b).

Suaeda californica (California seablite)
Federal endangered, no state listing

California seablite is a small evergreen shrub found in coastal marshes and swamps at an elevation of 0 to 50 feet. The species was formerly known from the San Francisco Bay Area, where it was extirpated by development; now it is extant only in Morro Bay and near Cayucos Point in San Luis Obispo County. It is unlikely to occur within the RMP decision area but may be possible on small surface or mineral estate in San Luis Obispo County. California seablite is threatened by recreation, erosion, and alteration of marsh habitat (CNPS 2009b).

Tuctoria greenei (Greene's tuctoria)
Federal endangered, state rare

Greene's tuctoria is an annual grass found in vernal pools at an elevation of 100 to 3,500 feet. The species is known from Shasta to Tulare Counties and has the potential for occurrence at some vernal pool sites managed by the BLM. Greene's tuctoria is threatened by agriculture, urbanization, and overgrazing (CNPS 2009b).

Other Notable Rare Species

Mimulus shevockii (Kelso Creek monkeyflower)

Kelso Creek monkeyflower is an annual herb found in sparsely vegetated openings within Joshua tree and piñon and juniper woodlands at an elevation of 2,600 to 4,400 feet. The species is known from only ten occurrences in the southern Sierra Nevada (Kern County) within Cyrus Canyon, in the Kelso Creek watershed, and nearby on the Mojave Desert side of the mountains. A recent status report for the Kelso Creek monkeyflower recommends listing the species, based on its rarity and current threats (Thomas 2008). The BLM has managed an area in Cyrus Canyon for the protection of populations of this rare species. A recent donation of land by the Kern Audubon Society has expanded the protected habitat in the canyon. Kelso Creek monkeyflower is also known from BLM lands in the Kelso Creek area. Threats include grazing and OHV activity. One Cyrus Canyon population was destroyed when an adjacent homeowner constructed horse corrals on public land.

B.5 Weeds Species within the Planning Area

There are over 200 problematic invasive plants within the Planning Area (Table B-3) as identified by the California Department of Food and Agriculture and the California Invasive Plants Council (Cal-IPC 2009).

Table B-3
Weed Species[1] within the RMP Planning Area

Acacia dealbata	*Cynodon dactylon*	***Oxalis pes-caprae***
A. melanoxylon	*Cynosurus echinatus*	*Panicum capillare*
A. paradoxa	*Cyperus esculentus*	*Peganum harmala*
Achnatherum brachychaetum	*C. rotundus*	*Pennisetum clandestinum*
Acroptilon repens[2]	***Cytisus scoparius***	*P. setaceum*
Aegilops cylindrica	*Dactylis glomerata*	*P. villosum*
A. triuncialis	*Delairea odorata*	*Phalaris aquatica*
Ageratina adenophora	*Descurainia sophia*	*Phragmites australis*
Agrostis avenacea	*Digitalis purpurea*	*Physalis acutifolia*
A. stolonifera	*Dipsacus fullonum*	*Physalis philadelphica*
Ailanthus altissima	*D. sativus*	*Phytolacca americana*
Alhagi maurorum	*Dittrichia graveolens*	*Picris echioides*
A. pseudalhagi	*Echium candicans*	*Piptatherum miliaceum*
Alternanthera philoxeroides	*Egeria densa*	*Plantago lanceolata*
Ambrosia acanthicarpa	***Ehrharta calycina***	*Poa pratensis*
Ammophila arenaria	*E. erecta*	*Polygonum amphibium* var.
Anthoxanthum odoratum	*Eichhornia crassipes*	*emersum*
Aptenia cordifolia	*Elodea canadensis*	*P. cuspidatum*

Table B-3
Weed Species[1] within the RMP Planning Area

Araujia sericifera	*Elytrigia repens*	*P. lapathifolium*
Arundo donax	*Emex spinosa*	*P. persicaria*
Asparagus asparagoides	*Erodium cicutarium*	*Potamogeton crispus*
Asphodelus fistulosus	*Eucalyptus camaldulensis*	*Prosopis velutina*
Atriplex semibaccata	*E. globulus*	*Ranunculus repens*
Avena barbata	*Euphorbia oblongata*	*Raphanus sativus*
A. fatua	*Ficus carica*	*Ricinus communis*
Bassia hyssopifolia	*Foeniculum vulgare*	*Robinia pseudoacacia*
Bellardia trixago	*Gaura coccinea*	*Rorippa palustris*
Brachypodium distachyon	*G. drummondii*	*Rubus discolor*
Brassica nigra	*G. sinuata*	*Rumex acetosella*
B. rapa	***Genista monspessulana***	*R. crispus*
B. tournefortii	*Geranium dissectum*	*Saccharum ravennae*
Briza maxima	*Glyceria declinata*	*Salsola paulsenii*
Bromus diandrus	*Gypsophila paniculata*	*S. soda*
B. hordeaceus	*Hedera helix*	***S. tragus***
B. japonicus	*Helianthus annuus*	***S. vermiculata***
B. madritensis	*H. ciliaris*	*Salvinia molesta*
B. madritensis subsp. rubens	*Hirschfeldia incana*	*Saponaria officinalis*
B. tectorum	*Holcus lanatus*	*Schinus molle*
Cakile maritima	*Hydrilla verticillata*	*Senecio jacobaea*
Cardaria chalepensis	*Hypericum canariense*	*S. vulgaris*
C.a draba	*H. perforatum*	*Sesbania punicea*
C. pubescens	*Hypochaeris glabra*	*Setaria pumila*
Carduus pycnocephalus	*H. radicata*	*S. viridis*
C. tenuiflorus	*Iris douglasiana*	*Silybum marianum*
Carpobrotus chilensis	*I. missouriensis*	*Sinapis arvensis*
C. edulis	*I. pseudacorus*	*Sisymbrium irio*
Carthamus baeticus	*Iva axillaris*	*Solanum carolinense*
C. lanatus	*Kochia scoparia*	*S. dimidiatum*
Cenchrus echinatus	***Lepidium latifolium***	*S. elaeagnifolium*
C. incertus	*Linaria genistifolia* ssp.	*S. lanceolatum*
C. longispinus	*dalmatica*	*S. nigrum*
Centaurea calcitrapa	*L. vulgaris*	*S. sarrachoides*
C. iberica	*Lolium multiflorum*	*Sonchus arvensis*
C. maculosa	*Ludwigia hexapetala*	*Sorghum bicolor*
C. melitensis	*Lupinus arboreus*	*S. halepense*
C. solstitialis	***Lythrum salicaria***	***Spartium junceum***
C. squarrosa	*Malvella leprosa*	*Sphaerophysa salsula*
Chondrilla juncea	*Marrubium vulgare*	*Taeniatherum caput-medusae*
Chorispora tenella	*Medicago polymorpha*	*Tagetes minuta*
Chrysanthemum coronarium	*Mentha pulegium*	*Tamarix aphylla*
Cirsium arvense	*Mesembryanthemum*	*T. chinensis*
C. ochrocentrum	*crystallinum*	*T. gallica*
C. vulgare	*Myoporum laetum*	*T. parviflora*
Conicosia pugioniformis	*Myosotis latifolia*	***T. ramosissima***

Table B-3
Weed Species[1] within the RMP Planning Area

Conium maculatum	*Myriophyllum aquaticum*	*Tanacetum vulgare*
Convolvulus arvensis	*M. spicatum*	*Torilis arvensis*
Cortaderia jubata	*Nicotiana glauca*	***Tribulus terrestris***
C. selloana	*Nothoscordum inodorum*	*Trifolium hirtum*
Cotoneaster pannosus	*Nymphaea mexicana*	*Verbascum thapsus*
Cotula coronopifolia	*Olea europaea*	*Vinca major*
Crataegus monogyna	*Ononis alopecuroides*	*Vulpia myuros*
Cucumis myriocarpus	*Onopordum acanthium*	*Washingtonia robusta*
Cupressus macrocarpa	*O. tauricum*	*Zygophyllum fabago*
Cynara cardunculus	*Orobanche ramose*	

[1]Weeds are those included on the Cal-IPC Web pages.
[2]The 22 species in bold are the focus of current weed control/eradication efforts. Source of the list: Consortium of California Herbaria (2009).

B.6 Regional Vegetation Descriptions

Coast Region

The Coast Region contains the largest number of plant communities of the three regions. Eighty-eight vegetation alliances are found within or have the potential to be on public lands in the area. Most of the public lands in the Coast Region have not had their vegetation mapped, so exact delineations of vegetation types are not available. Twenty-seven different alliances of woodlands are present, dominated by oaks, other hardwoods, pines, other conifers, or riparian species, primarily willows. Although there are 10 different alliances of oak woodlands within the Coastal Region, most prevalent are those types dominated by blue or coast live oak. Foothill (gray) pine is a common element in some of the blue oak woodlands.

Several of the plant communities have become sufficiently rare to cause local concern. Sensitive plant communities within this region include northern interior cypress forest (Sargent cypress alliance), serpentine chaparral (various chaparral alliance), southern dune scrub (coastal scrub alliance), southern Bishop pine forest (Bishop pine alliance), oak woodlands, and riparian communities.

Twenty-six federally listed plant species occur within the Coast Region (Table B-1), Federally Listed Plants on Public Lands in the RMP Decision Area), but nine of these are unlikely to occur on public lands. Of the remaining 17 species, six are threatened and 11 are endangered. Three of the listed species are known to occur on public lands within the Coast Region, four are suspected to occur, and the remaining 10 have the potential to occur. In addition, there are 123 BLM sensitive plant species within the Coast Region. Of these, 23 are known to be present on public lands, nine are suspected to occur, and 91 have the potential to be present. While little survey data is available for the presence of sensitive plants on public lands in this region, the best available information and professional judgement was used regarding the potential for the presence or absence of a particular plant. Many potentially impacting uses and activities may occur in varying degrees on these lands. Generally the accessible lands and those lacking dense vegetative cover are subject to surface-disturbing activities and resultant impacts on sensitive plant species and their habitats. Many of the inner coast range areas can be extensively grazed in livestock allotments. Parcels nearer the coastal zone tend to be in steep and densely vegetated areas.

Oil and gas development occurs on a limited scale in both the Sespe and Point Conception areas. It is unknown if any sensitive plant species are within the active oil producing leaseholds. Many of the coastal parcels have outstanding botanical resources. Examples include Los Osos with its pygmy oak forest and rare plants, Point Sal and Piedras Blancas with coastal dune communities and several sensitive plant species, Salinas River with its riparian community, Tierra Redonda Mountain with unique sand dunes and sensitive plants, Frog Pond Mountain with its rare bay forest, Cypress Mountain with its Sargent cypress forest and several associated sensitive plant species, Irish Hills with its Bishop pine forest and record trees, and Rusty Peak with its sensitive plant communities and species. These areas have been designated as ACECs, SMAs, or, for the newly acquired parcels, as proposed ACECs or Outstanding Natural Areas (Piedras Blancas).

Valley Region

The Valley Region contains the fewest plant communities of the three regions. Thirty-nine vegetation alliances are found within or have the potential to be on public lands in the region. Most of the BLM lands in the Valley Region have not had their vegetation mapped, so exact delineations of vegetation types are not available. Vegetation primarily consists of grasslands and alkali scrub. There are some blue and Alvord oak woodlands in the ranges on the western side of the region. The Freeborn Mountain area has extensive stands of chaparral, and the Cuyama area includes some juniper woodlands. Some of the alkali scrub communities are now quite rare due to conversion of extensive tracts of San Joaquin Valley land to agriculture.

Thirteen federally listed plant species occur within the Valley Region (Table B-1), Federally Listed Plants on Public Lands in the RMP Decision Area), but three of these are unlikely to occur on public lands. Of the remaining 10 species, three are threatened and seven are endangered. There is also one delisted species, Hoover's woolystar (*Eriastrum hooveri*). Five of the listed species are known to occur in the Valley Region, three are suspected to occur, and the remaining three have the potential to occur. In addition, there are 38 BLM sensitive plant species within the Valley Region. Of these, 22 are known to be present on public lands, seven are suspected to occur, and nine have the potential to be present. Most of these species are associated with either vernal pool ecosystems or alkali scrub communities.

The southern San Joaquin Valley was once covered with alkali scrub communities, estimated at over three million acres in the broad plains of the valley floor and foothills, and dominated by two perennial species of saltbush (*Atriplex polycarpa* and *A. spinifera*). The rapid development of irrigated agriculture, urbanization, and oil and gas production in the last century has significantly decreased the extent of this vegetation. Less than 10 percent of the original vegetation is now left, most in degraded to fair condition. Large areas of saltbush scrub have been lost or severely degraded by fire. Significant remnant examples of the saltbush scrub community are present in the Lokern area, Semitropic Ridge, Lost Hills, and Buena Vista Valley. Valley Sink Scrub is another natural vegetation type found in the valley. It is restricted to valley bottoms near lake beds, as exemplified by Kern, Tulare, and Goose Lakes. It is best developed in highly alkaline soils that have no external drainage. The vegetation of Valley Sink Scrub is made up of plants that can tolerate high levels of salinity and alkalinity, such as iodine bush (*Allenrolfea occidentalis*) and seepweed (*Suaeda fruticosa*). Water developments and land reclamation for agriculture have virtually eliminated this community from the San Joaquin Valley. It is now considered to be one of the rarest communities by the California Natural Diversity Data Base. The Goose Lake ACEC was established in part to conserve this rare plant community. Past proposals to expand this ACEC have not been successful, and the public land holdings remain at 40 acres.

Sierra Region

The Sierra Region is botanically diverse and relatively unexplored. Sixty-five vegetation alliances are found within or have the potential to be on public lands in the region. Twenty-five different alliances of woodlands are present, primarily dominated by oaks or conifers, but also including willow alliance in riparian areas. Notable vegetation alliances include Piute cypress forest, giant Sequoia forest, Joshua tree woodland, and alkali meadows. There are also extensive oak woodlands. Much of the Sierra Region has not been surveyed for sensitive plant species due to inaccessibility, rough terrain, and lack of resources. The more accessible lands are occasionally subject to surface-disturbing activities, such as grazing and OHV usage, which could impact sensitive plants. A much larger percentage of this region receives little or no impact from BLM-authorized activities because of its wilderness status or isolated nature.

Ten federally listed plant species occur within the Sierra Region (Table B-1), Federally Listed Plants on Public Lands in the RMP Decision Area). Of the 10 species, five are threatened and five are endangered. Four of the listed species are known to occur within the Sierra Region, five are suspected to occur, and one has some potential to occur. In addition, there are 65 BLM sensitive plant species within the Sierra Region. Of these, 27 are known to be present on public lands, 14 are suspected to occur, and 23 have the potential to be present. One alpine species is unlikely to be present on public lands.

Bakersfield cactus, a federally endangered species, occurs in the western portion of this region around Caliente Creek (Kern County). Kelso Creek monkeyflower, a species that many feel should be listed, is the focus of a proposed ACEC in Cyprus Canyon (Kern County); a recent donation of land from the Audubon Society has increased BLM holdings of monkeyflower habitat. No less than 18 new species have been described from the remote and relatively unexplored portions of the southern Sierra Nevada range, an area purported to include upwards of 60 percent of the California flora. Notable rare species, such as Spanish Needle onion (*Allium shevockii*), Nine-Mile Canyon phacelia (*Phacelia novenmillensis*), Needle's buckwheat (*Eriogonum breedlovei* var. *shevockii*), Charlotte's phacelia (*P. nashiana*), and Walker Pass milkvetch (*Astragalus ertterae*), can be found from Walker Pass to the Spanish Needle, along and near the Pacific Crest Trail.

The region also includes a number of sensitive or unique plant communities or habitats that support sensitive plant species. Marble outcrops that support limestone endemic species occur along Erskine Creek (Kern County) and at Comb Rocks near Milk Ranch Peak (Tulare County). Alkali meadow communities around Isabella Lake (Kern County), South Lake (Kern County), and hot springs areas support the alkali mariposa lily (*Calochortus striatus*). Piute Cypress groves, rare communities in and of themselves, additionally support other rare plants, such as the Piute Mountains jewelflower (*Streptanthus cordatus* var. *piutensis*) and Kern County larkspur (*Delphinium purpusii*).

B.7 Commercial Forest and Woodlands

The only public lands within the RMP Decision Area containing woodlands of potential commercial quality are within the Sierra Region in the Case Mountain/Milk Ranch Peak area (Tulare County). This is in the Case Mountain Wilderness Study Area; therefore, production of forest products is prohibited. Commercial forest lands are not found in the Chimney Peak/Walker Pass area.

Approximately 2,500 acres of federal lands on Case Mountain and Milk Ranch Peak have been logged; additionally nearby private lands were also logged. The goal of logging was to harvest old growth mixed conifer stands, including giant sequoias on private inholdings on Case Mountain, incense cedar, sugar

pine (*P. lambertiana*), ponderosa pine, white fir, and Jeffrey pine. Ground-based harvesting systems were used, and all logs were trucked to mills in Dinuba or Terra Bella, California. Areas too steep and rocky for these harvest systems were not logged. Old haul roads are evident throughout the site. Prior to 1980, approximately 60 million board feet of timber were extracted from the Case Mountain/Milk Ranch Peak area, primarily during the early 1950s. The BLM acquired 480 acres of privately owned land in 1980 that appeared to have been lightly logged several decades before. The seller still retained the rights to harvest half the remaining merchantable timber, excluding giant sequoia, and in 1981 harvested and trucked three million board feet of timber to the Dinuba mill.

A 4,500-acre lightning-caused fire in late August 1987 burned over much of Case Mountain with high (stand-replacing) intensities for approximately two weeks. The three giant Sequoia groves on public land were not damaged by fire, and most of the public lands were subject to low intensity burning that stayed on the ground.

B.8 Regional Wildlife Descriptions

Coast Region

Two National Wildlife Refuges occur in this region. The Guadalupe-Nipomo Dunes National Wildlife Refuge is approximately 9.5 miles north of public land within the Pt. Sal ACEC and was established to protect breeding habitat for the endangered California least tern and the threatened snowy plover. The Pt. Sal ACEC is managed to protect cultural, visual, geological, and biological resources, including rare, threatened, and endangered plant and animal species. The Hopper Mountain National Wildlife Refuge was established to protect the endangered California condor, its habitat, and other resources. The BLM manages approximately 2,025 acres of public land and 3,240 acres of split estate as the Hopper Mountain Special Management Area (SMA). The objective of the Hopper Mountain SMA is to support the California Condor Recovery Program and to complement management of the adjacent Sespe Condor Sanctuary, Hopper Mountain National Wildlife Refuge, and the Sespe-Piru Critical Condor Habitat Area.

The Coast Region provides suitable living conditions for a variety of plant and animal communities. The principal wildlife values found in this area are the state and federally listed and special status animals and those habitats and animals on public land.

Several federally listed species usually considered San Joaquin Valley specialties are found in a limited portion of the Coast Region. The San Joaquin kit fox is found in two areas, the San Juan Creek drainage and a disjunct population at Camp Roberts. The Camp Roberts kit fox population has declined substantially and may no longer be viable. The blunt-nosed leopard lizard and giant kangaroo rat are also found in the San Juan Creek drainage. There is little BLM-managed public land in this drainage, and the presence of these species is undetermined. The federally listed vernal pool fairy shrimp also occurs at Camp Roberts.

The BLM's involvement at Camp Roberts is limited to oil and gas leasing and development. Opportunities for the BLM to manage beyond the requirements of NEPA and the ESA are limited by the small amount of surface acreage under its control.

Approximately five acres of public land in the Los Osos area provides habitat for the federally listed Morro shoulderband snail and is designated critical habitat for the species. The parcel is also historic habitat for the federally listed Morro Bay kangaroo rat.

Public land in the Lompoc area provides potential habitat for the California tiger salamander. Critical habitat includes approximately one acre of public land and 20 acres of split estate.

Potential habitat for the California red-legged frog may occur on public land in the Coast Region. The frogs are known from state land next to public land at Piedras Blancas. Critical habitat includes approximately 80 acres of public land north of Cachuma Lake and approximately 120 acres of split estate near Garcia Mountain.

Critical habitat for arroyo southwestern toad and the coastal California gnatcatcher include split estate. Arroyo southwestern toad critical habitat includes 36 acres of split estate along the Sisquoc River. Additional split estate occurs nearby but outside the critical habitat boundary. Critical habitat for the coastal California gnatcatcher includes 320 acres of split estate near the Ventura-Los Angeles county line. Potential habitat includes public land at South Mountain and estate from Oak Ridge to South Mountain.

Portions of two critical habitat units for steelhead occur in the Coast Region. The south-central California coast critical habitat unit includes approximately 3/8 mile of stream on public land within the Cypress Mountain ACEC and along Dairy Creek, and one and a third miles of stream on split estate within the Salinas River ACEC and Irish Hills SMA and along the north fork of Pico Creek and San Carpoforo Creek. The southern California coast critical habitat unit includes approximately half a mile of stream on public land within the Hopper Mountain SMA and 100 feet of stream on split estate along Gobernador Creek.

Public land in the Coast Region provides habitat for the California condor. The Coast Region includes designated critical and essential condor habitat. The Hi Mountain Critical Habitat Area contains approximately 500 acres of public land near Big Baldy. Public land and split estate in the Hopper Mountain area provides condor nesting and roosting habitat.

Two other raptors of special interest occur within the Coast Region. The peregrine falcon, now a recovered species, is known to use public land at Point Sal and Piedras Blancas. The California spotted owl may occur on public land, especially on parcels next to Los Padres National Forest.

A number of special status wildlife species are restricted to the coastline habitats, offshore rocks, or waters at Point Sal and Piedras Blancas. These are the California brown pelican, western snowy plover, California least tern, marbled murrelet, southern sea otter, northern sea lion, and humpback whale. Three additional species, California sea lion, harbor seal, and northern fur seal, are not special status species but are protected by the Marine Mammal Protection Act. Point Sal is an ACEC with management directives appropriate for the area's importance to cultural and wildlife resources. Piedras Blancas is a National Historic Landmark. Management objectives for both areas include the protection of marine mammals and other wildlife. Western snowy plover habitat also occurs on 10 acres of mineral estate at the southern end of the Pacific Missile Test Center. The surface is managed by the Department of Defense whose management plan provides a benefit to the plover (USFWS 2005).

Abandoned mines and other features provide habitat for several BLM sensitive bat species. Mines in the Coast Ranges, such as Rinconada Mine and Klau Mine, are used by the Townsend's big-eared bat, pallid bat, Yuma myotis, fringed myotis, western pipistrelle, Mexican free-tailed bat, and big brown bat.

The Coast Region contains small to moderate numbers of big and upland game animals. A small herd of tule elk are resident at Camp Roberts. Quail, mourning dove, and chukar partridge are found in small to moderate numbers.

All or a portion the Adelaidea, Pozo, Santa Barbara-Ventura, and Shandon deer herd units occur within the Coast Region, within the Central Coast (south) Deer Assessment Unit 9 (DAU 9). Deer populations are composed of black-tailed deer in the north and California mule deer in the south. Deer in the unit are resident animals that exhibit some upslope and downslope movement with seasonal changes in weather and forage conditions. Population numbers range from 70,000 to 120,000 and are considered to be stable (CDFG 2007, 2008c). Public land managed by the BLM provides four percent of the habitat.

Besides those raptors already mentioned, the Coast Region provides nesting habitat for golden eagle, red-tailed hawk, red-shouldered hawk, American kestrel, prairie falcon, Cooper's hawk, sharp-shinned hawk, turkey vulture, western screech owl, burrowing owl, long-eared owl, northern saw-whet owl, and flammulated owl. The grass-dominated areas provide important wintering habitat for ferruginous hawk, northern harrier, merlin, rough-legged hawk, and short-eared owl. Swainson's hawks also forage over grasslands during fall and spring migrations. In addition to raptors, these grasslands provide important habitat for long-billed curlew and mountain plover.

Valley Region

Three National Wildlife Refuges, Kern, Pixley, and Bittercreek, occur in this region. Approximately 920 acres of BLM-managed public land are within the boundaries of Bittercreek National Wildlife Refuge. The BLM manages 920 acres of public land and 4,840 acres of split estate as the Bittercreek SMA. This is a threatened and endangered species conservation area and is compatible with the USFWS management of the surrounding Bittercreek National Wildlife Refuge. The USFWS established the Bittercreek National Wildlife Refuge to protect foraging habitat for the California condor. There are no public lands within or next to the Kern or Pixley National Wildlife Refuges.

Two National Cooperative Land and Wildlife Management Areas, the Caliente and the Temblor, include approximately 78,630 acres of public land in the Caliente and Temblor Mountain Ranges within the Valley Region. An additional 78,630 acres are within the Carrizo Plain National Monument and are not part of the Bakersfield RMP Decision Area. These National Cooperative Land and Wildlife Management Areas were established in 1961 to be managed by the BLM for the development, conservation, use, and maintenance of their natural resources, including their recreational and wildlife resources (Public Land Order 2326, January 26, 1962, and Public Land Order 2460, May 8, 1957). These National Cooperative Land and Wildlife Management Areas are withdrawn from application under the nonmineral public land laws, and from disposition under the homestead, desert land, and script selection laws (Public Land Order 2326, January 26, 1962, and Public Land Order 2460, May 8, 1957. These areas are managed as the Caliente and Temblor National Cooperative Land and Wildlife Management Area SMA. The Caliente and Temblor NCLWMA SMA is managed to improve and maintain vegetation communities that will benefit wildlife species, including deer, chukar, and quail.

Recent historic range of the California condor includes lands along the western, southern, and eastern border of the Valley Region (USFWS 1996). A portion of the Tejon Ranch Critical Habitat Area is within this region and includes 40 acres of public land and 240 acres of split estate. Essential habitat is deemed important for the recovery of a species but does not have the legal protection of the ESA (USFWS 1984). The San Juan Creek Essential Condor Habitat Area contains approximately 8,000 acres of public land and 7,000 acres of split estate near Freeborn Mountain, Hubbard Hill, and Cholame. The Glennville-Woody Essential Condor Habitat area includes 1,894 acres of public land and approximately 20,000 acres of split estate. Approximately 20,840 acres of public land and 6,480 acres of split estate are within the Carrizo and Elkhorn Plains Essential Condor Habitat Area. The Southwestern Kern County Essential Condor

Habitat Area includes 7,680 acres of public land and 14,000 acres of split estate near Bittercreek National Wildlife Refuge and the Windwolves Preserve. In 1998, the US Fish and Wildlife Service considered a potential condor release site on public land and private land within the Windwolves Preserve. Supplemental condor feeding stations occur at Windwolves Preserve, Bittercreek National Wildlife Refuge, and Tejon Ranch. Public land adjacent to Bitter Creek National Wildlife Refuge in the Headwall Oaks area provide roosting habitat, while the remaining public land in the Valley Region serves primarily as foraging habitat (USFWS 1996).

Blunt-nosed leopard lizards, San Joaquin kit fox, and San Joaquin antelope squirrel are known to occur on public lands throughout the region, including Kettleman Hills, Avenal, Buena Vista Valley, NPR-2, Lokern, Maricopa, Cuyama Valley, and Poso Creek. Giant kangaroo rats are known to occur on public lands throughout the west half of the region, including the NPR-2, Lokern Road, Midway Valley, and Buena Vista Valley. Giant kangaroo rats may occur on public lands in the Cuyama Valley. Tipton kangaroo rats are known to occur on public land at Atwell Island, NPR-2, and within the Alkali Sink ACEC near Copus Road. Tipton kangaroo rats may also occur on other scattered tracts of public land that are east of or next to the California Aqueduct and that support the alkali sink habitat used by the Tipton kangaroo rat. The Valley Region includes one 40-acre parcel of public land and scattered parcels of split estate within the historic range of the Fresno kangaroo rat. No known extant populations of the Fresno kangaroo rat are known to exist within the historic range. Potential habitat for the Buena Vista Lake shrew may occur on public lands in the Alkali Sink ACEC, Atwell Island, and one parcel of land at NPR-2. The Kern primrose sphinx moth was discovered in the Cuyama Valley in 2004 and is likely to occur on public land (Jump 2008). The Cuyama Valley is also an area of hybridization between the blunt-nosed and long nosed leopard lizard. While hybrids are not protected by law, the hybridization zone has been a topic of repeated scientific study (Montanucci 1970; LeFevre 1974, 1975).

The US Fish and Wildlife Service has published recovery plans for the California condor and the San Joaquin Valley suite of species (USFWS 1996, 1998). One of the actions in the Recovery Plan for Upland Species of the San Joaquin Valley, California (USFWS 1998) is to establish a system of multispecies reserves and corridors. These reserves and corridors include significant amounts of public land in Kettleman Hills, Avenal, NPR-2, Buena Vista Valley, Semitropic Ridge, Lokern Road, Lost Hills, Telephone Hills, Bitterwater Creek, Chico-Martinez, Midway Valley, and Upper Cuyama (Map 3.6)(see *A Conservation Strategy for Threatened and Endangered Species in the San Joaquin Valley*). Private lands have also been acquired or placed in mitigation banks in the Lokern Road Area, Buena Vista Valley, NPR-2, and Semitropic Ridge. In addition, the Atwell Island land retirement project is preserving remnant alkali sink habitat and is restoring previously irrigated farmlands to upland natural communities to implement recovery tasks of the San Joaquin Valley Upland Species Recovery Plan.

California red-legged frog critical habitat includes approximately 200 acres of public land and 600 acres of split estate near Blue Stone Ridge. One adult and one juvenile California red-legged frog was observed in a permanent pocket of water approximately a tenth of a mile from public land in 2001 (CDFG 2008b). Critical habitat for the California tiger salamander also occurs near Blue Stone Ridge in the Palo Prieto Pass but does not include any public land or split estate.

Critical habitat for the vernal pool fairy shrimp includes six acres of public land near Pixley National Wildlife Refuge. The vernal pool fairy shrimp has the potential to occur on 140 acres of split estate near Pixley National Wildlife Refuge.

Public land in the Valley Region provides important habitat for a number of BLM sensitive species and California Species of Concern. Such species include burrowing owl, mountain plover, LeConte's thrasher, Tulare grasshopper mouse, and western spadefoot toad.

All or a portion of six deer herd units are within the Valley Region. The Mt. Pinos, Shandon, Avenal, and Pozo deer herd units are within DAU 9, which is discussed above under the Coast Region. The Tejon and South Sierra-Foothill deer herd units are within the South Sierra DAU 7. Deer populations are composed of California mule deer. The nonmigratory Tejon herd was estimated at 1,820 in 2006 and had a stable to declining trend (CDFG 2007, 2008c). Approximately 3,450 acres of public land managed by the BLM is within the Tejon herd unit. The South Sierra-Foothill herd was estimated at 11,760 in 2006 and had a generally upward trend (CDFG 2007, 2008c). The South Sierra-Foothill herd is migratory, with much of the summer range on Forest Service or National Park Service land. Much of the winter range is on private or Forest Service public land. The Valley Region includes approximately 2,200 acres of public land managed by the BLM in the South Sierra-Foothill deer herd unit. Public land managed by the BLM provides four percent of the habitat in DAU 7.

Resident deer also occur throughout the region. No specific plans are written for these herds. For most of these resident deer, fawning habitat consists of meadows and riparian zones with dense cover. No other key habitat areas have been identified. Shrubland areas that provide browse may also be considered key habitat.

CDFG has released pronghorn at various locations in this region, including the Carrizo Plains and Antelope Valley. Pronghorn observations have been reported from Plieto Hills and Blackwells Corner in the north, through the foothills of the Temblors, and south to Camp Dix. Pronghorn are occasionally observed in the Lokern area and also in the eastern portion of this region near Arvin, Cottonwood Creek, and northwest of Bena. Although no specific observations occur for public lands, it is likely that pronghorn occur on public lands.

Tule elk were introduced into the Carrizo Plain in the 1980s (BLM 2008e). The resulting Poso herd unit numbers about 500, and animals commonly occur in the Chimineas Ranch and Taylor Canyon areas.

Wild pigs are known to occur on public land along the north and west flank of the Caliente Range, adjacent to the Carrizo Plain. California quail, chukar, and dove occur throughout the Temblor and Caliente Ranges.

The Valley Region provides habitat for a variety of raptor species, including most of those discussed under the Coast Region. In particular, burrowing owl, Swainson's hawk, red-tailed hawk (*Buteo jamaicensis*), ferruginous hawk, short-eared owl, and white-tailed kite make use of public land in the Valley Region. Kettleman Hills is an especially important foraging, nesting, and wintering area for raptors.

AQUATIC, WETLAND, AND RIPARIAN HABITAT

When seasonally flooded, public lands at Goose Lake, Copus Road, and Atwell Island provide wetland habitat for numerous water birds, such as black-necked stilt, American avocet, greater yellow-leg, long-billed dowitcher, western and least sandpipers, mallard, cinnamon teal, green-winged teal, gadwall, northern shoveler, and white pelican. Irrigation canals at Atwell Island provide wetland habitat throughout the year. Scattered springs are known to occur on public land in the region, with many of these occurring in the Caliente, Temblor, and San Emigdio Mountain ranges or foothills. Most of these

springs support an area of riparian vegetation around the source, and many support a linear riparian zone as their outflow travels downstream.

Sierra Region

One National Wildlife Refuge, Blue Ridge, occurs in this region. The Blue Ridge National Wildlife Refuge was established to protect important roosting habitat for the California condor. The BLM manages approximately 3,195 acres of public land and 2,100 acres of split estate next to the Blue Ridge National Wildlife Refuge as the Blue Ridge ACEC to protect designated critical condor habitat.

One National Cooperative Land and Wildlife Management Area, Monache Walker Pass National Cooperative Land and Wildlife Management Area, includes approximately 27,000 acres of public land near Lake Isabella, 17,000 acres of public land in the Kelso Creek Valley, and 94,800 acres of public land in the Chimney Peak and Walker Pass area. Public land in the Monache Walker Pass National Cooperative Land and Wildlife Management Area is managed as an SMA to improve and maintain a diverse assemblage of vegetation communities to benefit wildlife resources. Each vegetative community will be managed to perpetuate that particular community and the various wildlife species associated with it.

Recent historic range of the California condor includes lands along the western edge of the Sierra Region east to the foothills of the Sierra Nevada (USFWS 1996). Three of the nine federally designated critical condor habitat areas occur within this region. The Kern County Rangelands Critical Habitat Area includes 120 acres of public land and 4,760 acres of split estate near the town of Woody. The Tulare County Rangelands Critical Habitat Area includes 80 acres of public land near Chickencoop Canyon and 120 acres of split estate near Frazier Valley. The Tejon Ranch Critical Habitat Area includes 80 acres of public land and 11,565 acres of split estate in the Sierra Region. Approximately 500 acres of public land within the Tejon Ranch Critical Habitat Area were sold to Tejon Ranch in 1986 after formal consultation with the US Fish and Wildlife Service (USFWS 1985; BLM 1985a).

The Blue Ridge Critical Habitat Area includes 3,195 acres of public land and 2,100 acres of split estate. Landowners within the Blue Ridge Critical Habitat Area include the BLM (3,268 acres), US Fish and Wildlife Service (898 acres), California Department of Fish and Game (596 acres), California State Lands Commission (320 acres), and California Department of Forestry (one acre). The 898 acres owned by the US Fish and Wildlife Service has been designated the Blue Ridge National Wildlife Refuge. An interagency habitat management plan for the Blue Ridge area was written in 1986 (BLM 1986a). The area is also a designated ACEC.

Essential habitat for the California condor occurs in the Woody Glennville area of the Sierra Region and includes approximately 1,900 acres of public land and 20,000 acres of split estate. Historically, condors have used public land in the Tehachapi Mountains, such as Cummings Mountain and other scattered parcels.

Vernal pools at Kennedy Table and Table Mountain provides known habitat for the vernal pool fairy shrimp and potential habitat for the vernal pool tadpole shrimp. Critical habitat for the vernal pool fairy shrimp includes 60 acres of public land at Kennedy Table. Critical habitat for the vernal pool tadpole shrimp includes 219 acres of public land and 840 acres of split estate at Table Mountain.

Suitable habitat for the valley elderberry longhorn beetle occurs on public land throughout the Sierra Planning Area. Exit holes resembling those of valley elderberry longhorn beetle have been observed on

public lands at San Joaquin River Gorge, Three Rivers, and Keyesville and on scattered tracts in Fresno, Madera, Tulare, and Kern Counties.

Critical habitat for the central California population of the California tiger salamander occurs within the Sierra Region but does not include any public land or split estate. Public land near Raymond is immediately adjacent to critical habitat and it likely to be used by tiger salamanders as terrestrial habitat (Hansen 2005). A survey of ponds in the San Joaquin River Gorge found no evidence of tiger salamanders, although a BLM employee reported observing one in 2003 (Hansen 2009). Abundant suitable habitat is present, but it may be too isolated from large areas of occupied habitat near Millerton Lake. The San Joaquin River Gorge could serve as a reintroduction site, perhaps in response to habitat loss near Friant (Hansen 2009). Terrestrial habitat for tiger salamanders may also occur on public land near the San Joaquin Experimental Range.

California red-legged frogs historically occurred in the Sierra Region (Jennings and Hayes 1994). No extant populations are thought to occur along the Sierra foothills in Madera, Fresno, Tulare, or Kern Counties (Jennings and Hayes 1994). The California red-legged frog is unlikely to occur on public land or split estate in the Sierra Region.

Critical habitat for the southwestern willow flycatcher includes 400 acres of public land along the south fork of the Kern River. The western yellow-billed cuckoo also has the potential to occur on public land in the south fork area.

Kern primrose sphinx moth occurs in the Walker Basin area. Public land may be next to potential habitat for the sphinx moth.

Pacific fisher and California spotted owls have been documented on public lands in the Case Mountain area. California spotted owls are also suspected in other forested parts of the region or nonforested areas with dense stringers of riparian forest. Such habitat may exist on land near Milk Ranch Peak, Chimney Peak, and the San Joaquin River Gorge.

Public land in the Sierra rprovides important habitat for a number of state listed species, BLM sensitive species, and California species of concern. Public land in the Caliente Creek area provides habitat for the Tehachapi slender salamander and yellow-blotched salamander. Abandoned mines, especially in the Keyesville and Caliente Creek area provide habitat for bats, including the pallid bat, Townsend's big-eared bat, fringed myotis, and Yuma myotis. A small isolated population of burrowing owls occurs in the South Lake area. Burrowing owls also occur in the Kelso Valley area (Foothill Institute 1980). Pond turtles occur on public land at the San Joaquin River Gorge, Salt Creek, White River, and Erskine Creek. The willow flycatcher is likely to occur in the Chimney Peak area. The bald eagle and the peregrine falcon have been observed within the planning area and may make use of public lands.

All or a portion of eight deer herd units are within the Sierra Region. All are within DAU 7 and are composed of California mule deer. The south Sierra Foothill deer herd unit is discussed above under the Valley Region. The Sierra Region includes approximately 12,600 acres of public land managed by the BLM within the south Sierra Foothill deer herd unit. The migratory Hume, Kaweah, Tule, Greenhorn, and Kern River deer herd units are within Deer Hunt Zone D8. The population of Deer Hunt Zone D8 was estimated at 10,520 in 2006 and was stable to declining (CDFG 2007, 2008c). The Sierra Region includes approximately 52,700 acres of public land managed by the BLM in these five deer herd units. The nonmigratory Piute deer herd was estimated at 3,150 in 2006 and is stable (CDFG 2007, 2008c). This Sierra Region includes 79,746 acres of public land managed by the BLM in the Havilah, Walker Basin,

Kelso Valley, and Tehachapi areas. The migratory Monache deer herd was estimated at 880 in 2006 and is stable (CDFG 2007, 2008c). Public land includes approximately 108,700 acres of winter range in the Chimney Peak area.

Resident deer also occur throughout the region. No specific plans are written for these herds. For most of these resident deer, fawning habitat consists of meadows and riparian zones with dense cover. No other key habitat areas have been identified. Shrubland areas that provide browse may also be considered key habitat.

Pronghorn have been sighted within the region near Arvin and Tehachapi. All observations were on private land.

Besides those raptors already mentioned, the Sierra Region provides habitat for a variety of raptor species, including most of those discussed under the Coast Region. Barn owls roost and nest in abandoned mines and buildings. Great-horned owl, screech owl, saw-whet owl, and pygmy owl are likely to use public lands in the Sierra Region. Prairie falcon, golden eagle, and red-tailed hawk nest on public land in the Chimney Peak and San Joaquin River Gorge.

AQUATIC, WETLAND, AND RIPARIAN HABITAT

Extensive riparian inventories have been completed for 14 watersheds in the region. Based on these inventories at least 20 miles of riparian forest, 40 miles of riparian scrub, one mile of marshland and two miles of strandland occur on public lands in the region. Strandlands are beach and river channel communities subject to infrequent but periodic submersion (BLM 1987). Vegetation alliances represented on public land includes alder, cottonwood-willow, oak, and willow. Based on inventory and monitoring conducted by BLM between 1987 and 2009, approximately 67 miles of inventoried stream are in good to excellent condition, and 1.3 miles were in poor to fair condition.

Numerous springs occur throughout the region. Most support an area of riparian vegetation around the source and many support a linear riparian zone as their outflow travels downstream. Based on inventory and monitoring conducted by BLM between 1984 and 2009, approximately 1,000 springs have been inventoried, 80 percent of which are in good to excellent condition and 20 percent are in poor to fair condition.

B.9 Special Status Plant Species Listings

Table B-4
Special Status Plant Species in the Bakersfield FO Planning Area

			Likelihood of Occurrence within Planning Units [2]		
Scientific Name	**Common Name**	**Status[1]**	**Coast**	**Valley**	**Sierra**
Abies bracteata	bristlecone fir	S	P		
Agrostis hooveri	Hoover's bent grass	S	C		
Allium hickmanii	Hickman's onion	S	P		
A. howellii var. *clokeyi*	Mt. Pinos onion	S	P	P	
A. shevockii	Spanish Needle onion	S			C
Ancistrocarphus keilii	Santa Ynez groundstar	S	S		

Table B-4
Special Status Plant Species in the Bakersfield FO Planning Area

			Likelihood of Occurrence within Planning Units [2]		
Scientific Name	**Common Name**	**Status[1]**	**Coast**	**Valley**	**Sierra**
Aphanisma blitoides	Aphanisma	S	P		
Arabis bodiensis	Bodie Hills rock cress	S			U
Arctostaphylos cruzensis	La Cruz manzanita	S	P		
A. hookeri ssp. *Hearstiorum*	Hearsts' manzanita	S	P		
A. Luciana	Santa Lucia manzanita	S	P		
A. montereyensis	Monterey manzanita	S	P		
A. morroensis	Morro manzanita	T	C		
A. osoensis	Oso manzanita	S	P		
A. pechoensis	Pecho manzanita	S	P		
A. pilosula	Santa Margarita manzanita	S	C		
A. purissima	La Purisima manzanita	S	P		
A. refugioensis	Refugio manzanita	S	P		
A. rudis	sand mesa manzanita	S	C		
A. tomentosa ssp. *Daciticola*	dacite manzanita	S	P		
A. tomentosa ssp. *Eastwoodiana*	Eastwood's manzanita	S	P		
A. wellsii	Wells' manzanita	S	P		
Arenaria paludicola	marsh sandwort	E	P		
Aristocapsa insignis	Indian Valley spineflower	S		C	
Astragalus brauntonii	Braunton's milk-vetch	E	U		
A. didymocarpus var. *milesianus*	Mile's milk-vetch	S	P		
A. ertterae	Walker Pass milk-vetch	S			C
A. hornii var. *hornii*	Horn's milk-vetch	S		C	
A. lentiginosus var. *kernensis*	Kern Plateau milk-vetch	S			P
A. pycnostachyus var. *lanosissimus*	Ventura marsh milk-vetch	E	U		
A. shevockii	Shevock's milk-vetch	S			C
Atriplex cordulata	heartscale	S		C	
A. coronata var. *notatior*	San Jacinto Valley crownscale	E		M	
A. coulteri	Coulter's saltbrush	S	P		
A. depressa	brittlescale	S		P	
A. erecticaulis	Earlimart orache	S		P	
A. joaquiniana	San Joaquin spearscale	S		P	
A. minuscula	lesser saltscale	S		P	
A. pacifica	South Coast saltscale	S	U		
A. persistens	vernal pool smallscale	S		P	

Table B-4
Special Status Plant Species in the Bakersfield FO Planning Area

			Likelihood of Occurrence within Planning Units [2]		
Scientific Name	**Common Name**	**Status[1]**	**Coast**	**Valley**	**Sierra**
A. serenana var. *davidsonii*	Davidson's saltscale	S	P		
A. subtilis	subtle orache	S		C	
A. tularensis	Bakersfield smallscale	S		P	
A. vallicola	Lost Hills saltbush	S		C	
Baccharis plummerae ssp. *Glabrata*	San Simeon baccharis	S	P		
Bloomeria humilis	dwarf goldenstar	S	P		
Brodiaea filifolia	thread-leaved brodiaea	T	M		
B. insignis	Kaweah brodiaea	S			C
California macrophyllum	round-leaved filaree	S	C		C
Calochortus clavatus ssp. *Recurvifolius*	Arroyo De La Cruz mariposa lily	S	P		
C. obispoensis	San Luis mariposa lily	S	C		
C. palmeri var. *palmeri*	Palmer's mariposa lily	S	P		P
C. plummerae	Plummer's mariposa lily	S	P		
C. simulans	San Luis Obispo mariposa lily	S	S		
C. striatus	alkali mariposa lily	S		C	C
C. weedii var. *vestus*	late-flowered mariposa lily	S	P		
C. westonii	Shirley Meadows star-tulip	S			C
Calycadenia villosa	dwarf calycadenia	S	S		
Calyptridium parryi var. *hesseae*	Santa Crus Mtns. Pussypaws	S	S		
Calyptridium pulchellum	Mariposa pussypaws	T			S
Calystegia subacaulis ssp. *Episcopalis*	Cambria morning-glory	S	P		
Camissonia hardhamiae	Hardham's evening primrose	S	S		
C. integrifolia	Kern River evening primrose	S			S
Carex obispoensis	San Luis Obispo sedge	S	C		
Carlquistia muirii	Muir's tarplant	S			C
Carpenteria californica	tree anemone	S			S
Castilleja campestris var. *succulent*	succulent owl's-clover	T			C
C. densiflora ssp. *Obispoensis*	Obispo indian paintbrush	S	C		
Caulanthus amplexicaulis var. *barbarae*	Santa Barbara jewelflower	S	P		
C. californicus	California jewelflower	E		C	
C. coulteri var. *lemmonii*	Lemmon's jewelflower	S	C	C	
Ceanothus hearstiorum	Hearst's ceanothus	S	P		
C. maritimus	maritime ceanothus	S	P		

Table B-4
Special Status Plant Species in the Bakersfield FO Planning Area

			Likelihood of Occurrence within Planning Units [2]		
Scientific Name	**Common Name**	**Status[1]**	**Coast**	**Valley**	**Sierra**
Centromadia parryi ssp. *Australis*	southern tarplant	S	P		
C. parryi ssp. *congdonii*	Congdon's tarplant	S	P		
Chamaesyce hooveri	Hoover's spurge	T		P	
Chlorogalum pomeridianum var. *minus*	dwarf soaproot	S	P		
C. purpureum var. *purpureum*	purple amole	T	S		
C. purpureum var. *reductum*	Camatta Canyon amole	T	P		
Chorizanthe blakleyi	Blakley's spineflower	S	P		
C. breweri	Brewer's spineflower	S	C		
C. parryi var. *fernandina*	San Fernando Valley spineflower	S	P		
C. pungens var. *pungens*	Monterey spineflower	T	P		
C. rectispina	straight-awned spineflower	S	C		
Cirsium crassicaule	slough thistle	S		C	
C. fontinale var. *obispoense*	Chorro Creek bog thistle	E	C		
C. loncholepis	La Graciosa thistle	E	S		
C. occidentale var. *compactum*	compact cobwebby thistle	S	C		
C. rhothophilum	surf thistle	S	S		
Clarkia australis	small southern clarkia	S			S
C. jolonensis	Jolon clarkia	S	P		
C. speciosa ssp. *Immaculate*	Pismo clarkia	E	P		P
C. springvillensis	Springville clarkia	T			C
C. tembloriensis ssp. *Calientensis*	Caliente clarkia	S		S	
C. xantiana ssp. *Parviflora*	Kern Canyon clarkia	S			P
Collinsia antonina	San Antonio collinsia	S	P		
Cordylanthus eremicus ssp. *Kernensis*	Kern Plateau bird's-beak	S			P
C. maritimus ssp. *Maritimus*	salt marsh bird's-beak	E	P		
C. mollis ssp. *hispidus*	hispid bird's-beak	S		C	
C. palmatus	palmate-bracted bird's-beak	E		U	
C. rigidus ssp. *littoralis*	seaside bird's-beak	S	S		
Cryptantha incana	Tulare cryptantha	S			P
Deinandra arida	Red Rock tarplant	S			P

Table B-4
Special Status Plant Species in the Bakersfield FO Planning Area

			Likelihood of Occurrence within Planning Units [2]		
Scientific Name	**Common Name**	**Status[1]**	**Coast**	**Valley**	**Sierra**
D. halliana	Hall's tarplant	S	P		
D. increscens ssp. *foliosa*	leafy tarplant	S	P		
D. increscens ssp. *villosa*	Gaviota tarplant	E	S		
D. minthornii	Santa Susana tarplant	S	P		
D. mohavensis	Mojave tarplant	S	P	P	
Delphinium inopinum	unexpected larkspur	S			P
D. parryi ssp. *Blochmaniae*	dune larkspur	S	C		
D. purpusii	Kern County larkspur	S			C
D. recurvatum	valley larkspur	S		C	
D. umbraculorum	umbrella larkspur	S	C		
Dithyrea maritima	beach spectaclepod	S	C		
Dudleya abramsii ssp. *bettinae*	San Luis Obispo serpentine dudleya	S	P		
D. abramsii ssp. *murina*	San Luis Obispo dudleya	S	C		
D. blochmaniae ssp. *blochmaniae*	Blochman's dudleya	S	P		
D. cymosa ssp. *agourensis*	Santa Monica Mountains dudleya	T	U		
D. cymosa ssp. *costafolia*	Pierpoint Springs dudleya	S			P
D. cymosa ssp. *marcescens*	marcescent dudleya	T	U		
D. parva	Conejo dudleya	T	U		
D. verityi	Verity's dudleya	T	U		
Entosthodon kochii	Koch's cord moss	S	S		
Eremalche parryi ssp. *kernensis*	Kern mallow	E		C	
Eriastrum hooveri	Hoover's woolystar	D		C	
E. luteum	yellow-flowered eriastrum	S	C		
Ericameria gilmanii	Gilman's goldenbush	S			P
Erigeron aequifolius	Hall's daisy	S			P
E. blochmaniae	Blochman's leafy daisy	S	S		
E. inornatus var. *keilii*	Keil's daisy	S			P
E. multiceps	Kern River daisy	S			C
Eriogonum kennedyi var. *austromontanum*	southern mountain buckwheat	T	P		
Eriodictyon altissimum	Indian Knob mountainbalm	E	C		
E. capitatum	Lompoc yerba santa	E	S		
E. breedlovei var. *breedlovei*	Breedlove's buckwheat	S			P
E. crocatum	Conejo buckwheat	S	P		
E. kennedyi var. *pinicola*	Cache Peak buckwheat	S			C

Table B-4
Special Status Plant Species in the Bakersfield FO Planning Area

			Likelihood of Occurrence within Planning Units [2]		
Scientific Name	**Common Name**	**Status[1]**	**Coast**	**Valley**	**Sierra**
E. nudum var. *murinum*	mouse buckwheat	S			C
E. temblorense	Temblor buckwheat	S	S	S	
Eriophyllum lanatum var. *hallii*	Fort Tejon woolly sunflower	S	P	P	
Eryngium aristulatum var. *hooveri*	Hoover's button-celery	S	P		
E. spinosepalum	spiny-sepaled button-celery	S		C	C
Erythronium pusaterii	Kaweah fawn lily	S			P
Eschscholzia lemmonii ssp. *kernensis*	Tejon poppy	S		P	
E. rhombipetala	diamond-petaled California poppy	S	C	C	
Fritillaria brandegeei	Greenhorn fritillary	S			P
F. ojaiensis	Ojai fritillary	S	S		
F. striata	striped adobe-lily	S		C	C
F. viridea	San Benito fritillary	S	P		
Galium angustifolium ssp. *onycense*	Onyx Peak bedstraw	S			C
G. hardhamiae	Hardham's bedstraw	S	C		
Githopsis tenella	delicate bluecup	S			P
Gratiola heterosepala	Bogg's lake hedge-hyssop	S		C	
Grindelia hirsutula var. *maritima*	San Francisco gumplant	S	P		
Hesperocyparis nevadensis	Piute cypress	S			C
Heterotheca shevockii	Shevock's golden-aster	S			P
Horkelia cuneata ssp. *puberula*	mesa horkelia	S	P		
H. cuneata ssp. *sericea*	Kellogg's horkelia	S	P		
H. tularensis	Kern Plateau horkelia	S			P
Hulsea brevifolia	short-leaved hulsea	S			P
Iris munzii	Munz's iris	S			S
Ivesia campestris	field ivesia	S			P
Juncus luciensis	Santa Lucia dwarf rush	S	P		
Lasthenia californica ssp. *macrantha*	perennial goldfields	S	P		
L. conjugens	Contra Costa goldfields	E	U		
L. glabrata ssp. *coulteri*	Coulter's goldfields	S	C	C	C
Layia carnosa	beach layia	E	P		
L. heterotricha	pale-yellow layia	S	C	C	
L. jonesii	Jones' layia	S	C		
L. leucopappa	Comanche Point layia	S		C	

Table B-4
Special Status Plant Species in the Bakersfield FO Planning Area

			Likelihood of Occurrence within Planning Units [2]		
Scientific Name	**Common Name**	**Status[1]**	**Coast**	**Valley**	**Sierra**
L. munzii	Munz's tidy tips	S		S	
Lepidium jaredii ssp. *album*	Panchoe peppergrass	S		P	
L. jaredii ssp. *jaredii*	Jared's peppergrass	S		S	
Leptosiphon serrulatus	Madera linanthus	S			P
Lewisia disepala	Yosemite lewisia	S			P
Lonicera subspicata var. *subspicata*	Santa Barbara honeysuckle	S	P		
Lupinus citrinus var. *citrinus*	orange lupine	S			S
L. ludovicianus	San Luis Obispo lupine	S	C		
L. nipomensis	Nipomo mesa lupine	E	U		
L. padre-crowleyi	Father Crowley's lupine	S			P
Madia radiata	showy madia	S		S	
Malacothamnus abbottii	Abbott's bush-mallow	S	P		
Malacothamnus aboriginum	Indian Valley bush-mallow	S	P		
Malacothamnus davidsonii	Davidson's bush mallow	S	P		
M. palmeri var. *involucratus*	Carmel Valley bush mallow	S	P		
M. palmeri var. *palmeri*	Santa Lucia bush mallow	S	P		
Malacothrix saxatilis var. *arachnoidea*	Carmel Valley malacothrix	S	P		
Microseris paludosa	marsh microseris	S	P		
Mimulus gracilipes	slender-stalked monkeyflower	S			S
M. norrisii	Kaweah monkeyflower	S			C
M. pictus	Calico monkeyflower	S		C	C
M. shevockii	Kelso Creek monkeyflower	S			C
Monardella crispa	crisp monardella	S	C		
M. frutescens	San Luis Obispo monardella	S	S		
M. linoides ssp. *oblonga*	flax-like monardella	S		P	P
M. palmeri	Palme's monardella	S	P		
Monolopia congdonii	San Joaquin woollythreads	E		C	C
Nasturium gambelii	Gambel's water cress	E	P		
Navarretia fossalis	spreading navarretia	T	P		
N. nigelliformis ssp. *radians*	shining navarretia	S	P		
N. peninsularis	Baja navarretia	S			P
N. prostrata	prostrate pincushionplant	S	P		
N. setiloba	Piute Mountains navarretia	S			S
Nemacladus twisselmannii	Twisselmann's nemacladus	S			P

Table B-4
Special Status Plant Species in the Bakersfield FO Planning Area

			Likelihood of Occurrence within Planning Units [2]		
Scientific Name	**Common Name**	**Status[1]**	**Coast**	**Valley**	**Sierra**
Nolina cismontana	chaparral nolina	S	P		
Opuntia basilaris var. *treleasei*	Bakersfield cactus	E		S	S
Orcuttia californica	California Orcutt grass	S	P		
O. inaequalis	San Joaquin Valley Orcutt grass	T		C	C
O. pilosa	hairy Orcutt grass	E		P	
Oreonana vestita	woolly mountain-parsley	S			P
Orobanche valida ssp. *valida*	Rock Creek broomrape	S	P		
Orthotrichum shevockii	Shevock's bristle-moss	S			P
O. spjutii	Spjut's bristle-moss	S			P
Oxytheca parishii var. *abramsii*	Abrams's oxytheca	S	P		
Pedicularis dudleyi	Dudley's lousewort	S	P		
Pentachaeta lyonii	Lyon's pentachaeta	E		U	
Petrophyton caespitosum ssp. acuminatum	marble rockmat	S			P
Phacelia nashiana	Charlotte's phacelia	S			C
P. novenmillensis	Nine Mile Canyon phacelia	S			C
Pinus radiata	Monterey pine	S	P		
Plagiobothrys uncinatus	hooked popcorn-flower	S	S		
Poa diaboli	Diablo Canyon blue grass	S	P		
Pseudobahia bahiifolia	Hartweg's golden sunburst	E		S	S
P. peirsonii	Tulare pseudobahia	T		S	S
Quercus dumosa	Nuttall's scrub oak	S	P		
Ribes menziesii var. *ixoderme*	aromatic canyon gooseberry	S			P
R. tularense	Sequoia gooseberry	S			C
Sagittaria sanfordii	Sanford's arrowhead	S			P
Sanicula maritima	adobe sanicle	S	C		
Scrophularia atrata	black-flowered figwort	S	P		
Sidalcea hickmanii ssp. *anomala*	Cuesta Pass checkerbloom	S	S		
S. hickmanii ssp. *parishii*	Parish's checkerbloom	C	S		
S. keckii	Keck's checkerbloom	E			S
Streptanthus albidus ssp. *peramoenus*	most beautiful jewelflower	S	S		
Streptanthus campestris	southern jewelflower	S	P		
S. cordatus var. *piutensis*	Piute Mountains jewelflower	S			C
Stylocline citroleum	oil neststraw	S		C	

Table B-4
Special Status Plant Species in the Bakersfield FO Planning Area

			Likelihood of Occurrence within Planning Units [2]		
Scientific Name	**Common Name**	**Status[1]**	**Coast**	**Valley**	**Sierra**
S. masonii	Mason neststraw	S		S	S
Suaeda californica	California seablite	E	P		
S. esteroa	estuary seablite	S	P		
Thermopsis macrophylla	false lupine	S	P		
Tortula californica	California tortula moss	S		S	
Trifolium depauperatum var. *hydrophilum*	saline clover	S	P		
T. macilentum var. *dedeckerae*	DeDecker's clover	S			C
Triteleia ixioides ssp. *cookii*	Cook's triteleia	S	P		
Tropidocarpum californicum	King's gold	S		P	
Tuctoria greenei	Greene's tuctoria	E		P	
Viola pinetorum ssp. *grisea*	grey-leaved violet	S			P

[1]Status
E = Federally-listed endangered
T = Federally-listed threatened
C = Federal candidate for listing
D = Federally delisted
S = BLM sensitive

[2] Likelihood of Occurrence within Planning Units:
C = Confirmed
S = Suspected
P = Potential
U = Unlikely

B.10 Special Status Animal Species Listings

Table B-5
Special Status Animal Species in the Bakersfield FO Planning Area

		Status				Occurrence		
Common Name	***Scientific Name***	**Federal**	**BLM**	**State**	**Other**	**C**	**V**	**S**
Snails								
Morro shoulderband snail	*Helminthoglypa walkeriana*	FE, CH				K	N3	N3
Fairy Shrimp And Tadpole Shrimp								
Longhorn fairy shrimp	*Branchinecta longiantenna*	FE, CH				N1	L1	N3
Vernal pool fairy shrimp	*Branchinecta lynchi*	FT, CH				N1	L1	K
Conservancy fairy shrimp	*Branchinects conservatio*	FE, CH				N1	N2	N2

Table B-5
Special Status Animal Species in the Bakersfield FO Planning Area

		Status				Occurrence		
Common Name	***Scientific Name***	**Federal**	**BLM**	**State**	**Other**	**C**	**V**	**S**
Vernal pool tadpole shrimp	*Lepidurus packardi*	FT, CH				N3	N3	H
Insects								
San Joaquin dune beetle	*Coelus gracilis*		BLMS			N3	L1	N3
Valley elderberry longhorn beetle	*Desmocerus dimorphus*	FT, CH				N	L	H
Kern primrose sphinx moth	*Euproserpinus euterpe*	FT				N	K	L1
Fish								
Tidewater goby	*Eucyclogobius newberryi*	FE, CH		CSC		N1	N3	N3
Unarmored threespine stickleback	*Gasterosteus aculeatus williamsoni*	FE, PCH		CE, FP		N1	N3	N3
Kern brook lamprey	*Lampetra hubbsi*			CSC		N3	N1	N3
Pacific lamprey	*L. tridentata*		BLMS			L	N3	N3
Lahontan cutthroat trout	*Oncorhynchus clarki henshawi*	FT				N3	N3	N3
Paiute cutthroat trout	*O. c. seleniris*	FT				N3	N3	N3
CA golden trout (Volcano Creek)	*O. mykiss aguabonita*	REV		CSC		N3	N3	N2?
Kern River rainbow trout	*O. m. gilberti*			CSC		N3	N3	N2
Steelhead (Southern CA coast)*	*O. m. irideus*	FE, CH		CSC		N1	N3	N3
Steelhead (South-central CA coast)*	*O. m. irideus*	FT, CH		CSC		N1	N3	N3
Little Kern golden trout	*O. m. whitei*	FT, CH				N3	N3	N1
Amphibians								
CA tiger salamander (Cen CA DPS)	*Ambystoma californiense*	FT, CH		CSC		N3	L1	H
CA tiger salamander (SB DPS)	*A. californiense*	FE, CH		CSC		H	N3	N3
Arroyo toad	*Anaxyrus californicus*	FE, CH		CSC		LI	LI	N3
Kern Canyon slender salamander	*Batrachoseps simatus*			CT		N3	N3	M2
Tehachapi slender salamander	*B. stebbinsi*	REV	BLMS	CT		N3	N3	K

Table B-5
Special Status Animal Species in the Bakersfield FO Planning Area

		Status				Occurrence		
Common Name	***Scientific Name***	**Federal**	**BLM**	**State**	**Other**	**C**	**V**	**S**
Relictual slender salamander	*B. relictus*			CSC		N3	N3	L1
Breckenridge Mountain slender salamander	*B. sp.*			CSC		N3	N3	L2
Yellow-blotched salamander	*Ensatina eschscholtzi croceater*		BLMS	CSC		M2	N3	M2
Foothill yellow-legged frog	*Rana boylei*		BLMS	CSC		M1	N3	L1
California red-legged frog	*R. draytoni*	FT, CH		CSC	AWL	M1	L1	L1
Mtn yellow-legged frog (So. CA DPS)	*R. muscosa*	FE, CH				N3	N3	N3
Mtn yellow-legged frog (Sierran DPS)	*R. muscosa*	FC				N3	N3	N2
Western spadefoot toad	*Scaphiopus hammondi*		BLMS	CSC		M1	K	L1
Reptiles								
Northwestern pond turtle	*Actinemys marmorata marmorata*			CSC		N3	M1	K
Southwestern pond turtle	*A. m. pallida*		BLMS	CSC		K	M1	K
Blunt-nosed leopard lizard	*Gambelia sila*	FE		CE, FP		M1	K	N3
Coast horned lizard	*Phrynosoma blainvillei*		BLMS	CSC		H	K	N3
Northern sagebrush lizard	*Sceloporus graciosus graciosus*		BLMS			M1	L1	M1
Island night lizard	*Xantusia riversiana*	FT		CSC		N1	N3	N3
Sierra night lizard	*X. sierrae*			CSC		N3	N3	L1
California legless lizard	*Anniella pulchra*			CSC		H	K	H
Southern rubber boa	*Charina bottae umbratica*			CT		M2	N3	N3
California mountain kingsnake	*Lampropeltis zonata*		BLMS			M1	N3	H
San Joaquin whipsnake	*Masticophis flagellum ruddocki*			CSC		H	H	H
Giant garter snake	*Thamnophis gigas*	FT		CT		N3	L1	N3
Two-striped garter snake	*T. hammondii*		BLMS	CSC		M1	L1	N3

Table B-5
Special Status Animal Species in the Bakersfield FO Planning Area

		Status				Occurrence		
Common Name	***Scientific Name***	**Federal**	**BLM**	**State**	**Other**	**C**	**V**	**S**
Birds								
Aleutian Canada goose	*Branta canadensis leucopareia*	REC				N1	L1	N1
Barrow's goldeneye	*Bucephala islandica*			CSC		N1	N1	L1
Fulvous whistling-duck	*Dendrocygna bicolor*			CSC		L1	L1	L1
Harlequin duck	*Histrionicus histrionicus*			CSC		N1	N1	L1
Mountain quail	*Oreotyx pictus*				AWL	K	K	K
Common loon	*Gavia immer*			CSC		N1	N1	N1
Fork-tailed storm-petrel	*Oceanodroma furcata*		BLMS	CSC		L2	N3	N3
Ashy storm-petrel	*O. homochroa*		BLMS	CSC	AWL	M2	N3	N3
Black storm-petrel	*O. melania*			CSC	AWL	L2	N3	N3
American white pelican	*Pelecanus erythrorhynchos*			CSC		N1	K	K
California brown pelican	*P. occidentalis californicus*	REC	BLMS	CE		K	N1	N1
Western least bittern	*Ixobrychus exilis hesperis*			CSC		L1	L1	N1
California condor	*Gymnogyps californianus*	FE, CH		CE	AWL	K	K	K
Northern goshawk	*Accipiter gentilis*		BLMS	CSC		L1	L1	L2
Golden eagle	*Aquila chrysaetos*		BLMS	FP		K	K	K
Swainson's hawk	*Buteo swainsoni*		BLMS	CT	AWL	M2	K	M2
Northern harrier	*Circus cyaneus*			CSC		H	K	K
White-tailed kite	*Elanus leucurus*		BLMS	FP		K	K	M2
Bald eagle	*Haliaeetus leucocephalus*	REC	BLMS	CE, FP		M2	H	M2
American peregrine falcon	*Falco peregrinus anatum*	REC		REC, FP		K	H	M2
California black rail	*Laterallus jamaicensis coturniculus*		BLMS	CT, FP	AWL	N1	N3	N3
Light-footed clapper rail	*Rallus longirostris levipes*	FE		CE, FP		N1	N3	N3
California clapper rail	*R. l. obsoletus*	FE		CE, FP		N1	N3	N3
Greater sandhill crane	*Grus canadensis tabida*			CT, FP		L1	L1	L1
Western snowy plover (interior)	*Charadrius alexandrinus nivosus*			CSC		N3	K	N2

Table B-5
Special Status Animal Species in the Bakersfield FO Planning Area

		Status				Occurrence		
Common Name	***Scientific Name***	**Federal**	**BLM**	**State**	**Other**	**C**	**V**	**S**
Western snowy plover (coast)	*C. a. nivosus*	FT, CH		CSC	AWL	H	N3	N3
Mountain plover	*C. montanus*		BLMS	CSC	AWL	M2	K	M1
Long-billed curlew	*Numenius americanus*				AWL	H	K	N3
Black tern	*Chlidonias nigre*			CSC		L1	L1	L1
California least tern	*Sterna antillarum browni*	FE		CE, FP		H	N3	N3
Elegant tern	*Thalasseus elegans*				AWL	H	N3	N3
Marbled murrelet	*Brachyramphus marmoratus*	FT, CH		CE	AWL	H	N3	N3
Tufted puffin	*Fratercula cirrhata*			CSC		L2	N3	N3
Xanthus murrelet	*Synthliboramphus hypoleucus*	FC	BLMS	CT	AWL	N2	N3	N3
Western yellow-billed cuckoo	*Coccyzuz americanus occidentalis*	FC	BLMS	CE		N3	L1	L1
Short-eared owl	*Asio flammeus*			CSC	AWL	M1	H	M1
Long-eared owl	*A. otus*			CSC		L2	L2	H
Burrowing owl	*Athene cunicularia*		BLMS	CSC		M1	K	M2
Flammulated owl	*Otus flammeolus*				AWL	H	H	H
California spotted owl	*Strix occidentalis occidentalis*		BLMS	CSC	AWL	M1	M1	K
Black swift	*Cypseloides niger*			CSC	AWL	L2	L2	M2
Costa's hummingbird	*Calypte costae*				AWL	H	N3	H
Allen's hummingbird	*Selasphorus sasin*				AWL	H	N3	N3
White headed woodpecker	*Picoides albolarvatus*				AWL	H	H	H
Olive-sided flycatcher	*Contopus cooperi*			CSC	AWL	N3	H	H
Willow flycatcher	*Empidonax traillii*			CE	AWL	L1	N3	H
Southwestern willow flycatcher	*E. t. extermis*	FE, CH		CE	AWL	N3	N3	K
Vermilion flycatcher	*Pyrocephalus rubinus*			CSC		L1	L1	L1
Loggerhead shrike	*Lanius ludovicianus*			CSC		K	K	K
Least bell's vireo	*Vireo bellii pusillus*	FE, CH		CE	AWL	N2	N2	N2
Gray vireo	*V. vicinior*		BLMS	CSC	AWL	N3	N3	M2
Purple martin	*Progne subis*			CSC		L1	L1	L1
Bank swallow	*Riparia riparia*		BLMS	CT		L1	L1	L1
Oak titmouse	*Baeolophus inornatus*				AWL	H	H	N3
Coastal California gnatcatcher	*Polioptila californica californica*	FT, CH		CSC	AWL	L1	N3	N3
Bendire's thrasher	*Toxostoma bendirei*		BLMS	CSC	AWL	N3	N3	N3
Le Conte's thrasher	*T. lecontei*		BLMS	CSC	AWL	N1	K	L1

Table B-5
Special Status Animal Species in the Bakersfield FO Planning Area

		Status				Occurrence		
Common Name	***Scientific Name***	**Federal**	**BLM**	**State**	**Other**	**C**	**V**	**S**
Hermit warbler	*Dendroica occidentalis*			CSC	AWL	H	N3	H
Yellow warbler	*D. petechia brewsteri*			CSC		H	H	K
Yellow-breasted chat	*Icteria virens*			CSC		H	H	H
Channel Island song sparrow	*Melospiza melodia graminea*			CSC		N	N	N
Belding's savannah sparrow	*Passerculus sandwichensis beldingi*			CE		N1	N3	N3
Large-billed savannah sparrow	*P. s. rostratus*			CSC		N1	N3	N3
Summer tanager	*Piranga rubra*			CSC		N3	N3	L1
Black chinned sparrow	*Spizella atrogularis*				AWL	H	H	H
Kern red-winged blackbird	*Agelaius phoeniceus aciculatus*			CSC		N3	N3	H
Tricolored blackbird	*A. tricolor*		BLMS	CSC	AWL	H	H	H
Lawence's goldfinch	*Carduelis lawrencei*				AWL	H	N3	H
Mammals								
Buena Vista Lake shrew	*Sorex ornatus relictus*	FE, CH		CSC		N3	M1 ?	N3
California leaf-nosed bat	*Macrotus californicus*		BLMS	CSC		L1	N3	N3
Pallid bat	*Antrozous pallidus*		BLMS	CSC		K	K	K
Townsend's western big-eared bat	*Corynorhinus townsendii*		BLMS	CSC		M1	M1	K
Spotted bat	*Euderma maculatum*		BLMS	CSC		L1	L1	M2
Western red bat	*Lasiurus blossevillii*			CSC		M1	M1	M1
Western small-footed myotis	*Myotis ciliolabrum*		BLMS			M1	M1	M1
Long-eared myotis	*M. evotis*		BLMS			M1	M1	M1
Fringed myotis	*M. thysanodes*		BLMS			M1	M1	K
Yuma myotis	*M. yumanensis*		BLMS			M1	M1	K
Western mastiff-bat	*Eumops perotis californicus*		BLMS	CSC		M2	H	M2
San Joaquin antelope squirrel	*Ammospermophilus nelsoni*		BLMS	CT		L1	K	N3
Mohave ground squirrel	*Xerospermophilus mohavensis*		BLMS	CT		N3	N3	M2
Morro Bay kangaroo rat	*Dipodomys heermanni morroensis*	FE, CH		CE, FP		L1	N3	N3

Table B-5
Special Status Animal Species in the Bakersfield FO Planning Area

		Status				Occurrence		
Common Name	***Scientific Name***	**Federal**	**BLM**	**State**	**Other**	**C**	**V**	**S**
Giant kangaroo rat	*D. ingens*	FE		CE		L1	K	N3
Short-nosed kangaroo rat	*D. nitratoides brevinasus*		BLMS	CSC		M2	K	N3
Fresno kangaroo rat	*D. n. exilis*	FE, CH		CE		N3	L1	N3
Tipton kangaroo rat	*D. n. nitrtoides*	FE		CE		N3	K	N3
Yellow-eared pocket mouse	*Perognathus (parvus) xanthonotus*		BLMS			N3	N3	M2
Tehachapi white-eared pocket mouse	*P. alticola inexpectatus*		BLMS	CSC		M2	M2	M2
San Joaquin pocket mouse	*P. inornatus inornatus*		BLMS			H	K	H
Salinas pocket mouse	*P. i. psammophilus*			CSC		M2	N3	N3
Los Angeles pocket mouse	*P. longimembris brevinasus*			CSC		N3	N3	N3
San Joaquin valley woodrat	*Neotoma fuscipes riparia*	FE		CSC		N3	N3	N3
Tulare grasshopper mouse	*Onychomys torridus tularensis*		BLMS	CSC		M2	H	M2
Island fox	*Urocyon littoralis*	FE		CT		N1	N3	N3
San Joaquin kit fox	*Vulpes macrotis mutica*	FE		CT		K	K	N3
Sierra Nevada red fox	*V. vulpes necator*			CT		N3	N3	L1
Southern sea otter	*Enhydra lutris nereis*	FT		FP		K	N3	N3
Southern sea otter (South of Pt. Conception)	*E. l. nereis*	EXPN		FP		H	N3	N3
Wolverine	*Gulo gulo luscus*	FC		CT, FP		N3	N3	L1
Fisher (West Coast DPS)	*Martes pennanti*	FC	BLMS	CSC		N3	N3	K
Badger	*Taxidea taxus*			CSC		K	K	H
Guadalupe fur seal*	*Arctocephalus townsendi*	FT		CT, FP		L1	N3	N3
Northern sea lion (eastern pop.)*	*Eumetopias jubatus*	FT, CH				K	N3	N3
CA bighorn sheep (Sierra Nevada pop.)	*Ovis canadensis sierrae*	FE, CH		CE, FP		N3	N3	N2
Blue whale*	*Balaenoptera musculus*	FE				L	N	N
Gray whale*	*Eschrichtius robustus*	REC				K	N	N
Humpback whale*	*Megaptera novaeangliae*	FE				H	N	N

KEY:

FEDERAL STATUS
FE = Federal Endangered
FT = Federal Threatened
FC = Federal Candidate
REC = Recovered
REV = Under Review
CH = Designated Critical Habitat
PCH = Proposed Critical Habitat

BLM STATUS
BLMS = BLM California Sensitive Species

STATE STATUS
CE = California Endangered
CT = California Threatened
CSC = California Species of Special Concern
FP = Fully Protected Species

OTHER
AWL = American Bird Conservancy Watchlist
***** = National Marine Fisheries Service species

OCCURRENCE on Public Land
C = Coast Region
V = Valley Region
S = Sierra Region

K = Known to occur on public lands
H = Highly likely
M1 = Likely, but limited habitat
M2 = Likely, but localized species
L = Unlikely
L1 = Unlikely, localized species and limited habitat
L2 = Unlikely, very localized species
N = Very unlikely
N1 = Very unlikely, no suitable habitat
N2 = Very unlikely, limited suitable habitat exists but known no to be occupied
N3 = Very unlikely, outside normal range
U = Unknown

Appendix D

Wildland Fire Ecology and Management

Appendix D – Wildland Fire Ecology and Management

Table D-1
Acres by Fire Regime Condition Class (FRCC) for each Fire Management Unit

	FRCC Assigned			FRCC not Assigned				
FMU Name	**FRCC 1**	**FRCC 2**	**FRCC 3**	**Sparsely Vegetated**	**Barren**	**Agriculture**	**Urban**	**Grand Total**
Carrizo Plain	245	4,671	1,531		342			6,789
Coastal	3,961	9,266	6,456		118	4		19,806
Domelands	18,257	6,218	343	7,228	1,265		2	33,313
Foothill	7,180	235	486					7,900
Hopper Mtn.	1,544	599	327		26	29	1	2,525
Isabella	37,658	17,925	123	407	1,344	41	47	57,545
Kennedy Meadows	19,962	3,290	77	7,233	18	6	11	30,598
Lorraine	12,176	8,169	259	186	85	10	3	20,887
Santa Margarita	3,265	2,123	1,895		1	1	0	7,285
South Fork	13,082	1,208	16	1,689	1,107	84	51	17,236
South Sierra	28,695	11,074	156	7,257	1,377	35	1	48,595
Three Rivers	16,305	3,467	16,294	9	5		1	36,081
Valley	3,534	29,674	47,532	1	20,430	10,736	49	111,956
Grand Total	165,863	97,918	75,496	24,011	26,118	10,946	167	400,518

Table D-2
Percent of Area by Fire Regime Condition Class for each Fire Management Unit

FMU Name	**FRCC 1**	**FRCC 2**	**FRCC 3**	**Sparsely Vegetated**	**Barren**	**Agriculture**	**Urban**
Carrizo Plain	4%	69%	23%		5%		
Coastal	20%	47%	33%		1%		
Domelands	55%	19%	1%	22%	4%		
Foothill	91%	3%	6%				
Hopper Mtn.	61%	24%	13%		1%	1%	
Isabella	65%	31%		1%	2%		
Kennedy Meadows	65%	11%		24%			
Lorraine	58%	39%	1%	1%			
Santa Margarita	45%	29%	26%				
South Fork	76%	7%		10%	6%		
South Sierra	59%	23%		15%	3%		
Three Rivers	45%	10%	45%				
Valley	3%	27%	42%	0%	18%	10%	
Grand Total	41%	24%	19%	6%	7%	3%	< 1%

Appendix E

Comprehensive Trail and Travel Management

Appendix E – Comprehensive Trail and Travel Management

TABLE OF CONTENTS

E.1. Introduction

Comprehensive travel management is the proactive management of public access, natural resources, and regulatory needs to ensure that all aspects of road and trail system planning and management are considered. This includes route planning, inventory and evaluation, innovative partnerships, user education, mapping, monitoring, signing, field presence and law enforcement. Comprehensive travel management planning should address all resource use aspects, such as recreational, traditional, casual, agricultural, commercial, and educational, and accompanying modes and conditions of travel on public lands, not just motorized or off-highway vehicle (OHV) activities (US Department of the Interior, Bureau of Land Management [BLM] Land Use Planning Handbook 1601-1, Appendix C [BLM 2005]).

Throughout the BLM's planning process, scoping has consistently demonstrated comprehensive travel management as a major issue to be addressed in land use plans. Increased demand for access to public lands, combined with the research on the impacts of roads on resources and resource uses, has increased the need for a well designed and managed transportation system.

Though historically focused on motor vehicle use, comprehensive travel management encompasses all forms of transportation including travel by mechanized vehicles such as bicycles, as well as the numerous forms of motorized vehicles from two-wheeled (motorcycles) and four-wheeled such as all-terrain vehicles (ATVs) to cars and trucks.

The term off-road vehicle is an outdated term that has the same meaning as OHV, which is currently in use. Off-road vehicle is defined in 43 CFR 8340.0-5(a) as "any motorized vehicle capable of or designated for, travel on or immediately over land, water, or other natural terrain." This definition has been revised using the term "OHV" in the *National Management Strategy for Motorized Off-Highway Vehicle Use on Public Lands*, finalized by the BLM in January 2001 (BLM 2001). The intent of the National Strategy was to update and revitalize management of off-highway motor vehicle use on BLM-administered lands. The National Strategy provides guidance and recommendations to accomplish that purpose.

The Bakersfield Field Office (FO) has only recently completed an RMP decision-area-wide route inventory. The 1997 Caliente RMP did not include a route inventory and limited travel to existing routes throughout the majority of the decision area. It qualified existing routes as those appearing on BLM Surface Management Maps, aerial photographs and USGS topographical maps at the time the plan was completed. This policy was largely ineffective in addressing the proliferation of user-created routes and mitigation of environmental and social impacts.

In 2009, the BLM completed an RMP Decision Area-wide inventory that combined existing route information with updated inventories and new data. The completed "2009 Digital Inventory" compared historic maps and GIS files, previously designated routes, route information from state and local governments and current on-the-ground route inventories (completed as recently as December 2008) with recent aerial photographs. It also relied upon public input gathered at workshops and a public comment period in early 2009, described below. The process of development and content of the Bakersfield FO Travel Plan is described in this document.

Table E-1 lists the miles of routes and trails currently designated and miles of unauthorized routes in the Bakersfield FO.

Table E-1
Miles of Routes and Trails

Category	Miles
Designated Routes and Trails	978.3
Unauthorized Routes and Trails (i.e., user-created)	942.7
Total	**1,921**

E.1.1 How to Read/Use this Document

This document addresses the process by which the Bakersfield FO Interdisciplinary Team has developed the draft Resource Management Plan (RMP)/Environmental Impact Statement (EIS) alternatives for motorized, mechanized, and non-motorized uses throughout the planning area. This document takes the reader through the process of travel planning within the Bakersfield FO.

- The Land Use Planning decisions of the travel plan define the areas within the Bakersfield FO that are designated Open, Limited, or Closed, to OHV use.
- The Implementation decisions of the travel plan include the designation of routes throughout the decision area. Other implementation actions include signage, maps, public information, kiosks, monitoring, and working with partners.

The analysis of impacts for the travel plan will be completed within the RMP/EIS. Definitions commonly used in addressing OHV use are found in this appendix.

E.2. Summary

Land Use Planning Decisions – Code of Federal Regulations (CFR) require BLM to designate all public lands as Open, Closed or Limited for OHV use. These designations are made in the RMPs or in plan amendments. Additionally, the criteria for route designation are established in the RMP. (43 CFR Part 8340)

Implementation Decisions – The designation of routes is an implementation decision. Designation involves the selection and identification of roads and trails to be included in a travel plan system.

Route designation considerations common to all action alternatives include the following criteria, as developed by the Interdisciplinary Team in preliminary alternative-development meetings:

- In areas identified as “Limited to Designated” routes, only designated routes are open to motorized use.
- Areas and trails shall be located to minimize damage to soil, watershed, vegetation, air or other resources of the public lands, and to prevent impairment of wilderness suitability.
- Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention is to be given to T&E species and their habitats.
- Areas and trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands.

- Areas and trails shall be located to ensure the compatibility of such uses with populated areas, taking into account noise, safety, and other factors.
- Areas and trails shall not be located in officially designated wilderness areas or primitive areas.
- Areas and trails shall be located to ensure the compatibility with adjacent land uses and management, such as with National Forest System lands and the Carrizo Plain National Monument.
- Areas and trails will be designated and managed in accordance with the management objectives of other resources and designations (e.g., Areas of Critical Environmental Concern).
- Any fire, military, emergency or law enforcement vehicle when used for emergency purposes is exempted from OHV decisions.
- Wilderness Study Areas (WSAs) are to be designated as closed to OHV use, and must be managed and monitored to comply with the interim management policy nonimpairment standard.
- As required in 43 CFR Sec. 8342.3 (Designation changes): "The authorized officer shall monitor effects of the use of off-road vehicles. On the basis of information so obtained, and whenever the authorized officer deems it necessary to carry out the objectives of this part, designations may be amended, revised, revoked, or other actions taken pursuant to the regulations in this part."

E.2.1 Authority and Guidance for Travel Management

Alternatives have been developed based on the following authority and guidance specific to travel management for the BLM:

- Executive Order No. 11644, February 8, 1972 (37 *Federal Register* 2877) – This order established criteria by which federal agencies were to develop regulations for the management of OHVs on lands under their management. Agencies are to "monitor the effects" of OHV use on their public lands and, "on the basis of the information gathered, they shall from time to time amend or rescind designation of areas for OHV use "as necessary to further" its policy.
- Executive Order No. 11989, May 25, 1977 (42 *Federal Register* 26959) – This order amended Executive Order 11644 and authorized agencies to adopt a policy that particular lands can be considered closed to OHVs once it is determined that OHV use "will cause or is causing considerable adverse effects" to particular resources.
- 43 CFR Part 8342 – OHV Regulations that establish criteria for designating lands as Open, Limited, or Closed to the use of OHVs.
- Instruction Memorandum No. 2006-173, Implementation of Roads and Trails Terminology Report (BLM 2006).
- Instruction Memorandum No. 2008-014, Clarification of Guidance and Integration of Comprehensive Travel Transportation Management Planning into the Land Use Planning (BLM 2007).
- *National Management Strategy for Motorized Off-Highway Vehicle Use on Public Lands* (BLM 2001).

E.3. Travel Plan Designation Process

A goal of the Bakersfield FO planning process is to develop, with stakeholders, a travel plan that will provide access to public lands. The goals and objectives of the travel plan applies to all areas of travel management including access to resources, appropriate recreation opportunities that at the same time protect public land resources, ensure public safety, minimize conflicts among the various public land uses, and provide for support of the local economy.

More specifically, desired future conditions or desired outcomes are stated as goals and objectives. Goals are broad statements of desired outcomes (RMP-wide and resource or resource use specific) and generally are not quantifiable or measurable. Objectives are more-specific desired conditions or outcomes for resources to meet the resource/resource use goal. For key issues, objectives are different across alternatives; for other issues, objectives can be the same across alternatives.

Management actions and allowable uses are designed to achieve the objectives. Management actions include management measures that will guide future and day-to-day activities such as administrative designations (e.g., Areas of Critical Environmental Concern, suitable stream segments for inclusion in the National Wild and Scenic Rivers System), land tenure zones, and proposed withdrawals. Allowable uses indicate which uses are allowed, restricted, or prohibited, such as stipulations. Allowable uses also identify lands where specific uses are excluded to protect resource values, or where certain lands are open or closed in response to legislative, regulatory, or policy requirements.

E.3.1 Background

In the early 1980s, in response to the Presidential Executive Orders 11644 and 11989, the BLM began designating all public lands in one of three OHV designation categories. Thus public lands within the Bakersfield FO RMP planning area were designated as open, limited (limited to existing roads and trails or limited to designated roads and trails), or closed to OHV use. The designations are as follows:

Open – The BLM designates areas as "open" for intensive OHV use where there are no compelling resource protection needs, user conflicts, or public safety issues to warrant limiting cross-country travel. However, motor vehicles may not be operated in a manner causing or likely to cause significant, undue damage to or disturbance of the soil, wildlife, wildlife habitat improvements, cultural or vegetative resources or other authorized uses of the public lands (See 43 CFR 8341).

Limited – The "limited" designation is used in areas where OHV use must be restricted to meet specific resource management objectives. In the current guidance context, this means limited to designated roads and trails, i.e., a route network designated by the BLM in its RMP. These routes may also be limited to: (1) A time or season of use depending on the resources in the area (i.e., Threatened and Endangered Species' habitat or nesting areas, crucial winter ranges, etc.); and/or (2) Type of vehicle use (ATV, Motorcycle, four-wheel vehicle, etc.)

Closed – The BLM designates areas as "closed" if closure to vehicular use is necessary to protect resources, ensure visitor safety, or reduce resource or use conflicts. Access by means other than motor vehicle access is generally allowed. The Field Office Manager may allow OHV use on a case-by-case basis or for emergencies.

In the current RMP process and national guidance for the OHV Limited category designation has changed. Designating Open, Closed, and Limited areas for OHV use continues to be mandated, but

under the Limited category only the "Limited to Designated Roads and Trails" sub-category is recommended. The designation of the sub-category "Existing Roads and Trails" is no longer a recommended option. Eliminating the "Existing Roads and Trails" sub-category prevents confusion and enforcement problems concerning new unauthorized routes being created and then used by the public because they are then "existing". By policy (Instruction Memorandum No. 2008-014 [BLM 2007]), BLM discourages of the use of the "Limited to Existing" category.

Through the 1997 Caliente Resource Area RMP, the BLM designated all public lands within the Bakersfield FO decision area as Closed or Limited to Designated Roads and Trails (BLM 1997). None of the decision area was designated as open and very few of the designated routes have been specified for a particular use (i.e., motorized, mechanized, or nonmotorized).

E.3.2 Interdisciplinary Team Process

The Interdisciplinary Team of BLM resource specialists in the Bakersfield FO who participated in the completion of the Comprehensive Travel Management Plan is listed in Table E-4.

Table E-2
Bakersfield FO Interdisciplinary Team Members

Name	Resource
Lisa Ashley	Air, Soil, Water
Kim Cuevas	Archaeology
Nora DeDios	Interim Project Manager
Peter DeWitt	Recreation, Comprehensive Trails and Travel Management, Special Designations
Karen Doran	Range
Denis Kearns	Botany
Steve Larson	Assistant Field Manager
Jeff Prude	Minerals
Chris Ryan	Fire
Larry Saslaw	Wildlife
Diane Simpson	Realty
Larry Vredenburgh	Geographic Information Systems (GIS)

Between March and April 2009, the Bakersfield FO Interdisciplinary Team held meetings and workshops specifically concerning the travel plan. Throughout the process, the Bakersfield FO coordinated efforts with the Sequoia National Forest, which is also in the process of designating routes on National Forest System lands. The BLM used Sequoia National Forest's proposed route designations as a means to coordinate on routes crossing federal land boundaries. This was especially important for routes in the Lake Isabella area where some National Forest routes require access across BLM-administered public lands.

E.3.3 Trails and Routes Data-Collection Workshops

The BLM hosted two trails and routes data-collection workshops, one in Lake Isabella (February 25, 2009) and one in Taft (February 26, 2009). The workshops were held to allow the public to (1) review the BLM's inventory for accuracy and completeness; (2) provide information on routes that are missing from

the BLM's inventory; and (3) offer suggestions for reroutes or new trail sections that would complement the existing route system. These workshops focused specifically on the Lake Isabella and Taft areas. Table E-5 shows the date, location, and number of attendees for each workshop. Both meetings were from 6:00 pm to 8:00 pm.

Table E-3
Trails and Routes Data Collection Workshop Attendance

Location (California)	Date	Number of Attendees
Lake Isabella Lake Isabella Moose Lodge 6732 Lake Isabella Boulevard	February 25, 2009	44
Taft Taft Union High School 701 7th Street	February 26, 2009	14
Total		**58**

Both open houses were structured in a similar format. Attendees were asked to sign in and a brief PowerPoint presentation was given by BLM representatives about the travel management and route designation process and the goals and objectives of the workshop. A comment form and handout with a brief overview of the travel management planning process were available to all attendees.

An overview map was displayed at the entrance of the room that showed the Field Office boundary and the different travel management zones within the Field Office. The Lake Isabella area was divided into 12 arbitrary travel management zones, which were labeled A through L. The Taft area was divided into six arbitrary travel management zones, which were labeled A through F. Dividing each recreation area into a number of management zones enabled the public to focus on a specific area of interest and locate routes more easily.

Work stations were set up around the room with topographic-based maps displaying the inventoried trails and routes for each zone. Attendees were asked to complete a comment form and draw on the maps to document any missing existing trails and routes. Proposed new routes were also drawn on the maps. Pencils and markers were available to edit the maps.

The comment period for routes and trails data collection was open until March 13, 2009. The public could submit comments by completing the comment form and sending it via email, US mail, facsimile, or hand delivery to the Bakersfield FO. Copies of all travel management zone maps and comment forms were available at the two workshops and at the Bakersfield FO.

A total of seven submissions were received by the deadline of March 13, 2009, which includes all comment forms, e-mails, and letters. The BLM received one submission via the comment form, one letter submission, and five submissions via e-mail. Some written submissions included numerous comments, overlapping comments, and incomplete comments. As such, the seven submissions contained numerous unique comments. Most comments gave information on the purpose and the individuals' use of the routes. Other comments expressed support of or opposition to Bakersfield FO policies related to travel management. One submission provided GPS data to fill in a missing route. A record of comments received is part of the administrative record for the RMP revision process.

E.3.4 Other Coordination

The BLM also extended invitations to local agencies, user groups, and permittees to discuss the route designation process. The BLM met with Stewards of the Sequoia, California Off-road Vehicle Association, the Taft Motorcycle Club, and a representative of Kern County. Grazing permittees were also consulted regarding their usage of routes related to grazing practices.

In June 2009, the Bakersfield FO presented its route designation maps to the OHV sub-group to the Central California Resource Advisory Council.

E.3.5 Identification of Issues

Travel management issues were identified by BLM resource specialists in the preparation plan, through the public scoping process, and by input from the public during scoping for the RMP and specifically for travel management planning.

BLM staff identified the following factors describing the condition of travel management within the planning area, thereby identifying the need for developing a Comprehensive Travel Management plan.

- The 1997 RMP for the Caliente Resource Area is inadequate to address the rapid expansion of recreational vehicle use and visitation on public lands;
- Lack of planning for OHV recreation activities in popular areas, such as the Keyesville, Taft, and Tehachapi;
- The lack of legal access to public lands, through ROWs and easements, where public land is isolated within privately owned areas;
- Unauthorized creation of “bandit” routes causing impacts on other resources; and
- Growing conflicts among recreational users.

Scoping for the RMP revealed some disagreement about how best to maintain the route system within the Bakersfield FO. Some desire the network to be maintained or improved and expanded. Opposing this sentiment were comments recommending stricter controls on access, particularly with concern for off-road vehicle uses. Closing and restoring redundant or unnecessary roads, and leaving some roads unpaved to help maintain the Bakersfield RMP area’s undeveloped character was also requested. Specific requests included more single track access only and increased development of this type of trails. Many comments were received expressing a desire for additional OHV opportunities on public lands.

Developing Planning Criteria

Considerations of both social and physical elements help define the criteria for a travel plan. Social aspects include public demands, historical uses, existing rights-of-way, permitted uses, public access, resource development, law enforcement and safety, conflicts between existing or potential uses, recreation opportunities, local uses, cultural and economic issues. Physical aspects include the terrain, soils, water, vegetation, and watersheds, connectedness of routes, special designations, demands for specific types of vehicle use, and manageability considerations.

The BLM will manage access on public lands in accordance with existing law, executive orders, proclamation, regulation, and policy. General planning criteria for the RMP process includes:

- Laws – The plan will comply with all applicable laws and regulations, and will analyze the effects of the alternatives in an EIS in compliance with the National Environmental Policy Act of 1969 (NEPA).
- Decisions – All decisions made in the RMP will only apply to public lands administered by the BLM.
- Existing Rights – The plan recognizes current, valid existing rights.

Specific to the travel plan, the criteria include:

- National OHV Policy – Decisions regarding OHV travel will be consistent with the BLM's National OHV Strategy.
- RS 2477 – Rights-of-way may exist across the Bakersfield FO, although adjudication is beyond the scope of this RMP.

OHV Designation Criteria

BLM's designation of OHV use areas is guided by 43 CFR 8342.1, which states that designations shall be based on the protection of resources, the promotion of the safety of all users of public lands, and the minimization of land use conflicts. Minimization criteria are defined in 43 CFR 8342.1:

- [Designated] areas and [designated] trails shall be located in a manner to minimize impacts to physical resources (soils, watershed, vegetation, air, and other resources) and to prevent impairment of wilderness suitability;
- [Designated] areas and [designated] trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention will be given to protect endangered or threatened species and their habitats;
- [Designated] areas and [designated] trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreation uses, and to ensure the compatibility of such uses with existing conditions in populated area; and
- [Designated] areas and [designated] trails shall not be located in officially designated wilderness areas or primitive areas, and shall be located in natural areas only if the authorized officer determines that off-road vehicle use in such locations will not adversely affect their natural, esthetic, scenic, or other values for which established.

Bakersfield FO Considerations for Travel Plan

In addition to the criteria defined in 43 CFR 8342.1, preliminary screening criteria that were considered during the route designation process, and would be considered during future route modifications, include the following:

1. Resource concerns. This includes soil stability, special wildlife habitat, visual resources, cultural and paleontological resources, special management areas, etc.
2. Route conditions. This includes route use, route purpose, and parallel or duplicate routes.
3. Public concerns such as noise abatement and urban buffer zones.

Route Designations in Wilderness Study Areas

Information Bulletin No. 99-181 (BLM 1999) directs BLM to comply with the wilderness nonimpairment mandate (Federal Land Policy and Management Act of 1976, Section 603(c)). BLM must monitor and regulate the activities of off-highway vehicles in WSAs to assure that their use does not compromise these areas by impairing their suitability for designation as wilderness. The BLM's Off Road Vehicle Regulations (43 CFR 8342.1) require that BLM establish off-road vehicle designations of areas and routes that meet the non-impairment mandate. It is the BLM's policy that cross-country vehicle use in the WSAs does cause the impairment of wilderness suitability. The Bakersfield FO has decided to close all routes in WSAs to meet the non-impairment standard.

Administrative Access and Use

Routes considered for Administrative Use Only were discussed by the Interdisciplinary Team. These administrative categories could include routes to stock ponds and other range improvements, guzzlers, and BLM facilities. The Bakersfield FO reserves the right to allow travel on these routes to permittees, BLM employees, or whomever it deems appropriate on a case-by-case basis.

Emergency Uses

By regulation, any fire, military, emergency or law enforcement vehicle when used for emergency purposes is exempted from OHV decisions. Emergency uses in Wilderness and WSAs are covered in BLM Manual 8560, Management of Designated Wilderness Areas (BLM 1983) and BLM Handbook H-8550-1, Interim Management Policy for Lands Under Wilderness Review (BLM 1995), respectively.

Emergency Limitations or Closures

Whenever the authorized officer determines that OHV use will cause or is causing considerable adverse effects on resources (i.e., soil, vegetation, wildlife, wildlife habitat, cultural, historic, scenic, recreation, or other resources), the area must be immediately closed to the type of use causing the adverse effects (43 CFR 8341.2). Such limitation or closures are not OHV designations.

E.4. Bakersfield FO Travel Plan Alternative Development

As part of the BLM's RMP revisions process, the BLM is developing a complementary travel management plan for all BLM-administered lands within the Bakersfield FO. The revised RMP will comprehensively plan for all types of travel (recreational, casual, agricultural, industrial, administrative, etc.) and accompanying modes and conditions of travel, including motorized, mechanized, and nonmechanized (muscle-powered) uses.

E.4.1 Goal

The goal of the travel plan is to provide opportunities for a range of motorized and nonmotorized access and recreation experiences on public lands while protecting sensitive resources and minimizing conflicts among various users.

This process includes preparing a range of alternatives for inclusion in the draft RMP/EIS. The BLM will provide a range of alternatives as to which areas of the Bakersfield FO will be Closed to OHV travel and

which areas will be Limited to Designated Routes. BLM will provide a range of alternatives by varying miles of closed and designated routes.

E.4.2 Route Designations and Interdisciplinary Team Meetings

Interdisciplinary Team meetings to address route/resource conflicts and route designations were held in March and April 2009 in which each route proposed for designation within the Bakersfield FO, including the Lake Isabella and Taft areas, was evaluated.

The purpose of the route designation Interdisciplinary Team meetings was three-fold:

1. Gather input from Interdisciplinary Team on conflicts identified and mitigation proposed by each resource specialist. Identify (where known) the purpose and need for the route in question. Where conflicts with resources existed, these conflicts were discussed and resolved during the meeting, and final proposals for the various alternatives were established.
2. Formulate three action alternatives for the travel plan: The conservation alternative emphasizes resource conflicts over the purpose and need for the route. The development alternative emphasizes the purpose and need for the route over resource conflicts. The blended alternative weighs both resource conflicts and the purpose and need.
3. Develop a designed system of designated routes that fulfills the management goal for the planning area.

The RMP administrative record contains details of the conflicts identified for each route or route segment and BLM's conclusions as to designation.

Motorized Routes

Motorized travel includes standard passenger vehicles on maintained roads and OHVs on primitive roads and trails. OHVs include off-road motorcycles, ATVs, jeeps, specialized 4x4 trucks, and snowmobiles.

Motorized-Authorized Routes

Use of authorized routes requires a permit or other form of authorization from the BLM.

Nonmotorized Routes

Nonmotorized use includes moving by foot, stock or pack animal, nonmotorized boat, or mechanical vehicle such as bicycles that are not motorized. The Bakersfield FO concluded that routes not designated for motorized travel generally would be available for nonmotorized and nonmechanized travel. As with all designations in the travel plan, BLM reserves the right to change designations in the future, should resource issues warrant such action.

Nonmechanized

Nonmechanized travel by includes travel by natural means, such as by foot or horseback. Mechanical vehicles, such as bicycles, are not permitted on nonmechanized routes, except for approved, nonmotorized ADA accessible devices.

Nonmechanized-Pedestrian

Nonmechanized travel by foot only.

Closed Routes

Closed routes are routes that are not available for public or administrative uses. Closed routes can be restored.

E.5. Proposed Plan Designations

The following table (Table E-6) provides an example of the information available in electronic format on the disc and website regarding the Proposed Plan Route Designations[3]. The complete table (Route Designation Justification) identifies each specific route by a unique number (Route Segment Number) and the rationale supporting the proposed designation. This table should be used with the Google Earth files provided on the accompanying map disc and available from the website to geospatially identify where each route occurs.

The rational is broken down into two components the justification category and then additional notes concerning the route. The rational categories used are as follows;

OHV Closed Area – Non-Discretionary

This category is used to capture all routes in non-discretionary OHV closed areas (e.g., designated Wilderness). Within these areas we have both "Closed" (trespass routes), "Authorized" (grandfathered-in or valid existing rights routes) and "Non-Mechanized" (hiking/horseback riding trails). Motorized routes would not appear with this justification category, but could potentially have Non-motorized routes (mountain-biking).

OHV Closed Area – Discretionary

This category is used to capture all routes in discretionary OHV closed areas (e.g., some ACECs). As above there are non-motorized, authorized and closed routes within this category. This category is only use for those areas designated as OHV Closed areas by an RMP (or similar Land Use Planning level document).

[3] This document contains approximately 7,000 records which are best viewed electronically. Those without access to the computer equipment needed to view the document can review the document at the Bakersfield Field Office.

Resource Concern – Biology

This category is used when the justification for a route limitation hinges on a biological resource. Examples are route closures to reduce habitat fragmentation or limited seasonal use for breeding seasons. I've also used this justification when a route has been designated as authorized use only specifically identified for the benefit of biological resources e.g., authorized access to a wildlife guzzler.

Resource Concern – Cultural

This category is used when the justification for a route limitation hinges on a cultural resource. Examples are route closures due to proximity to an "eligible" archeological site.

Resource Concern – Air, Soil, Water

This category is used when the justification for a route limitation hinges on Air, Soil or Water. Examples are route restriction associated with riparian crossing, route closures or restrictions to reduce erosion, or route restrictions to reduce particulate (PM10/PM2.5) matter.

Resource Concern – Other

This category is used as a catch-all for every other resource based justification. For Bakersfield we've used this for some routes in at our Atwell Island Restoration Project (these could have equally been put in the Biology category) and some fire related routes – I have toyed with the idea of eliminating this category replacing it with "Resource Concern – Fire" and putting those other routes into the Biology section.

Resource Use Concern – Access

This category is used when the justification for a route designation is based on continued access to public lands or restricted access to authorized users only. We've used this as the justification for many of the "Motorized" route designations when there is little or no knowledge concerning the 'value' of the route, but the route is clearly well used and sustainable with no other resource concerns.

Resource Use Concern – Recreation

This category is used when the justification for a route designation hinges on a recreation value (experience/opportunity). Routes with every designation appear within this category, for example; a closed designation may be justified under this category when its closure is related to maintaining the Recreation Opportunity Spectrum's "Primitive Setting"; a non-motorized designation may be justified as enhancing mountain-bike opportunities; an authorized only route may be justified if it's only usable by SRP holders. Many "Motorized" route occur here when there is specific knowledge of the technical challenge, or access/scenic experiences provided by the route.

Resource Use Concern – Safety

This category is used when the justification for a route limitation hinges on public safety. In Bakersfield this designation justification category is most commonly encountered in the producing oil fields and other heavily industrialized areas.

Table E-6
Example Route Designation Justifications (Complete table available electronically)

Route Segment Number	Length (Miles)	Proposed Primary Designation	Proposed Secondary Restriction	Justification Category	Designation Notes	Route Classification
866	0.13	Closed		Resource Use Concern - Safety	Accesses mining site	To Be Restored
871	0.10	Closed		OHV Closed Area - Discretionary	Route enters Moses WSA.	To Be Restored
1101	0.10	Motorized		Resource Use Concern - Access	Route required for access to, from and across public lands	Primitive Road
1720	0.55	Closed		Resource Concern - Biology	Protect ACEC relevance criteria (Special Status Plant Species)	To Be Restored
2144	2.06	Non-Mechanized	Pedestrian Only	Resource Use Concern - Recreation	Closed to motorized/mechanized to promote recreation opportunity (wildlife watching).	Trail
2212	0.12	Closed		Resource Concern - Air, Soil, Water	Route steepness results in unsustainable route.	To Be Restored
2224	0.10	Motorized		Resource Use Concern - Recreation	Route within Special Recreation Management Area primarily used for recreation.	Trail
2336	0.12	Motorized	Street Legal Only	Resource Use Concern - Recreation	Restricted to 'Street Legal' vehicles only to meet recreation objectives.	Primitive Road
2528	0.04	Motorized	Authorized	Resource Concern - Cultural	Access to Keyes Mine (same route as 2523)	Primitive Road
2800	0.17	Closed		OHV Closed Area - Non-Discretionary	Trespass route enters Domeland Wilderness Area.	To Be Restored
2853	0.08	Motorized		Resource Use Concern - Access	Route required for access to, from and across public lands	Primitive Road
5417	0.00	Motorized	Authorized	Resource Use Concern - Safety	Routes within intensively developed (>1 well/acres) industrial area.	Primitive Road

E.6. Plan Maintenance and Changes to Route Designations

The RMP should include indicators to guide future plan maintenance, amendments, or revisions related to OHV area designations or the approved road and trail system within Limited areas (Instruction Memorandum No. 2008-014, Attachment 1 [BLM 2007]). Indicators could include results of monitoring data, new information, or changed circumstances.

Modifications to area OHV designations (open, closed, or limited) require an amendment to the RMP. Actual route designations can be modified without completing a plan amendment, although NEPA compliance is still required. The Federal regulations at 43 CFR 8342.3 state: "The authorized officer shall monitor effect of the use of off-road vehicles. On the basis of information so obtained, and whenever the authorized officer deems it necessary to carry out the objectives of this part, designations may be amended, revised, revoked, or other action taken pursuant to the regulation in this part."

Within the RMP, the Bakersfield FO must establish procedures for making modifications to their designated route networks. Because future conditions may require the designation or construction of new routes or closure of routes in order to better address resources and resource use conflicts, the Bakersfield FO will expressly state how modification would be evaluated.

Plan maintenance can be accomplished through additional analysis and land use planning, e.g., activity level planning. BLM will collaborate with affected and interested parties in evaluating the designated road and trail network for suitability for active OHV management and envisioning potential changes in the existing system or adding new trails that would help meet current and future demands. In conducting such evaluations, the following factors would be considered:

- Routes suitable for different categories of OHVs including dirt bikes, ATVs, dune buggies, and 4-wheel drive touring vehicles, as well as opportunities for joint trail use;
- Needs for parking, trailheads, informational and directional signs, mapping and profiling, and development of brochures or other materials for public dissemination;
- Opportunities to tie into existing or planned route networks;
- Measures needed to avoid onsite and offsite impacts to current and future land uses and important natural resources; among others, issues include noise and air pollution, erodible soils, stream sedimentation, non-point source water pollutions, listed and sensitive species' habitats, historic and archeological sites, wildlife, special management areas, grazing operations, fence and gate security, needs of non-motorized recreationists, and recognition of property rights for adjacent landowners; and
- Public land roads or trails determined to cause considerable adverse effects or to constitute a nuisance or threat to public safety would be considered for relocation or closure and rehabilitation after appropriate coordination with applicable agencies and partners.

Those areas managed as Closed will not be available for new motorized or mechanized route designation or construction.

Regulations at 43 CFR 8342.2 require BLM to monitor the effects of OHV use. Changes should be made to the Travel Plan based on the information obtained through monitoring. Procedures for making changes to route designations after the ROD is signed are established in the RMP.

Site specific NEPA documentation is required in order to change the route designations in this Travel Plan.

E.7. Implementation Process

Implementation decisions are actions to implement land use plans and generally constitute BLM's final approval allowing on-the-ground actions to proceed. These types of decisions are based on site-specific planning and NEPA analyses and are subject to the administrative remedies set forth in the regulations that apply to each resource management program of the BLM. Implementation decisions are not subject to protest under the planning regulations.

Instead, implementation decisions are subject to various administrative remedies. Where implementation decisions are made as part of the land use planning process, they are still subject to the appeals process of other administrative review as prescribed by specific resource program regulations after BLM resolves the protests to land use plan decisions and make a decision to adopt or amend the RMP.

Travel planning and implementation process includes the following:

- A map of roads and trails for all travel modes.
- Definitions and additional limitations for specific roads and trails.
- Criteria developed to set parameters and to specify limitations.
- Guidelines for management, monitoring, and maintenance of the system.
- Indicators to guide future plan maintenance, amendments or revisions related to OHV area designations or the approved road and trail system within limited areas.

The travel management networks should be reviewed periodically to ensure that current resource and travel management objectives are being met (43 CFR 8342.3).

In the final RMP decisions, designated OHV routes will be portrayed by a map entitled "Field Office Travel Plan and Map". This map will be the basis for signing and enforcement. The Field Office will prioritize actions, resources, and geographic areas for implementation. The implementation goals include completing signage, maps, public information, kiosks, and working with partners.

E.8. References

43 C.F.R. Part 8340

BLM (US Department of the Interior, Bureau of Land Management). 1983. Manual 8560, Management of Designated Wilderness Areas. BLM, Washington, DC. April 27, 1983.

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_____. 1997. Proposed Resource Management Plan and Final Environmental Impact Statement for the Caliente Resource Area. BLM, Bakersfield District. 1997.

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_____. 2001. National Management Strategy for Motorized Off-Highway Vehicle Use on Public Lands. BLM, Washington, DC. January 2001. 54 pp.

_____. 2005. Land Use Planning Handbook, H-1601-1. BLM, Washington, DC. March 11, 2005. 161 pp.

_____. 2006. Instruction Memorandum No. 2006-173. Implementation of Roads and Trails Terminology Report. June 16, 2006.

_____. 2007. Instruction Memorandum No. 2008-014. Clarification of Guidance and Integration of Comprehensive Travel and Transportation Management Planning into the Land Use Planning. October 24, 2007.

Executive Order No. 11644, February 8, 1972

Executive Order No. 11989, May 25, 1977

Appendix F

Livestock Grazing Management

Appendix F – Livestock Grazing Management

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F.1 Rangeland Health Standards and Livestock Grazing Management Guidelines for Central California

For efficiency the complete text of the Record of Decision for the Rangeland Health Standards and Livestock Grazing Management Guidelines for Central California (BLM, 1999) has been removed from this Appendix. Copies of this document are available in Appendix F (F-1) of the Draft Bakersfield Resouce Management Plan and Draft Environmental Impact Statement (BLM, 2011) and online at: http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0CDkQFjAB&url=http%3A%2F%2Fwww.blm.gov%2Fpgdata%2Fetc%2Fmedialib%2F%2Fblm%2Fca%2Fpdf%2Fpdfs%2Fcaso_pdfs.Par.84e7fdd8.File.pdf%2FCentral-Grazing.pdf&ei=rUucT-7MAYOLiALM27WLAQ&usg=AFQjCNGTyvPnahdbIUqi4tgygpqlDQgZDw.

F.2 Guidelines for Livestock Grazing Management in Bakersfield FO by Alternative

Specific Local Livestock Management Guidelines – Alternative A

Local guidelines were established to describe the types of livestock grazing management actions that are appropriate and commonly applied within the Bakersfield FO to ensure that the resource objectives and the standards for rangeland and ecosystem health could be met while authorizing livestock grazing. These local guidelines correlate with the Central California Guidelines for Livestock Grazing Management but are generally more specific or more stringent. Applying these guidelines to appropriate grazing allotments occurs with consultation of affected grazing lessees/permittees. These guidelines are incorporated into the terms and conditions of each authorization, as appropriate.

ALLOTMENT LOCATION	SPECIFIC RESOURCE	GUIDELINE
Within San Joaquin Valley listed species habitat as shown on map.	Mulch readiness	500 pounds per acre and two inches of green growth, or 700 pounds per acre without green growth.
	Mulch threshold	500 pounds per acre
	Saltbush scrub	December 1-May 31 season of use or meets form class, foliage density, and reproductive uniformity criteria.
Riparian areas as shown on implementation table.	Poor to fair condition	November1-May 31 season of use and apply the Central California Guidelines for Livestock Grazing Management.
	Good to excellent condition	Maintain current season of use and apply the Central California Guidelines for Livestock Grazing Management.
Known population of California jewelflower (*Caulanthus californicus*)		No grazing unless in approved study or research shows grazing beneficial.

ALLOTMENT LOCATION	SPECIFIC RESOURCE	GUIDELINE
High potential habitat for California jewelflower (*Caulanthus californicus*)		No grazing during critical flowering period February 15- April 30.
Known population of San Joaquin woolly threads (*Monolopia congdonii*)		No grazing unless approved study or research shows grazing beneficial. Grazing may be allowed outside a study with USFWS approval.
Known population of Kern mallow (*Eremalche kernensis*)		No grazing unless in approved study or research shows grazing not detrimental.
Known population of Hoover's woolly star (*Eriastrum hooveri*)		No special restrictions.
Known occurrence of GKR (Giant Kangaroo Rat) as shown on implementation table.		No grazing during haystacking (April 1- June 15) in certain years.
If other species become listed		Prescription that takes into account specific species requirements.

Specific Local Livestock Management Guidelines – Alternative B and E

Local guidelines were established to describe the types of livestock grazing management actions that are appropriate and commonly applied within the Bakersfield FO to ensure that the resource objectives and the standards for rangeland and ecosystem health could be met while authorizing livestock grazing. These local guidelines correlate with the Central California Guidelines for Livestock Grazing Management but are generally more specific or more stringent. Applying these guidelines to appropriate grazing allotments occurs with consultation of affected grazing lessees/permittees. These guidelines are incorporated into the terms and conditions of each authorization, as appropriate.

ALLOTMENT LOCATION	SPECIFIC RESOURCE	GUIDELINE
Within San Joaquin Valley listed species habitat.	Mulch Readiness	500 lbs/ac. and 2" green growth, or 700 lbs/ac. without green growth.
	Mulch Threshold	500 lbs/ac.
	Saltbush Scrub	Dec.1-May 31 season of use or meets form class, foliage density, and reproductive uniformity criteria.
Riparian areas.	Poor-Fair condition	Nov.1-May 31 season of use and apply the appropriate Central CA Guidelines for Livestock Grazing Management as needed to meet the Standards of Rangeland Health.
	Good-Excellent condition	Maintain current season of use and apply the appropriate Central CA Guidelines for Livestock Grazing Management as needed to meet the Standards of Rangeland Health.
Known population[4] of California jewelflower, *Caulanthus californicus*.		No grazing unless in approved study or research show grazing beneficial.
Known population of San Joaquin woolly threads, *Monolopia congdonii*.		Apply the appropriate Central CA Guidelines for Livestock Grazing Management as needed to meet the Standards of Rangeland Health.
Known population of Kern mallow, *Eremalche kernensis.*		No grazing unless in approved study or research shows grazing beneficial.
Known population of Hoover's woolly star, *Eriastrum hooveri*.		Apply the appropriate Central CA Guidelines for Livestock Grazing Management as needed to meet the Standards of Rangeland Health.
Known population of Shevock's monkeyflower, *Mimulus shevockii*.		No grazing.

[4] For the purposes of applying the livestock management guidelines, known occupied habitats and/or known populations are areas containing the species of concern. On a case-by-case basis and dependent on the specific needs of the species, in addition to the area containing the species of concern, the guideline may also be applied to adjacent areas that are determined to 1) have similar habitat characteristics and are likely to contain the species, or 2) directly influence or affect the habitat conditions in the area containing the species. For example, an annual plant may be known to exist on 10 acres. The adjacent 40 acres has similar habitat characteristics, and even though the plant has not been documented from the adjacent 40 acres, it is expected to occur on the 40 acres. In this case, the management guideline for that species would be applied to all 50 acres. Furthermore, the 80 acres in the watershed above the known population may also have the specific management guideline applied if the grazing use of those 80 acres is expected to directly influence the 10 acre existing population or the habitat suitability of the adjacent 40 acres.

ALLOTMENT LOCATION	SPECIFIC RESOURCE	GUIDELINE
Known occurrence of Kern primrose sphinx moth.		No grazing.
Known occurrence of Tehachapi slender salamander.		Apply the appropriate Central CA Guidelines for Livestock Grazing Management as needed to meet the Standards of Rangeland Health.
Other special status species;		Apply the appropriate Central CA Guidelines for Livestock Grazing Management as needed to meet the Standards of Rangeland Health and/or develop a management guideline that takes into account specific species requirements.

Specific Local Livestock Management Guidelines – Alternative C

Local guidelines were established to describe the types of livestock grazing management actions that are appropriate and commonly applied within the Bakersfield FO to ensure that the resource objectives and the standards for rangeland and ecosystem health could be met while authorizing livestock grazing. These local guidelines correlate with the Central California Guidelines for Livestock Grazing Management but are generally more specific or more stringent. Applying these guidelines to appropriate grazing allotments occurs with consultation of affected grazing lessees/permittees. These guidelines are incorporated into the terms and conditions of each authorization, as appropriate.

ALLOTMENT LOCATION	SPECIFIC RESOURCE	GUIDELINE
Within San Joaquin Valley listed species habitat.	Mulch Readiness	500 lbs/ac. and 2" green growth, or 700 lbs/ac. without green growth.
	Mulch Threshold	500 lbs/ac.
	Saltbush Scrub	Dec.1-May 31 season of use or meets form class, foliage density, and reproductive uniformity criteria.
Riparian areas.	Poor-Fair condition	No grazing. Use exclusionary fencing if necessary.
	Good-Excellent condition	No grazing. Use exclusionary fencing if necessary.
Known population[5] of California jewelflower, *Caulanthus californicus*		No grazing unless in approved study or research show grazing beneficial.
Known population of San Joaquin woolly threads, *Monolopia congdonii*		Apply the appropriate Central CA Guidelines for Livestock Grazing Management as needed to meet the Standards of Rangeland Health.
Known population of Kern mallow, *Eremalche kernensis*		No grazing unless in approved study or research shows grazing beneficial.
Known population of Hoover's woolly star, *Eriastrum hooveri*		Apply the appropriate Central CA Guidelines for Livestock Grazing Management as needed to meet the Standards of Rangeland Health.
Known population of Shevock's monkeyflower, *Mimulus shevockii*.		No grazing.
Known occurrence of Kern primrose sphinx moth		No grazing.
Known occurrence of Tehachapi slender salamander		No grazing.

[5] For the purposes of applying the livestock management guidelines, known occupied habitats and/or known populations are areas containing the species of concern. On a case-by-case basis and dependent on the specific needs of the species, in addition to the area containing the species of concern, the guideline may also be applied to adjacent areas that are determined to 1) have similar habitat characteristics and are likely to contain the species, or 2) directly influence or affect the habitat conditions in the area containing the species. For example, an annual plant may be known to exist on 10 acres. The adjacent 40 acres has similar habitat characteristics, and even though the plant has not been documented from the adjacent 40 acres, it is expected to occur on the 40 acres. In this case, the management guideline for that species would be applied to all 50 acres. Furthermore, the 80 acres in the watershed above the known population may also have the specific management guideline applied if the grazing use of those 80 acres is expected to directly influence the 10 acre existing population or the habitat suitability of the adjacent 40 acres.

ALLOTMENT LOCATION	SPECIFIC RESOURCE	GUIDELINE
Other special status species		Apply the appropriate Central CA Guidelines for Livestock Grazing Management as needed to meet the Standards of Rangeland Health and/or develop a management guideline that takes into account specific species requirements.

F.3 Rangeland Health Assessment Form for the Bakersfield FO

ASSESSMENT OF RANGELAND HEALTH STANDARDS, CONTRIBUTING FACTORS AND APPROPRIATE ACTIONS

THIS FORM DOCUMENTS, FOR THE INDICATED AREA: (1) DETERMINATIONS AND SUPPORTING RATIONALE REGARDING IF FUNDAMENTAL RANGELAND HEALTH CONDITIONS CITED IN 43 CFR 4180.1 EXIST IN THESE AREAS; (2) DETERMINATIONS, IN CASES WHERE ONE OR MORE CONDITIONS OF FUNDAMENTAL RANGELAND HEALTH DO EXIST, REGARDING THE STANDARDS THAT ARE/ ARE NOT ACHIEVED; (3) DETERMINATIONS, IN THOSE CASES WHERE ONE OR MORE STANDARDS ARE NOT ACHIEVED, REGARDING THE CONTRIBUTING FACTOR(S) THAT IS (ARE) PREVENTING STANDARD(S) ACHIEVEMENT OR IS (ARE)PREVENTING SIGNIFICANT PROGRESS TOWARDS ITS (THEIR) ACHIEVEMENT; AND, (4) THE INFORMATION THAT WAS EXAMINED THAT SUPPORT THESE DETERMINATIONS.

Indicate the date(s) or period the assessment occurred: _____

Authorized season of use:_____

IDENTIFICATION OF RELEVANT AREA:
Describe and indicate the area where these determinations and rationale apply:

Landscape (identify by planning area, groups of management units, or by watershed:
_____
Management Unit (allotment or pasture - list name / no. / acres):
_____

Stratification (Specific area of Management Unit with unique resources where assessment is applicable):

_____

_____

Rationale for choosing Stratification and Key Species: _____
_____

Approximate size in acres and % of Management Unit (allot or pasture) or linear length if lotic riparian:
_____

Number of Strata for this management unit _____

BLM STAFF PARTICIPANTS:

NAMES	POSITION
	Rangeland Management Specialist
	Wildlife Biologist
	Botanist

DOCUMENTATION OF THE INVOLVEMENT OF PERMITTEES, STATE AGENCIES AND THE INTERESTED PUBLIC IN MAKING STANDARDS CONFORMANCE AND CONTRIBUTING FACTORS DETERMINATIONS
Indicate the occurrence of public participation (e.g. permittee, interested public, other Federal or State /local agency), or opportunities for public participation that pertains to the review of standards achievement and contributing factors (who, when, and conversation or meeting summary):

SUMMARY OF STANDARDS ACHIEVEMENT DETERMINATION AND RATIONALE

As of the date of the completion of this form, a field examination of the information listed above indicated the following with regard to standards achievement for the area identified:

Standard — Determination on Standard Achievement (check appropriate box for each standard)

Soils

☐ Met / ☐ Not met, but progressing towards / ☐ Not met and not progressing towards / ☐ N/A

Rationale: _____

_____

_____

Magnitude: Acres not meeting: _____ % allot.:_____ % pasture: _____

Are livestock a significant factor: Yes/ No. Explain or summarize other contributing factors

_____

Species

☐ Met / ☐ Not met, but progressing towards / ☐ Not met and not progressing towards / ☐ N/A

Rationale: _____

_____

_____

Magnitude: Acres not meeting: _____ % allot.:_____ % pasture: _____

Are livestock a significant factor: Yes/ No. Explain or summarize other contributing factors:

_____

Riparian

☐ Met / ☐ Not met, but progressing towards / ☐ Not met and not progressing towards / ☐ N/A

Rationale: _____

_____

_____

Magnitude: Acres not meeting: _____ % allot.:_____ % pasture:_____

Are livestock a significant factor: Yes/ No. Explain or summarize other contributing factors:

_____

Water Quality

☐ Met / ☐ Not met, but progressing towards / ☐ Not met and not progressing towards / ☐ N/A

Rationale: _____

_____

_____

Magnitude: Acres not meeting: _____ % allot.:_____ % pasture: _____

Are livestock a significant factor: Yes/ No. Explain or summarize other contributing factors:

_____

Management Recommendations/ Rationale:

_____

_____

_____

_____

_____

_____

I concur with this determination and the management recommendations provided.

Field Office Manager: _____ Date: _____

STANDARDS ASSESSMENT BASE INFORMATION

STANDARD: SOILS

Soils exhibit functional biological and physical characteristics that are appropriate to soil type, climate, and landform.

Meaning That: Precipitation is able to enter the soil surface at appropriate rates; the soil is adequately protected against accelerated erosion; and the soil fertility is maintained at appropriate levels.

Site Data: Soil Map Unit: _____ Soil Description: _____

STANDARD: SPECIES

Healthy, productive and diverse populations of native species, including special status species (Federal T&E, Federal proposed, Federal candidates, BLM sensitive, or Calif. State T&E) are maintained or enhanced where appropriate.
Meaning That: Native and other desirable plant and animals are diverse, vigorous, able to reproduce and support the hydrologic cycle, nutrient cycles and energy flows over space and time.

Plant Community(ies): (Holland)_____

CWHR Habitat/Stage: _____

Indicator Species: _____

Key Species Management Area?: _____

Habitat Elements Considered: _____

Focused Studies:(ongoing? needed?)_____

STANDARD: RIPARIAN

Riparian/wetland vegetation, structure and diversity and stream channels and floodplains are, or are making significant progress toward, functioning properly and achieving an advanced ecological status.
Meaning That: The vegetation and soils interact to capture and pass sediment, sustain infiltration, maintain the water table, stabilize the channel, sustain high water quality, and promote biodiversity appropriate to soils, climate, and landform.

Stream Habitat Community: _____

Ecological/Seral Stages: _____

STANDARD: WATER QUALITY

Surface and groundwater quality complies with California, or other appropriate (e.g. Nevada or Tribal) water quality standards.
Meaning That: BLM actions do not contribute to pollution that violates the quantitative or narrative standards of the California and Nevada water quality standards (WQS). Approved Best Management Practices (BMPs) are used to protect water quality or restore water quality to water bodies not fully supporting designated beneficial uses, e.g., water quality limited segments. Surface and groundwater complies with objectives of the Clean Water Act and other applicable water quality requirements, including meeting the State standards within the respective boundaries of the States of California and Nevada.

Watershed: _____ CWA 303(d) impaired water body: Yes/ No

CURRENT CLIMATIC CONDITIONS:

Description of resources/ Rationale for Determination	Standard Indicator	Applicable Standards (un-shaded) and Determination (write Met; Not met; N/A)			
		Soils	Species	Riparian	Water Quality
Describe ground cover: Bare Ground_____% Herbs _____% Shrubs _____% Trees _____% Other _____%	Is ground cover (vegetation and other ground cover such as rock) sufficient to protect sites from accelerated erosion?				
Is organic matter level acceptable? Yes/No ____% cover litter/RDM Estimated lbs/ac _____ ____% cover live plants Heavy materials present in uplands? Yes/No N/A In riparian? Yes/No N/A	Is adequate organic matter (litter/RDM & standing plant material) evident in sufficient amounts to protect the soil surface and replenish soil nutrients through decomposition?				
Dom Cover spp: _____ 2nd: _____ Roots: Throughout; absent portions; one	Are a diversity of plant species, with a variety rooting depths present?				
(see Table 4-1 Rangeland Health) Soil movement C1 C2 C3 C4 C5 Surface/litter C1 C2 C3 C4 C5 Pedestaling C1 C2 C3 C4 C5 Flow patterns C1 C2 C3 C4 C5 Rills/Gullies C1 C2 C3 C4 C5	Is there minimal evidence of accelerated erosion in the form of rills, gullies, pedestaling of plants or rocks, flow patterns, physical soil crusts/ surface sealing, or compaction layers below the soil surface?				
Cryptogams _____% cover Variety: One Several Intact/ Fragmented	Are biological (microphytic,cryptogamic) soil crusts in place where appropriate and not excessively fragmented?				
Desired or priority plant communities and habitats present:	Where appropriate, does species composition contribute to desired or priority plant community objectives?				

Description of resources/ Rationale for Determination	Standard Indicator	Applicable Standards (un-shaded) and Determination (write Met; Not met; N/A)			
		Soils	Species	Riparian	Water Quality
PERENNIAL VEG: Spp:_____ : Even distribution; Seedlings/young missing; Mostly old/decadent Describe structure: Spp:_____ : Even distribution; Seedlings/young missing; Mostly old/decadent Describe structure: Spp:_____ : Even distribution; Seedlings/young missing; Mostly old/decadent Describe structure: RIPARIAN VEG: Spp:_____ : Even distribution; Seedlings/young missing; Mostly old/decadent Describe structure: Spp:_____ : Even distribution; Seedlings/young missing; Mostly old/decadent Describe structure:	Is age-class and structure of woody/ riparian/ or perennial vegetation diverse and appropriate for the site?				
VIGOR: (Good=growing/reproducing, Fair=Not uniform/consistent, Poor=most stunted Spp:_____ Good Fair Poor Why? Spp:_____ Good Fair Poor Why? Spp:_____ Good Fair Poor Why? FORM:(Good=normal, Fair=developing abnormal, Poor=Most in abnormal) Spp:_____ Good Fair Poor Why? Spp:_____ Good Fair Poor Why? Spp:_____ Good Fair Poor Why?	Is plant vigor adequate to maintain desirable plants and ensure reproduction and recruitment of plants when favorable climatic events occur?				

Description of resources/ Rationale for Determination	Standard Indicator	Applicable Standards (un-shaded) and Determination (write Met; Not met; N/A)			
		Soils	Species	Riparian	Water Quality
Describe distribution of plant species and habitats: (Well distributed; becoming fragmented; clumped with many bare areas) Spp:_____ Even/ Fragmented/ Clumped Spp:_____ Even/ Fragmented/ Clumped Spp:_____ Even/ Fragmented/ Clumped	Does the spatial distribution and cover of plant species and their habitats allow for reproduction and recovery from localized catastrophic events?				
Describe germination microsites for key species: Present across area; Degraded microsites; Germination/seedlings inhibited	Are germination microsites for key species present?				
Natural disturbances noted:	Is appropriate. natural disturbance evident?				
Any non-native plants?: Spp:_____ Acceptable? Yes No Spp:_____ Acceptable? Yes No	Are levels of non-native plants and animals at acceptable levels?				
Any noxious/ invasive weeds? Spp:_____% Cover_____ Spp:_____% Cover_____	Are noxious and invasive species at acceptable levels?				
Any special status species? SSS: _____ Up/ Down/ Stable ? Habitat: Good/ Fair/ Poor Connected: Yes/ No Why? SSS: _____ Up/ Down/ Stable ? Habitat :Good/ Fair/ Poor Connected: Yes/ No Why? SSS: _____ Up/ Down/ Stable ? Habitat: Good/ Fair/ Poor Connected: Yes/ No Why?	Are special status species present, healthy and in numbers that appear to ensure stable to increasing populations? Are habitat areas large enough to support viable populations or connected adequately with other similar habitat areas?				

Description of resources/ Rationale for Determination	Standard Indicator	Applicable Standards (un-shaded) and Determination (write Met; Not met; N/A)			
		Soils	Species	Riparian	Water Quality
Wildlife habitat: Seral Stage:_____ Appropriate? Yes/ No Structure: Good/ Fair/ Poor, Why? Patch size: Adequate/ Inadequate	Do wildlife habitats include seral stages, vegetation structure, and patch size promoting diverse, viable wildlife pops?				
(see PFC checklist, TR 1737-9) ____% habitat PFC ____% habitat At Risk (Up, Down, Static) ____% habitat Non-Functional	Are Riparian/Wetland Habitat(s) in Proper Functioning Condition?				
Describe cover of riparian banks:	Is vegetation cover >80% or the percentage that will protect banks and dissipate energy during high flows?				
Describe shading of riparian area: Herbs: Yes/ No Shrubs: Yes/ No Trees: Yes/ No	Where appropriate., is shading sufficient to provide adequate thermal regulation for fish and other riparian dependent species?				
Describe aquatic organisms and plants: Any invertebrates?: Yes/ No Do they indicate: Good Quality/Poor Quality Fish: Yes/ No Algae: Yes/ No	Do aquatic organisms and plants (macro-invertebrates, fish, algae and plants) indicate support for beneficial uses?				
Is Riparian habitat quality Acceptable or Unacceptable? (see riparian standards)	Does Riparian Habitat quality contribute to beneficial uses?				

Lotic Area Standard Proper Functioning Condition Checklist

Name of Riparian-Wetland Area:_____

Date: _____ Segment/ Reach ID:_____ Miles:_____

ID Team Observers:_____

Yes	No	N/A	HYDROLOGIC
			1) Floodplain inundated in "relatively frequent" events (1-3 years)
			2) Active/stable beaver dams
			3) Sinuosity, width/depth ratio, and gradient are in balance with the landscape setting (i.e., landform, geology, and bioclimatic region)
			4) Riparian zone is widening or has achieved potential extent
			5) Upland watershed not contributing to riparian degradation

Yes	No	N/A	VEGETATIVE
			6) Diverse age-class distribution (recruitment for maintenance/recovery)
			7) Diverse composition of vegetation (for maintenance/recovery)
			8) Species present indicate maintenance of riparian soil moisture characteristics
			9) Streambank vegetation is comprised of those plants or plant communities that have root masses capable of withstanding high streamflow events
			10) Riparian plants exhibit high vigor
			11) Adequate vegetative cover present to protect banks and dissipate energy during high flows
			12) Plant communities in the riparian area are an adequate source of coarse and/or large woody debris

Yes	No	N/A	SOILS - EROSION DEPOSITION
			13) Floodplain and channel characteristics (i.e. rocks, overflow channels, coarse and/or large woody debris) adequate to dissipate energy
			14) Point bars are revegetating
			15) Lateral stream movement is associated with natural sinuosity
			16) System is vertically stable
			17) Stream is in balance with the water and sediment being supplied by the watershed (i.e. no excessive erosion or deposition)

Remarks

Summary Determination

Does the stream . . .

- Dissipate stream energy associated with high water flows, thereby reducing erosion and improving water quality?
- Filter sediment, capture bedload, and aid in floodplain development?
- Improve flood-water retention and ground water recharge?
- Develop root masses that stabilize streambanks against cutting action?

Functional Rating:

Proper Functioning Condition _____
Functional – At Risk _____
Nonfunctional _____
Unknown _____

Trend for Functional - At Risk:

Upward _____
Downward _____
Not Apparent _____

Are factors contributing to unacceptable conditions outside the control of the manager? Yes ___ No _____

If yes, what are those factors?

_____ Flow regulations
_____ Mining activities
_____ Upstream channel conditions
_____ Channelization
_____ Road encroachment
_____ Oil field water discharge
_____ Augmented flows
_____ Other (specify) _____

(Revised 27 June 2000)

Lentic Area Standard Proper Functioning Condition Checklist

Name of Riparian-Wetland Area:_____

Date: _____ Area/ Segment ID:_____ Acres:_____

ID Team Observers:_____

Yes	No	N/A	HYDROLOGIC
			1) Riparian-wetland area is saturated at or near the surface or inundated in "relatively frequent" events
			2) Fluctuation of water levels is not excessive
			3) Riparian-wetland are is enlarging or has achieved potential extent
			4) Upland watershed is not contributing to riparian-wetland degradation
			5) Water quality is sufficient to support riparian-wetland plants
			6) Natural surface or subsurface flow patterns are not altered by disturbance (i.e., hoof action, dams, dikes, trails, roads, rills, gullies, drilling activities)
			7) Structure accommodates safe passage of flows (e.g., no headcut affecting dam or spillway)

Yes	No	N/A	VEGETATION
			8) There is diverse age-class distribution of riparian-wetland vegetation (recruitment for maintenance/recovery)
			9) There is diverse composition of riparian-wetland vegetation (for maintenance/recovery)
			10) Species present indicate maintenance of riparian-wetland soil moisture characteristics
			11) Vegetation is comprised of those plants or plant communities that have root masses capable of withstanding wind events, wave flow events, or overland flows (e.g., storm events, snowmelt)
			12) Riparian-wetland plants exhibit high vigor
			13) Adequate riparian-wetland vegetative cover is present to protect shoreline/soil surface and dissipate energy during high wind and wave events or overland flows
			14) Frost or abnormal hydrologic heaving is not present
			15) Favorable microsite condition (i.e., woody material, water temperature, etc.) is maintained by adjacent site characteristics

Yes	No	N/A	EROSION/DEPOSITION
			16) Accumulation of chemicals affecting plant productivity/ composition is not apparent
			17) Saturation of soils (i.e., ponding, flooding frequency, and duration) is sufficient to compose and maintain hydric soils
			18) Underlying geologic structure/soil material/permafrost is capable of restricting water percolation
			19) Riparian-wetland is in balance with the water and sediment being supplied by the watershed (i.e., no excessive erosion or deposition)

			20) Islands and shoreline characteristics (i.e., rocks, coarse and/or large woody material) are adequate to dissipate wind and wave event energies

Remarks

Summary Determination

Functional Rating:

Proper Functioning Condition _____
Functional – At Risk _____
Nonfunctional _____
Unknown _____

Trend for Functional - At Risk:

Upward _____
Downward _____
Not Apparent _____

Are factors contributing to unacceptable conditions outside the control of the manager?

Yes _____
No _____

If yes, what are those factors?

_____ Dewatering
_____ Mining activities
_____ Watershed condition
_____ Dredging activities
_____ Road encroachment
_____ Land ownership
_____ Other (specify) _____

(Revised 1999)

TABLE 4-1 Surface Soil Characteristics of the Bureau of Land Management

Characteristic	Class 1	Class 2	Class 3	Class 4	Class 5
Soil movement	Subsoil exposed over much of the area; may have embryonic dunes and wind-scoured depressions	Soil and debris deposited against minor obstructions	Moderate movement of soil is visible and recent; slight terracing	Some movement of soil particles	No visual evidence of movement
Surface rock and/ or litter	Very little remaining (use care on low-productivity sites); if present, surface rock or fragments exhibit some movement and accumulation of smaller fragments behind obstacles	Extreme movement is apparent; large and numerous deposits against obstacle; if present, rock or fragments exhibit some movement and accumulation of smaller fragments behind obstacles	Moderate movement is apparent and fragments are deposited against obstacles; if present, fragments have a poorly developed distribution pattern	May show slight movement; if present, coarse fragments have a truncated appearance or spotty distribution caused by wind and water	Accumulation in place; if present, the distribution of fragments shows no movement caused by wind or water
Pedestaling	Most rocks and plants are pedestaled and roots exposed	Rocks and plants on pedestals are generally evident; plant roots are exposed	Small rock and plant pedestals occurring in flow patterns	Slight pedestaling in flow patterns	No visual evidence of pedestaling
Flow patterns	Flow patterns are numerous and readily noticeable; may have large barren fan deposits	Flow patterns contain silt, sand deposits and alluvial fans	Well defined, small, and few with intermittent deposits	Deposition of particles may be in evidence	No visual evidence of flow patterns
Rills and gullies	May be present at depths of 8 to 15 cm (3 to 6 inches) and intervals of less than 13 cm (5 inches); sharply incised gullies cover most of the area, and 50 percent are actively eroding	Rills at depths of 1 to 15 cm (0.5 to 6 inches) occur in exposed areas at intervals of 150 cm (5 feet); gullies are numerous and well developed, with active erosion along 10 to 50 percent of their lengths or a few well-developed gullies with active erosion along more than 50 percent of their length	Rills at depths of 1 to 15 cm (0.5 to 6 inches)occur in exposed places at approximately 300 cm (10 foot) intervals; gullies are well developed, with active erosion along less than 10 percent of their length; some vegetation may be present	Some rills in evidence at infrequent intervals of over 300 cm (10 feet); evidence of gullies that show little bed or slope erosion; some vegetation is present on slopes	No visual evidence of rills; may be present in stable condition; vegetation on channel bed and side slopes

SOURCE: Rangeland Health: Adapted from U.S. Department of the Interior, Bureau of Land Management. 1973. Determination of Erosion Condition Class, Form 7310-12. May. Washington, D.C.: U.S. Department of the Interior.

F.3.A Current Rangeland Health Assessment Results

Allotment Number	Allotment Name	Public Acres[1]	Kind of Stock	Period Begin Date	Period End Date	Public AUMs	Range Health Assessment Date	Range Health Category[2]
2	Oilfield Road	440	Sheep	12/1	5/31	73	11/30/04	2
3	Naval Pet Res. I	1,518	Sheep	12/1	5/31	253	04/05/01	2
5	Blossom Peak	80	Cattle	3/1	6/1	7	None	N/A
6	Cuyama 2	480	Cattle	3/1	2/28	80	02/21/07	2
7	Freeborn Mt.	1,804	Cattle	3/1	2/28	254	03/14/07	2
8	Pleito Hills	3,423	Cattle	3/1	2/28	1,028	08/06/98	2
9	Badger Creek	480	Cattle	4/1	9/30	90	04/25/02	4
10	Santa Rita	160	Cattle	3/1	9/15	16	06/19/02	1 and 4
12	Live Oak Pass	280	Cattle	6/1	9/30	70	04/18/07	2
13	Temblor Creek	328	Cattle	3/1	2/28	82	04/13/2011	2
14	Case Mountain	5,576	Cattle	10/1	5/31	423	07/22/98	2
15	North Temblor[3]	34,795	Cattle	3/1	2/28	7,733	06/28/06	2
15	North Temblor		Cattle	12/1	5/31			
15	North Temblor (portion in BKFO managed by CPNM)	137	Cattle	3/1	2/28	30		
16	Oil Field	4,270	Sheep	12/1	5/31	303	02/25/05	2
17	North Fork River	5,693	Cattle	3/1	2/28	456	08/12/98	2
19	Buena Vista Creek	720	Sheep	12/1	5/31	107	04/05/01	2
20	Elephant Back	80	Cattle	3/1	2/28	16	02/24/00	2
21	Frazer Valley	1,694	Cattle	12/1	5/31	184	03/04/10	2
23	Hanning Flat West	754	Cattle	11/1	5/31	75	04/07/10	2
24	Bear Creek	405	Cattle	3/1	2/28	10	11/14/07	2
27	Bitterwater Valley	80				12	None	N/A
28	Kettleman Hills	5,216	Cattle	12/1	5/31	1,304	03/10/10	2,1 and 4
28	Kettleman Hills		Cattle	3/1	2/28			
30	West Klipstein	561	Cattle	3/1	2/28	112	03/22/06	2
32	Hubbard Hill	3,080	Cattle	3/1	2/28	418	03/07/07	2
33	Mankins Creek	476	Cattle	10/1	6/30	80	03/21/07	2
34	North Comb Rocks	230				39	None	N/A
35	Red Hill	160				3	None	N/A
36	Horn Mountain	1,517	Cattle	3/1	2/28	65	08/28/03	2
37	Raven Pass	40	Cattle	9/1	5/31	12	07/12/01	1
38	North Naval Petroleum Res.	2,278				380	None	N/A
39	Chimineas Ranch South[3]	4,982				730	None	N/A
40	Rio Bravo	401	Cattle	3/1	2/28	100	04/25/02	4
41	Derby Acres	530				151	None	N/A
42	Jack Canyon	33	Cattle	3/1	2/28	12	04/24/08	2
45	Goldpan Canyon	470	Cattle	3/1	2/28	84	12/16/98	2
47	Rankin Ranch	867	Cattle	3/1	2/28	144	None	N/A
48	Mountain Creek	264	Cattle	3/1	2/28	88	02/23/06	4
49	Loraine	678	Cattle	3/1	2/28	113	12/16/98	2
50	Santa Barbara Canyon	1,734	Cattle	3/1	2/28	118	08/01/02	2
51	Studhorse Canyon	498	Cattle	11/1	5/31	100	05/11/98	2

Allotment Number	Allotment Name	Public Acres[1]	Kind of Stock	Period Begin Date	Period End Date	Public AUMs	Range Health Assessment Date	Range Health Category[2]
52	Thompson Ridge	1,250				63	None	N/A
54	Willow Spring Canyon	480	Cattle	3/1	2/28	96	03/10/10	2
55	South Mountain	186	Cattle	3/1	2/28	23	06/11/08	2
56	Round Mountain Road	160	Cattle	12/1	5/31	27	10/08/03	2
57	Santiago Creek	2,723	Cattle	3/1	2/28	545	10/23/06	2
57	Santiago Creek		Cattle	12/1	5/31			
58	Anderson Canyon	2,120	Cattle	3/1	2/28	311	03/14/07	2
59	Loco Bill Canyon	640	Cattle	4/1	9/30	82	05/11/98	2
60	Santa Teresa	1,883	Cattle	3/1	2/28	400	06/26/08	2
61	Oak Grove	2,901	Cattle	4/1	9/30	235	08/19/98	2
62	Curtis Mountain	40	Cattle	3/1	2/28	13	None	N/A
63	Chico Martinez	8,602	Cattle	3/1	2/28	1,671	07/14/05	2
63	Chico Martinez		Cattle	12/1	5/31			
64	Cedar Canyon	624	Cattle	10/15	6/30	139	04/14/05	2
64	Cedar Canyon		Cattle	12/1	5/31			
65	Packwood	1,155	Cattle	12/1	5/31	282	08/02/01	1
65	Packwood		Cattle	3/1	2/28			
66	Liveoak Canyon	80				13	None	N/A
68	San Emigdio	650	Cattle	3/1	2/28	191	07/17/02	2
71	Rancheria	194				49	None	N/A
72	Bluestone Ridge	2,673	Cattle	12/1	6/30	668	09/04/98	2
73	Chimineas Ranch North	3,949	Cattle	12/1	5/31	759	05/06/10	1
74	Freedom Hill	2,278	Cattle	3/1	5/15	539	04/08/98	2
75	Kelso Peak	768	Cattle	2/1	5/15	154	08/15/01	2
76	Sacatar Meadow	6,320	Cattle	9/1	10/31	96	10/09/07	2
77	Walker Pass West	14,566	Cattle	1/1	6/30	781	01/13/00	2
78	Airport	1,759	Cattle	3/1	5/15	176	04/07/10	2
79	Fay Canyon	361	Cattle	3/1	4/30	64	08/15/01	2
80	Smith Canyon	2,760				60	None	N/A
81	Nellie's Nipple	3,885	Cattle	3/15	10/14	528	01/25/06	2
82	Short Canyon	3,260	Cattle	2/1	4/30	150	03/20/98	2
83	Lynch Canyon	510	Cattle	3/1	4/30	64	12/02/98	2
84	Cyrus Canyon	2,236	Cattle	10/1	5/15	225	04/18/02	2
85	Cooks Peak	2,111	Cattle	11/1	5/31	217	07/15/99	2
86	Cholla Canyon	4,572	Cattle	10/15	6/30	1,825	05/19/03	2
87	Havilah Basin	4,862	Cattle	3/1	2/28	356	03/18/10	2
87	Havilah Basin		Cattle	5/1	9/30			
88	Sales Creek[4]	40	Cattle	3/1	2/28	50	03/08/00	2
89	Bodfish	114	Cattle and horses	3/1	9/30	14	09/09/04	2
90	Wagy Flat	10,138	Cattle	2/15	4/30	521	09/09/04	2
91	Sulphur Ridge	506	Cattle	3/1	2/28	34	04/25/07	2
93	Eagle's Nest Peak	680	Cattle	11/1	5/31	182	02/06/06	2
94	South Comb Rocks	399	Cattle	10/1	6/30	100	03/21/07	2
95	Progress Gulch	480	Cattle	3/1	6/30	80	04/18/07	2
96	Maricopa[3]	5,979	Cattle	12/1	5/31	939	04/15/99	2
96	Maricopa		Cattle	3/1	2/28			

Allotment Number	Allotment Name	Public Acres[1]	Kind of Stock	Period Begin Date	Period End Date	Public AUMs	Range Health Assessment Date	Range Health Category[2]
97	Mc Van Oil Field	200	Cattle	3/1	2/28	34	03/29/01	1
98	Fresno River[4]	160	Cattle	5/1	10/31	36	09/07/01	1
99	Bittercreek Drainage	240	Cattle	3/1	2/28	60	04/28/05	2
100	Dry Creek	160	Cattle	3/1	2/28	20	07/16/08	2
102	Burnt Point	1,493	Cattle	3/1	2/28	79	05/23/07	2
103	Milk Ranch Peak	1,652	Cattle	4/15	9/30	133	07/11/07	2
104	Wash Burn Cove	628	Cattle	10/1	4/15	118	03/28/07	2
106	Western Minerals Road	1,540	Cattle	12/1	5/31	308	03/10/98	2
107	Cienaga Canyon	1,902	Cattle	12/1	5/31	380	05/10/06	2
108	Paso Robles	20	Horses	1/1	3/31	3	None	N/A
111	Sand Canyon	2,702	Cattle	3/1	2/28	365	01/19/00	2
113	Johns Peak	1,040	Cattle	3/1	2/28	168	03/13/02	2
114	East Klipstein	90	Cattle	3/1	9/30	18	03/22/06	2
115	Power Line Road	215	Sheep	1/1	5/31	36	03/29/01	2
116	Devils Gulch	600	Cattle	12/1	5/31	120	05/10/06	2
117	Red Mountain	7,317				327	None	N/A
118	Scobie Meadow	6,890	Cattle	6/1	10/31	182	06/08/00	2
119	Bald Eagle Peak	2,400	Cattle	3/1	2/28	168	03/18/10	2
120	Spanish Needle Creek	3,160	Cattle	3/15	6/5	40	07/08/98	2
123	Canebrake	8,238	Cattle	1/1	6/30	952	04/17/98	2
124	Long Valley	17,687	Cattle	10/1	11/30	226	06/12/02	2
125	Kennedy Lamont	44,296	Cattle	7/1	9/30	396	10/17/07	2
126	Lower Kennedy Table[4]	105	Cattle	12/1	5/31	30	03/27/01	2
128	Lwr Hiddenvalley Rch[4]	1,331	Cattle	12/1	5/31	236	04/25/05	2
129	Big Sandy[4]	813	Cattle	12/1	5/31	225	02/10/00	2
130	Smalley Road[4]	540	Cattle	11/15	5/15	188	03/01/00	2
136	Fowler Mountain[4]	280	Cattle	3/1	2/28	120	09/07/05	2
149	South Fork Kern River	800	Cattle	11/1	6/30	20	07/17/08	1
157	Wheeler Ridge	480	Cattle	12/1	5/31	144	02/28/07	1 and 4
157	Wheeler Ridge		Cattle	3/1	2/28			
3464	Franciscan	800	Cattle	3/1	2/28	168	08/02/01	2
3655	Wood Canyon[3]	204	Cattle	12/1	5/31	5	06/26/02	2
3718	Buena Vista	311	Cattle	3/1	2/28	62	06/26/08	2
3719	Vista Del Mar	165				10	None	N/A
3720	Klau Mine	12				3	None	N/A
3750	San Joaquin River Slope[4]	857	Cattle	12/1	5/31	240	3/27/01	2
4309	Surprise Arroyo (portion in BKFO managed by HFO)	~1,300	Cattle and Sheep	1/1	4/30	~417		
5008	Rudnick Common (portion in BKFO managed by RFO)	~7,000	Cattle	3/1	2/28	~412		

[1]Acreage figures in this table are approximate and may not correspond with cumulative totals elsewhere in this document.
[2]1=One or more standards not being met, livestock are significant contributor to failure; 2=All standards being met; 3=Status of one or more standards is unknown or cause of failure unknown; 4=One or more standards not being met due to cause other than livestock grazing (also see Appendix F-1).
[3]Portion of this allotment lies within the Carrizo Plain National Monument.
[4]Allotments currently directed by the Hollister RMP of 1984.

F.4 Selective Management Categories for Grazing Allotments

The Bureau began categorizing allotments upon the issuance of Instruction Memorandum No. 82-292 on March 5, 1982. That memorandum established the selective management approach to rangeland management. The selective management policy is intended to provide our agency with a logical and consistent system of prioritizing our management implementation needs by identifying those allotments needing the most management emphasis in regards to our capabilities at hand. The Bakersfield Field Office felt this policy was quite useful in helping to organize our many management priorities. In the 1997 Caliente RMP we redefined the categories and criteria described in IM-82-292 to fit our needs and put emphasis on the values we use intuitively to prioritize our management efforts. We have developed and continue to use the following three categories:

(I) Intensive: Concentrate effort in areas which require intensive management.

(M) Moderate: Provide moderate level of effort to maintain condition or effect change.

(C) Continue: Manage custodially, while protecting existing resource values and condition.

The following standard and optional criteria are being used in the Bakersfield Field Office to place allotments into the three identified categories.

Standard Criteria Used to Categorize Grazing Allotments

Resource Objective – Are the resources near, at, or far from their desired condition? Is intensive management effort required to reach objective or maintain stable condition, or will objective be met without much outside effort?
Resource Trend – Are resources moving toward objective, moving away from objective, or are they stable? Are apparent resource conditions improving or declining?
Present Management – Is present management satisfactory to meet long term management objectives? Is present management contributing to maintaining or meeting resource objectives? If resource conditions need improving, will a change in present management effect any change in resource trend toward objective?
Resource Use Conflicts/ Controversy – Do serious resource use conflicts exist which require special management emphasis? Is the allotment important to many user groups? Do special or sensitive resources, including special status species, exist which may require intensive management?

Optional Criteria Used to Categorize Grazing Allotments

Amount of Public Land – Does the percentage of Federal land within the management unit restrict implementation of desired changes? Is management change infeasible due to limited public lands within the management unit?
Cooperation – Does the grazing operator maintain existing projects and will future projects be maintained? Is the grazing operator willing to work with the Bureau in implementing management prescriptions?
Economic Return – What is the likelihood of positive economic return on public investment? Are desired resource objectives and proposed changes economically feasible?

Each allotment is rated separately based on the described standard criteria and the following scorecard:

SELECTIVE MANAGEMENT CATEGORY			
STANDARD CRITERIA	I	M	C
Resource Objective:	Far below desired condition.	Near or at desired condition.	Near desired condition.
Resource Trend:	Stable, moving toward objective, or moving away from objective.	Stable, or moving toward objective.	Stable, or moving toward objective.
Effect of Present Management:	Present management not satisfactory to maintain or reach objectives.	Present management contributing toward maintaining or meeting objectives.	Present management contributing toward maintaining or meeting objectives.
Resource Conflicts:	Conflicts evident.	Conflicts limited.	Conflicts minimal.
TOTAL SCORE:			
OPTIONAL CRITERIA	I	M	C
Amount of Public Land:	> 60%, Change possible.	59%-10%, Change restricted.	<10%, Change not feasible.
Cooperation:	Low level of cooperation.		Cooperative and reliable.
Economic Return:	Positive return.	Possible return.	Return not likely.
TOTAL SCORE:			

After evaluating an allotment and selecting a management category for each of the standard criteria, an obvious category assignment is usually indicated. However, in the instance that the scores between two management classes for a given allotment is even after applying the standard criteria, then the optional criteria are used to make the final category assignment.

The identification of management categories is a dynamic process. When the resource situation of an allotment changes following the implementation of management decisions, the allotment may be recategorized. The monitoring to support recategorization need not be limited to the type of monitoring typically used to manage livestock grazing (i.e., utilization, mulch, actual use, weather, trend and condition). Information from any source (e.g., wildlife, watershed, special status plant and animal, or archeological monitoring) may serve to make apparent and justify the need for recategorization. Due to time limitations, the categories printed in the allocation table of this document do not reflect the use of these newly developed criteria. The Field Office staff, in cooperation and consultation with affected grazing lessees/permittees and interested parties, will re-evaluate and categorize each allotment in order to determine management emphasis for the future.

F.5 Livestock Grazing Implimentation Levels by Alternative

Livestock Grazing Implementation Levels; Alternative A

Allotment Number	Allotment Name	Public Acres[1]	Mgmt. Status[2]	Type Auth.[3]	Kind Of Stock	Period Begin Date	Period End Date	Public Aums
2	Oilfield Road	440	M	15	Sheep	12/1	5/31	73
3	Naval Pet Res. I	1,518	M	15	Sheep	12/1	5/31	253
5	Blossom Peak	80	C	15	Cattle	3/1	6/1	7
6	Cuyama 2	480	C	15	Cattle	3/1	2/28	80
7	Freeborn Mt.	1,804	C	15	Cattle	3/1	2/28	254
8	Pleito Hills	3,423	C	15	Cattle	3/1	2/28	1,028
9	Badger Creek	480	C	15	Cattle	4/1	9/30	90
10	Santa Rita	160	C	15	Cattle	3/1	9/15	16
12	Live Oak Pass	280	C	15	Cattle	6/1	9/30	70
13	Temblor Creek	328	M	15	Cattle	3/1	2/28	82
14	Case Mountain	5,576	I	15	Cattle	10/1	5/31	423
15	North Temblor[4]	34,795	M	15	Cattle	3/1	2/28	7,733
15	North Temblor[4]	0	M	15	Cattle	12/1	5/31	0
15	North Temblor (Portion in BKFO Managed by CPNM)	137	M	15	Cattle	3/1	2/28	30
16	Oil Field	4,270	M	15	Sheep	12/1	5/31	303
17	North Fork River	5,693	M	15	Cattle	3/1	2/28	456
19	Buena Vista Creek	720	M	15	Sheep	12/1	5/31	107
20	Elephant Back	80	C	15	Cattle	3/1	2/28	16
21	Frazer Valley	1,694	M	15	Cattle	12/1	5/31	184
23	Hanning Flat West	754	C	3	Cattle	11/1	5/31	75
24	Bear Creek	405	M	15	Cattle	3/1	2/28	10
27	Bitterwater Valley	80	C	15				12
28	Kettleman Hills	5,216	I	15	Cattle	12/1	5/31	1,304
28	Kettleman Hills	0	I	15	Cattle	3/1	2/28	0
30	West Klipstein	561	C	15	Cattle	3/1	2/28	112
32	Hubbard Hill	3,080	C	15	Cattle	3/1	2/28	418
33	Mankins Creek	476	C	15	Cattle	10/1	6/30	80
34	North Comb Rocks	230	C	15				39
35	Red Hill	160	C	15	Cattle	3/1	2/28	3
36	Horn Mountain	1517	C	15	Cattle	3/1	2/28	65
37	Raven Pass	40	C	15	Cattle	9/1	5/31	12
38	North Naval Petroleum Res.	2,278	I	15				380
39	Chimineas Ranch South[4]	4,982	M	15	Cattle	12/1	5/31	730
40	Rio Bravo	401	C	15	Cattle	3/1	2/28	100
41	Derby Acres	530	C	15				151
42	Jack Canyon	33	C	15	Cattle	3/1	2/28	12
45	Goldpan Canyon	470	I	15	Cattle	3/1	2/28	84
47	Rankin Ranch	867	C	15	Cattle	3/1	2/28	144
48	Mountain Creek	264	C	15	Cattle	3/1	2/28	88
49	Loraine	678	I	15	Cattle	3/1	2/28	113
50	Santa Barbara Canyon	1,734	M	15	Cattle	3/1	2/28	118
51	Studhorse Canyon	498	M	3	Cattle	11/1	5/31	100
52	Thompson Ridge	1,250	M	15	Cattle	5/1	7/31	63

Allotment Number	Allotment Name	Public Acres[1]	Mgmt. Status[2]	Type Auth.[3]	Kind Of Stock	Period Begin Date	Period End Date	Public Aums
54	Willow Spring Canyon	480	M	15	Cattle	3/1	2/28	96
55	South Mountain	186	C	15	Cattle	3/1	2/28	23
56	Round Mountain Road	160	M	15	Cattle	12/1	5/31	27
57	Santiago Creek	2,723	M	15	Cattle	3/1	2/28	545
57	Santiago Creek	0	M	15	Cattle	12/1	5/31	0
58	Anderson Canyon	2,120	C	15	Cattle	3/1	2/28	311
59	Loco Bill Canyon	640	I	15	Cattle	4/1	9/30	82
60	Santa Teresa	1,883	M	15	Cattle	3/1	2/28	400
61	Oak Grove	2,901	I	15	Cattle	4/1	9/30	235
62	Curtis Mountain	40	C	15	Cattle	3/1	2/28	13
63	Chico Martinez	8,602	I	15	Cattle	3/1	2/28	1,671
63	Chico Martinez	0	I	15	Cattle	12/1	5/31	0
64	Cedar Canyon	624	C	15	Cattle	10/15	6/30	139
64	Cedar Canyon	0	C	15	Cattle	12/1	5/31	0
65	Packwood	1,155	M	15	Cattle	12/1	5/31	282
65	Packwood	0	M	15	Cattle	3/1	2/28	0
66	Liveoak Canyon	80	C	15				13
68	San Emigdio	650	C	15	Cattle	3/1	2/28	191
71	Rancheria	194	C	15				49
72	Bluestone Ridge	2,673	M	15	Cattle	12/1	6/30	668
73	Chimineas Ranch North	3,949	M	15	Cattle	12/1	5/31	759
74	Freedom Hill	2,278	I	3	Cattle	3/1	5/15	539
75	Kelso Peak	768	M	3	Cattle	2/1	5/15	154
76	Sacatar Meadow	6,320	C	3	Cattle	9/1	10/31	96
77	Walker Pass West	14,566	I	3	Cattle	1/1	6/30	781
78	Airport	1,759	M	3	Cattle	3/1	5/15	176
79	Fay Canyon	361	C	3	Cattle	3/1	4/30	64
80	Smith Canyon	2,760	M	3				60
81	Nellie's Nipple	3,885	M	3	Cattle	3/15	10/14	528
82	Short Canyon	3,260	I	3	Cattle	2/1	4/30	150
83	Lynch Canyon	510	C	3	Cattle	3/1	4/30	64
84	Cyrus Canyon	2,236	M	3	Cattle	10/1	5/15	225
85	Cooks Peak	2,111	C	3	Cattle	11/1	5/31	217
86	Cholla Canyon	4,572	M	3	Cattle	10/15	6/30	1,825
87	Havilah Basin	4,862	M	3	Cattle	3/1	2/28	356
87	Havilah Basin	0	M	3	Cattle	5/1	9/30	0
88	Sales Creek	40	C	15	Cattle	3/1	2/28	50
89	Bodfish	114	C	3	Cattle & Horses	3/1	9/30	14
90	Wagy Flat	10,138	M	3	Cattle	2/15	4/30	521
91	Sulphur Ridge	506	C	15	Cattle	3/1	2/28	34
93	Eagle's Nest Peak	680	C	15	Cattle	11/1	5/31	182
94	South Comb Rocks	399	C	15	Cattle	10/1	6/30	100
95	Progress Gulch	480	C	15	Cattle	3/1	6/30	80
96	Maricopa[4]	5,979	I	15	Cattle	12/1	5/31	939
96	Maricopa[4]	0	I	15	Cattle	3/1	2/28	0
97	Mc Van Oil Field	200	C	15	Cattle	3/1	2/28	34
98	Fresno River	160	C	15	Cattle	5/1	10/31	36

Allotment Number	Allotment Name	Public Acres[1]	Mgmt. Status[2]	Type Auth.[3]	Kind Of Stock	Period Begin Date	Period End Date	Public Aums
99	Bittercreek Drainage	240	C	15	Cattle	3/1	2/28	60
100	Dry Creek	160	C	15	Cattle	3/1	2/28	20
102	Burnt Point	1,493	M	15	Cattle	3/1	2/28	79
103	Milk Ranch Peak	1,652	C	15	Cattle	4/15	9/30	133
104	Wash Burn Cove	628	M	15	Cattle	10/1	4/15	118
106	Western Minerals Rd.	1,540	I	15	Cattle	12/1	5/31	308
107	Cienaga Canyon	1,902	M	15	Cattle	12/1	5/31	380
108	Paso Robles	20	C	15	Horses	1/1	3/31	3
111	Sand Canyon	2,702	I	15	Cattle	3/1	2/28	365
113	Johns Peak	1,040	C	15	Cattle	3/1	2/28	168
114	East Klipstein	90	C	15	Cattle	3/1	9/30	18
115	Power Line Road	215	M	15	Sheep	1/1	5/31	36
116	Devils Gulch	600	M	15	Cattle	12/1	5/31	120
117	Red Mountain	7,317	I	15				327
118	Scobie Meadow	6,890	M	3	Cattle	6/1	10/31	182
119	Bald Eagle Peak	2,400	M	3	Cattle	3/1	2/28	168
120	Spanish Needle Creek	3,160	I	3	Cattle	3/15	6/5	40
123	Canebrake	8,238	M	3	Cattle	1/1	6/30	952
124	Long Valley	17,687	M	3	Cattle	10/1	11/30	226
125	Kennedy Lamont	44,296	M	3	Cattle	7/1	9/30	396
126	Lower Kennedy Table	105	M	15	Cattle	9/15	5/31	30
128	Lwr Hiddenvalley Rch	1,331	M	15	Cattle	12/1	5/31	236
129	Big Sandy	813	M	15	Cattle	12/1	5/31	225
130	Smalley Road	540	M	15	Cattle	11/15	5/15	188
136	Fowler Mountain	280	M	15	Cattle	3/1	2/28	120
149	South Fork Kern River	800	C	3	Cattle	11/1	6/30	20
157	Wheeler Ridge	480	C	15	Cattle	12/1	5/31	144
157	Wheeler Ridge	0	C	15	Cattle	3/1	2/28	0
3464	Franciscan	800	M	15	Cattle	3/1	2/28	168
3655	Wood Canyon[4]	204	M	15	Cattle	12/1	5/31	5
3718	Buena Vista	311	M	15	Cattle	3/1	2/28	62
3719	Vista Del Mar	165	C	15				10
3720	Klau Mine	12	C	15				3
3750	San Joaquin River Slope	857	M	15	Cattle	12/1	5/31	240
4309	Surprise Arroyo (~ Portion in BKFO Managed by HFO)	1,300	I	15	Cattle & Sheep	1/1	4/30	~417
5008	Rudnick Common (~ Portion in BKFO Managed by RFO)	7,000	I	3	Cattle	3/1	2/28	~412
								34,526
	Available for application	20,800						3,100
	Estimated potential grazing opportunity[5]							37,626

[1]Acreage figures in this table are approximate and may not correspond with cumulative totals elsewhere in this document.
[2]C=Continue, M=Moderate, I=Intensive (also see Selective Management Categories in Appendix F-4).
[3]3=Grazing permits issued on public lands within the grazing districts established under the Taylor Grazing Act; 15=Grazing leases on public lands outside the original grazing district boundaries.
[4]Portion of this allotment lies within the Carrizo Plain National Monument.
[5]Total of authorized AUMs and projected future authorized AUMs, under the assumptions that 75% of acres available for application would be authorized and given a stocking rate of 5 acres/AUM.

Livestock Grazing Implementation Levels; Alternative B

Allotment Number	Allotment Name	Public Acres[1]	Mgmt. Status[2]	Type Auth.[3]	Kind Of Stock	Period Begin Date	Period End Date	Public Aums
2	Oilfield Road	440	M	15	Sheep	12/1	5/31	73
3	Naval Pet Res. I	1,518	M	15	Sheep	12/1	5/31	253
5	Blossom Peak	80	C	15	Cattle	3/1	6/1	7
6	Cuyama 2	480	C	15	Cattle	3/1	2/28	80
7	Freeborn Mt.	1,804	C	15	Cattle	3/1	2/28	254
8	Pleito Hills	3,423	C	15	Cattle	3/1	2/28	1,028
9	Badger Creek	480	C	15	Cattle	4/1	9/30	90
10	Santa Rita	160	C	15	Cattle	3/1	9/15	16
12	Live Oak Pass	280	C	15	Cattle	6/1	9/30	70
13	Temblor Creek	328	M	15	Cattle	3/1	2/28	82
14	Case Mountain	3,903	I	15	Cattle	10/1	5/31	296
15	North Temblor[4]	34,795	M	15	Cattle	3/1	2/28	7,733
	North Temblor[4]		M	15	Cattle	12/1	5/31	0
	North Temblor (Portion in BKFO Managed by CPNM)	137	M	15	Cattle	3/1	2/28	30
16	Oil Field	4,270	M	15	Sheep	12/1	5/31	303
17	North Fork River	5,693	M	15	Cattle	3/1	2/28	456
19	Buena Vista Creek	720	M	15	Sheep	12/1	5/31	107
20	Elephant Back	80	C	15	Cattle	3/1	2/28	16
21	Frazer Valley	1,694	M	15	Cattle	12/1	5/31	184
23	Hanning Flat West	575	C	3	Cattle	11/1	5/31	57
24	Bear Creek	405	M	15	Cattle	3/1	2/28	10
27	Bitterwater Valley	80	C	15				12
28	Kettleman Hills	5,216	I	15	Cattle	12/1	5/31	1,304
	Kettleman Hills		I	15	Cattle	3/1	2/28	0
30	West Klipstein	561	C	15	Cattle	3/1	2/28	112
32	Hubbard Hill	3,080	C	15	Cattle	3/1	2/28	418
33	Mankins Creek	476	C	15	Cattle	10/1	6/30	80
34	North Comb Rocks	230	C	15				39
35	Red Hill	160	C	15	Cattle	3/1	2/28	3
36	Horn Mountain	1,517	C	15	Cattle	3/1	2/28	65
37	Raven Pass	40	C	15	Cattle	9/1	5/31	12
38	North Naval Petroleum Res.	2,278	I	15				380
39	Chimineas Ranch South[4]	4,982	M	15	Cattle	12/1	5/31	730
40	Rio Bravo	401	C	15	Cattle	3/1	2/28	100
41	Derby Acres	530	C	15				151
42	Jack Canyon	33	C	15	Cattle	3/1	2/28	12
45	Goldpan Canyon	470	I	15	Cattle	3/1	2/28	84
47	Rankin Ranch	867	C	15	Cattle	3/1	2/28	144
48	Mountain Creek	264	C	15	Cattle	3/1	2/28	88
49	Loraine	678	I	15	Cattle	3/1	2/28	113
50	Santa Barbara Canyon	1,734	M	15	Cattle	3/1	2/28	118
51	Studhorse Canyon	498	M	3	Cattle	11/1	5/31	100
52	Thompson Ridge	1,250	M	15	Cattle	5/1	7/31	63
54	Willow Spring Canyon	480	M	15	Cattle	3/1	2/28	96
55	South Mountain	186	C	15	Cattle	3/1	2/28	23
56	Round Mountain Road	160	M	15	Cattle	12/1	5/31	27

Allotment Number	Allotment Name	Public Acres[1]	Mgmt. Status[2]	Type Auth.[3]	Kind Of Stock	Period Begin Date	Period End Date	Public Aums
57	Santiago Creek	2,723	M	15	Cattle	3/1	2/28	545
	Santiago Creek		M	15	Cattle	12/1	5/31	0
58	Anderson Canyon	2,120	C	15	Cattle	3/1	2/28	311
59	Loco Bill Canyon	640	I	15	Cattle	4/1	9/30	82
60	Santa Teresa	1,883	M	15	Cattle	3/1	2/28	400
61	Oak Grove	2,901	I	15	Cattle	4/1	9/30	235
62	Curtis Mountain	40	C	15	Cattle	3/1	2/28	13
63	Chico Martinez	8,602	I	15	Cattle	3/1	2/28	1,671
	Chico Martinez		I	15	Cattle	12/1	5/31	0
64	Cedar Canyon	624	C	15	Cattle	10/15	6/30	139
	Cedar Canyon		C	15	Cattle	12/1	5/31	0
65	Packwood	1,155	M	15	Cattle	12/1	5/31	282
	Packwood		M	15	Cattle	3/1	2/28	0
66	Liveoak Canyon	80	C	15				13
68	San Emigdio	650	C	15	Cattle	3/1	2/28	191
71	Rancheria	194	C	15				49
72	Bluestone Ridge	2,673	M	15	Cattle	12/1	6/30	668
73	Chimineas Ranch North	3,949	M	15	Cattle	12/1	5/31	759
74	Freedom Hill	2,278	I	3	Cattle	3/1	5/15	539
75	Kelso Peak	768	M	3	Cattle	2/1	5/15	154
76	Sacatar Meadow	6,320	C	3	Cattle	9/1	10/31	96
77	Walker Pass West	14,566	I	3	Cattle	1/1	6/30	781
78	Airport	917	M	3	Cattle	3/1	5/15	92
79	Fay Canyon	361	C	3	Cattle	3/1	4/30	64
80	Smith Canyon	2,760	M	3				60
81	Nellie's Nipple	3,885	M	3	Cattle	3/15	10/14	528
82	Short Canyon	3,260	I	3	Cattle	2/1	4/30	150
83	Lynch Canyon	510	C	3	Cattle	3/1	4/30	64
84	Cyrus Canyon	1,061	M	3	Cattle	10/1	5/15	106
85	Cooks Peak	2,111	C	3	Cattle	11/1	5/31	217
86	Cholla Canyon	4,572	M	3	Cattle	10/15	6/30	1,825
87	Havilah Basin	4,862	M	3	Cattle	3/1	2/28	356
	Havilah Basin		M	3	Cattle	5/1	9/30	0
88	Sales Creek	40	C	15	Cattle	3/1	2/28	50
89	Bodfish	114	C	3	Cattle & Horses	3/1	9/30	14
90	Wagy Flat	10,138	M	3	Cattle	2/15	4/30	521
91	Sulphur Ridge	506	C	15	Cattle	3/1	2/28	34
93	Eagle's Nest Peak	680	C	15	Cattle	11/1	5/31	182
94	South Comb Rocks	399	C	15	Cattle	10/1	6/30	100
95	Progress Gulch	480	C	15	Cattle	3/1	6/30	80
96	Maricopa[4]	5,979	I	15	Cattle	12/1	5/31	939
	Maricopa[4]		I	15	Cattle	3/1	2/28	0
97	Mc Van Oil Field	200	C	15	Cattle	3/1	2/28	34
98	Fresno River	160	C	15	Cattle	5/1	10/31	36
99	Bittercreek Drainage	240	C	15	Cattle	3/1	2/28	60
100	Dry Creek	160	C	15	Cattle	3/1	2/28	20
102	Burnt Point	1,493	M	15	Cattle	3/1	2/28	79
103	Milk Ranch Peak	1,652	C	15	Cattle	4/15	9/30	133

Allotment Number	Allotment Name	Public Acres[1]	Mgmt. Status[2]	Type Auth.[3]	Kind Of Stock	Period Begin Date	Period End Date	Public Aums
104	Wash Burn Cove	628	M	15	Cattle	10/1	4/15	118
106	Western Minerals Rd.	1,540	I	15	Cattle	12/1	5/31	308
107	Cienaga Canyon	1,902	M	15	Cattle	12/1	5/31	380
108	Paso Robles	20	C	15	Horses	1/1	3/31	3
111	Sand Canyon	2,702	I	15	Cattle	3/1	2/28	365
113	Johns Peak	1,040	C	15	Cattle	3/1	2/28	168
114	East Klipstein	90	C	15	Cattle	3/1	9/30	18
115	Power Line Road	215	M	15	Sheep	1/1	5/31	36
116	Devils Gulch	600	M	15	Cattle	12/1	5/31	120
117	Red Mountain	7,317	I	15				327
118	Scobie Meadow	6,890	M	3	Cattle	6/1	10/31	182
119	Bald Eagle Peak	2,400	M	3	Cattle	3/1	2/28	168
120	Spanish Needle Creek	3,160	I	3	Cattle	3/15	6/5	40
123	Canebrake	8,238	M	3	Cattle	1/1	6/30	952
124	Long Valley	17,687	M	3	Cattle	10/1	11/30	226
125	Kennedy Lamont	44,296	M	3	Cattle	7/1	9/30	396
126	Lower Kennedy Table	105	M	15	Cattle	9/15	5/31	30
128	Lwr Hiddenvalley Rch	1,331	M	15	Cattle	12/1	5/31	236
129	Big Sandy	813	M	15	Cattle	12/1	5/31	225
130	Smalley Road	540	M	15	Cattle	11/15	5/15	188
136	Fowler Mountain	280	M	15	Cattle	3/1	2/28	120
149	South Fork Kern River	744	C	3	Cattle	11/1	6/30	19
157	Wheeler Ridge	480	C	15	Cattle	12/1	5/31	144
	Wheeler Ridge		C	15	Cattle	3/1	2/28	0
3464	Franciscan	800	M	15	Cattle	3/1	2/28	168
3655	Wood Canyon[4]	204	M	15	Cattle	12/1	5/31	5
3718	Buena Vista	311	M	15	Cattle	3/1	2/28	62
3719	Vista Del Mar	165	C	15				10
3720	Klau Mine	12	C	15				3
3750	San Joaquin River Slope	857	M	15	Cattle	12/1	5/31	240
4309	Surprise Arroyo (~ Portion in BKFO Managed by HFO)	1,300	I	15	Cattle & Sheep	1/1	4/30	~417
5008	Rudnick Common (~ Portion in BKFO Managed by RFO)	7,000	I	3	Cattle	3/1	2/28	~412
								34,177
	Available for application	40,300						6,000
	Estimated potential grazing opportuinity[5]							40,177

[1]Acreage figures in this table are approximate and may not correspond with cumulative totals elsewhere in this document.
[2]C=Continue, M=Moderate, I=Intensive (also see Selective Management Categories in Appendix F-4).
[3]3=Grazing permits issued on public lands within the grazing districts established under the Taylor Grazing Act; 15=Grazing leases on public lands outside the original grazing district boundaries.
[4]Portion of this allotment lies within the Carrizo Plain National Monument.
[5]Total of authorized AUMs and projected future authorized AUMs, under the assumptions that 75% of acres available for application would be authorized and given a stocking rate of 5 acres/AUM.
Red highlight indicates that livestock grazing use of the allotment was modified by the actions of the Alternative compared to the No Action Alternative. The level that is allowed to continue to be authorized on the allotment is shown in the row.

Livestock Grazing Implementation Levels; Alternative C

Allotment Number	Allotment Name	Public Acres[1]	Mgmt. Status[2]	Type Auth.[3]	Kind Of Stock	Period Begin Date	Period End Date	Public Aums
2	Oilfield Road	440	M	15	Sheep	12/1	5/31	73
3	Naval Pet Res. I	1,518	M	15	Sheep	12/1	5/31	253
5	Blossom Peak	80	C	15	Cattle	3/1	6/1	7
6	Cuyama 2	480	C	15	Cattle	3/1	2/28	80
7	Freeborn Mt.	1,804	C	15	Cattle	3/1	2/28	254
8	Pleito Hills	3,423	C	15	Cattle	3/1	2/28	1,028
9	Badger Creek	480	C	15	Cattle	4/1	9/30	90
10	Santa Rita	160	C	15	Cattle	3/1	9/15	16
12	Live Oak Pass	280	C	15	Cattle	6/1	9/30	70
13	Temblor Creek	328	M	15	Cattle	3/1	2/28	82
14	Case Mountain	3,903	I	15	Cattle	10/1	5/31	296
15	North Temblor[4]	34,795	M	15	Cattle	3/1	2/28	7,733
	North Temblor[4]		M	15	Cattle	12/1	5/31	0
	North Temblor (Portion in BKFO Managed by CPNM)	137	M	15	Cattle	3/1	2/28	30
16	Oil Field	4,270	M	15	Sheep	12/1	5/31	303
17	North Fork River	4,839	M	15	Cattle	3/1	2/28	388
19	Buena Vista Creek	720	M	15	Sheep	12/1	5/31	107
20	Elephant Back	80	C	15	Cattle	3/1	2/28	16
21	Frazer Valley	1,694	M	15	Cattle	12/1	5/31	184
23	Hanning Flat West	302	C	3	Cattle	11/1	5/31	30
24	Bear Creek	405	M	15	Cattle	3/1	2/28	10
27	Bitterwater Valley	80	C	15				12
28	Kettleman Hills	5,216	I	15	Cattle	12/1	5/31	1.304
	Kettleman Hills		I	15	Cattle	3/1	2/28	0
30	West Klipstein	561	C	15	Cattle	3/1	2/28	112
32	Hubbard Hill	3,080	C	15	Cattle	3/1	2/28	418
33	Mankins Creek	438	C	15	Cattle	10/1	6/30	74
34	North Comb Rocks	230	C	15				39
35	Red Hill	160	C	15	Cattle	3/1	2/28	3
36	Horn Mountain	1,517	C	15	Cattle	3/1	2/28	65
37	Raven Pass	40	C	15	Cattle	9/1	5/31	12
38	North Naval Petroleum Res.	2,278	I	15				380
39	Chimineas Ranch South[4]	4,982	M	15	Cattle	12/1	5/31	730
40	Rio Bravo	401	C	15	Cattle	3/1	2/28	100
41	Derby Acres	530	C	15				151
42	Jack Canyon	33	C	15	Cattle	3/1	2/28	12
45	Goldpan Canyon	235	I	15	Cattle	3/1	2/28	34
47	Rankin Ranch	867	C	15	Cattle	3/1	2/28	144
48	Mountain Creek	264	C	15	Cattle	3/1	2/28	88
49	Loraine	678	I	15	Cattle	3/1	2/28	113
50	Santa Barbara Canyon	1,734	M	15	Cattle	3/1	2/28	118
51	Studhorse Canyon	498	M	3	Cattle	11/1	5/31	100
52	Thompson Ridge	1,250	M	15	Cattle	5/1	7/31	63
54	Willow Spring Canyon	480	M	15	Cattle	3/1	2/28	96
55	South Mountain	186	C	15	Cattle	3/1	2/28	23
56	Round Mountain Road	160	M	15	Cattle	12/1	5/31	27

Allotment Number	Allotment Name	Public Acres[1]	Mgmt. Status[2]	Type Auth.[3]	Kind Of Stock	Period Begin Date	Period End Date	Public Aums
57	Santiago Creek	2,723	M	15	Cattle	3/1	2/28	545
	Santiago Creek		M	15	Cattle	12/1	5/31	0
58	Anderson Canyon	2,120	C	15	Cattle	3/1	2/28	311
59	Loco Bill Canyon	640	I	15	Cattle	4/1	9/30	82
60	Santa Teresa	1,883	M	15	Cattle	3/1	2/28	400
61	Oak Grove	2,901	I	15	Cattle	4/1	9/30	235
62	Curtis Mountain	40	C	15	Cattle	3/1	2/28	13
63	Chico Martinez	8,602	I	15	Cattle	3/1	2/28	1,671
	Chico Martinez		I	15	Cattle	12/1	5/31	0
64	Cedar Canyon	624	C	15	Cattle	10/15	6/30	139
	Cedar Canyon		C	15	Cattle	12/1	5/31	0
65	Packwood	1,155	M	15	Cattle	12/1	5/31	282
	Packwood		M	15	Cattle	3/1	2/28	0
66	Liveoak Canyon	80	C	15				13
68	San Emigdio	650	C	15	Cattle	3/1	2/28	191
71	Rancheria	194	C	15				49
72	Bluestone Ridge	2,673	M	15	Cattle	12/1	6/30	668
73	Chimineas Ranch North	3,949	M	15	Cattle	12/1	5/31	759
74	Freedom Hill	2,278	I	3	Cattle	3/1	5/15	539
75	Kelso Peak	768	M	3	Cattle	2/1	5/15	154
76	Sacatar Meadow	6,320	C	3	Cattle	9/1	10/31	96
77	Walker Pass West	14,566	I	3	Cattle	1/1	6/30	781
78	Airport	967	M	3	Cattle	3/1	5/15	97
79	Fay Canyon	361	C	3	Cattle	3/1	4/30	64
80	Smith Canyon	2,760	M	3				60
81	Nellie's Nipple	3,885	M	3	Cattle	3/15	10/14	528
82	Short Canyon	3,260	I	3	Cattle	2/1	4/30	150
83	Lynch Canyon	510	C	3	Cattle	3/1	4/30	64
84	Cyrus Canyon	67	M	3	Cattle	10/1	5/15	7
85	Cooks Peak	2,111	C	3	Cattle	11/1	5/31	217
86	Cholla Canyon	4,572	M	3	Cattle	10/15	6/30	1,825
87	Havilah Basin	4,862	M	3	Cattle	3/1	2/28	356
	Havilah Basin		M	3	Cattle	5/1	9/30	0
88	Sales Creek	40	C	15	Cattle	3/1	2/28	50
89	Bodfish	114	C	3	Cattle & Horses	3/1	9/30	14
90	Wagy Flat	4,562	M	3	Cattle	2/15	4/30	234
91	Sulphur Ridge	506	C	15	Cattle	3/1	2/28	34
93	Eagle's Nest Peak	680	C	15	Cattle	11/1	5/31	182
94	South Comb Rocks	399	C	15	Cattle	10/1	6/30	100
95	Progress Gulch	389	C	15	Cattle	3/1	6/30	65
96	Maricopa[4]	5,979	I	15	Cattle	12/1	5/31	939
	Maricopa[4]		I	15	Cattle	3/1	2/28	0
97	Mc Van Oil Field	200	C	15	Cattle	3/1	2/28	34
98	Fresno River	147	C	15	Cattle	5/1	10/31	33
99	Bittercreek Drainage	240	C	15	Cattle	3/1	2/28	60
100	Dry Creek	160	C	15	Cattle	3/1	2/28	20
102	Burnt Point	1,120	M	15	Cattle	3/1	2/28	59
103	Milk Ranch Peak	1,652	C	15	Cattle	4/15	9/30	133

Allotment Number	Allotment Name	Public Acres[1]	Mgmt. Status[2]	Type Auth.[3]	Kind Of Stock	Period Begin Date	Period End Date	Public Aums
104	Wash Burn Cove	628	M	15	Cattle	10/1	4/15	118
106	Western Minerals Rd.	1,540	I	15	Cattle	12/1	5/31	308
107	Cienaga Canyon	1,902	M	15	Cattle	12/1	5/31	380
108	Paso Robles	20	C	15	Horses	1/1	3/31	3
111	Sand Canyon	2,702	I	15	Cattle	3/1	2/28	365
113	Johns Peak	1,040	C	15	Cattle	3/1	2/28	168
114	East Klipstein	90	C	15	Cattle	3/1	9/30	18
115	Power Line Road	215	M	15	Sheep	1/1	5/31	36
116	Devils Gulch	600	M	15	Cattle	12/1	5/31	120
117	Red Mountain	7,317	I	15				327
118	Scobie Meadow	6,890	M	3	Cattle	6/1	10/31	182
119	Bald Eagle Peak	2,400	M	3	Cattle	3/1	2/28	168
120	Spanish Needle Creek	3,160	I	3	Cattle	3/15	6/5	40
123	Canebrake	7,991	M	3	Cattle	1/1	6/30	923
124	Long Valley	17,687	M	3	Cattle	10/1	11/30	226
125	Kennedy Lamont	44,296	M	3	Cattle	7/1	9/30	396
126	Lower Kennedy Table	105	M	15	Cattle	9/15	5/31	30
128	Lwr Hiddenvalley Rch	1,331	M	15	Cattle	12/1	5/31	236
129	Big Sandy	813	M	15	Cattle	12/1	5/31	225
130	Smalley Road	540	M	15	Cattle	11/15	5/15	188
136	Fowler Mountain	280	M	15	Cattle	3/1	2/28	120
149	South Fork Kern River	744	C	3	Cattle	11/1	6/30	19
157	Wheeler Ridge	480	C	15	Cattle	12/1	5/31	144
	Wheeler Ridge		C	15	Cattle	3/1	2/28	0
3464	Franciscan	800	M	15	Cattle	3/1	2/28	168
3655	Wood Canyon[4]	204	M	15	Cattle	12/1	5/31	5
3718	Buena Vista	311	M	15	Cattle	3/1	2/28	62
3719	Vista Del Mar	165	C	15				10
3720	Klau Mine	12	C	15				3
3750	San Joaquin River Slope	857	M	15	Cattle	12/1	5/31	240
4309	Surprise Arroyo (Portion in Bkfo managed by Hfo)	1,300	I	15	Cattle & Sheep	1/1	4/30	~417
5008	Rudnick Common (Portion in Bkfo managed by Rfo)	7,000	I	3	Cattle	3/1	2/28	~412
								32,275
	Available for application	37,000						5,600
	Estimated potential grazing opportunity[5]							37,775

[1]Acreage figures in this table are approximate and may not correspond with cumulative totals elsewhere in this document.
[2]C=Continue, M=Moderate, I=Intensive (also see Selective Management Categories in Appendix F-4).
[3]3=Grazing permits issued on public lands within the grazing districts established under the Taylor Grazing Act; 15=Grazing leases on public lands outside the original grazing district boundaries.
[4]Portion of this allotment lies within the Carrizo Plain National Monument.
[5]Total of authorized AUMs and projected future authorized AUMs, under the assumptions that 75% of acres available for application would be authorized and given a stocking rate of 5 acres/AUM.
Red highlight indicates that livestock grazing use of the allotment was modified by the actions of the Alternative compared to the No Action Alternative. The level that is allowed to continue to be authorized on the allotment is shown in the row.

Livestock Grazing Implementation Levels; Alternative D

Allotment Number	Allotment Name	Public Acres[1]	Mgmt. Status[2]	Type Auth.[3]	Kind Of Stock	Period Begin Date	Period End Date	Public Aums
15	North Temblor (Portion in BKFO Managed by CPNM)	137	M	15	Cattle	3/1	2/28	30
4309	Surprise Arroyo (~ Portion In BKFO Managed by HFO)	1,300	I	15	Cattle & Sheep	1/1	4/30	~417
5008	Rudnick Common (~ Portion in BKFO Managed by RFO)	7,000	I	3	Cattle	3/1	2/28	~412
								859
	Available for application	0						0
	Estimated potential grazing opportuinity[4]							859

[1]Acreage figures in this table are approximate and may not correspond with cumulative totals elsewhere in this document.
[2]C=Continue, M=Moderate, I=Intensive (also see Selective Management Categories in Appendix F-4).
[3]3=Grazing permits issued on public lands within the grazing districts established under the Taylor Grazing Act; 15=Grazing leases on public lands outside the original grazing district boundaries.
[4]Total of authorized AUMs and projected future authorized AUMs, under the assumptions that 75% of acres available for application would be authorized and given a stocking rate of 5 acres/AUM.

Livestock Grazing Implementation Levels; Alternative E

Allotment Number	Allotment Name	Public Acres[1]	Mgmt. Status[2]	Type Auth.[3]	Kind Of Stock	Period Begin Date	Period End Date	Public Aums
2	Oilfield Road	440	M	15	Sheep	12/1	5/31	73
3	Naval Pet Res. I	1,518	M	15	Sheep	12/1	5/31	253
5	Blossom Peak	80	C	15	Cattle	3/1	6/1	7
6	Cuyama 2	480	C	15	Cattle	3/1	2/28	80
7	Freeborn Mt.	1,804	C	15	Cattle	3/1	2/28	254
8	Pleito Hills	3,423	C	15	Cattle	3/1	2/28	1,028
9	Badger Creek	480	C	15	Cattle	4/1	9/30	90
10	Santa Rita	160	C	15	Cattle	3/1	9/15	16
12	Live Oak Pass	280	C	15	Cattle	6/1	9/30	70
13	Temblor Creek	328	M	15	Cattle	3/1	2/28	82
14	Case Mountain	3,903	I	15	Cattle	10/1	5/31	296
15	North Temblor[4]	34,795	M	15	Cattle	3/1	2/28	7,733
	North Temblor[4]		M	15	Cattle	12/1	5/31	0
	North Temblor (Portion in BKFO Managed by CPNM)	137	M	15	Cattle	3/1	2/28	30
16	Oil Field	4,270	M	15	Sheep	12/1	5/31	303
17	North Fork River	5,693	M	15	Cattle	3/1	2/28	456
19	Buena Vista Creek	720	M	15	Sheep	12/1	5/31	107
20	Elephant Back	80	C	15	Cattle	3/1	2/28	16
21	Frazer Valley	1,694	M	15	Cattle	12/1	5/31	184
23	Hanning Flat West	739	C	3	Cattle	11/1	5/31	74
24	Bear Creek	405	M	15	Cattle	3/1	2/28	10
27	Bitterwater Valley	80	C	15				12
28	Kettleman Hills	5,216	I	15	Cattle	12/1	5/31	1,304
	Kettleman Hills		I	15	Cattle	3/1	2/28	0
30	West Klipstein	561	C	15	Cattle	3/1	2/28	112
32	Hubbard Hill	3,080	C	15	Cattle	3/1	2/28	418
33	Mankins Creek	476	C	15	Cattle	10/1	6/30	80
34	North Comb Rocks	230	C	15				39
35	Red Hill	160	C	15	Cattle	3/1	2/28	3
36	Horn Mountain	1,517	C	15	Cattle	3/1	2/28	65
37	Raven Pass	40	C	15	Cattle	9/1	5/31	12
38	North Naval Petroleum Res.	2,278	I	15				380
39	Chimineas Ranch South[4]	4,982	M	15	Cattle	12/1	5/31	730
40	Rio Bravo	401	C	15	Cattle	3/1	2/28	100
41	Derby Acres	530	C	15				151
42	Jack Canyon	33	C	15	Cattle	3/1	2/28	12
45	Goldpan Canyon	470	I	15	Cattle	3/1	2/28	84
47	Rankin Ranch	867	C	15	Cattle	3/1	2/28	144
48	Mountain Creek	264	C	15	Cattle	3/1	2/28	88
49	Loraine	678	I	15	Cattle	3/1	2/28	113
50	Santa Barbara Canyon	1,734	M	15	Cattle	3/1	2/28	118
51	Studhorse Canyon	498	M	3	Cattle	11/1	5/31	100
52	Thompson Ridge	1,250	M	15	Cattle	5/1	7/31	63
54	Willow Spring Canyon	480	M	15	Cattle	3/1	2/28	96
55	South Mountain	186	C	15	Cattle	3/1	2/28	23
56	Round Mountain Road	160	M	15	Cattle	12/1	5/31	27

Allotment Number	Allotment Name	Public Acres[1]	Mgmt. Status[2]	Type Auth.[3]	Kind Of Stock	Period Begin Date	Period End Date	Public Aums
57	Santiago Creek	2,723	M	15	Cattle	3/1	2/28	545
	Santiago Creek		M	15	Cattle	12/1	5/31	0
58	Anderson Canyon	2,120	C	15	Cattle	3/1	2/28	311
59	Loco Bill Canyon	640	I	15	Cattle	4/1	9/30	82
60	Santa Teresa	1,883	M	15	Cattle	3/1	2/28	400
61	Oak Grove	2,901	I	15	Cattle	4/1	9/30	235
62	Curtis Mountain	40	C	15	Cattle	3/1	2/28	13
63	Chico Martinez	8,602	I	15	Cattle	3/1	2/28	1,671
	Chico Martinez		I	15	Cattle	12/1	5/31	0
64	Cedar Canyon	624	C	15	Cattle	10/15	6/30	139
	Cedar Canyon		C	15	Cattle	12/1	5/31	0
65	Packwood	1,155	M	15	Cattle	12/1	5/31	282
	Packwood		M	15	Cattle	3/1	2/28	0
66	Liveoak Canyon	80	C	15				13
68	San Emigdio	650	C	15	Cattle	3/1	2/28	191
71	Rancheria	194	C	15				49
72	Bluestone Ridge	2,673	M	15	Cattle	12/1	6/30	668
73	Chimineas Ranch North	3,949	M	15	Cattle	12/1	5/31	759
74	Freedom Hill	2,278	I	3	Cattle	3/1	5/15	539
75	Kelso Peak	768	M	3	Cattle	2/1	5/15	154
76	Sacatar Meadow	6,320	C	3	Cattle	9/1	10/31	96
77	Walker Pass West	14,566	I	3	Cattle	1/1	6/30	781
78	Airport	1,671	M	3	Cattle	3/1	5/15	167
79	Fay Canyon	361	C	3	Cattle	3/1	4/30	64
80	Smith Canyon	2,760	M	3				60
81	Nellie's Nipple	3,885	M	3	Cattle	3/15	10/14	528
82	Short Canyon	3,260	I	3	Cattle	2/1	4/30	150
83	Lynch Canyon	510	C	3	Cattle	3/1	4/30	64
84	Cyrus Canyon	2,234	M	3	Cattle	10/1	5/15	225
85	Cooks Peak	2,111	C	3	Cattle	11/1	5/31	217
86	Cholla Canyon	4,572	M	3	Cattle	10/15	6/30	1,825
87	Havilah Basin	4,862	M	3	Cattle	3/1	2/28	356
	Havilah Basin		M	3	Cattle	5/1	9/30	0
88	Sales Creek	40	C	15	Cattle	3/1	2/28	50
89	Bodfish	114	C	3	Cattle & Horses	3/1	9/30	14
90	Wagy Flat	10,138	M	3	Cattle	2/15	4/30	521
91	Sulphur Ridge	506	C	15	Cattle	3/1	2/28	34
93	Eagle's Nest Peak	680	C	15	Cattle	11/1	5/31	182
94	South Comb Rocks	399	C	15	Cattle	10/1	6/30	100
95	Progress Gulch	480	C	15	Cattle	3/1	6/30	80
96	Maricopa[4]	5,979	I	15	Cattle	12/1	5/31	939
	Maricopa[4]		I	15	Cattle	3/1	2/28	0
97	Mc Van Oil Field	200	C	15	Cattle	3/1	2/28	34
98	Fresno River	160	C	15	Cattle	5/1	10/31	36
99	Bittercreek Drainage	240	C	15	Cattle	3/1	2/28	60
100	Dry Creek	160	C	15	Cattle	3/1	2/28	20
102	Burnt Point	1,493	M	15	Cattle	3/1	2/28	79

Allotment Number	Allotment Name	Public Acres[1]	Mgmt. Status[2]	Type Auth.[3]	Kind Of Stock	Period Begin Date	Period End Date	Public Aums
103	Milk Ranch Peak	1,652	C	15	Cattle	4/15	9/30	133
104	Wash Burn Cove	628	M	15	Cattle	10/1	4/15	118
106	Western Minerals Rd.	1,540	I	15	Cattle	12/1	5/31	308
107	Cienaga Canyon	1,902	M	15	Cattle	12/1	5/31	380
108	Paso Robles	20	C	15	Horses	1/1	3/31	3
111	Sand Canyon	2,702	I	15	Cattle	3/1	2/28	365
113	Johns Peak	1,040	C	15	Cattle	3/1	2/28	168
114	East Klipstein	90	C	15	Cattle	3/1	9/30	18
115	Power Line Road	215	M	15	Sheep	1/1	5/31	36
116	Devils Gulch	600	M	15	Cattle	12/1	5/31	120
117	Red Mountain	7,317	I	15				327
118	Scobie Meadow	6,890	M	3	Cattle	6/1	10/31	182
119	Bald Eagle Peak	2,400	M	3	Cattle	3/1	2/28	168
120	Spanish Needle Creek	3,160	I	3	Cattle	3/15	6/5	40
123	Canebrake	8,238	M	3	Cattle	1/1	6/30	952
124	Long Valley	17,687	M	3	Cattle	10/1	11/30	226
125	Kennedy Lamont	44,296	M	3	Cattle	7/1	9/30	396
126	Lower Kennedy Table	105	M	15	Cattle	9/15	5/31	30
128	Lwr Hiddenvalley Rch	1,331	M	15	Cattle	12/1	5/31	236
129	Big Sandy	813	M	15	Cattle	12/1	5/31	225
130	Smalley Road	540	M	15	Cattle	11/15	5/15	188
136	Fowler Mountain	280	M	15	Cattle	3/1	2/28	120
149	South Fork Kern River	744	C	3	Cattle	11/1	6/30	19
157	Wheeler Ridge	480	C	15	Cattle	12/1	5/31	144
	Wheeler Ridge		C	15	Cattle	3/1	2/28	0
3464	Franciscan	800	M	15	Cattle	3/1	2/28	168
3655	Wood Canyon[4]	204	M	15	Cattle	12/1	5/31	5
3718	Buena Vista	311	M	15	Cattle	3/1	2/28	62
3719	Vista Del Mar	165	C	15				10
3720	Klau Mine	12	C	15				3
3750	San Joaquin River Slope	857	M	15	Cattle	12/1	5/31	240
4309	Surprise Arroyo (~ Portion in BKFO Managed by HFO)	1,300	I	15	Cattle & Sheep	1/1	4/30	~417
5008	Rudnick Common (~ Portion in BKFO Managed by RFO)	7,000	I	3	Cattle	3/1	2/28	~412
								34,388
	Available for application	52,600						7,900
	Estimated potential grazing opportuinity[5]							42,288

[1]Acreage figures in this table are approximate and may not correspond with cumulative totals elsewhere in this document.
[2]C=Continue, M=Moderate, I=Intensive (also see Selective Management Categories in Appendix F-4).
[3]3=Grazing permits issued on public lands within the grazing districts established under the Taylor Grazing Act; 15=Grazing leases on public lands outside the original grazing district boundaries.
[4]Portion of this allotment lies within the Carrizo Plain National Monument.
[5]Total of authorized AUMs and projected future authorized AUMs, under the assumptions that 75% of acres available for application would be authorized and given a stocking rate of 5 acres/AUM.
Red highlight indicates that livestock grazing use of the allotment was modified by the actions of the Alternative compared to the No Action Alternative. The level that is allowed to continue to be authorized on the allotment is shown in the row.

Appendix G

Minerals Management

Appendix G – Minerals Management

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G.1 Introduction

This appendix includes specific details on the BLM Oil and Gas Leasing Program and the complete text, including additional information, for each stipulation both Controlled Surface Use (CSU) and No Surface Occupancy (NSO) presented in the alternatives (Chapter 2). Additionally, a discussion of locatable minerals is included along with a table summarizing potential impacts of the Proposed Plan alternative on mining and mineral collecting sites presented by the public as sites of interest.

G.2 Leasable Minerals

Leasable minerals, defined by the Mineral Leasing Act (February 1920, and 43 CFR 3000-3599, 1990) are the subsets fluid leasable and solid leasable minerals (BLM 2006a). Fluid leasable minerals can include oil, gas, and geothermal resources; solid leasable minerals can include coal, oil shale, native asphalt, phosphate, sodium, potash, potassium, and sulfur. The rights to explore for and produce these minerals on public land may be acquired only through leasing. This section focuses solely on oil and gas as the principle leasable mineral explored and developed in the Bakersfield Field Office.

G.2.1 Fluid Minerals – Oil, Gas, and Geothermal

The BLM manages oil and gas leases under regulations in 43 CFR, Part 3100, and geophysical exploration is covered under Part 3150. Geothermal leasing is managed under Part 3200, mineral materials under Part 3600 regulations, mining claims for locatable minerals under Part 3800 regulations, and solid leasable minerals, other than coal or oil shale, under Part 3500.

The BLM is responsible for managing federally owned mineral estate within the Decision Area, regardless of surface ownership. Much of the federal mineral estate falls within areas whose surface is managed by other federal agencies, including the US Forest Service (USFS), US Fish and Wildlife Service (USFWS), and National Park Service (NPS). In those areas, the BLM administers all of the subsurface activities on any oil and gas leases that may exist on these lands. However, the decision to allow the lands to be leased for oil and gas in the first place is made by the surface management agency; accordingly, most of the federal minerals with non-BLM surface may never be leased. In other cases, known as “split-estate federal minerals,” the surface is owned by a nonfederal entity.

The BLM considers geothermal resources to be a fluid mineral resource, along with oil and natural gas. Therefore, while land closures or restrictions to fluid leasable minerals are primarily meant for oil and gas exploration and development, they usually apply to geothermal exploration and development as well. Whereas oil and gas is a significant program in the Bakersfield Field Office, there are no geothermal leases. Unless geothermal is specifically mentioned, whenever leasing or oil and gas leasing are discussed in this section, it generally includes geothermal leasing.

G.2.2 Land Use Planning Allocations and Lease Stipulations

Allocations proposed under this plan identify lands open for and closed to leasing for oil, gas and geothermal resources. In addition, for lands open to leasing, the plan identifies proposed stipulations to be associated with the lease.

Virtually all of the leases issued in accordance with this RMP are expected to be for oil and gas leases, so these stipulations were designed for oil and gas leases. However, there may be rare instances where

geothermal or solid mineral leases are issued. If that occurs, the same general stipulations may be applicable with identical or slightly modified wording.

G.2.2.1 Lands Closed to Oil and Gas Leasing

Public lands that are closed to leasing are subdivided into two groups. Tracts that have been closed by previous legislation or secretarial policy form one group of lands and are known as *non-discretionary closure*s. The second group of closed lands consisting of those proposed for closure under this plan is called *proposed discretionary closures*.

Non-Discretionary Closures to Leasing

The 1920 Mineral Leasing Act, as amended, authorizes the Secretary of the Interior to lease Federal oil and gas resources on public domain and acquired lands. Federal minerals excluded from such leasing by legislation or secretarial policy include those underlying units of the National Park System, National Wildlife Refuges, Native American reservations, incorporated cities, and lands closed under previous land use decisions. Lands recommended for wilderness designation, wilderness study, or already within the National Wilderness Preservation System are also non-discretionary closures by existing legislation. Non-discretionary closures are discussed under the general framework of the Bakersfield Resource Management Plan for reference purposes but are not part of the Plan's land use allocation scope and purpose.

Discretionary Closures to Leasing

Discretionary closures to oil, gas and geothermal leasing are proposed by the land allocations in this plan. These proposals include areas of extreme resource sensitivity (e.g., some ACECs) requiring a level of protection that may only be achieved through closure to leasing activities.

G.2.2.2 Lands Open to Oil and Gas Leasing

Lands open to oil and gas leasing are subdivided into the following groups: (1) open to leasing under a standard lease stipulation; (2) open to leasing under a no surface use stipulation; and (3) open to leasing under a controlled surface use stipulation. The standard oil and gas lease form includes those preprinted lease terms and conditions that apply to all leases. Other stipulations developed in this plan are applied in lease areas with special resource concerns and supersede any inconsistent provisions of the standard lease form. The special stipulations proposed in this plan address no surface occupancy for areas where very unique resources exist, and controlled surface use for areas with resource protection needs slightly different from the standard lease stipulation.

Leasing with Standard Lease Stipulation

The standard lease stipulation includes the terms and conditions that are the national standards printed on BLM lease forms (form 3100-11, Oct. '08).

Under standard terms, exploration and development operations must be conducted in a manner that minimizes adverse impacts to the land, air, and water, to cultural biological, visual, and other resources, and to other land uses and users. The lessee must take reasonable measures deemed necessary by the BLM to minimize adverse impacts. These measures may include modification of siting (less than 200 meters (656 feet)) or design of facilities, timing of operations (delaying the project less than 60 days in one lease year), and specification of interim and final reclamation measures (43 CFR 3101.1-2).

Leasing with No Surface Occupancy (NSO) Stipulation

Special stipulations may be proposed for use to protect unique resources or values where it may be necessary to modify surface activities beyond authorities contained under the standard lease terms (43 CFR 3103.1-3). The No Surface Occupancy Stipulation allows BLM to prohibit the use of all or a portion of a lease for the placement of facilities and infrastructure related to the exploration, development and production of oil and gas.

NSO-General

Stipulation: *All or a portion of this lease has been identified by the current RMP (e.g., ACECs and areas of ecological importance with this stipulation prescribed) as containing unique or significant natural or cultural values. No new surface disturbing activity is allowed on the lease.*

Objective: *To minimize or eliminate adverse effects on unique or significant natural and cultural resources that are incompatible with fluid mineral development.*

Exception: *The Authorized Officer may grant an exception if, after coordination with appropriate agency (e.g., CDFG, SHPO, and USFWS), an environmental review determines the action as proposed or conditioned would not impair the values present because of temporary conditions.*

Modification: *The Authorized Officer may modify this stipulation to allow surface use on a portion or even all of the lease if an environmental review determines the action as proposed or conditioned would not impair the values present.*

Waiver: *The Authorized Officer may grant a waiver if an environmental review determines the values for which the NSO was applied no longer exist.*

Application: The NSO-General stipulation would be applied when adequate protection of surface resources cannot be provided through mitigation, and fluid mineral development of the lease from an off-site location is recommended. If there is no surface location available for directional drilling, the land would not be leased.

Review Process: Any proposed surface-disturbing activity would be reviewed to determine whether it is in compliance with the NSO stipulation. If the review determines the proposed action would not impair the values present and would be consistent with the management of the ACEC or area of ecological importance, exception or modification may be granted. Any decision to grant an exception or modification would be based on field inspection and inventory and the NEPA review process.

NSO-Bitter Creek ACEC

Stipulation: *All or a portion of this lease occurs within the boundaries of the Bitter Creek ACEC and the Bitter Creek National Wildlife Refuge. No new surface disturbing activity is allowed on the lease. Furthermore, access to federal minerals within the lease will only be allowed from off-site sources not within the Bitter Creek National Wildlife Refuge boundary.*

Objective: *To prevent or reduce disturbance to current or future refuge resources from fluid mineral development.*

Exception: *The Authorized Officer may grant an exception if, after coordination with USFWS, an environmental review determines the action as proposed or conditioned would not impair the values present and is consistent with the management of the National Wildlife Refuge.*

Modification: *The Authorized Officer may modify this stipulation to allow surface use on a portion or the entire lease if, after coordination with USFWS, an environmental review determines the action as proposed or conditioned would not impair the values present and is consistent with the management of the National Wildlife Refuge.*

Application: The NSO-Bitter Creek stipulation would be applied to all leases within the boundary of the Bitter Creek National Wildlife Refuge. Furthermore, access to federal minerals within the lease will only be allowed from off-site sources not within the Refuge boundary. If all of the surrounding land is also within the Refuge boundary, and there is no other surface location available for directional drilling, the land would not be leased.

Review Process: Any proposed surface-disturbing activity would be reviewed to determine whether it is in compliance with the NSO stipulation. If the review determines the proposed action would not impair the values present and would be consistent with the management of the Refuge and ACEC, exception or modification may be granted in coordination with the USFWS. Any decision to grant an exception or modification would be based on field inspection and inventory and the NEPA review process.

NSO-Compensation Lands ACEC

Stipulation: *All or a portion of this lease occurs within the boundaries of the Compensation Lands ACEC. These lands may have a governing document that prohibits certain activities. No new surface disturbing activity is allowed on the lease. Furthermore, access to federal minerals within the lease will only be allowed from off-site sources not considered to be compensation lands (e.g., compensation land in private ownership).*

Objective: *To minimize or eliminate adverse effects associated with fluid mineral development on lands acquired as compensation land.*

Exception: *The Authorized Officer may grant an exception if, after coordination with appropriate agency (e.g., CDFG and USFWS), an environmental review determines the action as proposed or conditioned would not impair the values present and is consistent with the document that established the compensation land.*

Modification: *The Authorized Officer may modify this stipulation to allow surface use on a portion or the entire lease if, after coordination with appropriate agency (e.g., CDFG and USFWS), an environmental review determines the action as proposed or conditioned would not impair the values present and is consistent with the document that established the compensation land.*

Application: The NSO-Compensation Lands stipulation would be applied to all new leases within the Compensation Lands ACEC. Furthermore, access to federal minerals within the lease will only be allowed from off-site sources that are not Compensation Lands. If all of the surrounding land is also Compensation Lands, and there is no other surface location available for directional drilling, the land would not be leased.

Review Process: Any proposed surface-disturbing activity would be reviewed to determine whether it is in compliance with the NSO stipulation. If the review determines the proposed action would not impair the values present and would be consistent with the management of the ACEC and the document that established the Compensation Lands; exception or modification may be granted in coordination with the USFWS. Any decision to grant an exception or modification would be based on field inspection and inventory and the NEPA review process.

Leasing with the Controlled Surface Use (CSU) Stipulation

Special stipulations may be proposed for use to protect unique resources or values where it may be necessary to modify surface activities beyond authorities contained under the standard lease terms (43 CFR 3103.1-3). The Controlled Surface Use Stipulation allows BLM, in consultation with the applicant, to extend modification of development proposals beyond the standard 200 meters and 60 day conditions. By reserving the additional leeway in siting facilities, the BLM and applicant can generally use the combination of increased siting and timing flexibility to modify development proposals to entirely avoid or significantly minimize surface disturbing effects associated with lease development. The Controlled Surface Use stipulation thus allows BLM to offer for lease parcels known to or suspected to contain unique resources or values and resolve any potential conflicts at the time when the lessee is prepared to design development proposals. Historically the BLM in cooperation with the lessee has been able to find sufficient flexibility in designing lease development proposals, even in the most sensitive of locations, to facilitate development without adversely affecting the resource values.

Exceptions, waivers, or modifications to lease stipulations provide an effective means of applying "adaptive management" techniques to fluid mineral leases and associated permitting activities to meet changing circumstances. An operator may also request that the BLM waive (permanently remove), except (case-by-case exemption) or modify (permanently change) a lease stipulation for a Federal lease. A request to waive, except, or modify a stipulation should also include information demonstrating that the factors leading to its inclusion in the lease have (1) changed sufficiently to make the protection provided by the stipulation no longer justified or (2) that the proposed operation would not cause unacceptable impacts. Public notification and 30-day review may be required for exceptions, waivers, or modifications that involve an issue of major concern to the public. Documentation requirements would follow those outlined in 43 CFR 3101.1-4.

Special conditions that may be attached to new leases issued in the Bakersfield Field Office are collectively referred to as the Controlled Surface Use (CSU) stipulation and supersede any inconsistent provisions of the standard lease form. The wording of the Controlled Surface Use stipulation has been adjusted to address ten differing resource concerns. The Controlled Surface Use Stipulation would be applied to the lease parcels as described below.

CSU-Defense

Stipulation: *All or a portion of this lease contains federal mineral estate under the surface administration of the Department of Defense. Surface disturbing activities may be moved, modified, or prohibited at the discretion of the Base Commander(s) to ensure these activities do not interfere with military activity on the base and to ensure personnel safety. Furthermore, processing times for proposed actions may be delayed beyond established standards to accommodate review and coordination with the Base Commander(s).*

Objective: *To minimize or eliminate conflict between fluid mineral development and military base operations.*

Waiver: *The Authorized Officer may grant a waiver if the surface administration changes from the Department of Defense to another entity.*

Application: The CSU-Defense stipulation would be applied to federal reserved mineral estate under the surface administration of the Department of Defense. Approximately 69,700 acres are affected, including Point Mugu, Port Hueneme, San Nicholas Island, Vandenberg Air Force Base, Camp Roberts, and Lemoore Naval Air Station. Coordination with local government agencies regarding the development of stipulations would be at the discretion of the base commander.

When a tract of land on a military installation is nominated for lease sale, the applicant would be notified that a legal description of the tract of interest has been forwarded to the attention of the base commander. The base commander would respond to the BLM with the recommended wording of the CSU-Defense stipulation. The wording would vary based on the base mission and would be applied to the entire military installation or to a limited portion of the parcel, at the discretion of the base commander. The BLM may alternatively identify in advance of lease sale offerings the terms and conditions applicable to military installations and thus be able to offer the leases for bid with advance disclosure of the terms and conditions.

Review Process: Generally, the following procedure would be used to approve surface-disturbing activities on leases with the CSU-Defense stipulation. The proposed activity would be reviewed to determine if the mission of the military installation would be affected. The review process would involve meetings coordinated by the BLM between the lessee and the representatives of the military base to determine impacts and potential effects.

Approval: If the review determines that the mission of the military installation would not be affected Bureau approval of the proposed activity would normally be granted within 30 days of the review. If the review determines that the mission of the military installation would be adversely affected, the BLM would coordinate with the Base Commander and the applicant to modify the proposal. Modifications may include movement of activities, seasonal restrictions, mitigation and/or compensation. Modified proposals would be developed cooperatively with the applicant to ensure that the modified project still meets the applicant's objective.

CSU-Protected Species

Stipulation: *All or a portion of the lease occurs within the range of one or more plant or animal species that are either listed or proposed for listing as threatened or endangered by the USFWS. A list of such species will be provided at the time of leasing and updated as necessary over the term of the lease. To determine whether species on this list or their habitat are present, a preliminary environmental review will be conducted for all surface disturbing activities. Presence of habitat or species may result in the proposed action being moved, modified, or delayed to mitigate project effects. Offsite compensation that would satisfactorily offset the loss of habitat may be required. Prohibition of all surface disturbing activities on the lease will only occur as needed to avoid jeopardizing the continued existence of a listed or proposed species, or when the proposed action is inconsistent with the recovery needs of a species as identified in an approved USFWS Recovery Plan through consultation with USFWS. Furthermore,*

processing times for proposed actions may be delayed beyond established standards to accommodate species surveys, and consultation or conferencing with the USFWS. This stipulation shall not be waived.

Objective: *To minimize or eliminate adverse effects associated with fluid mineral development on federally proposed and listed species.*

Exception: *The Authorized Officer may grant an exception if an environmental review determines the action as proposed or conditioned would have no effect on listed or proposed species.*

Modification: *The Authorized Officer may modify this stipulation to reflect new information with regard to the range of listed or proposed species through the expansion or reduction of lands subject to this stipulation for a specific species.*

Application: At the time of leasing, the CSU-Protected Species stipulation would be attached to all leases within the range of federally listed or proposed species. A list of protected species found within the Field Office boundary would be included with the stipulation for each lease at the time of leasing. This list may be updated at the time of APD/NOS submittal.

Review Process: Generally, the following process would be used to approve surface-disturbing activities on leases with the CSU-Protected Species stipulation. The proposed activity would be reviewed to determine if listed or proposed species would be affected. This review may involve site-specific surveys for plant and animal species conducted according to established methods that may specify certain seasons or other conditions. In some cases, this may mean that a survey cannot be completed until the next growing season for some plant species or after seasonal appearance for some animal species.

If the review determines that listed or proposed species would not be affected, an exception to the stipulation and approval of the application would normally be granted within 30 days of the review.

If the review were to determine that listed or proposed species may be affected, but in a beneficial, insignificant, or benign manner, and written concurrence is received from the USFWS, approval of the application would normally be granted within 30 days of receiving USFWS concurrence. There is no regulatory timeframe for USFWS to provide their written concurrence.

If it is determined that a listed or proposed species may be adversely affected, the BLM would work with the applicant to modify the proposal to minimize impacts. Modifications may include movement of activities, seasonal restrictions, mitigation, or compensation. Modified proposals would be developed with the applicant to ensure that the modified project still meets the applicant's objective. If the modified project would still adversely affect a listed or proposed species, the BLM would begin formal consultation or conference with the USFWS.

Coordination with the USFWS on Listed Species: Currently there are two options for meeting the formal consultation requirement. A new consultation may be initiated or a previously completed formal consultation may be used.

If a new consultation were initiated, the USFWS would issue a document, called the biological opinion. The USFWS has up to 135 days to complete a biological opinion, and it may request a 60-day extension. Extensions beyond 195 days require the consent of an applicant.

A previously completed formal consultation may also be used to meet the formal consultation requirement. An example of previously completed consultation that may be used is the *San Joaquin Valley Oil and Gas Programmatic Biological Opinion*.

Upon completion of a new consultation or determination that a previously completed consultation can be used, approval of the application will normally be granted within 30 days. If the new consultation concludes that a listed species may be jeopardized, then surface disturbance will be prohibited on the lease. Surface disturbance will also be prohibited if the consultation concludes that the proposed action is inconsistent with the recovery needs of the listed species as identified in an approved USFWS Recovery Plan.

Coordination with the USFWS on Proposed Species: BLM policy requires a conferencing with the USFWS on any action that may adversely affect proposed species. Depending on the complexity of the situation, a conference may be completed in a single telephone conversation or may require the time frames of a consultation. Generally, on completion of the conference, approval of the application will be granted within 30 days.

If the conference were to show that a proposed species may be jeopardized, surface-disturbing activities would be prohibited on the lease.

Final Approval: Final approval of applications that would have no effect on listed or proposed species would normally be granted within 30 days of the review.

Final approval for projects that may affect listed or proposed species in a beneficial, insignificant, or benign manner would normally be granted within 30 days of receiving USFWS written concurrence.

For projects that require consultation or conference with the USFWS, final approval would normally be granted within 30 days of consultation or conference completion. Conditions of approval would include any conditions specified by the BLM or USFWS for minimizing impacts.

CSU-Critical Habitat

Stipulation: *All or a portion of this lease lies within an area that is designated as critical habitat, or is proposed for designation as critical habitat by the USFWS. A list of these areas affecting this lease will be provided at the time of leasing and will be updated as necessary over the term of the lease. Any proposed surface disturbing activity occurring on the affected portions of this lease will be reviewed to determine if the activity would affect designated or proposed critical habitat. Determination of effects to designated or proposed critical habitat may result in the proposed action being moved, modified, seasonally restricted, or delayed. Consultation or conference with the USFWS is required if designated or proposed critical habitat may be affected. Off-site compensation that would satisfactorily offset the loss of habitat may be required. Prohibition of all surface disturbing activities on the lease will only occur as needed to avoid destroying or adversely modifying critical habitat or proposed critical habitat, or when the proposed action is inconsistent with the recovery needs identified in an approved USFWS Recovery Plan based on consultation with USFWS. Furthermore, processing times for proposed actions may be delayed beyond established standards to accommodate species surveys, and consultation or conferencing with the USFWS. This stipulation shall not be waived.*

Objective: *To minimize or eliminate adverse effects associated with fluid mineral development on habitat designated as critical, or is proposed for designation as critical habitat by the USFWS.*

Exception: *The Authorized Officer may grant an exception if an environmental review determines the action as proposed or conditioned would have no effect on critical habitat or proposed critical habitat.*

Modification: *The Authorized Officer may modify this stipulation to reflect new information with regard to the critical habitat or proposed critical habitat through the expansion or reduction of lands subject to this stipulation for a specific species.*

Application: The CSU-Critical Habitat stipulation would be applied to leases in areas that are designated as critical habitat or that are proposed for designation as critical habitat for certain species. A list of species and parcels would be included with the stipulation for each lease. The USFWS designates or proposes critical habitat according to the regulations found in 50 CFR 424. Critical habitat is one of the following:

- Specific areas within the geographical area currently occupied by a species, at the time it is listed in accordance with the Endangered Species Act, on which are found those physical or biological features (i) essential to the conservation of the species and (ii) that may require special management considerations or protection, and
- Specific areas outside the geographical area occupied by a species at the time it is listed upon a determination by the Secretary that such areas are essential for conservation of the species (50 CFR 424.02).

Review Process: Generally, the following process would be used to approve surface-disturbing activities on leases with the CSU-Critical Habitat stipulation. The proposed activity would be reviewed to determine if designated or proposed critical habitat would be affected. This review may involve site-specific surveys for plant and animal species, conducted according to established methods, which may specify certain seasons or other conditions. In some cases this may mean that a survey cannot be completed until the next growing season for some plant species or after seasonal appearance for some animal species.

If the review determines that designated or proposed critical habitat will not be affected, an exception to the stipulation would be granted, and approval of the application will normally be granted within 30 days of the review.

If the review determines that designated or proposed critical habitat may be affected, but in a beneficial, insignificant, or benign manner, and written concurrence is received from the USFWS, the application would normally be approved within 30 days of receiving USFWS concurrence. There is no regulatory timeframe for USFWS to provide their written concurrence.

If it is determined that designated or proposed critical habitat may be adversely affected, BLM would work with the applicant to modify the proposal to minimize impacts. Modifications may include relocating activities, seasonal restrictions, mitigation, and compensation. Modified proposals would be developed with the applicant to ensure that the modified project still meets the applicant's objective. If the modified project were to still adversely affect designated or proposed critical habitat, the BLM would initiate formal consultation or conference with the USFWS.

Coordination with the USFWS on Designated Critical Habitat: The BLM is required to initiate formal consultation with the USFWS for any action that may affect designated critical habitat. As a result of the consultation, the USFWS would issue a biological opinion within 135 days, and it may request a 60-day extension. Extensions beyond 195 days require the consent of an applicant.

As part of the biological opinion, the USFWS would determine if the proposed action would be likely to destroy or adversely modify critical habitat. Destruction or adverse modification of critical habitat means a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. Such alterations include those adversely modifying any of the physical or biological features that were the basis for determining the habitat to be critical (50 CFR 402.02).

If consultation concludes that critical habitat would be destroyed or adversely modified, then surface disturbance would be prohibited on the affected portion of the lease. Surface disturbance also would be prohibited if the consultation were to conclude that the proposed action is inconsistent with the recovery needs of the listed species, as identified in an approved USFWS recovery plan.

Coordination with the USFWS on Proposed Critical Habitat: BLM policy requires conferencing with the USFWS on any action that may adversely affect proposed critical habitat. Depending on the complexity of the situation, a conference may be completed in a single telephone conversation or may require the time frames of a consultation. Generally, on completion of the conference, the application would be approved within 30 days. If the conference were to show that proposed critical habitat would be destroyed or adversely modified, then surface disturbance would be prohibited on the affected portion of the lease.

CSU-Sensitive Species

Stipulation: *All or a portion of this lease is within the range of one or more plant or animal species that are either federal candidates for listing as threatened or endangered (federal candidate), are listed by the State of California as threatened or endangered (state listed), or are designated by the BLM as sensitive (BLM sensitive). A list of species will be provided at the time of leasing and updated as necessary over the term of the lease. To determine whether species on this list or their habitat are present, a preliminary environmental review will be conducted for all surface disturbing activities. Presence of habitat or species may result in the proposed action being moved more than 200 meters (656 feet) but not more than a quarter-mile or off of the lease and prohibition of activities during seasonal use period. Furthermore, processing times for proposed actions may be delayed beyond established standards to accommodate species surveys, and coordination with the USFWS and California Department of Fish and Game.*

Objective: *To minimize or eliminate adverse effects associated with fluid mineral development on federal candidate, state listed, and BLM sensitive species.*

Exception: *The Authorized Officer may grant an exception if an environmental review determines the action as proposed or conditioned would have no effect on federal candidate, state listed, and BLM sensitive species.*

Modification: *The Authorized Officer may modify the stipulation to reflect new information with regard to federal candidate, state listed or BLM sensitive species lists. Furthermore, the authorized officer may*

modify the maximum distance that a potential location could be moved to extend farther than the stated quarter-mile to maintain the sensitive species protection goals.

Application: The CSU-Sensitive Species stipulation would be attached to all leases that are within the range of a federal candidate, state listed or BLM sensitive species. A list of sensitive species within the Field Office boundary would be included with the stipulation for each lease when the lease is issued.

Review Process: Generally the following process would be used to approve surface-disturbing activities on leases with the CSU-Sensitive Species stipulation. The proposed activity would be reviewed to determine if special status species would be affected. This review may involve site-specific surveys for plant and animal species, conducted according to established methods that may specify certain seasons or other conditions. In some cases this may mean that a survey cannot be completed until the next growing season for some plants or after seasonal appearance for some animal species.

If the review determines that a special status species may be adversely affected, then surface-disturbing activities may be relocated up to a quarter-mile, but not off the lease, and certain surface-disturbing activities may be prohibited during seasonal periods. BLM policy may also require coordination with the USFWS or California Department of Fish and Game.

CSU-Priority Species, Plant Communities and Habitats

Stipulation: *All or a portion of the lease has been identified by the current RMP (i.e., ACECs and areas of ecological importance with this stipulation prescribed) as containing priority species, plant communities, or habitat that may be adversely affected by fluid mineral development. A list of affected parcels or portions of the lease will be provided at the time of leasing. To identify the possibility of adverse impact resulting from fluid mineral development, a preliminary environmental review will be conducted for all surface disturbing activities. Identification of adverse impacts may result in the proposed action being moved, modified, seasonally delayed, or prohibited from all or a portion of this lease. Furthermore, processing times for proposed actions may be delayed beyond established standards to accommodate species surveys.*

Objective: *To minimize or eliminate adverse effects associated with fluid mineral development on priority species, plant communities, or habitat.*

Exception: *The Authorized Officer may grant an exception if an environmental review determines the action as proposed or conditioned would have no effect on priority species, plant communities, or habitats.*

Modification: *The Authorized Officer may modify the stipulation to reflect new information with regard to the presence of priority species, plant communities, or habitat through the expansion or reduction of lands subject to this stipulation.*

Application: The CSU-Priority Species, Plant Communities and Habitats stipulation would be applied to specific areas that contain unique or significant biological and botanical values as described in the RMP (i.e., ACECs and areas of ecological importance).

Review Process: Generally the following process would be used to approve surface-disturbing activities on leases with the CSU- Priority Species, Plant Communities and Habitats stipulation: The proposed activity would be reviewed to determine if the values for which the area was recognized would be

affected. This review may involve site-specific surveys for plant species, conducted according to established methods, which may specify certain seasons or other conditions. In some cases this may mean that a survey cannot be completed until the next growing season for some plants species.

If the review were to determine that the values for which the area was recognized may be adversely affected, then surface-disturbing activities may be moved, modified, or prohibited on portions of or the entire lease and certain activities may be prohibited during seasonal periods.

CSU-Raptor

Stipulation: *All or a portion of this lease has been identified as an important raptor foraging, wintering, or nesting area. Any proposed surface disturbing activity will be reviewed to determine if the activity would affect raptor foraging, wintering, or nesting habitat. Determination of effects to raptor foraging, wintering, or nesting habitat may result in the proposed action being moved more than 200 meters (656 feet) but not more than a half-mile and prohibition of activities during seasonal use period.*

Objective: *To minimize or eliminate adverse effects associated with fluid mineral development on sensitive raptor foraging areas, winter roosting areas, or nest sites.*

Exception: *The Authorized Officer may grant an exception if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.*

Modification: *The Authorized Officer may modify the distance and other provisions of this stipulation based on new information and increasing or decreasing levels of the impacts anticipated from fluid mineral development.*

Waiver: *The Authorized Officer may waive the stipulation should new information show the area no longer contains sensitive raptor habitat for foraging, winter roosting, or nesting.*

Application: The CSU-Raptor stipulation would be applied to lands that have been identified as important raptor foraging, wintering, or nesting areas. Such lands include, but are not limited to, the Hopper Mountain, Kaweah, Kettleman Hills, Chico Martinez, Temblor, Caliente Mountain, and the San Joaquin River Gorge areas.

Review Process: Generally, the following process would be used to approve surface-disturbing activities on leases with the CSU-Raptor stipulation. The proposed activity would be reviewed to determine if sensitive raptor foraging areas, winter roosting areas, or nest sites would be affected. If the review were to show that sensitive raptor use areas may be adversely affected, then surface-disturbing activities may be relocated up to one-half mile or certain activities may be prohibited during seasonal periods. Modified proposals would be developed with the applicant to ensure that the modified project still meets the applicant's objective.

Different raptor species and different individuals vary in their sensitivity and ability to habituate to disturbances. Type and extent, duration and timing, and visibility of disturbance and influence of other environmental factors, such as topography, also affect the significance of the disturbance in any particular case. Often, moving an activity out of visibility, such as behind a topographic feature, would be sufficient. Delaying certain new activities until young birds have fledged is also a common tactic. Movement of surface-disturbing activities to retain roost trees or hunting perches may also be used.

The following species or groups of species would be eligible for protection under the CSU-Raptor stipulation: golden eagle, bald eagle, black-shouldered kite, northern harrier, sharp-shinned hawk, Cooper's hawk, northern goshawk, red-shouldered hawk, red-tailed hawk, Swainson's hawk, rough-legged hawk, ferruginous hawk, osprey, American kestrel, merlin, prairie falcon, peregrine falcon, and all owl species.

CSU-Known Cultural Resources

Stipulation: *All or a portion of the lease contains National Register-listed or potentially eligible cultural properties that may be adversely affected by fluid mineral development. A list of affected parcels or portions of the lease will be provided at the time of leasing. To identify the possibility of adverse impacts resulting from fluid mineral development, a preliminary cultural resource review/survey will be conducted for all surface disturbing activities. Identification of adverse impacts may result in the proposed action being moved or modified. Surface-disturbing activities would be prohibited on the portion of the lease where National Register-listed properties or properties potentially eligible for listing on the National Register occur.*

Objective: *To minimize or eliminate adverse effects associated with fluid mineral development on known National Register-listed or potentially eligible cultural properties.*

Exception: *The Authorized Officer may grant an exception, with concurrence from the California State Historic Preservation Office and Native American tribes, if a subsequent formal eligibility evaluation indicates the cultural property is ineligible.*

Modification: *The Authorized Officer may modify the stipulation to reflect new information from formal eligibility evaluations for cultural properties through the expansion or reduction of land where surface disturbing activities would be prohibited.*

Waiver: *The Authorized Officer may grant a waiver to the stipulation should the results of formal eligibility evaluation determine all cultural properties ineligible for listing on the National Register.*

Application: The CSU–Cultural Resources stipulation would be applied to lands that contain known National Register-listed or potentially eligible cultural properties. The locations and number of acres affected would be determined at the leasing stage.

Review Process: Generally, the following process would be used to approve surface-disturbing activities on leases with the CSU-Cultural Resources stipulation. The proposed surface disturbing activity would be reviewed to determine if a known National Register- listed or potentially eligible cultural property would be affected. If the review were to show that the cultural property may be adversely affected, then surface-disturbing activities would be relocated or modified. Surface-disturbing activities would be prohibited on the lease only where the proposed action would be likely to destroy or adversely affect a known National Register-listed property or properties found eligible for listing on the National Register.

CSU-Compensation Lands

Stipulation: *All or a portion of this lease underlies lands managed as compensation land by the BLM or an entity other than the BLM that may have a governing document that prohibits certain activities. To allow only a compatible amount of disturbance to unique or significant biological values, no more than*

ten (10) percent of the surface within any parcel may be disturbed on the surface reserve lands overlaying the lease. Furthermore, access to federal minerals within the lease will not disturb more than ten (10) percent of the surface within any parcel from off-site sources that are compensation lands (e.g., compensation land in private ownership).

Objective: *To minimize or eliminate adverse effects associated with fluid mineral development on lands managed as compensation land.*

Exception: *The Authorized Officer may grant an exception if, after coordination with appropriate agency (e.g., CDFG and USFWS), an environmental review determines the action as proposed or conditioned would not impair the values present and is consistent with the document that established the compensation land.*

Modification: *The Authorized Officer may modify this stipulation if, after coordination with appropriate agency (e.g., CDFG and USFWS), an environmental review determines the action as proposed or conditioned would not impair the values present and is consistent with the document that established the compensation land.*

Waiver: *The Authorized Officer may grant a waiver to the stipulation if the lease parcel no longer considered as compensation land by the appropriate agency (e.g., BLM, CDFG and USFWS).*

Application: The CSU–Compensation Lands stipulation would be applied to mineral estate underlying areas managed as compensation lands by the BLM or an entity other than BLM.

Review Process: Generally the following process would be used to approve surface-disturbing activities on leases with the CSU–Compensation Lands stipulation: The document or agreement governing the specific parcel of compensation land (such as a conservation easement, USFWS biological opinion, CDF&G agreement) would be reviewed to determine if the proposed activity is allowed on the parcel. If the proposed activity is allowed by the governing document, the activity would be reviewed to determine if the proposed surface disturbance would exceed the 10 percent threshold. If the review determines that the proposed activity would cumulatively exceed this threshold, actions to reduce the cumulative surface disturbance to below 10 percent, such as restoration, would be required prior to approval of the proposed activity.

If the review were to determine that the proposed activity is not allowed by the governing document, or that the cumulative surface disturbance cannot be kept at or below the 10 percent threshold, then new surface-disturbing activities would be prohibited.

If lands adjacent to the lease have also been set aside as compensation lands, either by BLM or another entity, off-site surface-disturbing activities to access federal mineral estate will be subjected to the same restrictions as above.

CSU-Existing Surface Use/Management

Stipulation: *All or a portion of the lease contains federal mineral estate underlying surface with an established use or management that may be incompatible with fluid mineral development. A preliminary environmental review will be conducted for all surface disturbing activities to identify possible conflict between surface use and fluid mineral development. Surface disturbing activities may be moved, modified, or prohibited to accommodate the existing surface use should the Authorized*

Officer determine the incompatibility of these uses. Specifically, fluid mineral development shall not occur:

1. *Closer to any development (e.g., public highway, institution, place of public assembly, or occupied dwelling) than allowed by the county/city regulation or statute applicable to the area in which the proposed action occurs (including those exceptions where closer spacing is allowed);*
2. *In a manner that significantly and adversely impacts natural and/or cultural resources of which the surface owner/administrator is charged with the management and protection; or*
3. *In a manner that significantly and adversely impacts existing recreation opportunity of which the surface owner/administrator is charged with the management and protection.*

Furthermore, processing times for proposed actions may be delayed beyond established standards to accommodate review and coordination with the surface owner/administrator.

Objective: *To minimize or eliminate conflict between fluid mineral development and existing surface uses on both public lands and split estate over federal minerals, and to reduce impacts associated with fluid mineral resource development on the owners/occupants within a dwelling or structure on split estate lands.*

Exception: *The Authorized Officer may grant an exception where a surface use agreement exists between the lessee and surface owner/administrator that allows for the proposed fluid mineral development. Furthermore, exception may be granted where the proposed action is deemed, following an environmental review, to have discountable or insignificant impacts on the existing surface use.*

Modification: *The Authorized Officer may modify this stipulation to further restrict surface use for mineral development on a portion of or all the lease if a more stringent requirement with regard to the location of facilities is deemed necessary following an environmental review (e.g., greater than county/city restrictions on fluid mineral development).*

Application: The CSU-Existing Surface Use/Management stipulation would be applied to areas where the authorized officer determines that pre-existing surface management uses/conditions would be incompatible with or preclude oil and gas operations from using the surface of a portion or even all of the leased land. The locations and number of acres affected would be determined at the leasing stage.

Review Process: Generally the following process would be used to approve surface-disturbing activities with the CSU-Existing Surface Use/Management stipulation. The proposed activity would be reviewed cooperatively with the surface manager to determine if it is compatible with the existing uses/conditions, and if not, the activity would be moved or possibly even denied/rejected.

CSU-Chimineas Ranch

Stipulation: *This lease is within the boundaries of, or adjacent to, the State of California's Chimineas Unit of the Carrizo Plain Ecological Reserve, an area that contains unique or significant natural or cultural values. Prior to the authorization of any surface disturbing activities, a preliminary environmental review will be conducted to identify the potential presence of natural or cultural values. Authorizations may be delayed until completion of the necessary surveys during the appropriate time period for these resources. Surface disturbing activities may be prohibited on portions or the entire lease, and some activities may be prohibited during seasonal time periods.*

Objective: *To prevent or reduce disturbance to unique or significant natural or cultural values from fluid mineral development.*

Exception: *The Authorized Officer may grant an exception if, after coordination with CDFG, an environmental review determines that the activity, as proposed or conditioned, would not impair the values present and is consistent with the management of the ecological reserve.*

Modification: *The Authorized Officer may modify this stipulation to further restrict surface use on a portion of or the entire lease if a more stringent requirement is deemed necessary to protect resource values following an environmental review.*

Application: The CSU–Chimineas Ranch stipulation would be applied to lands adjacent to, or within the boundaries of the California Department of Fish and Game's Chimineas Unit of the Carrizo Plain Ecological Reserve, where the surface is managed by BLM. Split estate land, where the surface is management by the California Department of Fish and Game, would be subject to the NSO-Existing Surface Use/Management stipulation.

Review Process: Generally, the following process would be used to approve surface disturbing activities on leases with the CSU–Chimineas Ranch stipulation. The proposed activity would be reviewed to determine if the values for which the area was recognized would be affected. This review may involve site specific surveys for plant and animal species, conducted according to established methodologies which may specify certain seasons or other conditions. In some cases this may mean that a survey cannot be completed until the next growing season for some plants or after seasonal appearance for some animal species.

If the review determines that the values for which the area was recognized may be adversely affected, then surface disturbing activities may be prohibited on all or portions of the lease and certain activities may be prohibited during seasonal periods.

G.2.3 Oil and Gas Leasing and Lease Management

A lease for oil and gas gives a lessee (holder of the lease) the right to drill and produce, subject to the lease terms, any special stipulations, other reasonable conditions, and approval of an Application for Permit to Drill (APD). The regulations at 43 CFR 3101.1-2 define the reasonable measures which BLM can require of a lessee. Generally, the BLM cannot deny a lessee the right to drill once a lease is issued unless the action is in direct conflict with another existing law. Any surface disturbing activity, however, requires prior approval of the BLM. Such approval would include a site-specific evaluation and compliance with the National Environmental Policy Act (NEPA) of 1969 requirements.

As part of the preparation for a lease sale the BLM California State Office submits a draft parcel list to the Bakersfield Field Office for review and processing. An Interdisciplinary Team (IDT) is convened to review the legal descriptions of the parcels to determine if they are in areas open to leasing; if appropriate stipulations have been included or additional stipulations are needed; whether or not new information is available since the land use plan was approved; if appropriate consultations have been conducted or if additional consultations are needed; and if there are special resource conditions of which potential bidders should be made aware. BLM conducts and documents an environmental analysis in compliance with NEPA, at the lease issuance stage, unless an adequate analysis was included in an existing environmental document.

The BLM offers lands for oil and gas lease to the highest qualified bidder in a competitive auction. The lease term is 10 years, and for as long thereafter as oil and gas can be produced in paying quantities, and the maximum lease size offered by BLM is 2,560 acres, (see the *Federal Onshore Oil and Gas Leasing Reform Act of 1987 Sec. 5102(a)(b)(1)(A)*. The BLM can lease the federal mineral estate beneath both public land (BLM administered surface) and split estate lands where the surface estate is owned by another party.

After obtaining an oil and gas lease and prior to drilling any well, a lessee and/or operator submits an Application for Permit to Drill (APD), indicating the specific location of the drilling site. BLM conducts and documents additional environmental analysis at the APD stage. BLM may require reasonable mitigation measures in the APD, consistent with the lease terms and stipulations.

For parcels that are split estate, the lessee and/or operator would be responsible not only for adhering to BLM requirements, but also for reaching an agreement with the private surface landowner regarding access, surface disturbance and reclamation. Where the lessee/operator is unable to reach a surface use agreement with the private surface owner, the lessee/operator can file a surface owner protection bond. This bond should be in an amount sufficient to protect against damages to the surface as allowed in the statute that reserved the mineral rights to the Federal government. However, the minimum of the surface owner protection bond is $1,000.00.

On occasion, it may be desirable or necessary to drill a well from a surface location that is not directly above the drilling target. This is known as directional drilling. Even though the surface location may not be within the federal mineral lease, BLM has the authority to regulate drilling from adjacent, non-federal land if federal minerals are involved by requiring a drilling application. Such directional drilling is subject to applicable environmental laws, including NEPA, the National Historic Preservation Act of 1966 (as amended), and the Endangered Species Act of 1973 (ESA), as amended. BLM will process this type of application in the same manner as for an application on leased lands.

Standard Operating Procedures, Implementation Guidelines, and Conditions of Approval to be employed of all existing federal oil and gas leases and private mineral developments subject to the limits of BLM authority are described in Appendix L.7.

G.3 Locatable Minerals

Locatable minerals are those for which the right to explore, develop, and extract mineral resources on federal lands open to mineral entry is established by the location (or staking) of lode or placer mining claims, as authorized under the General Mining Law of 1872, as amended. In general, locatable minerals of interest are metallic minerals. Those metallic minerals found within the Planning Area include: gold, copper, tungsten, asbestos, mercury, magnesite, chromite, and uranium.

G.3.1 Land Use Planning Allocations

Land Use Planning allocations include the identification of areas recommended for closure to the Mining Laws for locatable exploration or development that must be petitioned for withdrawal and any specific terms, conditions, or other special considerations needed to protect other resource values while conducting activities under the operation of the mining laws.

G.3.2 Locatable Mineral Site of Interest

Of greatest interest are those land use allocations that potentially affect areas of historical locatable mineral activity and areas of high locatable mineral potential. To aid in the understanding of the potential impacts to all levels of mining operation, the following table presents information regarding impacts resulting from the Proposed Plan alternative on 92 individual sites identified as sites of mineral interest by the public.

Table G-1
Summary of Potential Impacts to Locatable Mineral Sites of Interest Resulting from the Proposed Plan Alternative

Longitude	Latitude	Prohibited / Restricted?	Rational for Closures	Other alternatives considered?	Access Restrictions
-119.32373	34.96669	Within Bitter Creek National Wildlife Refuge. Outside the authority of the BLM.			
-120.95908	35.61636	PoO Required	No Closure	Withdrawal from the Mining Law	No Legal Public Access
-120.93459	35.60190	Not on Public Lands			
-120.92678	35.59826	PoO Required	No Closure	Withdrawal from the Mining Law	No Legal Public Access
-120.95681	35.61079	Not on Public Lands			
-120.95958	35.61166	Not on Public Lands			
-118.40175	35.71998	PoO Required	No Closure	None	Route Closed
-118.40152	35.71968	PoO Required	No Closure	None	Route Closed
-118.38536	35.69887	PoO Required	No Closure	None	Route Closed
-118.38482	35.69858	PoO Required	No Closure	None	Route Closed
-118.38620	35.69720	PoO Required	No Closure	None	Authorized Use Only
-118.38562	35.69608	PoO Required	No Closure	None	Authorized Use Only
-118.44203	35.58081	Withdrawn	Non-Discretionary withdrawal (WSA)	None	Route Closed
-118.43703	35.57970	Withdrawn	Non-Discretionary withdrawal (WSA)	None	No Access Route
-118.43702	35.57968	Withdrawn	Non-Discretionary withdrawal (WSA)	None	No Access Route
-118.40786	35.56581	Withdrawn	Non-Discretionary withdrawal (WSA)	None	No Access Route
-118.40622	35.56438	Withdrawn	Non-Discretionary withdrawal (WSA)	None	No Access Route
-118.44172	35.58078	Withdrawn	Non-Discretionary withdrawal (WSA)	None	Route Closed
-118.27231	35.18939	Not on Public Lands			
-118.29194	35.19046	Not on Public Lands			
-118.31631	35.18985	Not on Public Lands			
-118.29439 -118.29436	35.17073 35.17054	PoO & Surface Use Agreement Required, Casual Collection Prohibited	To protect sensitive cultural resources (Horse Canyon ACEC).	Withdrawal from the Mining Law	No Access Route
-118.78984	36.42776	PoO Required	No Closure	Withdrawal from the Mining Law	No Access Route
-118.91764	36.59525	Withdrawn	Non-Discretionary withdrawal (WSA)	None	No Access Route
-118.78844	36.44716	Not on Public Lands			
-118.82734	36.42076	PoO Required	No Closure	Withdrawal from the Mining Law	Authorized Use Only

Longitude	Latitude	Prohibited / Restricted?	Rational for Closures	Other alternatives considered?	Access Restrictions
-119.55205	35.38218	Not on Public Lands			
-119.52594	35.38058	Not on Public Lands			
-119.44874	35.20278	Not on Public Lands			
-119.62905	35.34308	Not on Public Lands			
-118.500920	35.716650	None	No Closure	None	No Access Route
-118.504530	35.639150	None	No Closure	None	No Access Route
-118.504810	35.637760	None	No Closure	None	No Access Route
-118.497310	35.633590	None	No Closure	Withdrawal from the Mining Law	None
-118.515640	35.620260	None	No Closure	None	Route Closed
-118.493140	35.659420	None	No Closure	None	None
-118.510640	35.619420	Not on Public Lands			
-118.534250	35.666650	Not on Public Lands			
-118.510640	35.612200	None	No Closure	None	No Access Route
-118.487590	35.635260	None	No Closure	Withdrawal from the Mining Law	None
-118.510090	35.619420	Not on Public Lands			
-118.513700	35.632200	None	No Closure	Withdrawal from the Mining Law	Authorized Use Only
-118.513980	35.652480	None	No Closure	None	None
-118.501750	35.623310	None	No Closure	Withdrawal from the Mining Law	None
-118.510620	35.612180	None	No Closure	None	No Access Route
-118.502620	35.633580	None	No Closure	Withdrawal from the Mining Law	None
-118.507320	35.633080	None	No Closure	Withdrawal from the Mining Law	No Access Route
-118.487620	35.635280	None	No Closure	Withdrawal from the Mining Law	None
-118.499020	35.618080	None	No Closure	Withdrawal from the Mining Law	None
-118.504520	35.635280	None	No Closure	Withdrawal from the Mining Law	No Access Route
-118.512320	35.625780	Surface Use Agreement Required	No Closure	Withdrawal from the Mining Law	None
-118.513720	35.632180	None	No Closure	Withdrawal from the Mining Law	Authorized Use Only
-118.505920	35.637840	None	No Closure	None	No Access Route
-118.492620	35.667780	Surface Use Agreement Required	No Closure	None	None

Longitude	Latitude	Prohibited / Restricted?	Rational for Closures	Other alternatives considered?	Access Restrictions
-118.506220	35.634380	None	No Closure	Withdrawal from the Mining Law	No Access Route
-118.514020	35.620580	None	No Closure	None	None
-118.501720	35.623280	None	No Closure	Withdrawal from the Mining Law	None
-118.491720	35.638880	None	No Closure	Withdrawal from the Mining Law	None
-118.492620	35.639980	None	No Closure	Withdrawal from the Mining Law	None
-118.505920	35.629680	None	No Closure	Withdrawal from the Mining Law	None
-119.541570	37.118240	Casual Collection Only	Not Open to Mineral Entry	None	Non-Motorized Access
-120.66589	34.90283	PoO Required	No Closure	Withdrawal from the Mining Law	No Public Access
-120.66589	35.45857	Not on Public Lands			
-120.82709	35.47329	None	No Closure	PoO Required	No Access Route
-120.83409	35.46826	None	No Closure	PoO Required	Authorized Use Only
-120.56067	35.40527	Not on Public Lands			
-120.56487	35.40777	Not on Public Lands			
-119.46844	34.79439	None	No Closure	None	Route Closed
-119.46924	34.79749	None	No Closure	None	Route Closed
-119.575370	37.116040	Surface Use Agreement Required	No Closure	None	No Access Route
-119.540970	37.135240	Casual Collection Only	Not Open to Mineral Entry	None	Non-Motorized Access
-119.542670	37.089140	Withdrawn	BOR Owned Lands	None	None
-119.565170	37.053240	Not on Public Lands			
-119.47874	35.09188	None	None	None	None
-119.53034	35.13418	None	None	None	None
-119.43984	35.06779	None	None	None	None
-119.58424	35.17328	None	None	None	None
-118.392310	35.582480	PoO Required	No Closure	Withdrawal from the Mining Law	None
-118.442030	35.580810	Withdrawn	Non-Discretionary withdrawal (WSA)	None	Route Closed
-118.437030	35.579700	Withdrawn	Non-Discretionary withdrawal (WSA)	None	No Access Route
-118.437020	35.579680	Withdrawn	Non-Discretionary withdrawal (WSA)	None	Route Closed
-118.513720	35.568080	None	None	None	No Access Route

Longitude	Latitude	Prohibited / Restricted?	Rational for Closures	Other alternatives considered?	Access Restrictions
-118.514020	35.569380	None	None	None	No Access Route
-118.064810	35.558310	Withdrawn	Non-Discretionary withdrawal (Wilderness)	None	No Access Route
-118.457030	35.558310	Withdrawn	Non-Discretionary withdrawal (WSA)	None	No Access Route
-119.541570	37.118240	Casual Collection Only	Not Open to Mineral Entry	None	Non-Motorized Access
-118.399250	35.584700	PoO Required	No Closure	Withdrawal from the Mining Law	None
-118.407860	35.565810	Withdrawn	Non-Discretionary withdrawal (WSA)	None	No Access Route
-118.406220	35.564380	Withdrawn	Non-Discretionary withdrawal (WSA)	None	Route Closed
-118.441720	35.580780	Withdrawn	Non-Discretionary withdrawal (WSA)	None	No Access Route
-119.540970	37.135240	Casual Collection Only	Not Open to Mineral Entry	None	Non-Motorized Access

Appendix H

Recreation and Visitor Services

Appendix H – Recreation and Visitor Services

TABLE OF CONTENTS

H.1 Introduction

Recreation Management and Visitors Services is the proactive management of opportunities, experiences, and outcomes for the general public as they interact with the National System of Public Lands.

Historically, management of recreation resources has been random and reactionary, pursing recreation when and where they occurred, with little planning and forethought to long-term goals and objectives. Although this approach was somewhat effective at addressing the immediate programmatic and public health and safety needs, it often resulted in isolated elements of the larger recreation program, making long-term management problematic.

The current management trend to try to fully address recreation and visitor services is that of benefits-based management. This style of management focuses on outcomes to attempt to encompass all elements of the recreation program, including recreation setting, activities, programs, and visitors services, thus providing an overall framework to guide the recreation and visitor services program.

H.1.1 How to Read/Use this Document

This document addresses several elements of the Recreation and Visitor Services Program, to provide further explanation of the management processes, prescriptions, and desired outcomes as they relate to the decisions presented in the management alternatives for recreation (Chapter 2) and the information provided in the affected environment (Chapter 3).

H.1.2 Authority and Guidance for Recreation and Visitor Services Management

Alternatives have been developed based on the following authority and guidance specific to Recreation and Visitor Services management for the BLM:

- Recreation 2000 Strategy (BLM 1989) and update (BLM 1995);
- US Department of Interior's Strategic Plan for Recreation; and
- The BLM's Priorities for Recreation and Visitor Services Work Plan (a.k.a., the Purple Book) (BLM 2003).

H.2 Recreation Management Areas

Through the Land Use Planning process, the RMP decision area is divided up between ERMAs, SRMAs and "area not managed for recreation". The primary difference between an SRMA and an ERMA is the amount or level of management that is required to maintain the primary recreation settings and opportunities and if the primary recreation is structured or unstructured (IM2011-004, BLM 2011).

H.2.1 Areas not managed for Recreation

Areas not managed for recreation are those, that although have intrinsic recreational value (open space) have no specific recreation management needs or future desired outcomes. These are also areas, where recreational use may be incompatible with other land uses, such as industrialized oil fields. The management associated with these areas is restricted to custodial actions. The custodial management concept is that the BLM will use the minimum of implementation actions necessary to proactively respond to stewardship needs associated with recreation-tourism activities.

H.2.2 Extensive Recreation Management Areas

ERMAs are administrative units where recreation management is only one of several management objectives and where a lower commitment of resources is required to provide extensive and unstructured types of recreation.

The identification of an ERMA does not mean that the expenditure of substantial time and funding is unwarranted when circumstances require it. For example, because of the proliferation of urban areas next to public lands, the BLM may need to implement actions that mitigate undesired activities, such as impacts on vegetation caused by the proliferation of user-created trails on the BLM lands next to these highly populated urban areas. In such instances, the BLM may apply a physical setting that favors appropriate activities but may not target a specific set of structured recreation outcomes such as would be associated with a SRMA designation. To carry out such management actions, the BLM may need assistance from participating partners and may have to prioritize ERMA implementation actions to protect resource values and to resolve conflicts.

H.2.3 Special Recreation Management Areas

SRMAs are areas that have a significant identifiable customer demand for structured recreation. The rationale for identifying an SRMA is that the area has to have an identifiable recreation-tourism market demand requiring structured (planned) recreation management that targets a particular activity to produce specific recreation experiences and desired outcomes. “Significant” implies that a specific type of outcome is being sought, including desired experiences and benefits and excluding undesired negative outcomes that are associated with specific recreation. “Structured” implies that the BLM and partners intend to produce this predetermined specific set of recreation opportunity outcomes.

SRMAs are identified when the BLM and partners are able to:

- Identify recreation-tourism markets;
- Identify activities and experiences benefit outcome opportunities;
- Create and maintain the natural resource recreation setting character (physical, social, and operational); and
- Perform necessary implementation actions.

H.2.4 Recreation Management Zones

SRMAs are further subdivided into more specific units known as Recreation Management Zones. RMZs are similar to SRMAs in that they address a very specific recreation audience and are managed for structured recreation. However, they are not identified as individual SRMAs because they have the same recreation-tourism market as the SRMA they are located in. There are four defining characteristics that are required for identifying an RMZ within an SRMA, as follows:

- RMZs serve a different recreation niche within the primary recreation market;
- RMZs produce a different set of recreation opportunities and facilitate the attainment of different experience and benefit outcomes (to individuals, households and communities, economies, and the environment);
- RMZs have distinctive recreation setting character; and

- RMZs require a different set of recreation provider actions to meet the strategically targeted primary recreation market demand.

Complete descriptions of the RMZ management framework for each of the 17 RMZs defined can be found further in this appendix under Section D – RMZ Management Framework.

H.3 Natural Resource Recreation Setting Matrix

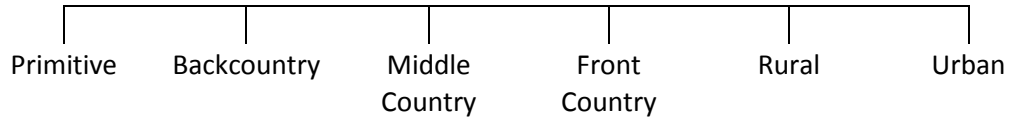
The Natural Resource Recreation Setting Matrix (NRRSM) is the primary tool that the BLM uses to describe and manage the recreation setting of an area, in order to aid management in achieving the desired benefits and outcomes. The NRRSM is a reinvention of the Recreation Opportunity Spectrum historically used to provide managers with guidance to ensure that recreation is provided for a wide range of users.

The BLM approach to NRRSM applies criteria to a land area's physical, social, and operational parameters to describe the conditions that define a land area's capability and suitability for providing a particular range of recreation opportunities. For example, some recreationists seek an undeveloped setting, emphasizing solitude and self-reliance, while others seek an experience with more comfort, security, and social opportunities.

The physical, social, and operational elements themselves are further divided to allow a fuller description of the setting, including the ability to map these characteristics, thereby removing some of the subjective and qualitative nature of the categorization.

Physical	Remoteness
	Naturalness
	Visitor facilities
Social	Contacts with others
	Group size
	Evidence of use
Operational	Mechanized use
	Visitor services
	Management controls

Like the Recreation Opportunity Spectrum, the NRRSM describes a range of settings, from primitive to urban, along a spectrum for the physical, social, and operational elements of an environment. Although the full spectrum of settings exists, for convenience, each area is assigned to one of six categories.



Physical conditions for the urban classification include areas with relatively easy access and a high degree of human alteration, such as buildings, roads, and power lines. In contrast, the physical environment classification is remote and relatively free of human alteration. The social environment varies from settings with abundant opportunities for solitude to areas where other people are nearly

always within sight and sound. The administrative environment is the degree and type of management actions taken to control visitation. Urban/developed sites may have more on-site aids, such as interpretive and directional signing, whereas at primitive sites, less interpretation is desired or necessary. The primary characteristics of each are as follows:

Primitive. An essentially unmodified natural environment of fairly large size, with minimal evidence of others and very low interaction among users. Extremely high probability of isolation, independence, tranquility, and closeness to nature. Areas are essentially free from evidence of human-induced restrictions and controls, and motorized and mechanized uses are not permitted.

Backcountry. A predominantly natural or natural-appearing environment of moderate to large size. Opportunities to experience isolation, independence, and tranquility exist to some degree. Interaction between users is low, with some evidence of other users. On-site controls and restrictions are minimal and subtle. Motorized use is not permitted.

Middle Country. A natural-appearing environment of moderate to large size. Low concentration of users with evidence of other users. Few opportunities to experience isolation and independence. On-site controls and restrictions are minimal and subtle. Motorized use is permitted.

Front Country. Predominantly natural-appearing environments with moderate evidence of the sights and sounds of man. Interaction among users is moderate with evidence of other users prevalent. Visible resource modification and use that generally harmonize with the natural environment. Conventional motorized use is provided for in facilities construction and design.

Rural. A substantially modified natural environment. Resource modification and use are visible and needed to protect resources from intensive use. Sights and sounds of humans are readily evident, and user interaction is moderate to high. Facilities are provided for special activities and are designed for large numbers of people and intensified motorized use, including parking.

Urban. A substantially urbanized environment with natural-appearing elements, visible renewable resource modification, and use. Large numbers of users, with sights and sounds of humans predominate. Facilities available for highly intensified motor use and parking, with mass transit often available to carry people throughout the site.

H.3.1 Using the Recreation Resource Setting Matrix

The NRRSM has two functions. First it allows classification of the existing recreation conditions of an area, its intrinsic and current recreational value; second it allows for a desired future condition to be prescribed. This essentially translates into the recreational objective for an area.

Since the ERMA is under custodial management settings, which are not managed for, and although NRRSM could be used to describe and set objectives for specific sites and or projects, generally no NRRSMs are prescribed. Within the SRMAs, however, the NRRSM is used as the primary tool for describing and allocating the current and desired recreation setting in order to achieve the beneficial outcomes sought. The NRRSM is used to describe and prescribe at the RMZ level.

H.3.2 Bakersfield FO SRMA Recreation Resource Settings

The following pages represent the description (table cells outlined in **bold**) of the existing setting as referenced in Chapter 3, Affected Environment, and the desired setting (table cells completely shaded) as referenced in Chapter 2, Alternatives, for all RMZs considered in the various SRMAs across all action alternatives.

Atwell Island ERMA

PHYSICAL – LAND and FACILITIES: character of the natural landscape

	Primitive		Backcountry	Middle Country	Front Country	Rural	Urban
	Pristine	Transition					
Mapped: Remoteness	More than 10 miles from any motorized route	More than 3 miles from any motorized route.	More than ½ mile from any kind of motorized route/use area, but not as distant as 3 miles	On or near motorized routes, but at least ½ mile from all improved roads, though they may be in sight.	On or near improved gravel roads, but at least ½ mile from highways.	On or near paved primary highways, but still within a rural area.	Municipal streets and roads within towns or cities.
Illustrated in Matrix: Naturalness	Undisturbed natural landscape.		Natural appearing landscape, having modifications not readily noticeable.	Natural appearing landscape, except for obvious motorized routes.	Landscape partially modified by roads/trails, utility lines, etc., but none overpower natural landscape features.	Natural landscape substantially modified by agriculture or industrial development.	Urbanized developments dominate landscape.
Illustrated in Matrix: Visitor Facilities	None.		Some primitive trails made of native materials, such as log bridges and carved wooden signs.	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets.	Improved yet modest, rustic facilities, such as campsites, restrooms, trails, and interpretive signs.	Modern facilities, such as campgrounds, group shelters, boat launches, and occasional exhibits.	Elaborate full-service facilities, such as laundry, restaurants, and groceries.

SOCIAL – VISITOR USE and USERS: character of recreation-tourism use

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Contacts with other groups	Fewer than 3 encounters a day at campsites and fewer than 6 encounters a day on travel routes.	3-6 encounters a day off travel routes (e.g., campsites) and 7-15 encounters a day on travel routes.	7-14 encounters a day off travel routes (e.g., staging areas) and 15-29 encounters a day en route.	15-29 encounters a day off travel routes (e.g., campgrounds) and 30 or more encounters a day en route.	People seem to be generally everywhere.	Busy place with other people constantly in view.
Illustrated in Matrix: Group Size (other than you own)	Fewer than or equal to 3 people per group.	4-6 people per group.	7-12 people per group.	13-25 people per group.	26-50 people per group.	Greater than 50 people per group.
Illustrated in Matrix: Evidence of Use	No alteration of the natural terrain. Footprints only observed. Sounds of people rare.	Areas of alteration uncommon. Little surface vegetation wear observed. Sounds of people infrequent.	Small areas of alteration. Surface vegetation showing wear, with some bare soils. Sounds of people occasionally heard.	Small areas of alteration prevalent. Surface vegetation gone with compacted soils observed. Sounds of people regularly heard.	A few large areas of alteration. Surface vegetation absent, with hardened soils. Sounds of people frequently heard.	Large areas of alteration prevalent. Some erosion. Constantly hear people.

OPERATIONAL – ADMINISTRATION and SERVICES: character of how Public Land Managers, Cooperative Agencies and Local Businesses Care for the Area and Serve Visitors

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Mechanized Use	None whatsoever.	Mountain bikes and perhaps other mechanized use, but all are nonmotorized.	Four-wheel-drives, all-terrain vehicles, dirt bikes, or snowmobiles, in addition to nonmotorized mechanized use.	Two-wheel-drive vehicles predominant, but also four-wheel-drives and nonmotorized mechanized use.	Ordinary highway auto and truck traffic is characteristic.	Wide variety of street vehicles, and highway traffic is ever-present.
Illustrated in [illegible]: Visitor Services	None is available on-site.	Basic maps, but area personnel seldom available to provide on-site assistance.	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance.	Information materials describe recreation areas and activities. Area personnel are periodically available.	Information described to the left, plus experience and benefit descriptions. Area personnel do on-site education.	Information described to the left, plus regularly scheduled on-site outdoor skills demonstrations and clinics.
Illustrated in [illegible]: Management Controls	No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have backcountry use restrictions. Enforcement presence rare.	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence.	Rules clearly posted, with some seasonal or day-of-week use restrictions. Periodic enforcement presence.	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence.	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage.

Case Mountain ERMA

PHYSICAL – LAND and FACILITIES: character of the natural landscape

	Primitive		Backcountry	Middle Country	Front Country	Rural	Urban
	Pristine	Transition					
Mapped: Remoteness	More than 10 miles from any motorized route.	More than 3 miles from any motorized route.	More than ½ mile from any kind of motorized route/use area but not as distant as 3 miles.	On or near motorized routes, but at least ½ mile from all improved roads, though they may be in sight.	On or near improved gravel roads, but at least ½ mile from highways.	On or near paved primary highways, but still within a rural area.	Municipal streets and roads within towns or cities.
Illustrated in Matrix: Naturalness	Undisturbed natural landscape.		Natural appearing landscape, having modifications not readily noticeable.	Natural appearing landscape, except for obvious motorized routes.	Landscape partially modified by roads/trails, utility lines, etc., but none overpower natural landscape features.	Natural landscape substantially modified by agriculture or industrial development.	Urbanized developments dominate landscape.
Illustrated in Matrix: Visitor Facilities	None.		Some primitive trails made of native materials, such as log bridges and carved wooden signs.	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets.	Improved yet modest, rustic facilities, such as campsites, restrooms, trails, and interpretive signs.	Modern facilities, such as campgrounds, group shelters, boat launches, and occasional exhibits.	Elaborate full-service facilities, such as laundry, restaurants, and groceries.

SOCIAL – VISITOR USE and USERS: character of recreation-tourism use

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Contacts with other groups	Fewer than 3 encounters a day at campsites and fewer than 6 encounters a day on travel routes.	3-6 encounters a day off travel routes (e.g., campsites) and 7-15 encounters a day on travel routes.	7-14 encounters a day off travel routes (e.g., staging areas) and 15-29 encounters a day en route	15-29 encounters a day off travel routes (e.g., campgrounds) and 30 or more encounters a day en route.	People seem to be generally everywhere.	Busy place with other people constantly in view.
Illustrated in Matrix: Group Size (other than you own)	Fewer than or equal to 3 people per group.	4-6 people per group.	7-12 people per group	13-25 people per group.	26-50 people per group.	Greater than 50 people per group.
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OPERATIONAL – ADMINISTRATION and SERVICES: character of how Public Land Managers, Cooperative Agencies and Local Businesses Care for the Area and Serve Visitors

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Mechanized Use	None whatsoever.	Mountain bikes and perhaps other mechanized use, but all are nonmotorized.	Four-wheel-drives, all-terrain vehicles, dirt bikes, or snowmobiles, in addition to nonmotorized mechanized use.	Two-wheel-drive vehicles predominant, but also four-wheel-drives and nonmotorized mechanized use.	Ordinary highway auto and truck traffic is characteristic.	Wide variety of street vehicles, and highway traffic is ever-present.
Illustrated in [illegible]: Visitor Services	None is available on-site.	Basic maps, but area personnel seldom available to provide on-site assistance.	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance.	Information materials describe recreation areas and activities. Area personnel are periodically available.	Information described to the left, plus experience and benefit descriptions. Area personnel do on-site education.	Information described to the left, plus regularly scheduled on-site outdoor skills demonstrations and clinics.
Management Controls	No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have backcountry use restrictions. Enforcement presence rare.	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence.	Rules clearly posted, with some seasonal or day-of-week use restrictions. Periodic enforcement presence.	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence.	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage.

Fresno River ERMA

PHYSICAL – LAND and FACILITIES: character of the natural landscape

	Primitive		Backcountry	Middle Country	Front Country	Rural	Urban
	Pristine	Transition					
Mapped: Remoteness	More than 10 miles from any motorized route	More than 3 miles from any motorized route.	More than ½ mile from any kind of motorized route/use area, but not as distant as 3 miles	On or near motorized routes, but at least ½ mile from all improved roads, though they may be in sight.	On or near improved gravel roads, but at least ½ mile from highways.	On or near paved primary highways, but still within a rural area.	Municipal streets and roads within towns or cities.
Illustrated in Matrix: Naturalness	Undisturbed natural landscape.		Natural appearing landscape, having modifications not readily noticeable.	Natural appearing landscape, except for obvious motorized routes.	Landscape partially modified by roads/trails, utility lines, etc., but none overpower natural landscape features.	Natural landscape substantially modified by agriculture or industrial development.	Urbanized developments dominate landscape.
Illustrated in Matrix: Visitor Facilities	None.		Some primitive trails made of native materials, such as log bridges and carved wooden signs.	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets.	Improved yet modest, rustic facilities, such as campsites, restrooms, trails, and interpretive signs.	Modern facilities, such as campgrounds, group shelters, boat launches, and occasional exhibits.	Elaborate full-service facilities, such as laundry, restaurants, and groceries.

SOCIAL – VISITOR USE and USERS: character of recreation-tourism use

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Contacts with other groups	Fewer than 3 encounters a day at campsites and fewer than 6 encounters a day on travel routes.	3-6 encounters a day off travel routes (e.g., campsites) and 7-15 encounters a day on travel routes.	7-14 encounters a day off travel routes (e.g., staging areas) and 15-29 encounters a day en route.	15-29 encounters a day off travel routes (e.g., campgrounds) and 30 or more encounters a day en route.	People seem to be generally everywhere.	Busy place with other people constantly in view.
Illustrated in Matrix: Group Size (other than you own)	Fewer than or equal to 3 people per group.	4-6 people per group.	7-12 people per group.	13-25 people per group.	26-50 people per group.	Greater than 50 people per group.
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OPERATIONAL – ADMINISTRATION and SERVICES: character of how Public Land Managers, Cooperative Agencies and Local Businesses Care for the Area and Serve Visitors

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Mechanized Use	None whatsoever.	Mountain bikes and perhaps other mechanized use, but all are nonmotorized.	Four-wheel-drives, all-terrain vehicles, dirt bikes, or snowmobiles, in addition to nonmotorized mechanized use.	Two-wheel-drive vehicles predominant, but also four-wheel-drives and nonmotorized mechanized use.	Ordinary highway auto and truck traffic is characteristic.	Wide variety of street vehicles, and highway traffic is ever-present.
Illustrated in Matrix: Visitor Services	None is available on-site.	Basic maps, but area personnel seldom available to provide on-site assistance.	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance.	Information materials describe recreation areas and activities. Area personnel are periodically available.	Information described to the left, plus experience and benefit descriptions. Area personnel do on-site education.	Information described to the left, plus regularly scheduled on-site outdoor skills demonstrations and clinics.
Illustrated in Matrix: Management Controls	No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have backcountry use restrictions. Enforcement presence rare.	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence.	Rules clearly posted, with some seasonal or day-of-week use restrictions. Periodic enforcement presence.	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence.	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage.

North Fork ERMA

PHYSICAL – LAND and FACILITIES: character of the natural landscape

	Primitive		Backcountry	Middle Country	Front Country	Rural	Urban
	Pristine	Transition					
Mapped: Remoteness	More than 10 miles from any motorized route.	More than 3 miles from any motorized route.	More than ½ mile from any kind of motorized route/use area, but not as distant as 3 miles	On or near motorized routes, but at least ½ mile from all improved roads, though they may be in sight.	On or near improved gravel roads, but at least ½ mile from highways.	On or near paved primary highways, but still within a rural area.	Municipal streets and roads within towns or cities.
Illustrated in Matrix: Naturalness	Undisturbed natural landscape.		Natural appearing landscape, having modifications not readily noticeable.	Natural appearing landscape, except for obvious motorized routes.	Landscape partially modified by roads/trails, utility lines, etc., but none overpower natural landscape features.	Natural landscape substantially modified by agriculture or industrial development.	Urbanized developments dominate landscape.
Illustrated in Matrix: Visitor Facilities	None.		Some primitive trails made of native materials, such as log bridges and carved wooden signs.	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets.	Improved yet modest, rustic facilities, such as campsites, restrooms, trails, and interpretive signs.	Modern facilities, such as campgrounds, group shelters, boat launches, and occasional exhibits.	Elaborate full-service facilities, such as laundry, restaurants, and groceries.

SOCIAL – VISITOR USE and USERS: character of recreation-tourism use

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Contacts with other groups	Fewer than 3 encounters a day at campsites and fewer than 6 encounters a day on travel routes.	3-6 encounters a day off travel routes (e.g., campsites) and 7-15 encounters a day on travel routes.	7-14 encounters a day off travel routes (e.g., staging areas) and 15-29 encounters a day en route	15-29 encounters a day off travel routes (e.g., campgrounds) and 30 or more encounters a day en route.	People seem to be generally everywhere.	Busy place with other people constantly in view.
Illustrated in Matrix: Group Size (other than you own)	Fewer than or equal to 3 people per group.	4-6 people per group.	7-12 people per group	13-25 people per group.	26-50 people per group.	Greater than 50 people per group.
Illustrated in Matrix: Evidence of Use	No alteration of the natural terrain. Footprints only observed. Sounds of people rare.	Areas of alteration uncommon. Little surface vegetation wear observed. Sounds of people infrequent.	Small areas of alteration. Surface vegetation showing wear, with some bare soils. Sounds of people occasionally heard.	Small areas of alteration prevalent. Surface vegetation gone, with compacted soils observed. Sounds of people regularly heard.	A few large areas of alteration. Surface vegetation absent, with hardened soils. Sounds of people frequently heard.	Large areas of alteration prevalent. Some erosion. Constantly hear people.

OPERATIONAL – ADMINISTRATION and SERVICES: character of how Public Land Managers, Cooperative Agencies and Local Businesses Care for the Area and Serve Visitors

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Mechanized Use	None whatsoever.	Mountain bikes and perhaps other mechanized use, but all are nonmotorized.	Four-wheel-drives, all-terrain vehicles, dirt bikes, or snowmobiles, in addition to nonmotorized mechanized use.	Two-wheel-drive vehicles predominant, but also four-wheel-drives and nonmotorized mechanized use.	Ordinary highway auto and truck traffic is characteristic.	Wide variety of street vehicles, and highway traffic is ever-present.
Illustrated in [illegible]: Visitor Services	None is available on-site.	Basic maps, but area personnel seldom available to provide on-site assistance.	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance.	Information materials describe recreation areas and activities. Area personnel are periodically available.	Information described to the left, plus experience and benefit descriptions. Area personnel do on-site education.	Information described to the left, plus regularly scheduled on-site outdoor skills demonstrations and clinics.
Illustrated in [illegible]: Management Controls	No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have backcountry use restrictions. Enforcement presence rare.	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence.	Rules clearly posted, with some seasonal or day-of-week use restrictions. Periodic enforcement presence.	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence.	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage.

Chimney Peak SRMA – Byway RMZ

PHYSICAL – LAND and FACILITIES: character of the natural landscape

		Primitive		*Backcountry*	*Middle Country*	*Front Country*	*Rural*	*Urban*
		Pristine	*Transition*					
Mapped	**Remoteness**	More than 10 miles from any motorized route	More than 3 miles from any motorized route.	More than ½ mile from any kind of motorized route/use area, but not as distant as 3 miles.	On or near motorized routes, but at least ½ mile from all improved roads, though they may be in sight.	On or near improved gravel roads, but at least ½ mile from highways.	On or near paved primary highways, but still within a rural area.	Municipal streets and roads within towns or cities.
Illustrated in Matrix	**Naturalness**	Undisturbed natural landscape.		Natural appearing landscape, having modifications not readily noticeable.	Natural appearing landscape, except for obvious motorized routes.	Landscape partially modified by roads/trails, utility lines, etc., but none overpower natural landscape features.	Natural landscape substantially modified by agriculture or industrial development.	Urbanized developments dominate landscape.
	Visitor Facilities	None.		Some primitive trails made of native materials, such as log bridges and carved wooden signs.	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets.	Improved yet modest, rustic facilities, such as campsites, restrooms, trails, and interpretive signs.	Modern facilities, such as campgrounds, group shelters, boat launches, and occasional exhibits.	Elaborate full-service facilities, such as laundry, restaurants, and groceries.

SOCIAL – VISITOR USE and USERS: character of recreation-tourism use

		Primitive	*Backcountry*	*Middle Country*	*Front Country*	*Rural*	*Urban*
Mapped	**Contacts with other groups**	Fewer than 3 encounters a day at campsites and fewer than 6 encounters a day on travel routes.	3-6 encounters a day off travel routes (e.g., campsites) and 7-15 encounters a day on travel routes.	7-14 encounters a day off travel routes (e.g., staging areas) and 15-29 encounters a day en route.	15-29 encounters a day off travel routes (e.g., campgrounds) and 30 or more encounters a day en route.	People seem to be generally everywhere.	Busy place, with other people constantly in view.
Illustrated in Matrix	**Group Size (other than you own)**	Fewer than or equal to 3 people per group.	4-6 people per group.	7-12 people per group.	13-25 people per group.	26-50 people per group.	Greater than 50 people per group.
	Evidence of Use	No alteration of the natural terrain. Footprints only observed. Sounds of people rare.	Areas of alteration uncommon. Little surface vegetation wear observed. Sounds of people infrequent.	Small areas of alteration. Surface vegetation showing wear, with some bare soils. Sounds of people occasionally heard.	Small areas of alteration prevalent. Surface vegetation gone with compacted soils observed. Sounds of people regularly heard.	A few large areas of alteration. Surface vegetation absent, with hardened soils. Sounds of people frequently heard.	Large areas of alteration prevalent. Some erosion. Constantly hear people.

OPERATIONAL – ADMINISTRATION and SERVICES: character of how Public Land Managers, Cooperative Agencies and Local Businesses Care for the Area and Serve Visitors

		Primitive	*Backcountry*	*Middle Country*	*Front Country*	*Rural*	*Urban*
Mapped	**Mechanized Use**	None whatsoever.	Mountain bikes and perhaps other mechanized use, but all are nonmotorized.	Four-wheel-drives, all-terrain vehicles, dirt bikes, or snowmobiles, in addition to nonmotorized mechanized use.	Two-wheel-drive vehicles predominant, but also four-wheel-drives and nonmotorized mechanized use.	Ordinary highway auto and truck traffic is characteristic.	Wide variety of street vehicles, and highway traffic is ever-present.
Illustrated in	**Visitor Services**	None is available on-site.	Basic maps, but area personnel seldom available to provide on-site assistance.	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance.	Information materials describe recreation areas and activities. Area personnel are periodically available.	Information described to the left, plus experience and benefit descriptions. Area personnel do on-site education.	Information described to the left, plus regularly scheduled on-site outdoor skills demonstrations and clinics.
	Management Controls	No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have backcountry use restrictions. Enforcement presence rare.	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence.	Rules clearly posted, with some seasonal or day-of-week use restrictions. Periodic enforcement presence.	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence.	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage.

Chimney Peak SRMA – PCNST RMZ

PHYSICAL – LAND and FACILITIES: character of the natural landscape

	Primitive		Backcountry	Middle Country	Front Country	Rural	Urban
	Pristine	Transition					
Mapped: Remoteness	More than 10 miles from any motorized route.	More than 3 miles from any motorized route.	More than ½ mile from any kind of motorized route/use area, but not as distant as 3 miles	On or near motorized routes, but at least ½ mile from all improved roads, though they may be in sight.	On or near improved gravel roads, but at least ½ mile from highways.	On or near paved primary highways, but still within a rural area.	Municipal streets and roads within towns or cities.
Illustrated in Matrix: Naturalness	Undisturbed natural landscape.		Natural appearing landscape, having modifications not readily noticeable.	Natural appearing landscape, except for obvious motorized routes.	Landscape partially modified by roads/trails, utility lines, etc., but none overpower natural landscape features.	Natural landscape substantially modified by agriculture or industrial development.	Urbanized developments dominate landscape.
Illustrated in Matrix: Visitor Facilities	None.		Some primitive trails made of native materials, such as log bridges and carved wooden signs.	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets.	Improved yet modest, rustic facilities, such as campsites, restrooms, trails, and interpretive signs.	Modern facilities, such as campgrounds, group shelters, boat launches, and occasional exhibits.	Elaborate full-service facilities, such as laundry, restaurants, and groceries.

SOCIAL – VISITOR USE and USERS: character of recreation-tourism use

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Contacts with other groups	Fewer than 3 encounters a day at campsites and fewer than 6 encounters a day on travel routes.	3-6 encounters a day off travel routes (e.g., campsites) and 7-15 encounters a day on travel routes.	7-14 encounters a day off travel routes (e.g., staging areas) and 15-29 encounters a day en route	15-29 encounters a day off travel routes (e.g., campgrounds) and 30 or more encounters a day en route.	People seem to be generally everywhere.	Busy place with other people constantly in view.
Illustrated in Matrix: Group Size (other than you own)	Fewer than or equal to 3 people per group.	4-6 people per group.	7-12 people per group.	13-25 people per group.	26-50 people per group.	Greater than 50 people per group.
Illustrated in Matrix: Evidence of Use	No alteration of the natural terrain. Footprints only observed. Sounds of people rare.	Areas of alteration uncommon. Little surface vegetation wear observed. Sounds of people infrequent.	Small areas of alteration. Surface vegetation showing wear, with some bare soils. Sounds of people occasionally heard.	Small areas of alteration prevalent. Surface vegetation gone with compacted soils observed. Sounds of people regularly heard.	A few large areas of alteration. Surface vegetation absent, with hardened soils. Sounds of people frequently heard.	Large areas of alteration prevalent. Some erosion. Constantly hear people.

OPERATIONAL – ADMINISTRATION and SERVICES: character of how Public Land Managers, Cooperative Agencies and Local Businesses Care for the Area and Serve Visitors

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Mechanized Use	None whatsoever.	Mountain bikes and perhaps other mechanized use, but all are nonmotorized.	Four-wheel-drives, all-terrain vehicles, dirt bikes, or snowmobiles, in addition to nonmotorized mechanized use.	Two-wheel-drive vehicles predominant, but also four-wheel-drives and nonmotorized mechanized use.	Ordinary highway auto and truck traffic is characteristic.	Wide variety of street vehicles, and highway traffic is ever-present.
Illustrated in [illegible]: Visitor Services	None is available on-site.	Basic maps, but area personnel seldom available to provide on-site assistance.	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance.	Information materials describe recreation areas and activities. Area personnel are periodically available.	Information described to the left, plus experience and benefit descriptions. Area personnel do on-site education.	Information described to the left, plus regularly scheduled on-site outdoor skills demonstrations and clinics.
Management Controls	No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have backcountry use restrictions. Enforcement presence rare.	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence.	Rules clearly posted, with some seasonal or day-of-week use restrictions. Periodic enforcement presence.	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence.	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage.

Chimney Peak SRMA – Wilderness RMZ

PHYSICAL – LAND and FACILITIES: character of the natural landscape

	Primitive: Pristine	Primitive: Transition	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Remoteness	More than 10 miles from any motorized route.	More than 3 miles from any motorized route.	More than ½ mile from any kind of motorized route/use area, but not as distant as 3 miles.	On or near motorized routes, but at least ½ mile from all improved roads, though they may be in sight.	On or near improved gravel roads, but at least ½ mile from highways.	On or near paved primary highways, but still within a rural area.	Municipal streets and roads within towns or cities.
Illustrated in Matrix: Naturalness	Undisturbed natural landscape.		Natural appearing landscape, having modifications not readily noticeable.	Natural appearing landscape, except for obvious motorized routes.	Landscape partially modified by roads/trails, utility lines, etc., but none overpower natural landscape features.	Natural landscape substantially modified by agriculture or industrial development.	Urbanized developments dominate landscape.
Illustrated in Matrix: Visitor Facilities	None.		Some primitive trails made of native materials, such as log bridges and carved wooden signs.	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets.	Improved yet modest, rustic facilities, such as campsites, restrooms, trails, and interpretive signs.	Modern facilities, such as campgrounds, group shelters, boat launches, and occasional exhibits.	Elaborate full-service facilities, such as laundry, restaurants, and groceries.

SOCIAL – VISITOR USE and USERS: character of recreation-tourism use

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Contacts with other groups	Fewer than 3 encounters a day at campsites and fewer than 6 encounters a day on travel routes.	3-6 encounters a day off travel routes (e.g., campsites) and 7-15 encounters a day on travel routes.	7-14 encounters a day off travel routes (e.g., staging areas) and 15-29 encounters a day en route.	15-29 encounters a day off travel routes (e.g., campgrounds) and 30 or more encounters a day en route.	People seem to be generally everywhere.	Busy place with other people constantly in view.
Illustrated in Matrix: Group Size (other than you own)	Fewer than or equal to 3 people per group.	4-6 people per group.	7-12 people per group.	13-25 people per group.	26-50 people per group.	Greater than 50 people per group.
Illustrated in Matrix: Evidence of Use	No alteration of the natural terrain. Footprints only observed. Sounds of people rare.	Areas of alteration uncommon. Little surface vegetation wear observed. Sounds of people infrequent.	Small areas of alteration. Surface vegetation showing wear, with some bare soils. Sounds of people occasionally heard.	Small areas of alteration prevalent. Surface vegetation gone with compacted soils observed. Sounds of people regularly heard.	A few large areas of alteration. Surface vegetation absent, with hardened soils. Sounds of people frequently heard.	Large areas of alteration prevalent. Some erosion. Constantly hear people.

OPERATIONAL – ADMINISTRATION and SERVICES: character of how Public Land Managers, Cooperative Agencies and Local Businesses Care for the Area and Serve Visitors

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Mechanized Use	None whatsoever.	Mountain bikes and perhaps other mechanized use, but all are nonmotorized.	Four-wheel-drives, all-terrain vehicles, dirt bikes, or snowmobiles, in addition to nonmotorized mechanized use.	Two-wheel-drive vehicles predominant, but also four-wheel-drives and nonmotorized mechanized use.	Ordinary highway auto and truck traffic is characteristic.	Wide variety of street vehicles, and highway traffic is ever-present.
Illustrated in Matrix: Visitor Services	None is available on-site.	Basic maps, but area personnel seldom available to provide on-site assistance.	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance.	Information materials describe recreation areas and activities. Area personnel are periodically available.	Information described to the left, plus experience and benefit descriptions. Area personnel do on-site education.	Information described to the left, plus regularly scheduled on-site outdoor skills demonstrations and clinics.
Illustrated in Matrix: Management Controls	No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have backcountry use restrictions. Enforcement presence rare.	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence.	Rules clearly posted, with some seasonal or day-of-week use restrictions. Periodic enforcement presence.	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence.	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage.

Keyesville SRMA – French Gulch RMZ

PHYSICAL – LAND and FACILITIES: character of the natural landscape

	Primitive (Pristine)	Primitive (Transition)	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Remoteness	More than 10 miles from any motorized route	More than 3 miles from any motorized route.	More than ½ mile from any kind of motorized route/use area, but not as distant as 3 miles	On or near motorized routes, but at least ½ mile from all improved roads, though they may be in sight.	On or near improved gravel roads, but at least ½ mile from highways.	On or near paved primary highways, but still within a rural area.	Municipal streets and roads within towns or cities.
Illustrated in Matrix: Naturalness	Undisturbed natural landscape.		Natural appearing landscape, having modifications not readily noticeable.	Natural appearing landscape, except for obvious motorized routes.	Landscape partially modified by roads/trails, utility lines, etc., but none overpower natural landscape features.	Natural landscape substantially modified by agriculture or industrial development.	Urbanized developments dominate landscape.
Illustrated in Matrix: Visitor Facilities	None.		Some primitive trails made of native materials, such as log bridges and carved wooden signs.	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets.	Improved yet modest, rustic facilities, such as campsites, restrooms, trails, and interpretive signs.	Modern facilities, such as campgrounds, group shelters, boat launches, and occasional exhibits.	Elaborate full-service facilities, such as laundry, restaurants, and groceries.

SOCIAL – VISITOR USE and USERS: character of recreation-tourism use

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Contacts with other groups	Fewer than 3 encounters a day at campsites and fewer than 6 encounters a day on travel routes.	3-6 encounters a day off travel routes (e.g., campsites) and 7-15 encounters a day on travel routes.	7-14 encounters a day off travel routes (e.g., staging areas) and 15-29 encounters a day en route.	15-29 encounters a day off travel routes (e.g., campgrounds) and 30 or more encounters a day en route.	People seem to be generally everywhere.	Busy place with other people constantly in view.
Illustrated in Matrix: Group Size (other than you own)	Fewer than or equal to 3 people per group.	4-6 people per group.	7-12 people per group.	13-25 people per group.	26-50 people per group.	Greater than 50 people per group.
Illustrated in Matrix: Evidence of Use	No alteration of the natural terrain. Footprints only observed. Sounds of people rare.	Areas of alteration uncommon. Little surface vegetation wear observed. Sounds of people infrequent.	Small areas of alteration. Surface vegetation showing wear, with some bare soils. Sounds of people occasionally heard.	Small areas of alteration prevalent. Surface vegetation gone with compacted soils observed. Sounds of people regularly heard.	A few large areas of alteration. Surface vegetation absent, with hardened soils. Sounds of people frequently heard.	Large areas of alteration prevalent. Some erosion. Constantly hear people.

OPERATIONAL – ADMINISTRATION and SERVICES: character of how Public Land Managers, Cooperative Agencies and Local Businesses Care for the Area and Serve Visitors

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Mechanized Use	None whatsoever.	Mountain bikes and perhaps other mechanized use, but all are nonmotorized.	Four-wheel-drives, all-terrain vehicles, dirt bikes, or snowmobiles, in addition to nonmotorized mechanized use.	Two-wheel-drive vehicles predominant, but also four-wheel-drives and nonmotorized mechanized use.	Ordinary highway auto and truck traffic is characteristic.	Wide variety of street vehicles, and highway traffic is ever-present.
Illustrated in Matrix: Visitor Services	None is available on-site.	Basic maps, but area personnel seldom available to provide on-site assistance.	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance.	Information materials describe recreation areas and activities. Area personnel are periodically available.	Information described to the left, plus experience and benefit descriptions. Area personnel do on-site education.	Information described to the left, plus regularly scheduled on-site outdoor skills demonstrations and clinics.
Illustrated in Matrix: Management Controls	No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have backcountry use restrictions. Enforcement presence rare.	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence.	Rules clearly posted, with some seasonal or day-of-week use restrictions. Periodic enforcement presence.	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence.	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage.

Keyesville SRMA – Gold Fever RMZ

PHYSICAL – LAND and FACILITIES: character of the natural landscape

	Primitive: Pristine	Primitive: Transition	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Remoteness	More than 10 miles from any motorized route.	More than 3 miles from any motorized route.	More than ½ mile from any kind of motorized route/use area, but not as distant as 3 miles.	On or near motorized routes, but at least ½ mile from all improved roads, though they may be in sight.	On or near improved gravel roads, but at least ½ mile from highways.	On or near paved primary highways, but still within a rural area.	Municipal streets and roads within towns or cities.
Illustrated in Matrix: Naturalness	Undisturbed natural landscape.		Natural appearing landscape, having modifications not readily noticeable.	Natural appearing landscape, except for obvious motorized routes.	Landscape partially modified by roads/trails, utility lines, etc., but none overpower natural landscape features.	Natural landscape substantially modified by agriculture or industrial development.	Urbanized developments dominate landscape.
Illustrated in Matrix: Visitor Facilities	None.		Some primitive trails made of native materials, such as log bridges and carved wooden signs.	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets.	Improved yet modest, rustic facilities, such as campsites, restrooms, trails, and interpretive signs.	Modern facilities, such as campgrounds, group shelters, boat launches, and occasional exhibits.	Elaborate full-service facilities, such as laundry, restaurants, and groceries.

SOCIAL – VISITOR USE and USERS: character of recreation-tourism use

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Contacts with other groups	Fewer than 3 encounters a day at campsites and fewer than 6 encounters a day on travel routes.	3-6 encounters a day off travel routes (e.g., campsites) and 7-15 encounters a day on travel routes.	7-14 encounters a day off travel routes (e.g., staging areas) and 15-29 encounters a day en route	15-29 encounters a day off travel routes (e.g., campgrounds) and 30 or more encounters a day en route.	People seem to be generally everywhere.	Busy place with other people constantly in view.
Illustrated in Matrix: Group Size (other than you own)	Fewer than or equal to 3 people per group.	4-6 people per group.	7-12 people per group	13-25 people per group.	26-50 people per group.	Greater than 50 people per group.
Illustrated in Matrix: Evidence of Use	No alteration of the natural terrain. Footprints only observed. Sounds of people rare.	Areas of alteration uncommon. Little surface vegetation wear observed. Sounds of people infrequent.	Small areas of alteration. Surface vegetation showing wear ,with some bare soils. Sounds of people occasionally heard.	Small areas of alteration prevalent. Surface vegetation gone, with compacted soils observed. Sounds of people regularly heard.	A few large areas of alteration. Surface vegetation absent, with hardened soils. Sounds of people frequently heard.	Large areas of alteration prevalent. Some erosion. Constantly hear people.

OPERATIONAL – ADMINISTRATION and SERVICES: character of how Public Land Managers, Cooperative Agencies and Local Businesses Care for the Area and Serve Visitors

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Mechanized Use	None whatsoever.	Mountain bikes and perhaps other mechanized use, but all are nonmotorized.	Four-wheel-drives, all-terrain vehicles, dirt bikes, or snowmobiles, in addition to nonmotorized mechanized use.	Two-wheel-drive vehicles predominant, but also four-wheel-drives and nonmotorized mechanized use.	Ordinary highway auto and truck traffic is characteristic.	Wide variety of street vehicles, and highway traffic is ever-present.
Illustrated in Matrix: Visitor Services	None is available on-site.	Basic maps, but area personnel seldom available to provide on-site assistance.	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance.	Information materials describe recreation areas and activities. Area personnel are periodically available.	Information described to the left, plus experience and benefit descriptions. Area personnel do on-site education.	Information described to the left, plus regularly scheduled on-site outdoor skills demonstrations and clinics.
Illustrated in Matrix: Management Controls	No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have backcountry use restrictions. Enforcement presence rare.	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence.	Rules clearly posted, with some seasonal or day-of-week use restrictions. Periodic enforcement presence.	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence.	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage.

Keyesville SRMA – The Dam RMZ

PHYSICAL – LAND and FACILITIES: character of the natural landscape

	Primitive: Pristine	Primitive: Transition	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped **Remoteness**	More than 10 miles from any motorized route.	More than 3 miles from any motorized route.	More than ½ mile from any kind of motorized route/use area, but not as distant as 3 miles.	On or near motorized routes, but at least ½ mile from all improved roads, though they may be in sight.	On or near improved gravel roads, but at least ½ mile from highways.	On or near paved primary highways, but still within a rural area.	Municipal streets and roads within towns or cities.
Illustrated in Matrix **Naturalness**	Undisturbed natural landscape.		Natural appearing landscape, having modifications not readily noticeable.	Natural appearing landscape, except for obvious motorized routes.	Landscape partially modified by roads/trails, utility lines, etc., but none overpower natural landscape features.	Natural landscape substantially modified by agriculture or industrial development.	Urbanized developments dominate landscape.
Illustrated in Matrix **Visitor Facilities**	None.		Some primitive trails made of native materials, such as log bridges and carved wooden signs.	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets.	Improved yet modest, rustic facilities, such as campsites, restrooms, trails, and interpretive signs.	Modern facilities, such as campgrounds, group shelters, boat launches, and occasional exhibits.	Elaborate full-service facilities, such as laundry, restaurants, and groceries.

SOCIAL – VISITOR USE and USERS: character of recreation-tourism use

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped **Contacts with other groups**	Fewer than 3 encounters a day at campsites and fewer than 6 encounters a day on travel routes.	3-6 encounters a day off travel routes (e.g., campsites) and 7-15 encounters a day on travel routes.	7-14 encounters a day off travel routes (e.g., staging areas) and 15-29 encounters a day en route.	15-29 encounters a day off travel routes (e.g., campgrounds) and 30 or more encounters a day en route.	People seem to be generally everywhere.	Busy place, with other people constantly in view.
Illustrated in Matrix **Group Size (other than you own)**	Fewer than or equal to 3 people per group.	4-6 people per group.	7-12 people per group.	13-25 people per group.	26-50 people per group.	Greater than 50 people per group.
Illustrated in Matrix **Evidence of Use**	No alteration of the natural terrain. Footprints only observed. Sounds of people rare.	Areas of alteration uncommon. Little surface vegetation wear observed. Sounds of people infrequent.	Small areas of alteration. Surface vegetation showing wear, with some bare soils. Sounds of people occasionally heard.	Small areas of alteration prevalent. Surface vegetation gone, with compacted soils observed. Sounds of people regularly heard.	A few large areas of alteration. Surface vegetation absent, with hardened soils. Sounds of people frequently heard.	Large areas of alteration prevalent. Some erosion. Constantly hear people.

OPERATIONAL – ADMINISTRATION and SERVICES: character of how Public Land Managers, Cooperative Agencies and Local Businesses Care for the Area and Serve Visitors

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped **Mechanized Use**	None whatsoever.	Mountain bikes and perhaps other mechanized use, but all are nonmotorized.	Four-wheel-drives, all-terrain vehicles, dirt bikes, or snowmobiles, in addition to nonmotorized mechanized use.	Two-wheel-drive vehicles predominant, but also four-wheel-drives and nonmotorized mechanized use.	Ordinary highway auto and truck traffic is characteristic.	Wide variety of street vehicles, and highway traffic is ever-present.
Illustrated in **Visitor Services**	None is available on-site.	Basic maps, but area personnel seldom available to provide on-site assistance.	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance.	Information materials describe recreation areas and activities. Area personnel are periodically available.	Information described to the left, plus experience and benefit descriptions. Area personnel do on-site education.	Information described to the left, plus regularly scheduled on-site outdoor skills demonstrations and clinics.
Management Controls	No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have backcountry use restrictions. Enforcement presence rare.	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence.	Rules clearly posted, with some seasonal or day-of-week use restrictions. Periodic enforcement presence.	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence.	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage.

Keyesville SRMA – Wallow Rock RMZ

PHYSICAL – LAND and FACILITIES: character of the natural landscape

	Primitive: Pristine	Primitive: Transition	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped **Remoteness**	More than 10 miles from any motorized route	More than 3 miles from any motorized route.	More than ½ mile from any kind of motorized route/use area, but not as distant as 3 miles.	On or near motorized routes, but at least ½ mile from all improved roads, though they may be in sight.	On or near improved gravel roads, but at least ½ mile from highways.	On or near paved primary highways, but still within a rural area.	Municipal streets and roads within towns or cities.
Illustrated in Matrix **Naturalness**	Undisturbed natural landscape.		Natural appearing landscape, having modifications not readily noticeable.	Natural appearing landscape, except for obvious motorized routes.	Landscape partially modified by roads/trails, utility lines, etc., but none overpower natural landscape features.	Natural landscape substantially modified by agriculture or industrial development.	Urbanized developments dominate landscape.
Illustrated in Matrix **Visitor Facilities**	None.		Some primitive trails made of native materials, such as log bridges and carved wooden signs.	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets.	Improved yet modest, rustic facilities, such as campsites, restrooms, trails, and interpretive signs.	Modern facilities, such as campgrounds, group shelters, boat launches, and occasional exhibits.	Elaborate full-service facilities, such as laundry, restaurants, and groceries.

SOCIAL – VISITOR USE and USERS: character of recreation-tourism use

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped **Contacts with other groups**	Fewer than 3 encounters a day at campsites and fewer than 6 encounters a day on travel routes.	3-6 encounters a day off travel routes (e.g., campsites) and 7-15 encounters a day on travel routes.	7-14 encounters a day off travel routes (e.g., staging areas) and 15-29 encounters a day en route.	15-29 encounters a day off travel routes (e.g., campgrounds) and 30 or more encounters a day en route.	People seem to be generally everywhere.	Busy place with other people constantly in view.
Illustrated in Matrix **Group Size (other than you own)**	Fewer than or equal to 3 people per group.	4-6 people per group.	7-12 people per group.	13-25 people per group.	26-50 people per group.	Greater than 50 people per group.
Illustrated in Matrix **Evidence of Use**	No alteration of the natural terrain. Footprints only observed. Sounds of people rare.	Areas of alteration uncommon. Little surface vegetation wear observed. Sounds of people infrequent.	Small areas of alteration. Surface vegetation showing wear, with some bare soils. Sounds of people occasionally heard.	Small areas of alteration prevalent. Surface vegetation gone, with compacted soils observed. Sounds of people regularly heard.	A few large areas of alteration. Surface vegetation absent, with hardened soils. Sounds of people frequently heard.	Large areas of alteration prevalent. Some erosion. Constantly hear people.

OPERATIONAL – ADMINISTRATION and SERVICES: character of how Public Land Managers, Cooperative Agencies and Local Businesses Care for the Area and Serve Visitors

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped **Mechanized Use**	None whatsoever.	Mountain bikes and perhaps other mechanized use, but all are nonmotorized.	Four-wheel-drives, all-terrain vehicles, dirt bikes, or snowmobiles, in addition to nonmotorized mechanized use.	Two-wheel-drive vehicles predominant, but also four-wheel-drives and nonmotorized mechanized use.	Ordinary highway auto and truck traffic is characteristic.	Wide variety of street vehicles, and highway traffic is ever-present.
Illustrated in **Visitor Services**	None is available on-site.	Basic maps, but area personnel seldom available to provide on-site assistance.	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance.	Information materials describe recreation areas and activities. Area personnel are periodically available.	Information described to the left, plus experience and benefit descriptions. Area personnel do on-site education.	Information described to the left, plus regularly scheduled on-site outdoor skills demonstrations and clinics.
Management Controls	No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have backcountry use restrictions. Enforcement presence rare.	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence.	Rules clearly posted, with some seasonal or day-of-week use restrictions. Periodic enforcement presence.	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence.	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage.

San Joaquin River Gorge SRMA – Pa San RMZ

PHYSICAL – LAND and FACILITIES: character of the natural landscape

	Primitive		Backcountry	Middle Country	Front Country	Rural	Urban
	Pristine	Transition					
Mapped — Remoteness	More than 10 miles from any motorized route.	More than 3 miles from any motorized route.	More than ½ mile from any kind of motorized route/use area, but not as distant as 3 miles.	On or near motorized routes, but at least ½ mile from all improved roads, though they may be in sight.	On or near improved gravel roads, but at least ½ mile from highways.	On or near paved primary highways, but still within a rural area.	Municipal streets and roads within towns or cities.
Illustrated in Matrix — Naturalness	Undisturbed natural landscape.		Natural appearing landscape, having modifications not readily noticeable.	Natural appearing landscape, except for obvious motorized routes.	Landscape partially modified by roads/trails, utility lines, etc., but none overpower natural landscape features.	Natural landscape substantially modified by agriculture or industrial development.	Urbanized developments dominate landscape.
Illustrated in Matrix — Visitor Facilities	None.		Some primitive trails made of native materials, such as log bridges and carved wooden signs.	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets.	Improved yet modest, rustic facilities, such as campsites, restrooms, trails, and interpretive signs.	Modern facilities, such as campgrounds, group shelters, boat launches, and occasional exhibits.	Elaborate full-service facilities, such as laundry, restaurants, and groceries.

SOCIAL – VISITOR USE and USERS: character of recreation-tourism use

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped — Contacts with other groups	Fewer than 3 encounters a day at campsites and fewer than 6 encounters a day on travel routes.	3-6 encounters a day off travel routes (e.g., campsites) and 7-15 encounters a day on travel routes.	7-14 encounters a day off travel routes (e.g., staging areas) and 15-29 encounters a day en route.	15-29 encounters a day off travel routes (e.g., campgrounds) and 30 or more encounters a day en route.	People seem to be generally everywhere.	Busy place with other people constantly in view.
Illustrated in Matrix — Group Size (other than you own)	Fewer than or equal to 3 people per group.	4-6 people per group.	7-12 people per group.	13-25 people per group.	26-50 people per group.	Greater than 50 people per group.
Illustrated in Matrix — Evidence of Use	No alteration of the natural terrain. Footprints only observed. Sounds of people rare.	Areas of alteration uncommon. Little surface vegetation wear observed. Sounds of people infrequent.	Small areas of alteration. Surface vegetation showing wear, with some bare soils. Sounds of people occasionally heard.	Small areas of alteration prevalent. Surface vegetation gone, with compacted soils observed. Sounds of people regularly heard.	A few large areas of alteration. Surface vegetation absent, with hardened soils. Sounds of people frequently heard.	Large areas of alteration prevalent. Some erosion. Constantly hear people.

OPERATIONAL – ADMINISTRATION and SERVICES: character of how Public Land Managers, Cooperative Agencies and Local Businesses Care for the Area and Serve Visitors

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped — Mechanized Use	None whatsoever.	Mountain bikes and perhaps other mechanized use, but all are nonmotorized.	Four-wheel-drives, all-terrain vehicles, dirt bikes, or snowmobiles, in addition to nonmotorized mechanized use.	Two-wheel-drive vehicles predominant, but also four-wheel-drives and nonmotorized mechanized use.	Ordinary highway auto and truck traffic is characteristic.	Wide variety of street vehicles, and highway traffic is ever-present.
Illustrated in Matrix — Visitor Services	None is available on-site.	Basic maps, but area personnel seldom available to provide on-site assistance.	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance.	Information materials describe recreation areas and activities. Area personnel are periodically available.	Information described to the left, plus experience and benefit descriptions. Area personnel do on-site education.	Information described to the left, plus regularly scheduled on-site outdoor skills demonstrations and clinics.
Illustrated in Matrix — Management Controls	No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have backcountry use restrictions. Enforcement presence rare.	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence.	Rules clearly posted, with some seasonal or day-of-week use restrictions. Periodic enforcement presence.	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence.	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage.

San Joaquin River Gorge SRMA – Tahoot RMZ

PHYSICAL – LAND and FACILITIES: character of the natural landscape

	Primitive		Backcountry	Middle Country	Front Country	Rural	Urban
	Pristine	Transition					
Mapped: Remoteness	More than 10 miles from any motorized route.	More than 3 miles from any motorized route.	More than ½ mile from any kind of motorized route/use area, but not as distant as 3 miles.	On or near motorized routes, but at least ½ mile from all improved roads, though they may be in sight.	On or near improved gravel roads, but at least ½ mile from highways.	On or near paved primary highways, but still within a rural area.	Municipal streets and roads within towns or cities.
Illustrated in Matrix: Naturalness	Undisturbed natural landscape.		Natural appearing landscape, having modifications not readily noticeable.	Natural appearing landscape, except for obvious motorized routes.	Landscape partially modified by roads/trails, utility lines, etc., but none overpower natural landscape features.	Natural landscape substantially modified by agriculture or industrial development.	Urbanized developments dominate landscape.
Illustrated in Matrix: Visitor Facilities	None.		Some primitive trails made of native materials, such as log bridges and carved wooden signs.	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets.	Improved yet modest, rustic facilities, such as campsites, restrooms, trails, and interpretive signs.	Modern facilities, such as campgrounds, group shelters, boat launches, and occasional exhibits.	Elaborate full-service facilities, such as laundry, restaurants, and groceries.

SOCIAL – VISITOR USE and USERS: character of recreation-tourism use

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Contacts with other groups	Fewer than 3 encounters a day at campsites and fewer than 6 encounters a day on travel routes.	3-6 encounters a day off travel routes (e.g., campsites) and 7-15 encounters a day on travel routes.	7-14 encounters a day off travel routes (e.g., staging areas) and 15-29 encounters a day en route.	15-29 encounters a day off travel routes (e.g., campgrounds) and 30 or more encounters a day en route.	People seem to be generally everywhere.	Busy place with other people constantly in view.
Illustrated in Matrix: Group Size (other than you own)	Fewer than or equal to 3 people per group.	4-6 people per group.	7-12 people per group.	13-25 people per group.	26-50 people per group.	Greater than 50 people per group.
Illustrated in Matrix: Evidence of Use	No alteration of the natural terrain. Footprints only observed. Sounds of people rare.	Areas of alteration uncommon. Little surface vegetation wear observed. Sounds of people infrequent.	Small areas of alteration. Surface vegetation showing wear, with some bare soils. Sounds of people occasionally heard.	Small areas of alteration prevalent. Surface vegetation gone, with compacted soils observed. Sounds of people regularly heard.	A few large areas of alteration. Surface vegetation absent, with hardened soils. Sounds of people frequently heard.	Large areas of alteration prevalent. Some erosion. Constantly hear people.

OPERATIONAL – ADMINISTRATION and SERVICES: character of how Public Land Managers, Cooperative Agencies and Local Businesses Care for the Area and Serve Visitors

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Mechanized Use	None whatsoever.	Mountain bikes and perhaps other mechanized use, but all are nonmotorized.	Four-wheel-drives, all-terrain vehicles, dirt bikes, or snowmobiles, in addition to nonmotorized mechanized use.	Two-wheel-drive vehicles predominant, but also four-wheel-drives and nonmotorized mechanized use.	Ordinary highway auto and truck traffic is characteristic.	Wide variety of street vehicles, and highway traffic is ever-present.
Illustrated in Matrix: Visitor Services	None is available on-site.	Basic maps, but area personnel seldom available to provide on-site assistance	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance.	Information materials describe recreation areas and activities. Area personnel are periodically available.	Information described to the left, plus experience and benefit descriptions. Area personnel do on-site education.	Information described to the left, plus regularly scheduled on-site outdoor skills demonstrations and clinics.
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San Joaquin River Gorge SRMA – Wu Ki'Oh RMZ

PHYSICAL – LAND and FACILITIES: character of the natural landscape

	Primitive: Pristine	Primitive: Transition	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Remoteness	More than 10 miles from any motorized route.	More than 3 miles from any motorized route.	More than ½ mile from any kind of motorized route/use area, but not as distant as 3 miles.	On or near motorized routes, but at least ½ mile from all improved roads, though they may be in sight.	On or near improved gravel roads, but at least ½ mile from highways.	On or near paved primary highways, but still within a rural area.	Municipal streets and roads within towns or cities.
Illustrated in Matrix: Naturalness	Undisturbed natural landscape.		Natural appearing landscape, having modifications not readily noticeable.	Natural appearing landscape, except for obvious motorized routes.	Landscape partially modified by roads/trails, utility lines, etc., but none overpower natural landscape features.	Natural landscape substantially modified by agriculture or industrial development.	Urbanized developments dominate landscape.
Illustrated in Matrix: Visitor Facilities	None.		Some primitive trails made of native materials, such as log bridges and carved wooden signs.	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets.	Improved yet modest, rustic facilities, such as campsites, restrooms, trails, and interpretive signs.	Modern facilities, such as campgrounds, group shelters, boat launches, and occasional exhibits.	Elaborate full-service facilities, such as laundry, restaurants, and groceries.

SOCIAL – VISITOR USE and USERS: character of recreation-tourism use

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Contacts with other groups	Fewer than 3 encounters a day at campsites and fewer than 6 encounters a day on travel routes.	3-6 encounters a day off travel routes (e.g., campsites) and 7-15 encounters a day on travel routes.	7-14 encounters a day off travel routes (e.g., staging areas) and 15-29 encounters a day en route.	15-29 encounters a day off travel routes (e.g., campgrounds) and 30 or more encounters a day en route.	People seem to be generally everywhere.	Busy place with other people constantly in view.
Illustrated in Matrix: Group Size (other than you own)	Fewer than or equal to 3 people per group.	4-6 people per group.	7-12 people per group.	13-25 people per group.	26-50 people per group.	Greater than 50 people per group.
Illustrated in Matrix: Evidence of Use	No alteration of the natural terrain. Footprints only observed. Sounds of people rare.	Areas of alteration uncommon. Little surface vegetation wear observed. Sounds of people infrequent.	Small areas of alteration. Surface vegetation showing wear, with some bare soils. Sounds of people occasionally heard.	Small areas of alteration prevalent. Surface vegetation gone with compacted soils observed. Sounds of people regularly heard.	A few large areas of alteration. Surface vegetation absent, with hardened soils. Sounds of people frequently heard.	Large areas of alteration prevalent. Some erosion. Constantly hear people.

OPERATIONAL – ADMINISTRATION and SERVICES: character of how Public Land Managers, Cooperative Agencies and Local Businesses Care for the Area and Serve Visitors

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Mechanized Use	None whatsoever.	Mountain bikes and perhaps other mechanized use, but all are nonmotorized.	Four-wheel-drives, all-terrain vehicles, dirt bikes, or snowmobiles, in addition to nonmotorized mechanized use.	Two-wheel-drive vehicles predominant, but also four-wheel-drives and nonmotorized mechanized use.	Ordinary highway auto and truck traffic is characteristic.	Wide variety of street vehicles, and highway traffic is ever-present.
Illustrated in Matrix: Visitor Services	None is available on-site.	Basic maps, but area personnel seldom available to provide on-site assistance.	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance.	Information materials describe recreation areas and activities. Area personnel are periodically available.	Information described to the left, plus experience and benefit descriptions. Area personnel do on-site education.	Information described to the left, plus regularly scheduled on-site outdoor skills demonstrations and clinics.
Illustrated in Matrix: Management Controls	No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have backcountry use restrictions. Enforcement presence rare.	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence.	Rules clearly posted, with some seasonal or day-of-week use restrictions. Periodic enforcement presence.	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence.	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage.

Temblor SRMA – Temblor Range RMZ

PHYSICAL – LAND and FACILITIES: character of the natural landscape

	Primitive		Backcountry	Middle Country	Front Country	Rural	Urban
	Pristine	Transition					
Mapped: Remoteness	More than 10 miles from any motorized route.	More than 3 miles from any motorized route.	More than ½ mile from any kind of motorized route/use area, but not as distant as 3 miles.	On or near motorized routes, but at least ½ mile from all improved roads, though they may be in sight.	On or near improved gravel roads, but at least ½ mile from highways.	On or near paved primary highways, but still within a rural area.	Municipal streets and roads within towns or cities.
Illustrated in Matrix: Naturalness	Undisturbed natural landscape.		Natural appearing landscape, having modifications not readily noticeable.	Natural appearing landscape, except for obvious motorized routes.	Landscape partially modified by roads/trails, utility lines, etc., but none overpower natural landscape features.	Natural landscape substantially modified by agriculture or industrial development.	Urbanized developments dominate landscape.
Illustrated in Matrix: Visitor Facilities	None.		Some primitive trails made of native materials, such as log bridges and carved wooden signs.	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets.	Improved yet modest, rustic facilities, such as campsites, restrooms, trails, and interpretive signs.	Modern facilities, such as campgrounds, group shelters, boat launches, and occasional exhibits.	Elaborate full-service facilities, such as laundry, restaurants, and groceries.

SOCIAL – VISITOR USE and USERS: character of recreation-tourism use

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Contacts with other groups	Fewer than 3 encounters a day at campsites and fewer than 6 encounters a day on travel routes.	3-6 encounters a day off travel routes (e.g., campsites) and 7-15 encounters a day on travel routes.	7-14 encounters a day off travel routes (e.g., staging areas) and 15-29 encounters a day en route	15-29 encounters a day off travel routes (e.g., campgrounds) and 30 or more encounters a day en route.	People seem to be generally everywhere.	Busy place with other people constantly in view.
Illustrated in Matrix: Group Size (other than you own)	Fewer than or equal to 3 people per group.	4-6 people per group.	7-12 people per group	13-25 people per group.	26-50 people per group.	Greater than 50 people per group.
Illustrated in Matrix: Evidence of Use	No alteration of the natural terrain. Footprints only observed. Sounds of people rare.	Areas of alteration uncommon. Little surface vegetation wear observed. Sounds of people infrequent.	Small areas of alteration. Surface vegetation showing wear, with some bare soils. Sounds of people occasionally heard.	Small areas of alteration prevalent. Surface vegetation gone with compacted soils observed. Sounds of people regularly heard.	A few large areas of alteration. Surface vegetation absent, with hardened soils. Sounds of people frequently heard.	Large areas of alteration prevalent. Some erosion. Constantly hear people.

OPERATIONAL – ADMINISTRATION and SERVICES: character of how Public Land Managers, Cooperative Agencies and Local Businesses Care for the Area and Serve Visitors

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Mechanized Use	None whatsoever.	Mountain bikes and perhaps other mechanized use, but all is nonmotorized.	Four-wheel-drives, all-terrain vehicles, dirt bikes, or snowmobiles, in addition to nonmotorized mechanized use.	Two-wheel-drive vehicles predominant, but also four-wheel-drives and nonmotorized mechanized use.	Ordinary highway auto and truck traffic is characteristic.	Wide variety of street vehicles, and highway traffic is ever-present.
Illustrated in [illegible]: Visitor Services	None is available on-site.	Basic maps, but area personnel seldom available to provide on-site assistance.	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance.	Information materials describe recreation areas and activities. Area personnel are periodically available.	Information described to the left, plus experience and benefit descriptions. Area personnel do on-site education.	Information described to the left, plus regularly scheduled on-site outdoor skills demonstrations and clinics.
Management Controls	No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have backcountry use restrictions. Enforcement presence rare.	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence.	Rules clearly posted, with some seasonal or day-of-week use restrictions. Periodic enforcement presence.	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence.	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage.

Temblor SRMA – Urban Interface RMZ

PHYSICAL – LAND and FACILITIES: character of the natural landscape

	Primitive (Pristine)	Primitive (Transition)	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Remoteness	More than 10 miles from any motorized route.	More than 3 miles from any motorized route.	More than ½ mile from any kind of motorized route/use area, but not as distant as 3 miles.	On or near motorized routes, but at least ½ mile from all improved roads, though they may be in sight.	On or near improved gravel roads, but at least ½ mile from highways.	On or near paved primary highways, but still within a rural area.	Municipal streets and roads within towns or cities.
Illustrated in Matrix: Naturalness	Undisturbed natural landscape.		Natural appearing landscape, having modifications not readily noticeable.	Natural appearing landscape, except for obvious motorized routes.	Landscape partially modified by roads/trails, utility lines, etc., but none overpower natural landscape features.	Natural landscape substantially modified by agriculture or industrial development.	Urbanized developments dominate landscape.
Illustrated in Matrix: Visitor Facilities	None.		Some primitive trails made of native materials, such as log bridges and carved wooden signs.	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets.	Improved yet modest, rustic facilities, such as campsites, restrooms, trails, and interpretive signs.	Modern facilities, such as campgrounds, group shelters, boat launches, and occasional exhibits.	Elaborate full-service facilities, such as laundry, restaurants, and groceries.

SOCIAL – VISITOR USE and USERS: character of recreation-tourism use

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Contacts with other groups	Fewer than 3 encounters a day at campsites and fewer than 6 encounters a day on travel routes.	3-6 encounters a day off travel routes (e.g., campsites) and 7-15 encounters a day on travel routes.	7-14 encounters a day off travel routes (e.g., staging areas) and 15-29 encounters a day en route	15-29 encounters a day off travel routes (e.g., campgrounds) and 30 or more encounters a day en route.	People seem to be generally everywhere.	Busy place with other people constantly in view.
Illustrated in Matrix: Group Size (other than you own)	Fewer than or equal to 3 people per group.	4-6 people per group.	7-12 people per group	13-25 people per group.	26-50 people per group.	Greater than 50 people per group.
Illustrated in Matrix: Evidence of Use	No alteration of the natural terrain. Footprints only observed. Sounds of people rare.	Areas of alteration uncommon. Little surface vegetation wear observed. Sounds of people infrequent.	Small areas of alteration. Surface vegetation showing wear, with some bare soils. Sounds of people occasionally heard.	Small areas of alteration prevalent. Surface vegetation gone with compacted soils observed. Sounds of people regularly heard.	A few large areas of alteration. Surface vegetation absent, with hardened soils. Sounds of people frequently heard.	Large areas of alteration prevalent. Some erosion. Constantly hear people.

OPERATIONAL – ADMINISTRATION and SERVICES: character of how Public Land Managers, Cooperative Agencies and Local Businesses Care for the Area and Serve Visitors

	Primitive	Backcountry	Middle Country	Front Country	Rural	Urban
Mapped: Mechanized Use	None whatsoever.	Mountain bikes and perhaps other mechanized use, but all is nonmotorized.	Four-wheel-drives, all-terrain vehicles, dirt bikes, or snowmobiles, in addition to nonmotorized mechanized use.	Two-wheel-drive vehicles predominant, but also four-wheel-drives and nonmotorized mechanized use.	Ordinary highway auto and truck traffic is characteristic.	Wide variety of street vehicles, and highway traffic is ever-present.
Illustrated in Matrix: Visitor Services	None is available on-site.	Basic maps, but area personnel seldom available to provide on-site assistance.	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance.	Information materials describe recreation areas and activities. Area personnel are periodically available.	Information described to the left, plus experience and benefit descriptions. Area personnel do on-site education.	Information described to the left, plus regularly scheduled on-site outdoor skills demonstrations and clinics.
Illustrated in Matrix: Management Controls	No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have backcountry use restrictions. Enforcement presence rare.	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence.	Rules clearly posted, with some seasonal or day-of-week use restrictions. Periodic enforcement presence.	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence.	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage.

H.4 RMZ Management Framework

Creating a management framework for each RMZ is part of the Land Use Planning level decision that initially identifies the SRMA. The RMZ management framework is a combination of allocation decisions bringing together the previously identified setting prescriptions with the management objectives and actions needed to achieve them. Specifically for each RMZ the following decisions are made:

Niche—This refers to the niche market of the SRMA which the RMZ will primarily serve. It is a specifically focused and targetable subset of the overall demographic that utilizes an area and is drawn by the SRMA market. As such, it can be through of as a narrowly defined group of potential customers.

Recreation Management Objectives—This are the specific opportunities available (or to be provided by) an RMZ and the outcomes to be attended. They can be described as activities, experiences and benefits.

Recreation Setting Character Conditions—These are the prescribed/desired recreation resource settings, from the NRRSM.

Recreation Management, Marketing, Monitoring and Administrative Support Action—These are the actions that steer the activity level planning and implementation within each of the RMZs to achieve the niche, management objectives and desired settings. At the land use planning level, these generally pertain to achieving specific objectives or present a broad strategy, for which further planning is required.

Although the presence or absence of SRMAs and their associated RMZs varies by alternative, the niche, recreation management objectives and desired recreation setting character conditions are invariable. The specific management, marketing, monitoring, and administrative support actions for SRMAs occurring within more than one alternative does change, but for ease of understanding, only the primary actions are presented below.

SRMA Name: Chimney Peak **RMZ Name:** Byway

RMZ Market Segment (Niche)		
Unique driving experience between designated Wilderness areas.		
Recreation Management Objective		
Manage this zone to provide opportunities for visitors to engage in targeted activities and gain knowledge and appreciation of the byway theme though interpretation. Reduce impacts on natural and cultural resources and protect recreational opportunities from potentially conflicting uses. Increase developments and signing to enhance the targeted activities.		
Targeted Opportunities and Outcomes		
Activities	**Experiences**	**Benefits**
Driving for Pleasure Wildlife Viewing Scenic Appreciation	Enjoying closeness of family and friends Learning more about the things that are there Enjoy having easy access to natural landscapes	***Personal:*** Improved outdoor knowledge and self-confidence; enhanced awareness and understanding of nature ***Community:*** Heightened sense of satisfaction with the community ***Economic:*** More positive contributions to local and regional economies; increased local tourism revenues ***Environmental:*** Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails

Prescribed Setting Character Conditions					
Physical		**Social**		**Operational**	
Remoteness:	Middle Country	***Contacts:***	Backcountry	***Access:***	Middle Country
Naturalness:	Middle Country	***Group Size:***	Backcountry	***Visitor Services:***	Backcountry
Facilities:	Middle Country	***Evidence of Use:***	Backcountry	***Mgmt. Controls:***	Backcountry

Implementation (Activity) Planning Framework	
Management	Maintain and improve campgrounds at Chimney Creek, Long Valley Loop and Walker Pass. Continue to establish nonmechanized trails to connect to and from the PCNST RMZ.
Marketing	Establish a program of interpretive materials along the Chimney Peak Backcountry Byway. Market the Chimney Peak Backcountry Byway on BKFO materials.
Monitoring	-
Administration	Establish amenity fees for camping at developed campgrounds within the RMZ Manage as VRM Class II.

SRMA Name: Chimney Peak **RMZ Name:** PCNST

RMZ Market Segment (Niche)		
Exploration of extensive National Scenic Trail along the Pacific Rim.		
Recreation Management Objective		
Manage this zone to provide world class opportunities for visitors to find solitude, engage in unconfined recreation, and experience personal challenge and reflection on the Pacific Crest National Scenic Trail		
Targeted Opportunities and Outcomes		
Activities	**Experiences**	**Benefits**
Destination Hiking Horseback Riding/Packing Primitive Camping	Developing skills and abilities Enjoying the esteem of others Testing personal endurance Gaining a greater sense of self-confidence Telling others about the trip	***Personal:*** Improved mental well being; greater self-reliance; improved skills for outdoor enjoyment; a spiritual connection to the world ***Community:*** Heightened sense of satisfaction with the community ***Economic:*** More positive contributions to local and regional economies; increased local tourism revenues ***Environmental:*** Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails

Prescribed Setting Character Conditions					
Physical		**Social**		**Operational**	
Remoteness:	Backcountry	***Contacts:***	Backcountry	***Access:***	Primitive
Naturalness:	Backcountry	***Group Size:***	Backcountry	***Visitor Services:***	Backcountry
Facilities:	Backcountry	***Evidence of Use:***	Backcountry	***Mgmt. Controls:***	Backcountry

Implementation (Activity) Planning Framework	
Management	Continue to establish connecting trails from and to the PCNST. Improve the PCNST trailhead at Walker Pass.
Marketing	Make additional PCNST and Wilderness information available on kiosks at PCNST trailheads.
Monitoring	Continue use of Volunteers for trail monitoring.
Administration	Manage as VRM Class I

SRMA Name: Chimney Peak **RMZ Name:** Wilderness

RMZ Market Segment (Niche)		
Unconfined primitive recreation within several designated Wilderness areas.		
Recreation Management Objective		
Manage this zone to provide opportunities for visitors to find solitude, engage in unconfined recreation, and experience personal challenge and reflection. Preserve the primitive opportunities and wilderness characteristics in this zone.		
Targeted Opportunities and Outcomes		
Activities	**Experiences**	**Benefits**
Hiking Horseback Riding Primitive Camping	Gaining a greater sense of self-confidence Testing personal endurance Savoring the total sensory experience (sight sound, and smell) of a natural landscape Feeling good about solitude, being isolated and independent Enjoying an escape from crowds of people Nurturing personal spiritual values and growth	***Personal:*** A more holistic sense of wellness; a greater sensitivity to awareness of outdoor aesthetics, nature's art and elegance; greater self-reliance; a closer relationship with the natural world ***Community:*** Greater freedom from urban living ***Economic:*** More positive contributions to local and regional economies; increased local tourism revenues ***Environmental:*** Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails

Prescribed Setting Character Conditions					
Physical		**Social**		**Operational**	
Remoteness:	Backcountry	***Contacts:***	Primitive	***Access:***	Primitive
Naturalness:	Primitive	***Group Size:***	Backcountry	***Visitor Services:***	Primitive
Facilities:	Primitive	***Evidence of Use:***	primitive	***Mgmt. Controls:***	Primitive

Implementation (Activity) Planning Framework	
Management	Manage as congressionally designated Wilderness area.
Marketing	Wilderness information available at Kiosks in other RMZs.
Monitoring	Implement Wilderness Character Monitoring.
Administration	Manage as VRM Class I.

SRMA Name: Keyesville **RMZ Name:** French Gulch

RMZ Market Segment (Niche)		
Extensive trail systems for multiple users of varying experience levels.		
Recreation Management Objective		
Manage to provide opportunities for visitors to engage in dispersed camping and OHV recreation. The zone will also serve as a staging area for long-range OHV touring of both BLM and US Forest Service lands.		
Targeted Opportunities and Outcomes		
Activities	**Experiences**	**Benefits**
Cultural Discovery Prospecting OHV Trail Riding Horseback Riding	Developing skills and abilities Testing personal endurance Gaining a greater sense of self-confidence Telling others about the trip Enjoying risk-taking adventure Discussing equipment with others	***Personal:*** Improved mental well being; greater self-reliance; improved skills for outdoor enjoyment ***Community:*** Heightened sense of satisfaction with the community ***Economic:*** Improved local economic stability; maintenance of community's distinctive recreation tourism market ***Environmental:*** Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails

Prescribed Setting Character Conditions					
Physical		**Social**		**Operational**	
Remoteness:	Middle Country	***Contacts:***	Middle Country	***Access:***	Middle Country
Naturalness:	Middle Country	***Group Size:***	Backcountry	***Visitor Services:***	Middle Country
Facilities:	Middle Country	***Evidence of Use:***	Front Country	***Mgmt. Controls:***	Middle Country

Implementation (Activity) Planning Framework	
Management	Manage in coordination with adjacent National Forest. Work with user groups and partners to create a versatile trail system supporting a variety of uses, skill levels and experiences.
Marketing	Establish collaborative partnerships with local interest groups. Promote volunteerism/friends group for the area. Install information and interpretive kiosks at key locations within the RMZ. Disseminate information brochures.
Monitoring	-
Administration	Manage as VRM Class III. Support programs and events though issuance of SRPs.

SRMA Name: Keyesville **RMZ Name:** Gold Fever

RMZ Market Segment (Niche)		
Interpretation of gold mining history and historical resources.		
Recreation Management Objective		
Manage this zone to provide opportunities for visitors to engage in personal and guided (interpreted) discovery of the historical significance of the area. Manage this zone to provide opportunities for community residents and regional, national, and international visitors who use the area for sustainable day use and camping, OHV touring opportunities, opportunities to learn about historical mining, and to gain appreciation of the natural setting of the greater Keyesville region through self-discovery.		
Targeted Opportunities and Outcomes		
Activities	**Experiences**	**Benefits**
Cultural Interpretation Historical Appreciation Hiking OHV Trail Riding Prospecting	Savoring the total sensory experience of a natural landscape Escaping everyday responsibilities for awhile Feeling good about the way shared cultural heritage is being protected Learning about things here Just knowing this attraction is in or near the community	***Personal:*** Greater respect for shared cultural heritage; closer relationship with the natural world ***Community:*** Greater understanding of the community's cultural identity; greater community involvement in recreation and other land use decisions ***Economic:*** Improved local economic stability; maintenance of community's distinctive recreation tourism market ***Environmental:*** Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails

Prescribed Setting Character Conditions					
Physical		**Social**		**Operational**	
Remoteness:	Front Country	***Contacts:***	Front Country	***Access:***	Front Country
Naturalness:	Front Country	***Group Size:***	Middle Country	***Visitor Services:***	Rural
Facilities:	Front Country	***Evidence of Use:***	Front Country	***Mgmt. Controls:***	Middle Country

Implementation (Activity) Planning Framework	
Management	Stabilize and maintain historic buildings and facilities to support public use. Use the Walker Cabin site as a visitor contact station from which it initiate interpretive programs.
Marketing	Establish collaborative partnerships with local interest groups. Promote volunteerism/friends group for the area. Install information and interpretive kiosks at key locations within the RMZ. Disseminate information brochures.

SRMA Name: Keyesville **RMZ Name:** Gold Fever

	Establish interpretative programs highlighting mining history of the area.
Monitoring	-
Administration	Manage as VRM Class III. Support programs and events though issuance of SRPs. Proposed for the withdrawal from mining laws. Close to mineral material disposal and soil mineral leasing. Incorporate withdrawn areas into a recreation mining area. Manage recreational mining through a permit system (including nominal fee). Close the RMZ to the discharge of firearms.

SRMA Name: Keyesville **RMZ Name:** The Dam

RMZ Market Segment (Niche)					
River access for commercial and causal white-water kayaking and rafting.					
Recreation Management Objective					
Manage this RMZ in coordination with the US Forest Service with cooperation from local permitted outfitters and guides to provide opportunities to access the Lower Kern River for high-adventure activities whilst promoting visitor health and safety.					
Targeted Opportunities and Outcomes					
Activities		**Experiences**		**Benefits**	
White-Water Rafting White-Water Kayaking Water Play		High Adventure/Adrenaline Rush Personal Challenge Self Discovery Appreciation for the power of the natural world.		***Personal:*** Increase self-respect; sense of achievement ***Community:*** Bonding through shared experiences ***Economic:*** Increased draw to destination; promotion of local business (outfitters); improved local economic stability; maintenance of community's distinctive recreation tourism market ***Environmental:*** Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails	
Prescribed Setting Character Conditions					
Physical		**Social**		**Operational**	
Remoteness:	Front Country	***Contacts:***	Front Country	***Access:***	Front Country
Naturalness:	Front Country	***Group Size:***	Rural	***Visitor Services:***	Front Country
Facilities:	Rural	***Evidence of Use:***	Front Country	***Mgmt. Controls:***	Front Country

Implementation (Activity) Planning Framework	
Management	Improve existing raft launch facilities. Designate Granite Launch for authorized use only.
Marketing	Establish collaborative partnerships with local interest groups. Promote volunteerism/friends group for the area. Install information and interpretive kiosks at key locations within the RMZ. Disseminate information brochures.
Monitoring	-
Administration	Manage as VRM Class III. Support programs and events though issuance of SRPs. Manage SRPs for River access in coordination with the US Forest Service. Proposed for the withdrawal from mining laws. Close to mineral material disposal and soil mineral leasing. Manage recreational mining through a permit system (including nominal fee). Close the RMZ to the discharge of firearms. Restrict motorized access to street-legal vehicles only. Impose day use only restrictions and prohibit campfires.

SRMA Name: Keyesville **RMZ Name:** Wallow Rock

RMZ Market Segment (Niche)		
Structured developed camping with easy access to the river.		
Recreation Management Objective		
Manage to provide visitors with access to a wide variety of recreational opportunities in the area and enjoy camping in a developed setting, specifically tailored to larger group camping experiences.		
Targeted Opportunities and Outcomes		
Activities	**Experiences**	**Benefits**
Camping Group Camping	Enjoying the closeness of friends and family Relishing group affiliation and togetherness Enjoying meeting new people with similar interests Increased independence/autonomy	***Personal:*** Stronger ties with family and friends; restore mind from unwanted stress ***Community:*** Greater interaction with visitors from different cultures ***Economic:*** Improved local economic stability; maintenance of community's distinctive recreation tourism market ***Environmental:*** Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails

Prescribed Setting Character Conditions					
Physical		**Social**		**Operational**	
Remoteness:	Rural	***Contacts:***	Rural	***Access:***	Front Country
Naturalness:	Front Country	***Group Size:***	Front Country	***Visitor Services:***	Rural
Facilities:	Rural	***Evidence of Use:***	Rural	***Mgmt. Controls:***	Rural

Implementation (Activity) Planning Framework	
Management	Developed designated individual and group campsites, including creating camping pads. Provide extensive visitor services, including trash, toilets. Redesign and engineer access road to eliminate steep grade and reduce erosion.
Marketing	Establish collaborative partnerships with local interest groups. Promote volunteerism/friends group for the area. Install information and interpretive kiosks at key locations within the RMZ. Disseminate information brochures.
Monitoring	Establish Campground host program
Administration	Manage as VRM Class IV. Proposed for the withdrawal from mining laws. Close to mineral material disposal and soil mineral leasing.

SRMA Name: Keyesville	**RMZ Name:** Wallow Rock
	Close the RMZ to the discharge of firearms. Establish fees for use of camping facilities. Enforce a leash law for all pets.

SRMA Name: San Joaquin River Gorge **RMZ Name:** Pa San

RMZ Market Segment (Niche)		
Semiprimitive directed nonmotorized trail use in a natural scenic setting.		
Recreation Management Objective		
Manage this RMZ to provide opportunities for visitors to engage in a remote isolated recreational experience. Manage this RMZ to provide opportunities for community residents and regional visitors who use the area seasonally to engage in sustainable, primarily primitive day-use opportunities and gain appreciation of the natural setting of the San Joaquin River corridor though self-discovery and exploration.		
Targeted Opportunities and Outcomes		
Activities	**Experiences**	**Benefits**
Hiking Mountain Biking Horseback Riding	Developing skills and abilities Testing personal endurance Savoring the total sensory experience of a natural landscape Escaping everyday responsibilities for awhile	***Personal:*** Greater self-reliance; improved skills for outdoor enjoyment; closer relationship with the natural world ***Community:*** Greater freedom from urban living ***Economic:*** More positive contributions to local and regional economies ***Environmental:*** Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails

Prescribed Setting Character Conditions					
Physical		**Social**		**Operational**	
Remoteness:	Backcountry	***Contacts:***	Middle Country	***Access:***	Backcountry
Naturalness:	Backcountry	***Group Size:***	Middle Country	***Visitor Services:***	Middle Country
Facilities:	Backcountry	***Evidence of Use:***	Middle Country	***Mgmt. Controls:***	Middle Country

Implementation (Activity) Planning Framework	
Management	Maintain and improve network for recreation facilities, including trails and campgrounds. Install signage to reduce user conflict and conflict with adjacent landowners.
Marketing	-
Monitoring	-
Administration	Manage as VRM Class I

SRMA Name: San Joaquin River Gorge **RMZ Name:** Tahoot

RMZ Market Segment (Niche)		
Interpretation and education programs for regional community.		
Recreation Management Objective		
Manage this zone to provide opportunities for community residents and visitors to engage in sustainable personal discovery, interpretive programs, and educational opportunities, while protecting critical resources.		
Targeted Opportunities and Outcomes		
Activities	**Experiences**	**Benefits**
Camping Group Camping Interpretation Environmental Education Hiking Horseback Riding Mountain Biking	Enjoying easy access to natural landscapes Enjoying access to hands-on environmental learning Enjoying needed physical exercise	***Personal:*** Better-informed and more responsible visitor; enhanced awareness and understanding of nature; increased appreciation of the area's cultural history ***Community:*** Greater community valuation of its ethnic diversity; greater protection of the area's historic and archaeological sites ***Economic:*** More positive contributions to local and regional economies ***Environmental:*** Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails

Prescribed Setting Character Conditions					
Physical		**Social**		**Operational**	
Remoteness:	Rural	***Contacts:***	Front Country	***Access:***	Front Country
Naturalness:	Front Country	***Group Size:***	Rural	***Visitor Services:***	Rural
Facilities:	Front Country	***Evidence of Use:***	Rural	***Mgmt. Controls:***	Rural

Implementation (Activity) Planning Framework	
Management	Maintain and improve network for recreation facilities, including trails and campgrounds. Install signage to reduce user conflict and conflict with adjacent landowners.
Marketing	Develop community collaboration and partnerships. Provide environmental education opportunities within outdoor classroom settings.
Monitoring	-
Administration	Manage as VRM Class IV. Establish fees for programs and use of facilities. Acquire lands that would facilitate management of the area.

SRMA Name: San Joaquin River Gorge **RMZ Name:** Wu Ki'Oh

RMZ Market Segment (Niche)		
Multiple river accesses for recreational experiences of varying complexity.		
Recreation Management Objective		
Manage this RMZ to provide opportunities for community residents and regional visitors to engage in sustainable, primarily primitive day-use opportunities and gain appreciation of the natural setting of the San Joaquin River though self-discovery and exploration		
Targeted Opportunities and Outcomes		
Activities	**Experiences**	**Benefits**
Fishing Water Play Gold Panning Kayaking	Developing skills and abilities Testing personal endurance Enjoying risk-taking adventure Savoring the total sensory experience of a natural landscape Escaping everyday responsibilities for awhile	***Personal:*** Greater self-reliance; improved skills for outdoor enjoyment; closer relationship with the natural world ***Community:*** Greater freedom from urban living ***Economic:*** More positive contributions to local and regional economies ***Environmental:*** Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails

Prescribed Setting Character Conditions					
Physical		**Social**		**Operational**	
Remoteness:	Front Country	***Contacts:***	Middle Country	***Access:***	Backcountry
Naturalness:	Backcountry	***Group Size:***	Middle Country	***Visitor Services:***	Front Country
Facilities:	Middle Country	***Evidence of Use:***	Middle Country	***Mgmt. Controls:***	Middle Country

Implementation (Activity) Planning Framework	
Management	Maintain and improve network for recreation facilities, including trails and campgrounds. Install signs to reduce user conflict and conflict with adjacent landowners.
Marketing	Develop community collaboration and partnerships. Provide environmental education opportunities within outdoor classroom settings.
Monitoring	-
Administration	Manage as VRM Class II. Establish Fees for programs and use of facilities. Acquire lands that would facilitate management of the area. Apply special rules to restrict prospecting activities to the least impacting.

SRMA Name: Temblor **RMZ Name:** Temblor Range

RMZ Market Segment (Niche)					
Motorized recreation on designated trails.					
Recreation Management Objective					
Manage to provide opportunities for visitors to engage in a remote isolated recreation experience with opportunities for community residents and visitors who use the area seasonally to engage in sustainable, primarily primitive opportunities and gain appreciation of the natural setting of the Temblor Mountain Range though self-discovery, and OHV touring on designated routes.					
Targeted Opportunities and Outcomes					
Activities		**Experiences**		**Benefits**	
OHV Trail Riding Driving for Pleasure Dispersed Camping Hunting/Target Shooting		Developing skills and abilities Testing personal endurance Enjoying risk-taking adventure Savoring the total sensory experience of a natural landscape Escaping everyday responsibilities for awhile		***Personal:*** Greater self-reliance; improved skills for outdoor enjoyment; Closer relationship with the natural world ***Community:*** Providing a place near but outside the community to recreate; removing unwanted use from industrial areas; addressing health and safety concerns ***Economic:*** Improved local economic stability; maintenance of community's distinctive recreation tourism market ***Environmental:*** Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails	
Prescribed Setting Character Conditions					
Physical		**Social**		**Operational**	
Remoteness:	Middle Country	***Contacts:***	Backcountry	***Access:***	Middle Country
Naturalness:	Middle Country	***Group Size:***	Backcountry	***Visitor Services:***	Backcountry
Facilities:	Backcountry	***Evidence of Use:***	Middle Country	***Mgmt. Controls:***	Middle Country
Implementation (Activity) Planning Framework					
Management	Develop high quality trail system, including maintenance of many existing trail and creating additional recreation trails.				
Marketing	Encourage strong stewardship ethic among users through dissemination of information via kiosks and brochures. Coordinate management with local communities and user groups. Establish a system of grading trail experience/difficulty.				
Monitoring	Encourage local volunteer groups to actively monitor trail network, use, and				

SRMA Name: Temblor **RMZ Name:** Temblor Range

	compliance.
Administration	Acquire public access.

SRMA Name: Temblor **RMZ Name:** Urban Interface

RMZ Market Segment (Niche)		
Immediate access for local communities to wild, open, unconfined space.		
Recreation Management Objective		
Manage this zone to provide opportunities for community residents and visitors who use the area seasonally to engage in sustainable urban access for primarily day-use opportunities and gain appreciation of the natural setting of the San Joaquin Valley though self-discovery and OHV touring on designated routes.		
Targeted Opportunities and Outcomes		
Activities	**Experiences**	**Benefits**
OHV Trail Riding Driving for Pleasure	Developing skills and abilities Testing personal endurance Enjoying risk-taking adventure Savoring the total sensory experience of a natural landscape Escaping everyday responsibilities for awhile	***Personal:*** Greater self-reliance; improved skills for outdoor enjoyment; closer relationship with the natural world ***Community:*** Providing a place near but outside the community to recreate; removing unwanted use from industrial areas; addressing health and safety concerns ***Economic:*** Improved local economic stability; maintenance of community's distinctive recreation tourism market ***Environmental:*** Increased awareness and protection of natural landscapes; reduced negative human impacts such as litter, vegetative trampling, and unplanned trails

Prescribed Setting Character Conditions					
Physical		**Social**		**Operational**	
Remoteness:	Front Country	***Contacts:***	Middle Country	***Access:***	Middle Country
Naturalness:	Front Country	***Group Size:***	Middle Country	***Visitor Services:***	Middle Country
Facilities:	Middle Country	***Evidence of Use:***	Front Country	***Mgmt. Controls:***	Front Country

Implementation (Activity) Planning Framework	
Management	Establish an OHV staging area (parking, loading/unloading ramps), restrooms. Develop high quality trail system, including maintenance of many existing trail and creating additional recreation trails.
Marketing	Encourage strong stewardship ethic among users, through dissemination of information via kiosks and brochures. Coordinate management with local communities and user groups. Establish a system of grading trail experience/difficulty.

SRMA Name: Temblor **RMZ Name:** Urban Interface

Monitoring	Encourage local volunteer groups to actively monitor trail network, use and compliance.
Administration	Acquire public access.

Appendix L

Best Management Practices/Standard Operating Procedures

Appendix L – Best Management Practices/Standard Operating Procedures

TABLE OF CONTENTS

L.1 Introduction

This appendix presents a sampling of best management practices (BMPs), standard operating procedures (SOPs), and other measures for minimizing environmental effects of various authorized activities on public lands. The authorized officer is not limited to the following, nor is there any commitment to use this specific wording presented here.

BMPs are dynamic, evolving through new understanding and developments in science and technology. They are selected and implemented as necessary, based on site-specific conditions, to meet resource objectives for specific management actions. New information and improving technologies will undoubtedly lead to the development of new or revised measures over time. New measures may be developed to address unforeseen impacts, as long as they comply with existing laws, polices, rights of the applicant, and this RMP.

Some of the SOPs are identified to ensure compliance with BLM authorization terms and conditions. Many of these measures have been implemented across the BLM as BMPs or have been developed as mitigation measures resulting from site-specific environmental analyses. Mitigation measures often become design features in subsequent proposed actions to avoid impacts and to implement environmentally compatible projects, and thus they become SOPs.

L.2 General

These measures will be applied to all BLM undertakings and authorizations:

- No construction or surface disturbing activities shall occur without prior written authorization of the authorized BLM officer.
- Surface disturbance will be minimized. Project applicants will be encouraged to utilize previously disturbed sites when feasible.
- Authorizations for new surface-disturbing activities will place priority on avoiding impacts to biological, cultural, and paleontological resources. Avoidance will employ measures such as relocation of project sites, modifying construction techniques, and altering project timing.
- Civil engineering studies or geotechnical studies may be required to determine feasibility prior to road or other construction. Construction in areas of extremely unstable bedrock formations and active landslides will not be permitted or would require special design criteria.
- Delineate work area boundaries with flagging, temporary fencing, or other marking to minimize surface disturbance or impacts on sensitive biological, cultural, or other important resources.
- When necessary to protect sensitive biological, cultural, or other important resources, monitoring by BLM approved biologists and archaeologists shall be required during construction activities.
- Avoid soil-disturbing activities during periods of runoff or when soils are wet and muddy, in order to minimize damage.

L.2 Air Quality

L.2.1 Roads

- Vehicle speed limits may be applied to reduce fugitive dust emissions from road use.
- Watering, graveling, paving, or the application of surfactant may be used to reduce fugitive dust from road use.

L.2.2 Oil and Gas Production

Air Quality BMPs reduce emissions of hazardous air pollutants (HAPs), criteria pollutants (PM_{10}, $PM_{2.5}$, carbon monoxide, sulfur dioxide, ozone, nitrogen oxides), volatile organic compounds (VOCs), which contribute to ozone formation, and greenhouse gases (GHGs). Combustion results in emissions of criteria pollutants, VOCs, GHGs, and HAPs, which come from vehicle tailpipe emissions, dehydrators, mobile and stationary engines, and flaring. Fugitive emissions of criteria pollutants, VOCs, GHGs, and HAPs are the result of equipment leaks, evaporation ponds and pits, condensate tanks, storage tanks, windblown dust (from vehicles and construction). Dehydrator vents result in emissions of GHG, VOCs, and HAPs.

- Projects and activities on BLM lands shall meet Federal, State, Regional Air Quality Control Boards, and other local emissions standards for air quality.
- Directionally drill multiple wells from a single pad, which results in minimizing roads, travel, dust, and vehicle emissions.
- Planned road systems result in less surface disturbance and save in construction and maintenance costs; fewer planned roads result in less area free of vegetation, which contributes to fugitive dust emissions.
- Apply water along roads, during trenching and earth-moving construction activities.
- Install vapor recovery units to reduce VOC emissions, which contribute to ozone formation.
- Reduce emissions from leaking gas on reciprocating compressor rod packing systems by replacing compressor packing rods at frequent intervals.
- Use solar power at tank setting or facility locations to reduce the number of vehicle trips and methane emissions from the use of pneumatic pumps.
- Replace high-bleed devices with low-bleed devices or retrofit bleed reduction kits on high-bleed devices. This reduces methane and VOCs from pneumatic devices (liquid level controllers, pressure regulators, and valve controllers).
- Use “green completions” to recover product, while reducing methane and VOC emissions that would otherwise result from venting or flaring during well completions.
- Vanpool to reduce the number of vehicles and associated combustion emissions.
- Use enclosed tanks instead of open pits to reduce fugitive VOC emissions.
- Use vapor recovery units on oil, condensate, and produced water storage tanks to reduce fugitive VOCs and recover BTU-rich vapors for sale or use on-site.
- Consider a BLM-approved dust suppressant to control fugitive dust emissions.

- Use cleaner diesel engine power (shift from Tier 1 to Tier 4) as manufacturers phase in newer engines between 2011 and 2014.
- To reduce NOx, SOx, CO, and CO_2, use controls for compressor engines, including closed loop engine control, controlled engines, selective catalytic reduction, system-installed power supply (solar or battery powered), and ultra-low sulfur diesel.
- Complete interim reclamation (post-drilling) and final reclamation of well sites and roadways during abandonment; recontour and revegetate unused or unnecessary areas to reduce fugitive dust emissions from bare or eroded soils and combustion emissions from vehicle travel.
- Reduce emissions that result from glycol over-circulation in glycol dehydrators by optimizing the circulation rate.
- Reduce GHG emissions (CH_4) by installing and using a flash tank separator to capture and recycle methane that flashes from rich glycol in an energy exchange pump.
- Reduce centrifugal wet seal compressor emissions from the seal oil degassing vent by replacing of wet seals with dry seals, which emit less methane and have lower power requirements.
- Install plunger lifts and smart automation systems, which monitor well production parameters to reduce methane emissions from well blowdowns.
- Reduce fugitive gas leaks by implementing a Directed Inspection and Maintenance program, which identifies and cost effectively fixes fugitive gas leaks using leak detection (infrared camera, organic vapor analyzer, soap solution, ultrasonic leak detectors) and measurement (calibrated bagging, rotameters, high volume samplers).

L.2.3 Prescribed Burning

Burn on permissive burn days and coordinate closely with applicable air pollution control district(s) to obtain necessary permits and authorizations prior to ignition.

Burn when weather conditions will provide good dispersion of emissions; utilize ignition techniques to encourage clean burns to reduce the amount of smoldering.

Utilize alternatives to burning, such as chipping or masticating, where applicable, to reduce smoke emissions.

Construct slash or brush piles using the following techniques to encourage a cleaner, hotter, and shorter burn that will minimize overall smoke production:

- Pile vegetation loosely to facilitate air movement between fuel pieces;
- Cover a portion of the pile to provide a dry ignition point following rain events;
- Minimize the amount of dirt in the pile;
- Ensure fuels are sufficiently dried; and
- Use proper lighting techniques when igniting the pile to encourage a clean burn.

Where possible, split larger burn units into several smaller blocks to have more control over the amount of area burned in one operational period to better control smoke production on marginal burn days.

L.2.4 Additional Information on BMPs for Air Quality

- BLM Washington Office BMP Web site: http://www.blm.gov/bmp
- EPA Natural Gas STAR Program: http://www.epa.gov/gasstar/tools/recommended.html
- California Air Resources Board Clearinghouse: http://www.arb.ca.gov/cc/non-co2-clearinghouse/non-co2-clearinghouse.htm
- Four Corners Air Quality Group: http://www.nmev.state.nm.us.aqb/4C/
- Intermountain BMP Web Site/Database: http://www.oilandgasbmps.org
- Fugitive Dust Control: http://www.arb.ca.gov/cap/handbooks/fugitivedust_large.pdf
- Forest Management Burning Handbook: http://www.arb.ca.gov/cap/handbooks/forestmngtburnlg.pdf
- Oil Field Production Handbook: http://www.arb.ca.gov/cap/handbooks/oilfieldproductionlarge.pdf
- Naturally Occurring Asbestos Control: http://www.arb.ca.gov/cap/handbooks/asbestosnoafinal.pdf

L.3 Biological Resources

The following measures are Standard Operating Procedures (SOP) typically applied to BLM undertakings or authorizations that are implemented to avoid or mitigate impacts to biological resources.

L.3.1 Biological Resource Protection

- No destruction, cutting, or clearing of trees or other vegetation shall occur without prior written approval from the authorized BLM officer.
- Biological surveys will be required prior to any disturbance, unless given project- specific, written clearance from BLM officers.
- Surveys will be conducted at the appropriate time of year to detect sensitive species and important biological resources.
- Surveys will comply with current BLM, USFWS, and CDFG protocols.
- If it has been longer than 30 days between the last biological survey and the proposed start of construction, BLM biologists may require additional surveys for sensitive species.
- All biological survey data and reports will be sent from the biologist conducting the survey directly to the BLM biology staff. All survey biologists are required to have an updated CV on file in the Bakersfield Field Office. Prior to undertaking a survey, BLM will certify that survey biologists have appropriate training, experience, and permits.
- Exploration, construction, and development activities may have seasonal restrictions imposed within a half- mile radius around raptor nest sites. Seasonal restrictions would allow for undisturbed courtship, nest building, incubation and fledging. This seasonal restriction could last as long as six months, depending upon species. Restrictions could be imposed around high-use areas during other seasons.
- Facilities and structures such as power lines, wind towers and turbines, solar arrays, and communication facilities will conform to BLM-, USFWS- and CDFG-approved wildlife protection

guidelines. Such guidelines include, flight diverters, night ambient lighting, tower beacon lights, wind tower design and avoidance measures, raptor protections for power poles, perimeter fencing, and vegetation management.

- Trenches and holes shall be provided with animal escape ramps and not be open longer than one week.
- Pipe ends three inches or greater will be covered.
- Power lines will be constructed to meet raptor protection protocols. Existing power lines will be modified to meet raptor protection protocols where electrocutions occur.
- All troughs shall have an escape ramp. Ensure that troughs allow wildlife access to water and that they are in good repair and function properly.
- Claim stakes made of pipe shall be two inches or less in diameter with sealed tops.
- Vehicles will remain on existing legal roads unless given specific written approval by the authorized BLM officer. Off-road travel will be discouraged.
- In appropriate sites, constraints will be placed on vehicle speeds to reduce potential for roadkill, to minimize dust, and to protect sensitive animals and habitats.

L.3.2 Wetland-Riparian Habitats

- Wetlands and riparian areas affected by livestock would be fenced or otherwise protected. Water diversions would divert the minimum volume necessary to maintain livestock or wildlife surface water. Float valves or other devices would be installed to control diversion. To protect riparian areas, water withdrawn for livestock would be piped as far as necessary or would be reconsidered on a case-by-case basis.
- Livestock water sources would be made available for wildlife year-round, as needed and to the greatest extent practicable.
- Stream crossings, if necessary, would be designed to minimize adverse impacts to soils, water quality, and riparian vegetation and provide for fish passage as appropriate.

L.3.3 Rehabilitation/ Restoration

- Disturbed sites will be restored to natural conditions using site-appropriate measures and timelines developed in consultation/coordination with BLM resource specialists. Restoration plans and requirements will be developed on a case-by-case basis and include post-project monitoring.
- All unnecessary roads, vehicle paths, and other disturbed areas will be restored to natural conditions.
- Match local genotypes, as close as practical, when choosing seeds and other materials for habitat restoration.
- Adjust grazing prescriptions or eliminate grazing following restoration if necessary to protect populations of vulnerable species and facilitate establishment of newly planted sites.

L.3.4 Threatened and Endangered, and Sensitive Species

Many measures to protect threatened and endangered and sensitive species have been developed as a result of formal consultations between the BLM and USFWS on a variety of BLM actions. The CDFG also has required many measures for projects complying with CESA, CEQA, and the Fully Protected Species Act. Once protection measures are identified in federal biological opinions or in CDFG permits, they generally become SOPs to obtain subsequent USFWS and CDFG permits. As additional measures are developed to minimize the adverse effects from future management activities, they are likely to become required actions in order to comply with ESA and CESA and thus would become additional SOPs.

Special status species survey, avoidance, take minimization, mitigation measures, compensation, and monitoring measures required in biological opinions (programmatic and site-specific) will be incorporated into project design, attached as conditions of approval, grant, or lease terms and conditions, or otherwise implemented in all BLM projects and authorizations that may affect listed species. These measures may change due to new information or USFWS and CDFG requirements. Current practices are found below.

General Guidelines for Conserving Habitat and Minimizing Project Impacts

- Habitat disturbance will be minimized and conducted in a manner that reduces, as much as possible, the potential for take of individuals of a listed species. Existing roads and routes of travel will be used, to the greatest extent practicable. Natural drainage patterns will be maintained to the greatest extent practicable.
- Avoid large draws and drainages with saltbush to the greatest extent practicable.
- The area of disturbance will be reduced to the smallest practical area, considering topography, placement of facilities, location of burrows, nesting sites or dens, public health and safety, and other limiting factors.
- Work area boundaries will be delineated with flagging, temporary fencing or other marking to minimize surface disturbance associated with vehicle straying.
- To the extent practicable, use previously disturbed areas to stockpile excavated materials, store equipment, dig slurry and borrow pits, locate trailers, park vehicles, and performing other surface-disturbing actions.
- All oil spills will be contained closest to the source site as possible. The USFWS will be notified within 48 hours of any oil spill.
- Project employees will be directed to exercise caution when commuting within listed species habitats. The speed limit on unpaved roads not maintained by the county shall be a maximum of 20 MPH, in order to minimize wildlife casualties.
- Cross-country travel by vehicles is prohibited, unless specifically authorized by BLM for the project. The use of all-terrain vehicles (ATVs) may be considered for projects that require cross-country travel (such as project survey staking, geophone placement and retrieval).
- Project employees will be provided with written guidance governing vehicle use restrictions, speed limits on unpaved roads, and fire prevention and hazards.

- A worker education program will be conducted for all employees working on the project sites in listed species habitats. The education program will include identification of listed species and their habitats, project mitigation measures and stipulations, reporting requirements, and penalties for failure of compliance.
- All spills of hazardous materials within endangered species habitats shall be cleaned up immediately.
- Unless specified for reducing impacts to blunt-nosed leopard lizards, actions during evening hours when some listed species are active and vulnerable to vehicle or equipment-induced injury or mortality will be minimized.
- Trash and food items will be contained in closed containers and removed daily.
- Firearms will be prohibited from project sites.
- Trenches or holes should have at least one escape ramp for each 1,000 feet of open trench. Escape ramps should be earthen and at a slope no steeper than 1:1. Trenches will be checked in the morning before beginning work and at the end of the work day. Any entrapped animals will be allowed to escape unharmed.
- Pets will not be permitted on construction project sites.
- Listed species shall be protected from the hazards posed by oil sumps. All hazardous exposed oil sumps shall be screened or eliminated (California Laws for Conservation of Oil and Gas 1995). All screening of sumps shall meet the following specifications: (1) be not greater than 2 inch nominal mesh, (2) be of sufficient strength to restrain entry of wildlife, and (3) be supported in such a manner so as to prevent contact with the sump fluid. Oil sumps shall be designed, constructed, and maintained as to not be a hazard to people, livestock, or wildlife, including birdlife. Oil sumps shall be filled with earth after removal of harmful materials (California Code of Regulations 1982).
- Biologists and law enforcement personnel from the California Department of Fish and Game and the USFWS shall be given complete access to the project area to review monitoring and mitigation activities.
- Project activities that are likely to cause the amount or extent of take to be exceeded shall cease immediately.
- The protective measures being implemented for listed species shall be extended to candidate and proposed species in the project area to the maximum extent practicable.
- Restoration will be required on unused portions of the project area, or oil and gas lease when deemed necessary by the BLM to maintain or improve habitat values. Restoration will be required when a project or lease is abandoned. The BLM will be contacted for specific restoration requirements upon project completion.

Disturbance Levels

- Surface disturbance on public lands in Reserves (Red Zones) will not exceed 10% of any 640-acre section, aliquot section, or aggregate of adjacent aliquot sections.
- Surface disturbance on public lands in Corridors (Green Zones) will not exceed 25% of any 640-acre section, aliquot section, or aggregate of adjacent aliquot sections.

Survey Requirements

- The Conserved Lands area of ecological importance (Reserves and Corridors) will be presumed to be occupied habitat for listed animal species. Wildlife surveys will determine listed species presence and/or important habitat features for listed species. Surveys will be conducted within 30 days prior to the onset of ground breaking actions and will include daytime line transect surveys which will be conducted by walking the project area and appropriate buffer at 30 to 90 feet intervals. Transect width will be adjusted based on vegetation height, topography, etc. Surveys will include areas of surface disturbance, appropriate buffers, access routes, and cross-country travel routes. Surveys will be designed to identify habitat features such as burrows, dens, and precincts, and not species presence or absence.
- If non-BLM lands are also involved in a project, an applicant may choose to comply with some other USFWS- and CDFG-approved program (such as the Metro Bakersfield HCP or the proposed Kern County Valley Floor HCP). If an alternative program were selected, the survey requirements for the alternative program may be substituted at the USFWS's and BLM's discretion.

  San Joaquin Kit Fox – Survey for natal, known, occupied, and potential dens in the project area and a 200-foot buffer.

  Blunt-Nosed Leopard Lizard – Survey for burrows that may be used by blunt-nosed leopard lizards in the area to be disturbed by the project and a 50-foot buffer.

  Giant Kangaroo Rat – Survey for precincts in the area to be disturbed by the project and a 50-foot buffer.

  Tipton Kangaroo Rat – Survey for burrows in the area to be disturbed by the project and a 50-foot buffer.

  Federal Proposed and Federal Candidate and State Listed Animal Species – Survey for important habitat features in the area to be disturbed by the project and a 50-foot buffer.

  Kern Mallow, California Jewelflower, and San Joaquin Woolly-Threads – Survey during the appropriate season in the area to be disturbed by the project and a 50-foot buffer. Conduct reconnaissance-level surveys to determine habitat suitability using meandering walk-over surveys. Conduct site-specific surveys in appropriate habitat by walking transacts with 50-foot spacing.

  At the discretion of an approved BLM botanist, existing information may be used to conclude that the site is not occupied and surveys are not required or that project impacts are acceptable without detailed surveys.

  Hoover's Woolly-Star – Survey for species in the area to be disturbed by the project and a 50-foot buffer, if season is appropriate. If season is inappropriate to detect species or skeletons, use surveys to evaluate potential of a site to support the species. Reconnaissance level surveys to determine habitat suitability will be conducted using meandering walk-over surveys. Site-specific surveys in appropriate habitat will be conducted by walking transects at 50-foot intervals.

At the discretion of an approved BLM botanist, existing information may be used to conclude that the site is not occupied and surveys are not required or that project impacts are acceptable without detailed surveys.

Bakersfield Cactus – Bakersfield cactus is known to occur on one section of split estate land within the Green Zone. Bakersfield cactus is not known to occur elsewhere in either the Red or Green Zone. Survey project sites in potential habitat using meandering walk-over surveys.

State-Listed and Federally Proposed and Candidate Plant Species – Survey in the area to be disturbed by the project and a 50-foot buffer, if season is appropriate. If extant populations or high potential habitat is known to occur in the project area, the BLM may require surveys during the appropriate season. At the USFWS/BLM's discretion, existing information may be used to conclude that the site is not occupied and surveys are not required.

Measures for Minimizing Take

San Joaquin Kit Fox

San Joaquin kit fox dens will be protected, to the maximum extent practicable. Known, occupied, and potential non-natal dens will be buffered by 100 feet. Unoccupied natal dens will be buffered by 200 feet to protect the physical den site. If an active natal den is encountered, the USFWS will be contacted immediately, before any action is taken.

The project construction area will be delineated with a temporary fence, flagging, or other barrier. Actions within the buffer zone shall be limited to vehicle and equipment operation on existing roads.

Non-fatal disturbance, such as above ground blasting, vibroseis, and shothole, shall not occur within 500 feet of an active San Joaquin kit fox natal den between November 1 and August 15 to reduce disruption of kit fox breeding.

Potential dens will be monitored and temporarily blocked. Den monitoring will follow the guidelines described below. In the event that a den is encountered that needs to be excavated, the following will apply:

Non-natal dens within a construction area may be carefully excavated at any time of the year by USFWS-approved biologists or under the supervision of a USFWS-approved biologist. Prior to the destruction of the den, the den will be monitored for at least three consecutive days to determine its current status. Activity at the den will be monitored by placing tracking medium at the entrance and by spotlighting. If no kit fox activity is observed during this period, the den will be destroyed immediately to preclude subsequent use. If kit fox activity is observed at the den during this period, the den will be monitored for at least five consecutive days from the time of observation to allow any resident animal to move to another den during its normal activities. Use of the den can be discouraged during this period by partially plugging the entrance(s) with soil in such a manner that any resident animal can escape easily. Destruction of the den may begin when, in the judgment of the USFWS-approved biologist, the animal has moved to a different den. If the animal is still present after five or more consecutive days of plugging and monitoring, the project biologist shall contact the BLM or the USFWS to obtain permission to excavate the den when it is temporarily vacant, for example, during the animal's normal foraging activities.

Destruction of the den will be accomplished by careful excavation until it is certain that no kit foxes are inside. The den will be fully excavated and then filled with dirt and compacted to ensure that kit foxes cannot reenter or use the den during the construction period. If, at any point during excavation a kit fox is discovered inside the den, the excavation activity will cease immediately and monitoring of the den will be resumed. The BLM and the USFWS will be notified immediately. Destruction of the den may be resumed, when in the judgment of the USFWS-approved biologist, the animal has escaped from the partially destroyed den.

If an unoccupied natal den cannot be avoided, the den will be carefully excavated by a USFWS-approved biologist with permission from the USFWS or the BLM. Excavation of unoccupied natal dens will be allowed only between August 15 and November 1.

Pipes and culverts will be searched for kit fox prior to being moved or sealed, to ensure that kit foxes are not being entrapped. Any kit fox found will be allowed to escape unimpeded. Pipes and culverts with a diameter greater than 4 inches will be capped or taped closed after searching them.

Occupied pipe dens will be protected to the maximum extent practicable. Pipe dens will be buffered to protect the physical den site and kit fox activity. Removal of pipe dens will follow the monitoring and plugging procedure described above for natural dens.

Blunt-Nosed Leopard Lizard

If a blunt-nosed leopard lizard is observed in the project area or along the access route BLM will be immediately contacted. BLM will provide additional measures that must be complied with to avoid impacts to blunt-nosed leopard lizards.

Avoid burrows that may be used by blunt-nosed leopard lizards, to the greatest extent practicable.

The biological monitor shall check the project area and access route daily during the blunt-nosed leopard lizard active season to determine the presence or absence of lizards in the work area. If blunt-nosed leopard lizards are observed in the project area or along the access route BLM will be immediately contacted. BLM will provide additional measures that must be complied with to avoid impacts to blunt-nosed leopard lizards. As part of the post-construction report, a map showing the location, date and time of the observation will be submitted.

If blunt-nosed leopard lizards are known or likely to occur in the general project area:

Avoid burrows that may be used by blunt-nosed leopard lizards.

Locations of activities with potential to collapse or block burrows (sleeper placement, stockpile, storage and parking areas, trenching) will be approved by the biological monitor.

The biological monitor may allow certain activities in burrow areas if, in his or her judgment, the combination of soil hardness and activity impact is not expected to collapse burrows. Activities authorized by the biological monitor in burrow areas will be documented and included in any report.

Roadway sections where blunt-nosed leopard lizards have been observed or are likely to occur should be clearly marked to prevent workers from driving off the road and over burrows. Barriers, such as fencing, may also be installed.

A brief description of measures taken to avoid burrow collapse will be included in any report, including the post-construction report.

In addition, for project activities that occur during the blunt-nosed leopard lizard active season (approximately April 15 to October 15) the following will apply:

- Notify the BLM that blunt-nosed leopard lizard active season measures are being implemented;
- When possible, conduct project activities at night or during blunt-nosed leopard lizard inactivity periods (generally when temperatures are below 77 degrees F and above 99 degrees F);
- All personnel will be advised to reduce speeds on sections of the access/egress route with potential to support blunt-nosed leopard lizards.
- All vehicle operators will check under vehicles and equipment prior to operation.
- Any trenches or pits will be inspected by the biological monitor in the morning, late afternoon, at the end of the work day and prior to backfilling to free any blunt-nosed leopard lizards that may become entrapped. Trenches or holes should have at least one escape ramp for each 1,000 feet of open trench. Escape ramps should be earthen and at a slope no steeper than 1:1.

A flashing barrier may be installed around the work area to prevent blunt-nosed leopard lizards from entering the work area. The flashing barrier will be constructed of 18-inch or wider flashing, buried 6-inches in depth and reinforced with rebar or fence posts. Silt fencing will be used to isolate areas inside the exclusion fence. If a blunt-nosed leopard lizard is subsequently found within the fenced area, the fence will be removed (in that area) and the lizard will be allowed to leave the exclusion zone. Surveys will continue until blunt-nosed leopard lizards are no longer observed inside the flashing barrier (i.e. no evidence for one to two weeks dependent upon the discretion of the biologist). Barrier installation should occur prior to emergence of blunt-nosed leopard lizards or by April 15. Locate flashing so that no burrows are destroyed and avoid burrows during barrier construction. Surveys will occur when temperatures are sufficient for leopard lizards to be above ground. The flashing barrier will remain in place until drilling and sump closure activities have been completed.

Burrows that cannot be avoided may be destroyed under the following circumstances:

- Burrows inside a barrier may be destroyed after the survey and monitoring requirements described above for flashing barriers has been met. Burrows should be carefully excavated under the supervision of a qualified biologist to verify that is it unoccupied and then destroyed.
- If any burrows are destroyed, the following information will be included in the post construction compliance report: the dimensions of the of the area impacted by burrow destruction/excavation; number of burrows destroyed/excavated; results of burrow excavation, including any observations of wildlife in excavated burrows; and any other information deemed useful by the consulting biologist.
- If a blunt-nosed leopard lizard were observed exiting a burrow, the burrow should be carefully excavated, under the supervision of a qualified biologist to verify that is it unoccupied and immediately destroyed.

The biological monitor shall check the project area and access route daily during the blunt-nosed leopard lizard active season to determine the presence or absence of lizards in the work area. If blunt-

nosed leopard lizards are observed in the project area or along the access route, the biological monitor will take action to avoid impacts on lizards.

If a blunt-nosed leopard lizard is observed at the project site or along the access/egress route, the biological monitor will notify the BLM of the actions being undertaken. Initial notification may be by phone message. Written documentation, including GPS coordinates of lizard observations, will be included in any reports. The post-construction report will include a map showing the location, date, and time of any blunt-nosed leopard lizard observations.

Roadway sections where blunt-nosed leopard lizards have been observed should be clearly marked to prevent workers from driving off the road into blunt-nosed leopard lizard habitat or over burrows. Barriers, such as fencing, may also be installed.

The biological monitor must be on-site during appropriate temperatures for blunt-nosed leopard lizard activity. The biological monitor will escort all traffic through any area where blunt-nosed leopard lizards have been observed. Biological monitors will complete daily compliance reports, which will be summarized and included in the weekly report sent to the BLM.

Large vehicles (tankers, water trucks, drilling rigs) must be escorted to and from the worksite by a biological monitor during appropriate temperatures for blunt-nosed leopard lizard activity.

The biological monitor will provide the BLM with a brief weekly report describing any actions taken to avoid blunt-nosed leopard lizard impacts. This report may be submitted by e-mail to the BLM.

All reports must be submitted by the biological monitor conducting the work in the field or be reviewed by the field biological monitor. Alternately, the original report prepared by the field biological monitor may be attached to the report.

When the biological monitor determines that temperature patterns at the project site no longer support blunt-nosed leopard lizard activity for the season and with receipt of the BLM's concurrence, these active season measures may be discontinued.

If blunt-nosed leopard lizards have been observed in the project area or along the access route, and operations and maintenance will continue into the next blunt-nosed leopard lizard active season, an operations and maintenance plan (O&M Plan) will be submitted to BLM. The O&M Plan will outline the practices and mitigation measures that will be implemented to avoid impacts on blunt-nosed leopard lizards.

Giant Kangaroo Rat and Tipton Kangaroo Rat

Avoid active precincts by a buffer of 50 feet. Actions within the buffer zone will be limited to vehicle and equipment operation on existing roads. Actions within buffer zones will be confined to daylight hours.

Annually, the USFWS will advise the BLM if applicants should be required to implement the following capture and release program:

- If active precincts cannot be avoided, the area will be trapped no greater than seven days before ground-disturbing activities for five consecutive nights. On the day following the fifth trap night, burrows will be carefully excavated. Captured animals will be marked and may be released into

enclosed artificial burrow systems outside the work area the following night. All work will be supervised by a USFWS-qualified biologist. At any time during the year, the USFWS and the BLM may adjust or decide to discontinue the capture and release program.

Kern Mallow, California Jewelflower, San Joaquin Woolly-Threads, and Hoover's Woolly-Star

Extant populations will be avoided, to the greatest extent practicable. The locations of listed plants will be avoided and temporarily fenced or prominently flagged to prevent inadvertent encroachment by vehicles and equipment during the activity. If California jewelflower populations and individuals are discovered in the Kern or Kings counties, they will be avoided by a 50-foot buffer.

If extant populations of Kern mallow, San Joaquin woolly-threads or Hoover's woolly-star cannot be avoided, surface disturbance should be scheduled after seed set and before germination. Collection of seed, with reseeding undertaken at the site following the activity, during seasonal time-frames and weather conditions favorable for germination and growth, may also be required. Topsoil may be stockpiled and replaced after project completion. Topsoil will not be required to be stockpiled for greater than one year.

Impacts on extant populations may be considered minimized when (a) the number of plants lost is cumulatively less than 3 percent of the impacted population and disturbance is temporary, or (b) the amount of habitat lost is less than 3 percent of the occupied habitat for the impacted population.

Plants that are considered waifs or incidental, biologically marginal occurrences due to their presence on chronically disturbed habitat and a small population size (less than 50 individuals) may be disturbed at the USFWS/BLM's discretion.

The following guidelines shall be used to determine thresholds for facilities operation and maintenance activities that are within the scope of certain programmatic biological opinions:

- Estimated loss of individuals of plants from project activities will amount to no more than 3 percent of the individuals of the impacted population;
- Estimated extent of habitat disturbance amounts to no more than 3 percent of the estimated acreage of occupied habitat for the impacted population;
- Formal consultation shall be reinitiated if chronic and cumulative habitat loss and disturbance adversely affects a population that does not qualify as a waif or an incidental, biologically marginal occurrence by virtue of its presence on chronically disturbed habitat or small population size (less than 50 individuals);
- Herbicide use will not be permitted within 300 feet of listed plant populations identified during pre-project surveys.

Kern Mallow

The BLM and the USFWS may delineate a Kern Mallow Specialty Preserve, where special measures to conserve Kern mallow will be required. Delineation will include mapping the current distribution of Kern mallow, particularly the outer boundaries of core and satellite populations. Special measures may include:

- Completely avoiding areas occupied by Kern mallow;
- Conducting all surface-disturbing work after seed set and before germination, regardless of the presence or absence of Kern mallow;
- Compensating impacts with lands inside the specialty preserve;
- Stockpiling topsoil and replacing after project completion; and
- Using modified compensation ratios.

Bakersfield Cactus

Bakersfield cactus populations or individuals will be avoided by a 50-foot buffer in all areas where they are located.

San Joaquin Antelope Squirrel

To the maximum extent practicable, the measures described above for blunt-nosed leopard lizards will be applied to San Joaquin antelope squirrel in the project area and along the access/egress route.

In areas where antelope squirrels are suspected to occur and when temperatures are suitable for antelope squirrel activity, all personnel will be advised to check below parked vehicles and equipment before moving such vehicles or equipment. Caution will be taken when driving through areas where antelope squirrels may occur.

The applicant should implement CDFG-approved San Joaquin antelope squirrel take avoidance measures to minimize or eliminate the likelihood "take" of San Joaquin antelope squirrel and provide compliance with the California Endangered Species Act.

California Condor Best Management Practices for Oil and Gas Operations

The following measures have been developed by BLM and USFWS and applied to past oil and gas projects near condor roosting and nesting areas.

- Drilling and well completion activities may be restricted to certain time periods to reduce impacts to condors. For example, activities near the Bitter Creek National Wildlife Refuge may be restricted to the period between mid-October and early May when condors make less use of the general area. Alternately, activities near the Hopper Mountain Wildlife Refuge may be restricted to the period between March 1 and September 30, to avoid the period when chicks would be fledging. The specific dates may be modified to reflect actual conditions for a given year. the general time periods may be modified should the USFWS recommend a different time period.
- Operators will designate a representative (Designated Representative) who will be responsible for overseeing compliance with the California Condor Protection Measures. The operator will provide BLM with the name, phone number and email of the Designated Representative. The operator will promptly notify BLM of any changes to the Designated Representative.

- Prior to conducting work on-site, employees and contractors shall be made aware of the protected species, and how to avoid and minimize impacts to them. Special emphasis will be placed on keeping the well pad site free of "microtrash" and other hazards.
- Direct contact with California condors shall be avoided.
- All work areas shall be kept free of trash and debris. Particular attention shall be paid to "microtrash." All construction debris and trash (including such small items as screws, nuts, washers, nails, coins, rags, small electrical components, small pieces of plastic, glass or wire, and any debris or trash that is colorful or shiny) shall be covered, kept in closed containers, or otherwise removed from the project site at the end of each day or prior to periods when workers are not present at the site.
- All food items and associated trash shall be placed in covered containers. This would include small bits of trash and debris, such as soda can pull tabs, electrical connectors, broken glass, and pieces of rubber, plastic and metal.
- All equipment and work-related materials (including loose-wires, open containers or other supplies or materials) shall be contained in closed containers either in the work area or placed inside vehicles. Loose items (e.g., rags, hose, etc.) shall be stored within closed containers or enclosed in vehicles.
- All hoses or cords that must be placed on the ground due to drilling operations that are outside of the primary work area (immediate vicinity of the drilling rig) shall be covered to prevent California condor access. Covering may take the form of burying or covering with heavy mats, planks, or grating that would preclude access by California condors.
- All liquids shall be in closed, covered containers. Any spills of hydrocarbon/hazardous liquids shall not be left unattended until clean-up has been completed. No open drilling mud, water, oil or other liquid storage or retention structures will be allowed. All such structures will be required to have some sort of netting or other covering that precludes entry or other use by condors or other listed avian species.
- Where practical, ethylene glycol based anti-freeze or other ethylene glycol based liquid substances will be avoided, and propylene glycol based antifreeze will be encouraged. Equipment or vehicles that use ethylene glycol based anti-freeze or other ethylene glycol based liquid substances shall be inspected daily for leaks. While at the site, areas below vehicles and equipment using ethylene glycol based substances will be checked for leaks and puddles. Standing fluid (i.e., a puddle of anti-freeze) shall be remediated (e.g., cleaned-up, absorbed, or covered) without unnecessary delay. Vehicles using ethylene glycol based substances will be inspected before and after field use for obvious leaks and puddles. Leaks will be repaired before the vehicle is allowed back into the general area. No changing of antifreeze of any type will be allowed within the oil and gas development area.
- A not-to-exceed 20 mile-per-hour speed limit shall be implemented and enforced during all activities.
- All construction equipment, staging areas, materials, and personnel shall be restricted to disturbed areas that are not habitat for listed species.

- To prevent injury to wildlife, habitat degradation, erosion, and fires, driving off of disturbed areas without a pre-activity survey and implementation of appropriate measures is prohibited, except in the case of an emergency.
- Firearms and pets are prohibited.
- No feeding of wildlife shall be permitted.
- The potential for human-caused wildfires should be minimized by use of shields, mats, or other fire-prevention methods when grinding or welding. Fire watch, including water, extinguishers, and shovels shall be available for fire suppression.
- Approval from the FWS will be obtained prior to 1) the use of any aircraft in the drilling, operation or monitoring of the wells, and 2) flaring of natural gas or other flammable gases or substances at the project site.
- Any use (perching, landing) of a well site and its associated facilities by California condors shall be recorded and reported to the operator's Designated Representative and BLM.
- Any take (harm, harassment, injury, killing, etc., or any attempt to engage in these activities) shall be reported to the operator's Designated Representative. The Designated Representative shall immediately notify BLM, USFWS and CDFG as appropriate. The activity that caused the take to occur shall be ceased immediately.
- Should a well prove productive, the following additional measures will be implemented:
    - Barriers (such as welded wire fabric or hardware cloth) will be installed around well cellars and on secondary containment pans to prevent condor access.
    - Stainless steel lines, rather than poly chemical lines will be used to preclude condors from obtaining and ingesting pieces of poly lines.
    - Landing deterrents, such as Daddi Long Legs or porcupine wire, will be attached to the walking beams on pumping units.
    - Should condors continue to make use of the ground near the proposed pad, perimeter fence will be installed to discourage condor access.
    - Information signs regarding micro-trash will be posted.
    - Power lines will not span canyons or be located on ridgelines. The distance between power lines will be sufficient to prevent electrocution of condors and other raptors. Bird deflectors will be installed.

Project Monitoring

Each project will have a field contact representative (FCR), who will be responsible for overseeing compliance with protective stipulations for listed species. The FCR may be a project manager, project representative, BLM employee, or contract biologist. The FCR will have the authority to halt all actions that are in violation of the stipulations. The FCR will have a copy of all appropriate stipulations when surface-disturbing actions are being conducted on the site. The BLM and USFWS will be notified of the name and telephone number of the FCR prior to project construction.

Biological monitoring will be accomplished by a USFWS-qualified biologist. The biologist will be responsible for field crews to be in compliance with protection measures, performing surveys in front of crews as needed to locate and avoid sensitive species and habitat features, and monitoring project

mitigation compliance. The biological monitor will have the authority to halt all non-emergency actions should danger to a listed species arise. Work will proceed only after hazards to the listed species are removed, the individual(s) is no longer at risk, or the individual(s) has been removed by the biologist.

The BLM will be provided with the name, phone number, and e-mail of the field biological monitor prior to construction. If not already on file at the Bakersfield FO, a copy of the field biological monitor's resume or curriculum vitae will be submitted to the BLM prior to the commencement of construction.

Biological monitors will be required to be on-site during initial surface-disturbing actions to minimize direct take of listed species. Subsequent to initial surface disturbing activities, biological monitors are not required to be present but must be available within 24-hour notice from the applicant, the BLM, or the USFWS in order to troubleshoot potential take situations.

Biological monitors will be required to be on-site during placement of sleepers and pipe to minimize direct take of listed species.

At the BLM's/USFWS's discretion, on-site biological monitors may not be required if exclusion zones or surface disturbance areas are prominently marked with lath, flagging, or fencing, as necessary.

Biological monitors are required for kit fox den excavations.

In previously unsurveyed areas, biological monitors are required for routing cross-country travel to minimize impacts on habitat features.

Biological monitors may be required, if, on project inspection by the BLM, CDFG, or USFWS, noncompliance of project stipulations are observed and documented.

All reports must:

- Be signed and submitted by the biological monitor conducting work in the field, OR
- Be reviewed and signed by the biological monitor conducting work in the field, OR
- Include, as an attachment, the original report prepared and signed by the field biological monitor.

An e-mail report originating from the field biological monitor may be accepted as a signature.

Within 60 days of completion of construction, a brief post-construction compliance report will be provided to the BLM that addresses:

- Any revisions to habitat disturbance estimates;
- Any observed impacts on listed species, including take;
- A brief description of significant actions taken to comply with the provisions listed above;
- An overall evaluation of compliance with the provisions and any suggestions for changes to the provisions;
- Any information required due to the sighting of an additional species, such as a blunt-nosed leopard lizard.

Compensation

~~*The compensation ratio for Kern mallow will be 9:1 for permanent impacts and 6:1 for temporary impacts on known populations. For all other species, t*~~ *T*he compensation ratio *for San Joaquin Valley species* will be 3:1 for permanent impacts and 1.1:1 for temporary impacts ~~*on previously disturbed habitat*~~ *except as follows:*

- *The compensation ratio for Kern mallow will be 9:1 for permanent impacts and 6:1 for temporary impacts on known populations.*
- *Within the western Kern County kit fox core area the compensation ratio will be 4:1 for permanent impacts.*
- *The compensation ratio for vernal pool habitat will be 5:1 with a replacement element.*

If a new compensation ratio becomes established for a county or species, the BLM and USFWS may decide to modify compensation ratios.

For protected lands (such as federal lands, state wildlife areas, conservation banks, Lokern area) a replacement component will be added to the compensation ratio.

Compensation of habitat must be in kind. Land used for compensation must be of equal value or better than the land impacted. The same species must be present and habitat must be of an equal of greater value. Lands used for compensation for project impacts on Kern mallow, San Joaquin woolly-threads, blunt-nosed leopard lizards, and the kangaroo rats must support these species or be approved by the USFWS for these species. Lands used to compensate for impacts on a kit fox natal den must support breeding populations of kit foxes.

Ownership of compensation lands will be transferred prior to any surface disturbance to one of the following: the BLM; an entity acceptable to the BLM, USFWS, and CDFG that can effectively manage listed species and their habitats; the CDFG; or the USFWS for dedication to listed species habitat management. The USFWS will be informed before the actual transfer when land is transferred.

Areas preapproved to serve as compensation areas are the Lokern Road area, Buena Vista Valley, Semitropic Ridge, Allensworth, Kettleman Hills, Kern Water Bank, Carrizo Plain Natural area, or any Specialty Preserve agreed to by the BLM and the USFWS. Habitat linkage areas and small specialty preserves determined by the BLM, CDFG, and USFWS to be important for species conservation and recovery will be acceptable as compensation habitat. Coles Levee Ecosystem Reserve has historically served as a compensation area. The USFWS is monitoring the long-term viability of the bank and may choose to curtail approval of this area as a compensation area.

As an alternative to the above standard compensation method, applicants may provide a letter agreeing to dedicate existing mitigation credits or purchase additional mitigation credits at a USFWS-approved mitigation bank to compensate for any impacts.

The final compensation acreage will be adjusted on completion of construction, based on the actual amount of acreage temporarily and permanently disturbed.

The applicant may propose to conduct construction in a manner that results in no surface disturbance. The biological monitor will document surface conditions before and after construction to verify the lack of disturbance. The biological monitor will take before and after photographs of the construction

corridor every 1,000 feet or as necessary to document the lack of disturbance. The same photo point locations and directions will be used for the before and after photos. GPS coordinates for each photo point will be provided to the BLM.

The USFWS and California Department of Fish and Game protocols will be employed to conduct special status species surveys.

L.3.5 Control of Non-native Species

Projects and activities on BLM lands will include measures to minimize the introduction and spread of weeds.

Weed control methods will follow integrated pest management principles.

Use of pesticides shall comply with applicable federal and state laws. BLM policy requires project-specific NEPA analysis and the issuance of a pesticide use permit before the use of pesticides. Only products on the California BLM's list of approved pesticides may be used.

The release of nonnative animal species will be prohibited, other than those legally introduced for biological control, or those released during legal hunts as regulated by CDFG.

L.4 Soils

- Minimize soil disturbance by limiting developments to the smallest area possible and by using previously disturbed areas and existing roads to the extent practicable.
- Minimize surface disturbance and design disturbed areas on steep slopes to prevent surface water from concentrating to reduce erosion and sedimentation.
- Restrict access and suspend authorized projects during wet weather when soil resources will be detrimentally affected by rutting, compaction, and increased erosion.
- Minimize fire control lines, both handline and dozerline, to the width necessary to effectively stop fire spread. Rehabilitate lines by smoothing out berms and installing waterbars prior to the rainy season.
- Assess the need for soil stabilization following wildfires. Use the Emergency Stabilization and Rehabilitation process to determine and implement needed actions.
- Follow guidelines for site reclamation in the Oil and Gas BMP section to protect soils, including topsoil conservation, scarifying or disking soil, recontouring the area, redistributing topsoil and providing ground cover through seeding or other methods.
- Actively patrol public lands to prevent unauthorized off-road travel. If unauthorized routes are found, block access to minimize further soil disturbance and reduce the potential for erosion through rehabilitation action.

L.4.1 Additional Information on BMPs for Soils

- Erosion and sediment control: http://www.cabmphandbooks.org
- OHV BMP Manual for erosion and sediment control: http://www.watchyourdirt.com/erosion-control-files/

L.5 Water Resources

California's Non-Point Source (NPS) Program Plan (adopted by SWRCB in December 1999) identifies 61 Management Measures (MMs) which constitute the State's BMPs for controlling NPS pollution. MMs that are applicable to BLM program and management actions include, but are not limited to, those that pertain to livestock grazing management, chemical management (pesticide and herbicide use), road construction and management, erosion and sediment control, hydromodification, wetlands, and riparian areas. The BLM demonstrates compliance with the Clean Water Act and state water quality objectives by implementing BMPs that are consistent with the State's MMs. To further meet the requirements of the CWA, the BLM California State Office is currently preparing a "Water Quality Management Plan" under an MOU with the California Water Resource Control Board (1993). During this process BMPs for non-point source pollution will be developed and approved by the State, consistent with pertinent Management Measures (MM) and regional water quality objectives. Once finalized, the BLM Water Quality Management Plan will be distributed by the State Office for application and implementation by the Bakersfield Field Office during project implementation. In the interim, the following measures are examples of BMPs that will be utilized to specifically protect water quality:

- Employ erosion and sediment control measures during watershed restoration activities to reduce or eliminate erosion and sediment transport or incidental sediment discharge.
- Erosion control measures include mulching, placement of hay bales and other drainage control features, construction of rolling dips, and seasonal limits on operations.
- Protect the existing water quality improvement functions of wetlands and riparian areas as a component of NPS programs. Damaged wetlands or riparian areas should be restored where restoration of such systems will abate polluted runoff.
- Protect sensitive areas (including streambanks, lakes, wetlands, estuaries, and riparian zones) by reducing direct loadings of animal wastes and sediment. This may include restricting or rotationally grazing livestock in sensitive areas by providing fencing, livestock stream crossings, and by locating salt, shade, and alternative drinking sources away from sensitive areas.
- Upland erosion can be reduced by, among other methods: (1) maintaining the land consistent with the California Rangeland Water Quality Management Plan or Bureau of Land Management and Forest Service activity plans or (2) applying the range and pasture components of a Resource Management System (NRCS FOTG). This may include prescribed grazing, seeding, gully erosion control, such as grade stabilization structures and ponds, and other critical area treatment.
- Road construction/reconstruction shall be conducted so as to reduce sediment generation and delivery. This can be accomplished by, among other means, following designs for road systems, incorporating adequate drainage structures, properly installing stream crossings, avoiding road construction in streamside management areas, removing debris from streams, and stabilizing areas of disturbed soil such as road fills.
- Manage roads to prevent sedimentation, minimize erosion, maintain stability, and reduce the risk that drainage structures and stream crossings will fail or become less effective. Components of this measure include inspections and maintenance actions to prevent erosion of road surfaces and to ensure the effectiveness of stream-crossing structures. This measure also addresses appropriate methods for closing roads that are no longer in use.

- Confine runoff onsite to reduce impacts of mechanical site preparation and revegetation operations—particularly in areas that have steep slopes or highly erodible soils, or where the site is located in close proximity to a waterbody.
- Conduct prescribed fire practices for site preparation and methods to suppress wildfires in a manner that limits loss of soil organic matter and litter and that reduces the potential for runoff and erosion.
- Addresses the rapid revegetation of areas disturbed during road construction—particularly road systems where mineral soil is exposed or agitated (e.g., road cuts, fill slopes, landing surfaces, etc.).
- Do not apply chemicals within 100 feet of perennial streams or channels with beneficial use(s) recognized by the state.
- Do not apply chemicals directly into intermittent streams or channels with beneficial use(s) recognized by the state.
- Avoid aerial application of chemicals when wind speeds would cause drift.
- Avoid aerial application of wildland fire chemicals within 300 feet of waterways and any ground application of wildland fire chemicals into waterways.
- To minimize water quality degradation and maintain soil productivity while achieving rapid and safe suppression of wildfire, limit use of heavy equipment near streams and on steep slopes when possible. Where fire trail entry into a riparian area is essential, angle the approach rather than have it perpendicular to the stream.
- For actions resulting in more than one acre of disturbance, discharges resulting from construction will be managed in accordance with the applicable Regional Water Quality Control Board NPDES permit requirements addressing stormwater discharges.
- Construction projects that disturb one or more acre of soil (includes clearing, grading, and ground disturbances such as stockpiling or excavation) are required to obtain coverage under the General Permit for Dishcarges of Stormwater Associated with Construction Activity (Construction General Permit, 99-08-DWQ).
- Small linear underground/overhead projects disturbing at least one acre but less than five acres (including trenching and staging areas) must be covered by the Statewide General Permit for Stormwater Discharges Associated with Construction Activity from Small Linear Underground/Overhead Projects (Small LUP General Permit).

L.5.1 Mineral Exploration and Development

Require that operators obtain all required state and federal permits for the protection of groundwater and surface water quality. Additional measures to protect water resources that may be included as Conditions of Approval (COAs) are described in Appendix L.7.2. COAs specifically designed to protect groundwater include zone isolation, general casing depth and cement requirements, pressure testing, casing integrity testing, fluid surveys, and/or wellhead monitoring.

- Design roads, well pads, and facilities for exploratory wells to impact and fragment the least acreage practicable. New facilities shall be designed to maintain natural drainage and runoff

patterns. Noncommercial wells shall be restored as soon as appropriate using BLM restoration methods.

- Timely plugging and abandonment of depleted wells will be required. This includes plugging the well bore with cement, removing all materials and equipment, and recontouring/ revegetation as specified in the conditions of approval.
- Sufficiently impervious secondary containment, such as containment dikes, containment walls, and drip pans, should be constructed and maintained around all qualifying petroleum facilities, including tank batteries and separation and treating areas consistent with the Environmental Protection Agency's Spill Prevention, Control, and Countermeasure regulation (40 CFR 112).
- The appropriate containment and/or diversionary structure would be sufficiently impervious to oil, glycol, produced water, or other fluid and would be installed so that any spill or leakage would not drain, infiltrate, or otherwise escape to the ground, surface, or navigable waters before clean-up is completed.
- Proper containment of oil and produced water in tanks, drilling fluids in reserve pits, and locating staging areas away from drainages would prevent potential contaminants from entering surface waters.
- Chemical containers should not be stored on bare ground or exposed to the sun and moisture. Labels must be readable. Chemical containers should be maintained in good condition and placed within secondary containment in case of a spill or high velocity puncture. All secondary containment must be designed to preclude entry from wildlife or livestock.
- Set and cement surface casings to sufficient depths to protect fresh water bearing zones.
- Consider the use of a closed loop drilling system.
- Produced water from oil and gas operations would be disposed of in accordance with the requirements of Onshore Oil and Gas Order #7.

L.5.2 Additional Information on BMPs for Water Resources

- BLM Water Quality Law Summary: http://www.blm.gov/nstc/WaterLaws/Chap5.html
- Example BMPs from Pinedale, WY BLM Field Office:

http://www.blm.gov/wy/st/en/programs/Planning/rmps/pinedale/feis_prmp.html

- Proposed Grazing Management Practices for Water Quality in California, from Rangeland Health Standards and Guidelines for California and Northwestern Nevada Final EIS: http://www.blm.gov/style/medialib//blm/ca/pdf/pa/rangeland_management/final_rangeland_health.Par.537ebc11.File.pdf/APPENDIX_10.pdf
- Policy for Aerial Delivery of Wildland Fire Chemicals near Waterways: http://www.fs.fed.us/rm/fire/wfcs/Application_Policy-MultiAgency_042209-UPDATE.pdf.
- USDA Forest Service Water Quality Management BMPs: http://www.fs.fed.us/r5/publications/water_resources/waterquality/water-best-mgmt.pdf
- http://www.waterboards.ca.gov/water_issues/programs/stormwater/bmp_database.shtml
- http://www.waterboards.ca.gov/water_issues/programs/nps/cammpr.shtml

- http://www.cabmphandbooks.com/

L.6 Cultural Resources

- Prior to the implementation of all proposed actions, cultural resource compliance with the National Historic Preservation Act, Section 106 and 110, will be coordinated pursuant to the current and any subsequent versions, supplemental procedures and amendments of the *National Programmatic Agreement Among the Bureau of Land Management, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers Regarding the Manner in Which the BLM Will Meet its Responsibilities Under the National Historic Preservation Act* and the *State Protocol Agreement Among the California State Director of the Bureau of Land Management and the California State Historic Preservation Officer and the Nevada Historic Preservation Officer Regarding the Manner in Which the Bureau of Land Management Will Meet its Responsibilities Under the National Historic Preservation Act and the National Programmatic Agreement Among the Bureau of Land Management, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation*. Should the either of these agreements be terminated, the BLM would comply with requirements under Sections 106 and 110 of the National Historic Preservation Act (NHPA) through the implementation of procedures put forth in 36 CFR 800.
- Archaeologists, law enforcement rangers, resource staff specialists, Native Americans, or designated volunteer stewards will patrol and monitor selected significant cultural resources on public lands in the Bakersfield FO to reduce threats from human and natural disturbances.
- The BLM will coordinate with Native Americans, cultural resource specialists, interdisciplinary specialists, conservationists, and interested public, as appropriate, to apply the best available science to determine the amount and type of maintenance desired at cultural sites that are threatened by human or natural causes and how best to mitigate identified problems.
- The Bakersfield FO will continue to support access by the Native Americans to traditional material collecting and gathering locations and ceremonial places. It is a federal policy to protect and preserve for the American Indian, the inherent right of freedom to believe, express, and exercise their traditional religions, including access to religious sites, use and possession of sacred objects, and freedom to worship through ceremonies and traditional rites (American Indian Religious Freedom Act of 1978). Executive Order 13007, Indian Sacred Sites (1996), directs federal agencies to manage federal lands in a manner that accommodates Indian religious practitioners' access to and ceremonial use of Indian sacred sites and that avoids adversely affecting the physical integrity of such sacred sites, to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions.
- Continue open dialogue and share information with Native Americans and ethnic groups that have cultural ties to lands managed by the Bakersfield FO.
- Conduct cultural resource inventory and evaluations for all projects that require soil disturbance or cause a visual intrusion on a historic property. The presence or absence of cultural properties would be determined prior to the approval of any surface-disturbing activity. When cultural properties are present, the project would be redesigned or modified to safely avoid impacting

cultural sites or steps would be taken to adequately mitigate impacts through project redesign or data recovery.

- Soil erosion can severely impact surface and subsurface cultural resource integrity. Potential secondary impacts on cultural resources caused by erosion would be analyzed during project planning. Residual impacts on cultural resources outside the project area would be carefully considered in surface-disturbing projects.
- Identification, safe avoidance, or mitigation of potential adverse effect on cultural properties shall be required as a condition of a lease, permit, license, and other federal undertakings for both external and internal projects.
- Any late discovery of a cultural or paleontological resource during a project would be reported to the authorized officer. All activity in the immediate discovery area associated with the project would be suspended until an evaluation of the discovery is made by the archaeologist to determine appropriate actions to prevent the loss of significant cultural, paleontological, or scientific values. A written authorization to resume the project, or to take appropriate mitigation action, would be issued by the authorized officer.
- Sensitive cultural resource records, site location information, and traditional cultural properties and values would be held confidential from the public as deemed appropriate to protect historic properties (NHPA, Section 304 [a], Archaeological Resource Protection Act [ARPA], Section 9[a]).
- It is the policy of the BLM to 1) avoid impacts on significant cultural resources and traditional properties and values whenever possible; 2) to retain a representative example of the full array of cultural resource site types; and 3) to avoid inadvertent loss or destruction of cultural and paleontological resources by BLM actions or authorizations.
- Additional archaeological surveys would be required in the event a proposed project or its location were changed or modified after the initial survey is completed. This survey, associated documentation, and necessary compliance would be completed prior to project approval.
- Apply necessary measures to protect and preserve National Register-eligible historic and prehistoric resources by sustaining integrity, physical form, and materials associated with cultural resources. This could include installation of protective barriers, fences, or site capping; using regulatory and informational signs, kiosks, and brochures; limiting visitor access to sensitive sites; taking preventive measures to reduce erosion and other natural disturbances to sites, conducting data recovery to preserve a site's informational potential; providing visitor educational and awareness information by various means, such as interpretive exhibits, workshops, and tours; patrolling and monitoring the condition of historic properties; and identifying cultural resources through proactive field inventory, oral history, and archival records data compilation.
- Pursue identification and nomination of cultural properties to the NRHP.

L.7 Oil and Gas Standard Operating Procedures /Implementation Guidelines and Conditions of Approval

The following SOPs and implementation guidelines will be employed on all existing federal leases and private mineral developments, subject to the limits of BLM authority and the right of the owners/lessees to have reasonable access and development.

L.7.1 Implementation Guidelines

- All oil field activities that occur on land where the BLM has an interest, whether mineral or surface estate, should be conducted with the least impact practicable to sensitive resources.
- Wells that are not commercially developed should be reclaimed to natural contours and revegetated as soon as appropriate; i.e., restoration methods should consider timing of planting, acceptable species and evaluation criteria, and should be tailored to area-specific resource conditions and be compatible with the monument proclamation.
- Applications for permit to drill (APDs), sundry notices (leasehold activities requiring surface disturbance), and final abandonment notices will be reviewed using the existing NEPA approval process.
- Timely plugging and abandonment of depleted wells will be required. This includes plugging the well bore with cement, removing all materials and equipment, and recontouring/ revegetation as specified in the conditions of approval.
- Design roads, well pads, and facilities for exploratory wells to impact and fragment the least acreage practicable. New facilities shall be designed to maintain natural drainage and runoff patterns, reduce visual impacts, and reduce hazards to wildlife, especially California condors. Noncommercial wells shall be restored as soon as appropriate using BLM restoration methods.
- Good housekeeping requirements will be enforced (i.e., operators will be required to maintain a neat and orderly appearance of sites, remove junk and trash, and otherwise minimize landscape intrusions).
- Sufficiently impervious secondary containment, such as containment dikes, containment walls, and drip pans, should be constructed and maintained around all qualifying petroleum facilities, including tank batteries and separation and treating areas consistent with the Environmental Protection Agency's Spill Prevention, Control, and Countermeasure regulation (40 CFR 112).
- Chemical containers should not be stored on bare ground or exposed to the sun and moisture. Labels must be readable. Chemical containers should be maintained in good condition and placed within secondary containment in case of a spill or high velocity puncture. The secondary containment must preclude entry from wildlife.
- Pipelines should be placed within existing disturbed rights-of-way, such as road shoulders, whenever possible.
- Roads shall be designed to an appropriate standard no higher than necessary to accommodate their intended functions.
- New wells and roads should be located in areas where cut and fill shall be minimized to the extent practicable.

- Operators will be encouraged or required to place multiple wells on a single pad where feasible in order to minimize unnecessary disturbance.
- Operators shall be required to maintain clean well locations and to remove trash, junk, and other materials not in current use.
- Other BMPs that may be applied to operations on BLM lands can be found on the Internet at http://www.blm.gov/bmp.

L.7.2 Conditions of Approval

The following describes recognized engineering practices for the routine operation of oil and gas exploration and development activities, known as conditions of approval (COAs). These standard procedures are described in the Federal Onshore Orders and are further clarified in the Code of Federal Regulations (CFR 43, October 2007).

Standard regulations could be supplemented with additional COAs, which address sensitive issues within the Bakersfield FO. Critical issues underlying the federal regulations and supplemental COAs are the protections of usable aquifers, mineral zones, including hydrocarbons, surface environmental issues, site safety and well control, and site reclamation.

For more specific information on the requirements for obtaining permit approval and conducting environmentally responsible oil and gas operations on Federal lands and on private surface over Federal minerals, please see *The Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development,* current edition (commonly referred to as The Gold Book). The Gold Book may be found online at:

http://www.blm.gov/style/medialib/blm/wo/MINERALS__REALTY__AND_RESOURCE_PROTECTION_/energy/oil_and_gas.Par.18714.File.dat/OILgas.pdf.

The BLM will inspect and monitor oil field activity in the following phases of oil and gas development:

- Geophysical/seismic;
- Drilling a new well;
- Interim Reclamation of a producing well;
- Regular Production and Environmental Surface inspections;
- Temporary abandonment of a producing well (idle well);
- Plugging and abandonment of a well;
- Surface reclamation.

No special COAs are normally added for routine producing well operations. The following describes the COAs applicable to each of the oil and gas development phases on existing federal oil and gas leases.

L.7.3 Drilling A New Well

After an APD has been received by the Bakersfield FO, a review of engineering design and potential effects on sensitive resources will be undertaken. During the review stage of an oil and gas project, either the operator or the BLM will note special conditions on the application. Modified proposals will be developed cooperatively with the applicant to ensure that the modified project still meets the

applicant's objective. Any special conditions will be attached to the APD by the BLM, and the applicant will be informed within seven days of receipt of the APD if there are deficiencies that need to be corrected. In addition to BLM-wide regulations, the Bakersfield FO has developed its own local procedures, as follows:

Pits. The BLM encourages the use of closed-loop or semi closed-loop mud systems whenever possible. If pits are utilized, they must remain free of any hydrocarbons. Hydrocarbons should be removed from pits upon discovery. If hydrocarbons enter the pit or are likely to enter the pit, the pit must preclude wildlife entry. Netting or other effective methods should be utilized to preclude wildlife entry. Flagging of pits is no longer considered an effective means to prevent wildlife entry to pits.

Steam Injectors. All steam injection wells within a 300-foot radius of a new location must be shut in a minimum of three days before the spudding (beginning drilling operations) of a new well.

Conductor Pipe. A minimum of 50 feet of conductor pipe is to be set and cemented to the surface. The conductor pipe must be equivalent to or exceed the properties of A-25-grade line pipe.

Diverter. Before spud, a diverter system will be installed on the conductor pipe and function tested. The test shall be recorded in the drilling log. The diverter system, at a minimum, shall consist of an annular type preventer (minimum working pressure 1,000 psi), 2-inch (minimum ID) kill lines, and 6-inch (minimum ID) diverter lines with no internal restrictions or turns. A full opening, hydraulically controlled valve shall be installed in the diverter line that will automatically open when the annular preventer is closed. The accumulator system should have sufficient capacity to close the annular preventer and open the hydraulically controlled valve.

Remote controls for the diverter system shall be located on the rig floor and readily accessible to the driller. Remote controls shall be capable of closing the annular preventer and opening the hydraulically controlled valve. Master controls shall be located at the accumulator and should be capable of closing and opening the annular preventer and opening the hydraulically controlled valve. The diverter system shall be function-tested daily and the test recorded in the drilling log.

General Casing and Cementing. A Subsequent Report (Form 3160-5) detailing the size, weight, and grade of the casing; the amount and type of cement, including additives; and a copy of the service company's materials ticket and job log shall be submitted to the BLM within five business days following the cementing of the casing string. Each casing string (except conductor pipe) shall be pressure tested, before drilling out the casing shoe, to 0.22 psi/ft of casing string length or 1,000 psi, whichever is greater, but not to exceed 70% of the internal yield pressure of the casing. The casing pressure test shall be recorded in the drilling log. The wait-on-cement time for each casing string shall be adequate to achieve a minimum of 500 psi compressive strength at the casing shoe before drilling out.

Drilling Fluids. Sufficient quantities of drilling fluid (mud and water) shall be maintained at the well site, at all times, for the purpose of controlling steam kicks.

L.7.4 Temporary Abandonment of a Producing Well (Idle Well)

Oil and gas exploration and development is a cyclical business, with periods of high and low levels of activities. On occasion, an operator may decide to temporarily shut in producing wells and wait for conditions to improve. The highly viscous nature of most Kern County crude oil, typical low well head pressures, and the relatively low corrosive properties of the fluids (low sulfur crude) make

the known dangers of shutting in a well for long periods and then bringing it back online less of a mechanical problem in the Bakersfield FO than in other producing regions of the country. Monitoring and correcting the problem has been successfully undertaken by the California Division of Oil, Gas, and Geothermal Resources and the Bakersfield FO.

The following additional conditions *may* be required before the temporary abandonment of a producing oil/gas well, service well, or an injection well.

Zone Isolation. The requirement to isolate the producing interval (General Requirement #4) is waived. This waiver is based on the information submitted with the application and the geologic data in *Volume II - California Oil and Gas Fields*, (field name) which indicates the absence of usable water aquifers above the producing horizon in (section in which well is located).

Mechanical Integrity of Casing. The mechanical integrity of the casing may be determined using the ADA pressure test method.

Fluid Surveys. In accordance with the requirements of the State of California Idle Well Program, a fluid level survey will be performed at two- to five-year intervals while the well is temporarily abandoned. A copy of the survey will be submitted to the BLM within five business days of the survey.

Monitoring of Wellhead Pressures and Temperatures. Wellhead pressure and temperature will be continuously monitored while the well is temporarily abandoned. Any pressure/temperature change will be promptly reported to the BLM.

Isolation of the Producing Interval. The producing interval shall be isolated by setting a plug in the casing within 100 feet above the producing interval if a rising fluid level, an increasing wellhead pressure, or an increasing wellhead temperature is detected. The plug could be either a retrievable or drillable-type bridge plug or a cement plug of at least 100 feet in length.

L.7.5 Producing, Plugging and Abandonment of a Well

No additional conditions are typically attached to the abandonment of a well in California. Onshore orders describe the plugging procedure. Final abandonment would normally be witnessed by the BLM. No final surface site marker is required by the Bakersfield FO, but a permanent buried marker is required.

Surface Reclamation (Interim or Final)

Conditions for the recovery of an oil well site are unique to each area's ecosystem and habitat. The following examples of COAs have been developed for use within the Bakersfield FO. The applicability of any or all of these COAs will be determined based on site-specific conditions.

General. The operator (or holder) shall prepare a seedbed by scarifying the disturbed area, distributing topsoil uniformly, and possibly disking the topsoil, as directed by the BLM authorized officer.

The operator shall recontour the disturbed area and obliterate all earthworks by removing embankments, backfilling excavations, and grading to reestablish the approximate original contours of the land in the area of operation.

The operator shall uniformly spread all topsoil over all unoccupied disturbed area. Spreading should not be done when the ground or topsoil is frozen or wet.

The operator shall seed all disturbed area, using an agreed on method suitable for the location using locally collected seed. Seeding shall be repeated if a satisfactory stand is not obtained, as determined by the BLM authorized officer upon evaluation after the first growing season.

The operator shall arrange to have a biologist available to assist the construction workers in the identification and avoidance of endangered species.

Producing Wells. Site interim reclamation for producing wells shall be accomplished for portions of the site not required for continued operation of the well. The following measures are typical reclamation requirements:

- Production facilities and equipment is placed to maximize interim reclamation;
- Closing drilling fluid pit (mud pit) if present;
- Recontouring the pad, leaving only enough level ground for possible future workover operations;
- Cut and fill slope vegetation;
- Interim reclamation of access roads;
- Site fencing;
- Berm removal and site grading;
- Polluting substances, contaminated materials disposed of properly.

The Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development "The Gold Book" (Current Edition) should be referenced for more detailed information.

Nonproducing Wells. Rehabilitation on the entire site shall be required and should begin as soon as practical, depending on prevailing weather conditions. Cut and fill slopes shall be reduced and graded to blend to the adjacent terrain.

Drilling fluids held within pits may be allowed to dry for up to six months. Fluids that will not dry must be removed. All polluting substances or contaminated materials, such as oil, oil-saturated soils, and gravels, shall be removed to an approved site.

Drainages shall be reestablished and temporary measures will be required to prevent site erosion until vegetation is established.

After final grading and before replacement of topsoil, the entire surface of the site shall be scarified to eliminate slippage surfaces and to promote root penetration. Topsoil should then be spread over the site to achieve an approximate, uniform stable thickness consistent with the established contours.

Permanent Well Abandonment. The surface management agency is responsible for establishing and approving methods for surface rehabilitation and determining when this rehabilitation has been satisfactorily accomplished. At this point, a subsequent (final) report of abandonment will be approved.

L.7.6 Geophysical Exploration

There are two primary methods of generating seismic data. The first involves a group of several large vehicles (vibroseis, or "thumper trucks") traveling along specific paths both on and offroad throughout the study area, frequently stopping to place a metal pad in contact with the ground, and then vibrating the pad to send soundwaves down into the earth. The second involves placing a small explosive charge in a series of shallow holes a few inches in diameter. The explosives are detonated simultaneously, sending soundwaves into the ground. Regardless of which method is used (and sometimes a combination is used), the soundwaves reflect off of underground strata and return to the surface. At the surface, the signals are received by an array of very sensitive microphones that are laid on the surface in pre-designated areas. The electronic signals are processed by proprietary programs, and the resulting data can be interpreted by geophysicists, geologists, and engineers, providing an idea of where zones may be that could contain oil or gas. Historically, there were many 2-D seismic shoots, where only a single line of data is gathered. During the past few years, however, the trend is towards large scale 3-D seismic surveys. These surveys are comprised of a series of closely spaced lines in one direction, followed by another series of lines perpendicular to the first set. These large 3-D projects can involve thousands of miles of surveys.

Project Reconnaissance

A general reconnaissance of the project area will be conducted to describe the project area and to determine the extent of listed species presence and habitat. This information will used to identify areas where listed species are likely to occur, land uses that preclude listed species use, topography that may preclude listed species use, habitat types that support listed species, and the extent of small mammal burrowing activity along source lines, receiver lines, travel routes, and staging areas. Reconnaissance surveys will be supplemented by conducting general field visits of the project area, obtaining aerial images of the project area, land ownership, slope and topographic features, general habitat or vegetation mapping, and land use maps using GIS, California Natural Diversity Data Base, and other information for the project area.

Avoidance Criteria

Source Points: Vibroseis, Shot Hole, and Staging Areas

Vibroseis and shothole drilling and vehicle staging avoidance criteria for off-road locations (minimum exclusion zone radius):

Avoidance Buffers

- 200 feet from occupied San Joaquin kit fox natal or pupping dens;
- 150 feet from known San Joaquin kit fox natal or pupping dens;
- 100 feet from occupied San Joaquin kit fox dens;
- 100 feet from known San Joaquin kit fox dens;
- 50 feet from potential San Joaquin kit fox dens;
- 50 feet from giant kangaroo rat burrow systems;
- 30 feet from potential or known San Joaquin antelope squirrel burrows;
- 30 feet from potential or known blunt-nosed leopard lizard burrows;
- 50 feet from badger dens;

- 50 feet from burrowing owl burrows;
- 50 feet from populations of listed plants; and
- Natural vernal pools and natural ponded waters will be avoided by 300 feet (Table 1 – above).

Travel Routes

- Travel routes shall be placed so that there are no sensitive wildlife resources within a 25-foot corridor (12.5 feet from centerline) along access routes and source lines.

Receiver Lines

- Receiver lines will be walked if necessary to avoid direct impacts on burrows and features.
- Where receiver lines are driven by ATVs/UTVs, avoidance buffers will be enforced.

Geodetic Surveys

Geodetic surveys of the source and receiver points in listed species habitat shall be completed in a manner to avoid impacts on listed species.

- Surveys may be conducted without biological monitors where all cross-country activities in listed species habitat will be conducted on foot, with ATVs/UTVs confined to existing roads and two-track trails.
- Where ATVs/UTVs are used traveling cross-country in conserved areas and BNLL habitats, biological surveys to identify travel routes and avoidance zones shall be completed before, or concurrent with, conducting the geodetic surveys.
- ATVs/UTVs may be used outside of conserved areas or BNLL habitat without biological surveys where speeds are not in excess of 10 miles per hour in cross-country travel. All habitat features (e.g., burrows, dens, listed plant populations) shall be avoided. If this is not possible, biological monitors shall accompany survey crews using ATVs/UTVs.
- If ATVs/UTVs are observed to collapse burrows suitable for BNLL use, to compact or disturb soil, uprooting plants, or extensive mortality to native shrub species, activities shall be conducted on foot or travel routes shall be identified ahead of survey crews.

Source Point Activities

Geophysical surveys of the source points and all associated travel in listed species habitats shall be completed in a manner to avoid impacts on listed species.

- Before commencement of seismic testing activities, an agency-approved biologist shall conduct pre-activity surveys of proposed vibrator, shot hole, source point travel paths, and staging areas in listed species habitats.
- Where seismic lines cross threatened or endangered species habitat, the survey corridor within which testing and ancillary vehicles operate shall be limited to a maximum width of 25 feet (12.5 feet on either side of the centerline). These activity zones shall be reduced, where possible, to avoid endangered species sites such as occupied kit fox dens or kangaroo rat burrows.
- All cross country vehicle travel will remain on the flagged routes and will avoid marked burrows.

- Small shot hole drilling vehicles, such as tractor-mounted drill rigs or ATV/UTV-pulled drill trailers is the suggested source method to be used on conserved lands (CDFG, some BLM, CNLM, other lands with threatened and endangered conservation easements, HCP conservation management areas, etc.) and in likely blunt-nosed leopard lizard habitats.
- San Joaquin kit fox dens, giant kangaroo rat, San Joaquin antelope squirrel, and blunt-nosed leopard lizard burrows shall be flagged for avoidance. As necessary to protect these species, additional habitat features, shall be identified and flagged for avoidance.
- Project effects will be monitored for species impacts as work progresses at source points, along travel routes and at staging areas.
- Efforts will be made to have biological monitors work with equipment to avoid burrows, dens and features where biological surveys were conducted before seismic survey activities.
- If biological surveys are conducted within 14 days of source point activities, survey routes do not need to be resurveyed ahead of source point vehicle travel.
- If biological surveys were conducted greater than 14 days before source point activities, biological monitors will be required to actively monitor and resurvey as necessary, travel routes and point locations to ensure that avoidance buffers are applied to any new listed species occurrences.
- Pre-activity surveys will be conducted immediately ahead of seismic vehicle and drill rig deployment where previous surveys were not completed, providing that all avoidance buffers will be met.
- All project vehicles shall observe travel avoidance routes described in the biological pre-activity survey notes that provide for avoidance of sensitive wildlife and special status plant resources.
- If avoidance distances cannot be met, a qualified biologist shall flag a rerouted travel corridor that avoids direct damage to burrows, dens, shrubs, or other habitat features.
- Source points may be skipped or moved to meet avoidance buffer criteria.
- The applicant shall make every reasonable effort to prevent collapse of dens and burrows by relocating source points to avoid dens and burrows or other means such as establishing exclusion zones as described above.
- Damage to shrubs will be minimized to the maximum extent practicable.
- Project related vehicles should be confined to existing primary or secondary roads or to specifically delineated project areas that have had biological surveys to avoid listed species.
- Vibroseis vehicles may be used on existing roads within avoidance buffer distances provided that biological monitors shall accompany vibroseis crews to avoid direct impacts on listed species in roads where disturbance will occur.

Receiver Line Activities

Geophysical surveys of the receiver points and all associated travel in listed species habitats shall be completed in a manner to avoid impacts on listed species.

- Before deployment of receiver lines, geophones, and related equipment, a qualified biologist shall conduct pre-activity surveys of proposed geophone travel paths and receiver points. This may be done after the geodetic survey, but before the receiver line deployment.

- All avoidable San Joaquin kit fox dens, giant kangaroo rat, San Joaquin antelope squirrel, blunt-nosed leopard lizard burrows, and listed plant populations within the immediate vicinity of receiver lines, and points shall be prominently staked or flagged to alert project personnel to their presence.
- All project-related flagging shall be collected and removed after completion of the project.
- Damage to shrubs will be minimized to the maximum extent practicable.
- Vehicles in cross-country travel will remain on flagged routes and will avoid marked burrows. A biologist will assist project-related receiver line cross-country travel, geophone placement, and staging areas to avoid listed species and their habitat features.

Habitat Mitigation Measures

Geophysical surveys of the source and receiver points and all associated travel in listed species habitats shall be completed in a manner to minimize impacts on listed species habitats.

- During geophone deployment, work crews shall make every reasonable effort to avoid damaging shrubs, washes, drainage banks, and cryptogamic crusts.
- Small shothole drilling vehicles, such as tractor-mounted drill rigs or ATV/UTV-pulled drill trailers, is the suggested method to be used in listed species habitats.
- Off-road travel corridors shall be clearly delineated to contain project-related vehicles within marked travel routes to reduce impacts on large shrubs and washes.
- Damage to shrubs will be minimized to the maximum extent practicable.
- Project-related vehicles shall be restricted to approved travel routes and paths/roads.
- Large shrubs shall be avoided by carefully selecting travel paths/roads to avoid crushing shrubs.
- Washes shall be avoided by all vehicular activity to the maximum extent practicable. Washes will be crossed to minimize project impacts. Washes shall not be used as travel routes.

Additional Species-Specific Mitigation Measures

Blunt-Nosed Leopard Lizard

When the project area is within the known range of' blunt-nosed leopard lizards, the following measures will be implemented:

- Shrubs will be avoided to the maximum extent practicable.
- All potential burrows that may be used by blunt-nosed leopard lizards will be avoided.
- Project activities will be conducted during daylight when lizard activity is likely, but no daytime temperature criteria are required.
- Small shothole drilling vehicles, such as tractor-mounted drill rigs or ATV/UTV/UTV-pulled drill trailers, is the suggested source method to be used in likely blunt-nosed leopard lizard habitats.
- ATVs/UTVs may be used where avoidance criteria can be met.
- Vibroseis vehicles may be used on existing roads within buffer distances provided that biological monitors shall accompany vibroseis crews to avoid direct impacts on blunt-nosed leopard lizards.

- Biological monitors will look for active leopard lizards aboveground within and directly adjacent to the seismic cross-country travel corridors.
- Vehicles parked in blunt-nosed leopard habitat for greater than one hour shall be inspected under and around the vehicle for BNLL. Vehicles will not be moved until any BNLL observed have moved a safe distance to avoid being crushed.
- All potential burrows of this species will be flagged for avoidance within avoidance buffer zones.
- Potential habitat will be considered suitable for blunt-nosed leopard lizards within the range of the species by the following criteria:
    - Slope is less than 30%, most favorable less than 10%,
    - Vegetation density is open to allow blunt-nosed lizard movements, and
    - Burrows are available and suitable for BNLL use.

San Joaquin kit fox

If damage or destruction to a known or occupied San Joaquin kit fox den cannot be avoided during project activities, the BLM and USFWS shall be contacted immediately for guidance.

Listed Plant Species

- Vibroseis units and drill buggies/tractors/ATV/UTV/UTV-trailers will follow flagged routes around areas of listed plants on BLM and conserved lands. A 50-foot avoidance zone for special-status plant species will be enforced.
- Avoid populations of Hoover's woolly-star to the maximum extent practicable in the growing season. Populations of special-status plants will be avoided by relocating and/or reconfiguring source points, receiver points and travel routes. If it becomes necessary to locate a project in an area where Hoover's woolly-star is known or thought to be present, every reasonable effort shall be made to wait until after seed set before beginning ground disturbances. It will not be necessary to protect Hoover's woolly-star that has become reestablished in previously disturbed areas.
- When possible, conduct seismic surveys after seed set of listed plant species (generally after May 1).
- Avoid special-status plant species by relocating source points, travel routes, and receiver points to avoid listed plant populations by 50 feet.

Other Mitigation Measures

- Before the onset of ground disturbing project activities, a qualified wildlife biologist shall provide an employee orientation program to project personnel on the occurrence and distribution of listed species in the project area, measures being implemented to protect these species during project actions, reporting requirements should incidental take occur, and applicable definitions and prohibitions under the Endangered Species Act.
- Qualified biologists shall accompany seismic survey vehicles and crews throughout the project area in areas with the potential to affect listed species.

- At least one qualified biologist shall accompany each vibrator set or drill rig crew working within endangered species habitat.
- Qualified biologists will be responsible to implement survey, take avoidance, monitoring, and reporting activities and shall perform the following:
    - Aid seismic crews in satisfying avoidance criteria and implementing project mitigation.
    - Aid seismic crews in relocating source points and receiver lines as necessary.
    - Observe and note all pertinent information concerning project effects on listed species.
    - Avoid the take of blunt-nosed leopard lizards; and associated burrows
    - Assist the seismic contractor in conducting the proposed project in such a manner as to avoid adverse effects on endangered and threatened species.
- Biological monitors are expressly empowered to order cessation of seismic activities if take avoidance and mitigation measures are significantly violated.
- Biological monitors or project environmental representative shall notify the BLM and USFWS before, or as soon as possible after biological compliance measures are significantly violated.
- At least one biological monitor shall accompany vibroseis and shot hole crews while working within endangered species habitat.
- Project biologists shall keep an accurate running tally of the number of dens and burrows damaged, destroyed, or otherwise affected by project activities. Such tallies shall be combined and totaled at the end of each workday to determine proximity to take limits and the need for subsequent project modifications to prevent impacts upon dens and burrows in excess of take limits. Total number of dens and burrows affected by the project shall be reported in the post-activity compliance report.
- One biologist exclusive of biologists observing vibrator crew activities shall oversee activities of receiver line deployment crews where cross country vehicle travel occurs in listed species habitat.
- Pets shall not be permitted on the project site during project activities.
- All food-related trash such as wrappers, cans, bottles, and food scraps shall be disposed of in closed containers only and regularly removed from the project site.
- Although highly unlikely to occur, all spills of hazardous materials within endangered species habitats shall be cleaned up immediately according to applicable federal, state, and local laws and regulations.
- Daily preparation and end of day maintenance will be conducted no earlier than two hours before sunrise and not later than two hours after sunset. These activities include refueling of vibroseis and other project related vehicles, moving some vehicles to staging areas, etc. These activities, however, will not include significant vehicle travel in listed species habitat. No off-road vehicle travel shall be conducted within sensitive species habitat until there is sufficient natural light for resource avoidance.
- All project-related vehicles shall observe a speed limit of 10 mph or less on all routes that traverse endangered species habitat, except on State and County highways and roads.
- To prevent the inadvertent entrapment of covered vertebrates, all project-related open steep-walled holes, or trenches more than 2 feet deep shall be covered at the close of each working

day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, procedures listed above must be followed.

- If during any phase of the seismic operation any oil or other pollutant shall be discharged from project related vehicles, or from containers impacting federal lands, the control, cleanup, and disposal of such oil or other pollutant, wherever found, shall be the responsibility of the permit holder, regardless of fault. Upon failure of permit holder to control, cleanup or dispose of such discharge on or affecting federal lands, or to repair all damages to federal lands resulting from, the authorized officer may take such measures as he/she deems necessary to control and cleanup the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the permit holder. Such action by the authorized officer shall not relieve the permit holder of any liability or responsibility.

Vegetation and Habitat Types

Project related vehicles should be restricted to approved travel routes and paths/roads. Large shrubs shall be avoided in an effort to minimize impact on wildlife habitat. Large shrubs shall be avoided by carefully selecting travel paths/roads to avoid crushing individuals. In addition, washes represent a fragile habitat type and function as seasonally productive sources of annual vegetation for animals, as dispersal corridors, and as areas affording favorable burrow construction habitat. Washes shall be avoided by all vehicular activity as feasible.

Post-Project Reporting

Within 45 calendar days after completion of the project, the seismic contractor shall submit to the USFWS and BLM a post-activity compliance report that details the following information:

- Dates that seismic testing occurred:
- Pertinent data concerning the seismic contractor's success in meeting project mitigation measures.
- Known project effects on San Joaquin kit foxes, blunt-nosed leopard lizards, giant kangaroo rats and San Joaquin antelope squirrels, if any (including specific number of dens and small mammal burrows damaged or destroyed).
- Occurrences of incidental take of state or federally listed species.
- An assessment of the extent and severity of project impacts on all sensitive wildlife habitats, a summary of rehabilitation plans, if any; and other pertinent information.

BLM, USFWS and CDFG shall be notified in writing within three (3) working days in the event of an accident death or injury of a San Joaquin kit fox, giant kangaroo rat, or blunt-nosed leopard lizard, or of the finding of any dead or injured kit fox, giant kangaroo rat, or leopard lizard during the proposed seismic survey. Notification shall include the date, time, and location of the incident or of the finding of a dead or injured animal, and any other pertinent information. The USFWS contact for this information is the Chief of the Division of Endangered Species, Sacramento Field Office, 3310 El Camino Avenue, Suite 130, Sacramento, CA 95821-6340, (916) 979-2725. The CDFG contact information is the California Department of Fish and Game, Fresno Regional Headquarters, Environmental USFWSs Division, 1234 E.

Shaw Ave., Fresno, CA (559) 243-4014. Any dead or injured kit fox, giant kangaroo rat, or blunt-nosed leopard lizard shall be turned over to the California Department of Fish and Game.

L.8 Visual Resources

Visual Resource BMPs provide a variety of tools to address the visual impacts of projects on the landscape. They are applied to reduce or eliminate visual contrast in order to maintain or achieve Visual Resource Management (VRM) objectives. BMPs for visual resources include a variety of techniques from proper site selection for projects, to minimizing long-term surface disturbance and correct color selection for painting structures. No all techniques are appropriate for all locations and would be implemented as appropriate. As with all BMPs the science and technology; specifically camouflaging techniques, behind the management is continually evolving as such new BMPs are developed and replace other concepts. More information on BMPs for visual resource management can be found in several BLM publications and websites including the 2007 Visual Resource Management for Fluid Minerals self study guide found at http://www.blm.gov/wo/st/en/prog/energy/oil_and_gas/best_management_practices/technical_information.html.

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Appendix M

Reasonably Foreseeable Development Scenario

Appendix M – Reasonably Foreseeable Development Scenario

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M.1 Introduction

As part of the Bakersfield FO RMP process, reasonably foreseeable development (RFD) scenarios for minerals and renewable energy were developed to aid in assessing the potential consequences of the alternatives. An RFD is a forecast or estimate of activity that is likely to occur. The goal is to give scope or scale to the potential consequences of new activities and their associated impacts on the environment. The RFD is not meant to predict actual activities but to be a basis for quantifying environmental effects from a range of development scenarios.

The RFD projection is based on knowledge of past use, the capability of the resource for additional development, local and regional economic trends, and the needs of the public. The data presented in an RFD is deliberately general for ease in assessment. Specific locations of surface-disturbing activities, such as road or oil well developments, are not indicated. The period covered by this RFD is ten to fifteen years.

Regulations in the 1987 Onshore Oil and Gas Leasing Reform Act require such a projection to be formulated to facilitate development of federal lands that are not otherwise constrained by existing land allocations, such as wilderness areas and mineral withdrawals.

Typical resources that would be evaluated with an RFD format are oil and gas, hard rock mining, livestock grazing, improvements (such as rights-of-way), and recreation. The information presented here for oil and gas, hard rock mining, geothermal leasing, and renewable energy development is a summary of potential projected activity.

Minerals management programs with the Bakersfield FO primarily involve oil and gas leasing, solid leasable minerals (phosphates, salines), locatable minerals (metals, gypsum), and salable minerals (sand, gravel, clay, and decorative rock). The federal mineral estate addressed by the Bakersfield RMP totals 1,162,210 acres for fluid minerals, 1,046,530 acres for solid leasable minerals, and 1,046,290 acres for locatable and salable minerals.

M.2 Mineral Leasing

Federal leasable minerals are classified as fluid minerals or solid leasable minerals. Either kind of mineral can be developed after obtaining a lease from the BLM. Leasable fluid minerals include oil, gas, geothermal resources, and carbon dioxide. Leasable solid minerals include coal, potash, sulfur, and sodium. Just less than 150,850 acres or 13 percent of the federal mineral estate within the Bakersfield FO is closed to oil and gas leasing and 228,840 acres or 22 percent are closed to solid leasable mineral leases.

M.2.1 Fluid Minerals

Oil and Gas Resources

The RFD for oil and gas is a projection of the exploration, drilling, and production activity that is likely to occur in the next 10 to 15 years.

Between 100 and 400 federal wells are forecast to be drilled on federal mineral estate per year. Although the average was 191 wells per year during the last decade, 363 drilling permits were issued in

FY 2010. The higher stabilized prices may result in increased drilling in areas that were previously marginal, such as deep fractured shale and shallow diatomite zones. New surface disturbance associated with exploration and development is estimated to involve between 100 and 265 acres per year. This includes roads, pads, facilities, pipelines, power lines, and all other associated activities except for running seismic lines, and includes both short-term and long-term impacts. Approximately 25 to 35 percent of the surface disturbance would be short term and would be reclaimed within two to three years.

A recent analysis of seismic projects approved over the past decade showed that there were approximately 1.5-4 acres of disturbance per square mile of seismic lines run, and virtually all of that would be transient or temporary. For the maximum expected 1000 square miles of 3-D seismic over the life of this plan, that would result in approximately 4000 acres of disturbance. Additional actions resulting in temporary effects include the drilling of unsuccessful wells. Long-term disturbance may not be reclaimed in two to three years and perhaps not during the plan life. Successful drilling and the related production facilities, roads, and some seismic exploration create long-term effects. The positive impact of separating the two categories of surface-disturbance is that the brief surface effects of drilling an unsuccessful well and the minimal effects from most geophysical activity can be quantified, while long-term effects, such as a producing oil field and its processing facilities, can be realistically examined. Up to 100 acres of inactive wells, roads, pads, and other disturbed areas would be reclaimed annually. In addition, current best management practices are resulting in land being reclaimed in the interim before the leases and fields are abandoned.

The past 10 to 15 years have seen both historic lows and historic highs in both oil prices and drilling. Between late 1998 and mid-2008, oil prices for the Midway Sunset field, which produces the largest volume of federal crude in California, rose from $6 per barrel to $120 per barrel, a 20-fold increase. However, U.S. and world economic conditions have significantly deteriorated since then, and Midway Sunset crude was down to approximately $25 per barrel in late 2009. As of February 2010, the price had risen back to $69 per barrel, by mid-January 2011, to $86.25, and by mid-March 2011, to nearly $110 per barrel, further demonstrating the volatility of crude prices. Consequently, there is no consensus among forecasters as to what the demand for oil will be in either the near term or long term. Most current forecasts are for demand to continue to drop in the near term to midterm and to remain depressed into the foreseeable future.

Between approximately 80 and 90 percent of all surface-disturbing activities related to the oil industry would occur in the San Joaquin Valley portion of the Planning Area. In fact, during the last 10+ years, more than 95% of all federal drilling has occurred in this area. Most of this would be within the established boundaries of producing fields in Kern County, and the vast majority would be on lands that are already leased (not on new leases issued subsequent to this RMP). Surface disturbance from drilling new wells accounts for about 65 percent of the long-term surface disturbance. Associated activities such as new processing facilities, roads, pipelines, and seismic surveys account for the rest of the disturbance.

No significant new fields have been discovered in the Bakersfield FO decision area in the last twenty years. The discoveries were all in the San Joaquin Valley portion of the Planning Area, and none contained lands with any federal interest. There is virtually no correlation between oil prices and federal wells drilled; in fact, the record high for wells drilled in a year (428) occurred in 1998, the same year that recorded the lowest average oil price, $8.46 per barrel. The reason is most likely because development of federal leases is so heavily concentrated in a very few areas that are somewhat insulated from short-term swings in prices. Consequently, current activity levels are not expected to be significantly different

from what has occurred in the past. Additions of new reserves are expected to continue the decline begun in 1990 in all management areas. Other factors unique to California sometimes further depress oil prices and discourage new drilling, such as a severe shortage of rigs during the early 2000s.

The geologic basins of the Coast Range and coastal areas are mature oil-producing basins (the onshore portions of the Santa Maria and Ventura basins), meaning that most of the obvious and the more obscure structural oil prospects have been drilled. Further depressing drilling on the coast is the relatively high cost of exploration, compared to other parts of the state. Higher drilling and completion costs are the result of surface restrictions, rough terrain, and well depths. Although industry interest in leasing newly available lands is likely, new exploration projects that result in actual drilling are likely to continue to be rare.

Similarly, the oilfields in the San Joaquin Valley are among the oldest in the world, several of them having been discovered well over 100 years ago; consequently, most of the activity continues to be within existing fields.

Although projections were made on a field-by-field basis, the numbers contained in the RFD are meant to be used as averages during the life of the plan. Some fields may have fewer or more wells drilled than projected, and some years may see very high or very low numbers for overall activity. Because oil and gas are worldwide commodities, events that occur globally may have significant effects on US production. The political instability of other nations that have most of the world's reserves changes regularly, causing difficulty in forecasting worldwide levels of petroleum supply and demand. In addition, the US and worldwide economic conditions have changed dramatically within the last couple of years, causing further uncertainty.

Two other sources of data may be of interest to the reader, although they are not specific to federal land. The U. S. Geological survey produced an oil and gas development forecast in 2007 titled "Petroleum Systems and Geologic Assessment of Oil and Gas in the San Joaquin Basin Province, California." This report was published as U.S. Geological Survey Professional Paper 1713. Another document is the National Oil and Gas Assessment Inventory, accessible at: http://energy.cr.usgs.gov/oilgas/noga/.

Additional details (number and status of wells, production) on a county by county basis for the entire state are found in the figure below that includes all of the wells in the state, both federal and private.

PRODUCING WELLS AND PRODUCTION OF OIL, GAS, AND WATER BY COUNTY - 2008*

COUNTY NAME	NUMBER OF WELLS				OIL PRODUCTION (bbl)	NET GAS PRODUCTION (Mcf)			WATER PRODUCTION (bbl)
	OIL		GAS			ASSOCIATED (from oil zones)	NONASSOCIATED (from gas zones)	TOTAL	
	PROD	SHTN	PROD	SHTN					
Alameda	6	1	0	0	18,454	0	0	0	43,412
Butte	0	0	8	3	0	0	59,848	59,848	112
Colusa	0	0	248	85	0	0	10,887,536	10,887,536	142,001
Contra Costa	0	0	24	19	a/ 0	0	1,578,456	1,578,456	51,292
Fresno	2,008	1,347	4	1	b/ 6,269,839	819,930	108,474	928,404	84,461,341
Glenn	0	0	234	57	0	0	9,502,588	9,502,588	94,462
Humboldt	0	3	36	16	0	0	1,023,678	1,023,678	10,688
Kern	42,065	13,808	194	110	c/ 162,206,386	149,662,564	4,794,400	154,456,964	1,448,411,573
Kings	168	159	0	2	111,793	60,981	0	60,981	178,167
Lassen	0	0	0	6	0	0	0	0	0
Los Angeles	3,427	1,419	11	19	d/ 25,874,776	11,745,183	300,984	12,046,167	750,099,319
Madera	0	0	17	19	0	0	2,552,570	2,552,570	5,571
Merced	0	0	2	1	0	0	71,318	71,318	336
Monterey	487	678	0	0	4,315,085	723,501	0	723,501	104,377,904
Orange	1,078	571	0	0	4,704,930	2,200,510	0	2,200,510	70,376,290
Riverside	0	3	0	1	0	0	0	0	0
Sacramento	0	0	151	67	e/ 0	0	16,921,988	16,921,988	515,020
San Benito	23	15	2	5	7,142	2,033	26,526	28,559	258,958
San Bernardino	8	30	0	0	2,904	60	0	60	934
San Joaquin	0	0	71	86	0	0	6,780,756	6,780,756	291,998
San Luis Obispo	156	162	0	0	525,047	158,168	0	158,168	7,499,609
San Mateo	13	12	0	0	3,704	0	0	0	13,404
Santa Barbara	861	1,256	1	3	f/ 3,009,057	2,581,586	3,153	2,584,739	70,587,676
Santa Clara	11	2	0	0	28,214	5,775	0	5,775	13,587
Solano	0	0	172	107	g/ 0	0	14,614,956	14,614,956	328,858
Stanislaus	0	0	2	0	0	0	354,050	354,050	0
Sutter	0	0	274	98	h/ 0	0	13,683,634	13,683,634	137,659
Tehama	0	0	136	29	0	0	3,394,685	3,394,685	111,574
Tulare	72	9	0	13	51,502	56	0	56	3,440,079
Ventura	1,761	1,293	0	6	7,466,152	7,626,361	0	7,626,361	50,784,784
Yolo	0	0	50	42	i/ 0	0	3,196,124	3,196,124	187,923
Yuba	0	0	1	0			2,449	2,449	0
STATE TOTALS	52,144	20,768	1,638	795	214,594,985	175,586,708	89,858,173	265,444,881	2,592,424,531

Figure M-1. Producing Wells and Production of Oil, Gas, and Water by County - 2008

Coast

Although there are many oil and gas fields with billions of barrels of oil and trillions of cubic feet of gas production and reserves, there is very little federal mineral estate in the area. Only the Sespe oilfield within the boundaries of Los Padres National Forest contains any significant amount of federal mineral estate, and nearly that entire oilfield is covered under the 2005 Los Padres Oil RMP/EIS. Consequently, very little activity has occurred or is expected to occur on BLM-administered lands within this area.

San Joaquin Valley

Between 2003 and 2007, nearly 90 percent of the wells drilled in California were drilled on lands within the RMP planning area. On federal lands, virtually 100 percent of all federal wells drilled within the past 14 years were drilled in the San Joaquin Valley. Within the RMP decision area, most of the oil and gas activities are projected to occur within the San Joaquin Valley. Most federal drilling occurs on a relatively few leases, most of which are operated by a handful of operators.

Sierra Nevada Range

The Sierra Nevada Range portion of the Planning Area has little or no potential for the accumulation of hydrocarbons.

Ongoing reviews of the monthly activity in the Bakersfield FO suggest that the activity levels within existing fields may stabilize at current levels. More specifically, federal oil activity would continue to be focused in the Midway-Sunset and Lost Hills Fields in the San Joaquin Valley.

Geothermal Resources

In December 2008, the BLM issued a Record of Decision (ROD) for the Programmatic Environmental Impact Statement (PEIS) for Geothermal Leasing in the Western United States. This ROD documented the BLM's decision to facilitate geothermal leasing of the federal mineral estate in Alaska, Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming. This decision allocated BLM lands as open to be considered for geothermal leasing or closed to geothermal leasing. The ROD adopted stipulations, best management practices, and procedures for geothermal leasing and development and stated that these actions would be implemented through BLM resource management plans.

Although most of the lands within the decision area are open to geothermal leasing and development, all Areas of Critical Environmental Concern (ACECs) were closed to geothermal leasing in the ROD for the nationwide EIS.

Within the Planning Area Kernville Hot Springs near Lake Isabella has high potential for the development of geothermal resources. This area of high potential extends south and west to Democrat Hot Springs, within the boundary of lands managed by the US Forest Service. Within the Sierra Nevada, a broad area of moderate potential surrounds Lake Isabella, extending from California Hot Springs on the northwest to Walker Pass on the southeast. Furthermore, an area extending from Springville on the west nearly to Coso Hot Springs on the east also has moderate potential. In the Transverse Range, an area with several hot springs, extending west from Sespe Hot Springs for over thirty miles, has moderate potential.

Within the RMP decision area, there are currently no federal geothermal leases. There has historically been little interest in geothermal development in the decision area. Therefore, based on the RFD in the PEIS it is projected that no direct use or indirect use geothermal development will occur on public lands within the Planning Area over the next 10 years.

M.2.2 Solid Leasable Minerals

The solid leasable mineral resources in the Bakersfield FO planning area mostly consist of phosphate and saline (salt) materials. Within the decision area, about 35,084 acres of federal mineral estate is classified as prospectively valuable for these minerals and, therefore, have .potential for solid leasable mineral development. Of these, 493 acres of the potential area is currently closed to development.

Saline and Phosphate Minerals

The BLM has classified several areas as prospectively valuable for phosphates within the Transverse Ranges and the southern Coast Ranges. A few of these areas have small tracts of BLM-managed public lands within them, although two areas have significant acreages of BLM-managed public land: San Luis Obispo County, from just east of Creston to just south of State Highway 58 at San Juan Creek, west of US Highway 101 from Atascadero north to Adelaida, and at the southern end of Morales Canyon northwest of New Cuyama; Kern County, on the east side of the Temblor Range from just south of McKittrick Summit north to State Highway 46. Over the past 20 years, there have been about a dozen phosphate

prospecting permits or leases within the Bakersfield FO, most of which have been on lands administered by the US Forest Service. All of these permits are either dormant or expired.

Saline minerals have been produced from Soda Lake in the Carrizo Plain, Lockwood Valley near Mount Pinos, and Proctor Dry Lake near Tehachapi. Soda Lake, which is outside of the decision area for this RMP, was mined from the 1880s until about the 1920s for salt and sodium sulfate. Borate minerals were mined within the boundary of Los Padres National Forest in the Lockwood Valley early in the 1900s, and salt was produced from Proctor Lake. The BLM has classified all three areas as prospectively valuable for sodium and potassium.

In the past, phosphate and saline developments have impacted between 20 and 40 acres. Any future development of these resources would likely impact between 10 and 80 acres per project. Only one such project is considered likely to occur in the next 20 years.

Other Solid Leasable Minerals

On average, the Bakersfield FO receives one proposal for mining solid leasable minerals (other than saline or phosphates) every couple of years. Each of these proposals would typically impact up to 20 acres. Over the next 20 years, there may be as many as five mining plans for solid leasable minerals. The total projected surface disturbances from these projects after reclamation would be 130 acres.

M.3 Locatable Minerals

Locatable minerals are those for which the right to explore, develop, and extract mineral resources on federal lands open to mineral entry is established by the location (or staking) of lode or placer mining claims as authorized under the General Mining Law of 1872. Mining is also regulated under 40 CFR 3802, Exploration and Mining, Wilderness Review Program, 40 CFR 3809, Surface Management, and 43 CFR 6304, Uses Addressed in Special Provisions of the Wilderness Act, and other applicable federal regulations. Locatable minerals are part of the federal mineral estate on split-estate lands, with private surface patented under the Stock Raising Homestead Act. In these ranching patents, the surface became private, but the Federal Government retained the minerals. Mining claims can be staked on SRH Lands. Regulations for staking mining claims on private lands are contained in 43 CFR, 3838.

Because of the variety of potentially locatable minerals, there is not a definitive list of locatable minerals. The 1872 Mining Law itself mentions only those metallic minerals known to be valuable at the time. As a result of various court decisions and new laws over the years, other minerals, including some nonmetallic minerals, have been added (such as materials use in the production of kitty litter, or pumice that breaks naturally into dimensions of 3 inches or greater). Some minerals are considered locatable only if they are “unique” and have a “distinct and special value.” The BLM has to make such a determination on a case-by-case basis. In general, metallic minerals are locatable.

Historically, locatable minerals mined within the Bakersfield FO are gold, silver, copper, lead, zinc, tungsten, mercury, chromite, manganese, antimony, and uranium. Nonmetallic minerals mined are diatomaceous shale, diatomite, limestone, pumice, fuller’s earth, barite, magnesite, and feldspar. Limited noncommercial amounts of gemstones (including rare varieties of agate) and gem minerals may be collected for free. Commercial collection is normally done under a mining claim. Uncommon varieties of agate and gemstones do occur within the Bakersfield FO.

There are 257,690 acres in the Bakersfield Decision Area with potential for locatable mineral development; however, there are approximately 21,000 acres with potential that are currently withdrawn from entry under the mining law.

Areas of Disturbance for Locatable Minerals

Because the area needed for each mine depends on the mineral deposit and the economics and regulations affecting the mining methods, there are no typical amounts of disturbance support facilities that can be readily predicted. However, historically, most exploration programs for locatable minerals have caused less than five acres of surface disturbance, while most development projects have caused 10 to 80 acres of disturbance. If fewer than five acres of surface disturbance are proposed, a notice must be submitted to the BLM before disturbing the surface. If more than five acres of surface disturbance are proposed or if the proposed operation is within an ACEC, federal regulations require that a plan of operations and a reclamation plan be submitted and that an environmental assessment or EIS be prepared.

Typically, the Bakersfield FO receives up to three mining notices each year, averaging two acres. It receives up to one plan of operations each year that would impact an average of 10 acres. Over the next 20 years, there may be as many as 60 mining notices and 10 plans of operation. Total projected surface disturbances, after reclamation would be 230 acres.

M.4 Salable Minerals

The BLM defines common varieties of sand, gravel, stone, pumice, pumicite, cinders, and ordinary clay as salable, not locatable (BLM 2004a). Salable minerals include materials used for building and construction, both commercially and privately. Sand, gravel, aggregate, lime (limestone), cinders, and building stone are the more common salable minerals. Use of salable minerals from public lands requires either a sales contract or a free use permit from the Bakersfield FO. The contract or permit may have stipulations on multiple land use. Disposals of salable minerals from public lands are regulated by 43 CFR, Part 3600.

Geology determines the location and character of the sand and gravel deposits from which aggregate is obtained. The most easily accessible sources of high quality aggregate are in and along modern river channels, floodplains, mill sites, and tunnel sites. Other suitable resources may be obtained from terrace deposits along modern river channels or from older channel or floodplain deposits that are buried beneath the present land surface. Extensive deposits of Pleistocene sand deposits east of Lake Isabella and in the San Joaquin Valley have good potential for use as fill. Recent alluvium within active riverbeds is mined for sand and gravel in many places on private lands.

There is an increasing demand for crushed stone produced from the mining, crushing, and sizing of granitic and volcanic rocks. Crushed stone is now being produced from several companies in the Sierra Nevada and Coast Range. They make up a widespread resource for mineral material development on BLM lands throughout the Bakersfield FO.

Salable minerals are expected to continue being mined within the Bakersfield FO. The demand for salable mineral resources is a function of market preferences and construction activity and depends on where the construction is taking place. Transportation costs for sand and gravel aggregate can be minimized by using a salable mineral source close to a construction site. It is likely that construction project managers will prefer using mineralized areas close to public roads.

Typically, the Bakersfield FO receives 10 to 20 requests for mineral materials from the Kelso Community pit each year. County governments and mineral material contractors are asking the BLM to establish new community pits on the west side of Kern County, in western Fresno County, and near the town of Coarsegold in Madera County. The Bakersfield FO will likely receive up to 15 permits for material sales from the Kelso pit each year for the next 20 years. This will cause no additional surface disturbance than what has already been authorized for this pit. Over the next 20 years, three new community pits are projected to be established, and there will likely be 10 new negotiated sales. Each of these projects would disturb up to 20 acres each, for a total projected disturbance of 200 acres

In the decision area, there are 51,275 acres of land with potential for salable mineral development. Of these, 7,594 acres or 15% of the potential area is closed to development.

M.5 Renewable Energy

Renewable energy includes solar power, wind, and biomass resources. As demand has increased for clean and viable energy to power the nation, consideration of renewable energy sources available on public lands has come to the forefront of land management planning.

In cooperation with the National Renewable Energy Laboratory, the BLM assessed renewable energy resources on public lands in the western United States (BLM and DOE 2003). The BLM reviewed the potential for concentrated solar power (CSP), photovoltaics (PV), wind, biomass, and geothermal energy on US Department of the Interior, Bureau of Indian Affairs, and Forest Service lands in the West. (Hydropower was not addressed.) While geothermal is a renewable energy source, it is considered a fluid leasable mineral and, therefore, is covered under Section M.2.1 above.

M.5.1 Solar

Resource Potential

The planning area did not rank among the top 25 BLM planning areas in the US having the highest CSP or PV potential. An area was considered to have high potential if it met the following criteria (BLM and DOE 2003):

- A minimum direct solar resource of six kilowatt-hours or greater per square meter per day ($kWh/m^2/day$);
- Terrain slope of less than or equal to five percent for CSP or one percent for PV;
- Within 50 miles of transmission 115-345 kV;
- Within 50 miles of major road or railroad;
- Minimum parcel size of 40 contiguous acres;
- Department of the Interior Bureau of Indian Affairs, BLM, or USDA Forest Service lands; and
- BLM and USDA Forest Service compatible land use.

Approximately 40 percent of the planning area met the solar resource criterion of six $kWh/m^2/day$. The terrain criterion was met throughout most of the San Joaquin Valley, sporadically within the Coast, and rarely within the Sierra Nevada Range. The entire planning area met the criteria for proximity to roads, railroads, and transmission lines. The majority of public lands within the Bakersfield FO are at least 40 contiguous acres in size (BLM and DOE 2003).

Public lands meeting the CSP and PV potential criteria have been identified within the San Joaquin Valley in the area to the northeast of the Carrizo Plain National Monument and near the town of South Lake near Lake Isabella in the southern portion of the Sierra Nevada Range near Highway 178 (BLM and DOE 2003). The lands near Lake Isabella have slopes of around five percent and would therefore be suitable only for CSP development.

While renewable energy potential has been identified in other portions of the Bakersfield FO with lands with high solar potential (Western Governor's Association and Department of Energy 2009), the rugged landscape and steep slopes preclude the development of solar energy with existing technologies. No other solar resources were identified within the Bakersfield FO.

Existing Activity

The Bakersfield FO does not currently have any solar installation projects on public land.

There is one pending solar right-of-way (ROW) application, CACA 51812, involving 1509 acres within the Atwell Island management area.

Two solar ROW applications were received in 2011: CACA 52471 involving an isolated 160 acre parcel of BLM managed lands near Duck Pond and CACA 52473 involving an isolated 80 acre parcel near Lost Hills. These applications were rejected in September and the cases closed in October 2011.

Reasonably Foreseeable Development Scenario

While most BLM parcels available for development are not large enough for commercial scale development on their own, there is the potential for projects occurring on adjacent private parcels to be partially located on BLM lands. The Bakersfield FO is expected to contain up to two CSP projects and up to five PV projects over the long term, given existing land allocations. The most likely sites for utility scale CSP or PV projects to be solely located on public land are just south of Lake Isabella and within the Atwell Island management area. Other solar projects may occur on smaller parcels if they are part of projects occurring on adjacent lands not administered by the BLM.

M.5.2 Wind

Resource Potential

Wind power classes range from 1 (lowest) to 7 (highest). Public lands in portions of the planning area are Class 3 and higher, although the planning area is not in the top 25 BLM planning units in the US having the highest wind energy potential (Class 5 and higher) (BLM and DOE 2003).

The PEIS on Wind Energy Development on BLM-Administered Lands in the Western United States (BLM 2004b) categorizes public lands as having a low, medium, or high potential for wind energy development from 2005 through 2025, on the basis of their wind power classification. Wind resources in Class 3 and higher could be developed economically with current technology over the next 20 years. Class 3 resources have medium potential; resources in Classes 4 and higher have high potential. The PEIS identifies public land parcels with medium or high wind resource potential that might be developed economically with current technology. These areas are concentrated along ridgetops in the following areas:

- Tehachapi Mountains and Lake Isabella
- North of Fillmore and Piru
- Around Orchard Peak, east of Cholame, between State Routes 41 and 46.

The January 2009 Draft Map of the Western Renewable Energy Zones, a joint initiative of the Western Governors' Association and the US Department of Energy, identified the following areas as having wind potential (Western Governor's Association and Department of Energy 2009):

- The Tehachapi Mountain Range, extending from Frazier Park in the south to just south of Piute Peak in the north, with wind power classes ranging from 3 through 7;
- An area centered on Simi Valley, extending north to Fillmore, south to Thousand Oaks, west to Santa Paula, and east to San Fernando, with wind power classes ranging from 3 through 6;
- Scattered parcels across the mountain range bounded by Lompoc to the northwest, Solvang to the northeast, and the Pacific Ocean to the south, with wind power classes ranging from 3 through 7; and
- Scattered parcels in the coastal range from Nipomo in the south to Cambria in the north, with wind classes ranging from 3 through 6.

Existing Activity

There are currently no wind projects administered by the Field Office within the planning area.

In the past several years several ROW applications have been received for the following areas: east of Cholame, within the Temblor Range, near Lake Isabella, and within the Tehachapi Mountains. Most of these were dropped by the applicants.

In 2010 and 2011, four ROW applications for wind development were received and evaluated by the Field Office. CACA 49112, involving 8592 acres in the Tehachapi Mountains, was withdrawn by the applicant in January 2011. Three other applications (CACA 52611, 52612, and 52613) were rejected and the cases closed in June 2011.

Reasonably Foreseeable Development Scenario

Wind energy is expected to be developed within the Temblor Range, in the mountains near Fillmore in Ventura County, southwest of Lake Isabella, and within the Tehachapi Mountains over the long term. Other wind projects could occur in the future along the scattered parcels of public land that coincide with mountain peaks and ridges

M.5.3 Biomass

Resource Potential

Biomass resources include the use of biological materials such as sawdust or yard clippings directly as fuel, and the conversion of biological materials into usable fuel such as alcohol. The BLM/National Renewable Energy Laboratory study evaluated the long-term sustainability to support biomass plants using the monthly Normalized Difference Vegetation Index (NDVI) computed from the National Aeronautics and Space Administration's (NASA) Advanced Very High Resolution Radiometer Land

Pathfinder satellite program. The Bakersfield FO is not in the top 25 BLM planning areas having the highest potential for biomass resources. For an area to have biomass development potential, it would have had to meet the following criteria (BLM and DOE 2003):

- An NDVI of 0.4 for at least four months between April and September;
- A slope of less than 12 percent;
- No more than 50 miles from a town with at least 100 people; and
- BLM- and USFS-compatible land use.

Nearly all of the public lands within the Bakersfield FO are identified as meeting the criteria for having biomass potential.

Scattered parcels of high biomass potential lands occur throughout the Planning Area. The areas of highest concentration are at the following locations:

- Immediately south of State Route 58 approximately five miles east of Highway 101 and approximately 12 miles from the city of San Luis Obispo;
- Approximately 2.5 miles north of State Route 46 and 15 miles west of Highway 101;
- In Kern County, approximately three miles east of State Route 33 and four miles south of the Maricopa Highway (State Routes 33/166);
- In Santa Barbara County, half a mile west of State Route 33 (Maricopa Highway) around the unincorporated town of Ventucopa in the Cuyama Valley;
- Several remote areas throughout the Tehachapi Mountains, ranging from 10 to 12 miles north and northeast of State Route 58; and
- Multiple areas around all sides of Lake Isabella close to State Routes 178 and 155, Wofford Boulevard/Burlando Road, and Sierra Way.

Existing Activity

There are no current or historical biomass energy facilities on any public lands within the Bakersfield FO, nor has the Bakersfield FO received any applications for such facilities.

Reasonably Foreseeable Development Scenario

There is potential for biomass energy development in planning area over the long term. Unlike wind and solar resources, the location of a biomass facility does not correlate with the amount of production of biomass that local lands provide. Feedstock, which is the raw material used to fuel biomass, such as woody debris from forests and agricultural wastes from farm lands, needs to be transported to a biomass facility, so having such sources present at the regional level is sufficient. Both the Coastal and Sierra areas have high biomass yielding lands due to the forests in these areas, and the San Joaquin Valley contains vast amounts of high biomass-yielding lands due to the intensity of agricultural production. It is desirable to shorten the distance that a feedstock must be transported to a biomass facility; nevertheless, the entire planning area has so much biomass feedstock on public lands that the question of where to locate a biomass plant in the Bakersfield FO hinges more on the site's suitability for the construction of a facility than on the productivity of the site. Given this, it is likely that biomass

facilities would be located on private lands and that public lands would be used only as a source for biomass fuel.

M.6 References

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Appendix N

Supplementary Rules

Appendix N – Supplementary Rules

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N.1 Introduction

The focus of a Resource Management Plan (RMP) is to guide the management of resources, both protection and utilization, and to address issues related to public health and safety. Throughout the RMP, decisions concerning restrictions, prohibitions, and allowable uses are presented to address identified issues or achieve management goals and objectives. In order for these decisions to be effectively put into practice, enforcement is often needed, first to ensure the management decision is properly understood and followed and second to provide for civil and criminal penalties should these restrictions and prohibitions not be followed.

Although many of management decisions can be implemented through existing laws and regulations, often, unique and site-specific restrictions and prohibitions need to be clearly spelled out for ease of understanding and clarity. The BLM's tools to achieve this are closure and restriction orders, supplementary rules, and special rules.

N.2 How to Read and Use this Document

This document addresses the process by which the supplementary rules will be enacted, including public involvement opportunities and the proposed supplementary rules themselves as they pertain to the proposed plan alternative (Alternative B). Similar rules would be implemented under other alternatives, although the size, scope, and levels of restriction would change. These supplementary rules for the other alternatives are not presented, so as to not confuse or reduce the clarity of the proposed rules.

N.3 Summary

The proposed supplementary rules include all closure and restriction orders, and supplementary rules presented throughout Alternative B. This includes rules divided into 9 subsections for ease of understanding, implementation, and enforcement. The justification and reasoning behind each restriction or prohibition is presented throughout the RMP in Chapter 2 - Alternatives, Chapter 3 - Affected Environment, and Chapter 4 - Environmental Consequences.

N.4 Authority

The regulations that allow for the creation and enforcement of closure and restriction orders, supplementary rules, and special rules are issued in the Code of Federal Regulations (CFR), 43 CFR, under the provisions of the following:

- Federal Land Policy and Management Act of 1976 (43 USC, 1701 et seq.);
- Sikes Act (16 USC, 670g);
- Taylor Grazing Act (43 USC, 315a);
- Wild and Scenic Rivers Act (16 USC, 1281c);
- Act of September 18, 1960, as amended (16 USC, 877 et seq.);
- Land and Water Conservation Fund Act (16 USC, 460l-6a); and
- National Trails System Act (16 USC, 1241 et seq.).

The authority is specifically given in the following regulations:

- Supplementary Rules (43 CFR, 8365.1-6);
- Closure and Restriction Orders (43 CFR, 8364.1); and
- Special Rules (43 CFR, 8341.2 and 8351.2-1).

N.5 Process

The process of creating and enacting supplementary rules and closure or restriction orders, involves several steps, including creation and development of rules, public comment and feedback, and final publication.

For the purposes of this process, all existing rules affecting the Bakersfield FO planning area are assumed to be rescinded and replaced. This resolves several issues that have developed over the years, including boundary changes, acquired lands, and obsolete rules. In addition, presenting all the rules, updated and rewritten in a consistent manner, aids in understanding and ability to enforce.

N.6 Rule Creation

The process of creating supplementary rules begins with the management actions presented in Chapter 2, Alternatives of the RMP. These decisions essentially create restrictions and prohibitions that need to be backed with written rules to ensure they are fully understood and enforceable.

In many cases the process of creating rules is intuitive, e.g., a restriction on access to a specific area for protection of a resource result in a rule stating access to that area is prohibited; as such, the justification behind the rules is self-explanatory.

In some cases the proposed rules respond to specific identified issues, which may or may not be directly addressed in the RMP, but respond to an existing need. For efficiency, this type of rule is included with the rules resulting from specific RMP decisions to provide a complete version of the proposed supplementary rules that would go into effect.

N.7 Public Process

In order for special rules to be implemented, a public process is required to be undertaken. As outlined in 43 CFR, 8365.1-6, specific steps are taken to ensure interest groups and public lands users are adequately informed of newly proposed rules before they go into effect.

The first step of this process is the publication of a proposed set of rules and then a period for public response and comment. This appendix within the RMP and the associated notices, press releases, and public meetings serve as the opportunity for the public to review and comment on the proposed rules, along with the RMP as a whole. This appendix has also been made available as a stand-alone document at the BLM's Bakersfield Field Office and various other locations throughout the region. In addition, the RMP and this appendix are available for download on the BLM's Bakersfield FO Web site at http://www.ca.blm.gov/bakersfield.

During the public process, reviewers are encouraged to comment on several elements of the proposed rules, including consistency and clarity. Specifically as it relates to clarity, Executive Order 12866

requires each agency to write regulations that are simple and easy to understand. As such, comments on how to make these supplementary rules easier to understand are encouraged, including answers to the following questions:

- Are the requirements in the supplementary rules clearly stated?
- Do the supplementary rules contain technical language or jargon that interferes with their clarity?
- Does the format of the supplementary rules (for example, grouping and order of sections, use of headings, and paragraphing) aid or reduce their clarity?
- Would the supplementary rules be easier to understand if they were divided into more (but shorter) sections?

After public comments have been addressed and in conjunction with the Notice of Availability for the Final RMP, final supplementary rules will be made available though similar channels as the proposed rules, including press releases, publication in the *Federal Register*, the BLM's Bakersfield FO Web site and at BLM locations through which the public can receive information.

N.8 Public Comment Procedures

Written comments on the proposed supplementary rules should be specific, should be confined to issues pertinent to the proposed supplementary rules, and should explain the reason for any recommended change. Where possible, comments should reference the specific section or paragraph of the rule that the comment is addressing. The BLM is not obligated to consider or include in the Administrative Record for the proposed supplementary rules (a) comments that the BLM receives after the close of the comment period, unless they are postmarked or electronically dated before the deadline, or (b) comments delivered to an address other than those listed.

All comments on the proposed rules should be mailed or hand-delivered to Susan Porter, Planning and Environmental Coordinator, BLM, Bakersfield Field Office, 3801 Pegasus Drive, Bakersfield, California, 93308.

Comments, including names, street addresses, and other contact information of respondents, will be available for public review at the BLM's Bakersfield Field Office, 3801 Pegasus Drive, during regular business hours, Monday through Friday, except federal holidays. Before including your address, telephone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment—-including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

N.9 Other Procedural Matters

In addition the public process described, creation and enactment of additional regulations is guided by a myriad of legislation. As such, the following we're given consideration as part of the development of these proposed supplemental rules:

National Environmental Policy Act (NEPA)

These rules have been developed in conjunction with the RMP and associated EIS. The rules themselves and the actions to support and justify do not constitute a major federal action significantly affecting the quality of the human environment under Section 102(2)(C) of NEPA, 42 USC, 4332(2)(C). The public is invited to comment on the RMP, along with these rules, in accordance with the public comment procedures outlined.

Regulatory Flexibility Act

Congress enacted the Regulatory Flexibility Act (RFA) of 1980, as amended, 5 USC, 601-612, to ensure that government regulations do not unnecessarily or disproportionately burden small entities. The RFA requires a regulatory flexibility analysis if a rule would have a significant economic impact, either detrimental or beneficial, on a substantial number of small entities. These rules establish allowable, restricted and prohibited uses and rules of conduct for public use of specific public lands. Therefore, the BLM has determined under the RFA that these rules would not have a significant economic impact on a substantial number of small entities.

Small Business Regulatory Enforcement Fairness Act

These proposed supplementary rules do not constitute a “major rule,” as defined at 5 USC, 804(2).

Unfunded Mandates Reform Act (2 USC, 1531 et seq.)

These proposed supplementary rules do not impose an unfunded mandate on state, local, or tribal governments or the private sector of more than $100 million per year; nor do these supplementary rules have a significant or unique effect on state, local, or tribal governments or the private sector.

Executive Order 12630, Governmental Actions and Interference with Constitutionally Protected Property Rights (Takings)

These proposed supplementary rules do not represent a government action capable of interfering with constitutionally protected property rights. The supplementary rules do not address property rights in any form and do not cause the impairment of one's property rights. Therefore, the BLM has determined that these proposed supplementary rules would not cause a “taking” of private property or require further discussion of takings implications under this Executive Order.

Executive Order 13132, Federalism

The proposed supplementary rules will not have a substantial direct effect on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government. These supplementary rules do not conflict with any California state law or regulation. Therefore, in accordance with Executive Order 13132, the BLM has determined that these supplementary rules do not have sufficient Federalism implications to warrant preparation of a Federalism Assessment.

Executive Order 12988, Civil Justice Reform

Under Executive Order 12988, the BLM California State Office has determined that these proposed supplementary rules would not unduly burden the judicial system and that they meet requirements of sections 3(a) and 3(b)(2) of the Order.

Executive Order 13175, Consultation and Coordination with Indian Tribal Governments

In accordance with Executive Order 13175, the BLM has found that these proposed supplementary rules do not include policies that have tribal implications. The supplementary rules do not affect Indian resource, religious, or property rights.

Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

These proposed supplementary rules do not comprise a significant energy action. The rules will not have an adverse effect on energy supply, production, or consumption and have no connection with energy policy.

Executive Order 13352, Facilitation of Cooperative Conservation

In accordance with Executive Order 13352, the BLM has determined that the proposed supplementary rules will not impede facilitating cooperative conservation, will take appropriate account of and consider the interests of persons with ownership or other legally recognized interests in land or other natural resources, will properly accommodate local participation in the federal decision making process, and will provide that the programs, projects, and activities are consistent with protecting public health and safety. These rules merely establish rules of conduct for recreation on certain public lands.

Paperwork Reduction Act

These proposed supplementary rules do not contain information collection requirements that the Office of Management and Budget must approve under the Paperwork Reduction Act, 44 USC, 3501 et seq.

Information Quality Act

In developing these proposed supplementary rules, the BLM did not conduct or use a study, experiment, or survey requiring peer review under the Information Quality Act (Section 515 of Pub. L. 106-554).

N.10 Proposed Supplementary Rules

The following constitute the proposed supplementary rules, closure, and restriction orders and special rules to be enacted concurrently with the final RMP, based on selection of Alternative B (the Proposed Plan Alternative). For clarity and ease of understanding, the rules are broken down into subsections, grouping rules relating to similar issues together. Definitions used throughout the rules are provided first.

N.10.1 Definitions

The following definitions apply to the proposed supplementary rules, unless modified within a specific part or regulation:

(a) Drug paraphernalia means equipment, products, and materials of any kind which are used, intended for use, or designed for use in planting, propagating, cultivating, growing, harvesting, manufacturing, compounding, converting, producing, preparing, testing, analyzing, packaging, repackaging, storing, containing, concealing, injecting, ingesting, inhaling or otherwise introducing into the human body a controlled substance. It includes diluting agents or substances.

(b) Motor vehicle means any vehicle that is self-propelled by a non-living power source, including a vehicle that is propelled by electric power. Exempt from this definition are motorized wheelchairs.

(c) Operator means any person who operates, drives, controls, or otherwise has charge of a mechanical mode of transportation or any other mechanical equipment.

(d) Public lands mean any lands owned by the United States and administered by the Secretary of the Interior through the Bureau of Land Management without regard to how the United States acquired ownership. This includes paved or unpaved parking lot or other paved or unpaved area where vehicles are parked or areas where the public may drive a motorized vehicle, paved or unpaved roads, roads, routes, or trails.

(e) Firearms means any weapon capable of firing a projectile, including but not limited to a rifle, shotgun, handgun, BB-gun, pellet gun, or paintball gun.

(f) Airsoft and Paintball activities mean any recreational activity that involves the use of replica firearms to fire non-lethal, plastic or form pellets, or paint-laden capsule, through the use of compressed gas or electric and/or spring driven pistons. Activities may include shooting targets or games/combat situations involving multiple people.

(g) Sunrise to sunset means those specific times published by the US Navy Astronomical Applications Department, when the upper edge of the disk of the Sun is on the horizon, considered unobstructed relative to the location of interest.

(h) Graffiti means any unauthorized inscription, word, figure, painting or other defacement that is written, marked, etched, scratched, sprayed, drawn, painted, or engraved on or otherwise affixed to any surface by any graffiti implement, to the extent that the graffiti was not authorized in advance by the Bureau of Land Management.

(i) Graffiti implement means an aerosol paint container, a broad-tipped marker, gum label, paint stick or graffiti stick, etching equipment, brush or any other device capable of scarring or leaving a visible mark on any natural or manmade surface.

N.10.2 Alcohol and Drugs

(a) ***Operation of a Motor Vehicle while under the influence of alcohol or drugs***—It shall be illegal to operate or be in actual physical control of a motor vehicle on public lands while under the influence of alcohol, or a drug, or drugs or any combination thereof, to a degree

that renders the operator incapable of safe operation of that vehicle; or the alcohol concentration in the blood or breath is 0.08 grams or more of alcohol per 100 milliliters of blood or 210 liters of breath. If the State of California establishes by statute a more restrictive standard of alcohol concentration than that defined in this supplementary rule, that more restrictive standard is hereby adopted and made a part of this supplementary rule and supersedes the standard specified in the preceding sentence.

(b) ***Open Container of Alcoholic Beverage***—It shall be illegal to carry or store a bottle, can or other receptacle containing an alcoholic beverage that is open, or has been opened, or whose seal is broken or the contents of which have been partially removed, within a motor vehicle on public lands. Each person within a motor vehicle is responsible for complying with the provision in this section that pertains to carrying an open container. The operator of a motor vehicle is the person responsible for complying with the provisions of this section that pertain to the storage of an open container. This section does not apply to:

(i) An open container stored in the trunk of a motor vehicle or, if a motor vehicle is not equipped with a trunk, to an open container stored in some other portion of the motor vehicle designed for the storage of luggage and not normally occupied by or readily accessible to the operator or passengers. For the purpose of this section, a utility compartment or glove compartment is deemed to be readily accessible to the operator and passengers of a motor vehicle; or

(ii) An open container stored in the living quarters of a motor home or camper; or

(iii) Unless otherwise prohibited, an open container carried or stored in a motor vehicle that is parked and the vehicle's occupant(s) are camping.

(c) ***Possession of Alcohol by a Minor***—Consumption or possession of any alcoholic beverage by a person under 21 years of age and the selling, offering to sell, or otherwise furnishing or supplying any alcoholic beverage to a person less than 21 years of age, on public lands is prohibited. This does not apply to the selling, handling, serving, or transporting of alcoholic beverages by a person in the course of his lawful employment by a licensed manufacturer, wholesaler, or retailer of alcoholic beverages.

(d) ***Possession of Drug Paraphernalia***—Possession of drug paraphernalia, as defined in C.1 – Definitions (a), by any person on public lands is prohibited.

N.10.3 Camping

(a) ***Camping Time Limit***—Camping within designated campgrounds is limited to 14 days within any 90-day period; unless otherwise noted at the campground.

(b) ***Dispersed Camping Time Limit***—Dispersed camping is limited to 14 days within any 90-day period. After the 14th day, campers must move beyond a 25-mile radius of their previous camp.

(c) ***Dispersed Camping Parking***—Parking for dispersed camping (including cars, trucks, recreation vehicles, and trailers ["fifth wheels"]) is restricted to one vehicle width from the edge of the designated route, designated for use of the type of vehicle which is parked.

(d) ***Dispersed Camping location restrictions***—Dispersed camping is prohibited within:
  (i) Any area identified for day-use;
  (ii) Any area or site with identified campsites;
  (iii) 25 yards of any freshwater source; and
  (iv) 100 yards of any suitable segment of a Wild and Scenic River categorized as either wild or scenic.

(e) ***Day-Use Only—***It shall be unlawful to stay beyond sunset or arrive before sunrise, as defined in N.10.1 – Definitions (g), in any area identified for "Day Use Only," unless specific written authorization is provided by the BLM. This prohibition is applied to the Ancient Lakeshores ACEC, Bitter Creek ACEC, Compensation Lands ACEC, Cypress Mountain ACEC, Cyrus Canyon ACEC, Hopper Mountain ACEC, Los Osos ACEC, Pt. Sal ACEC, Tierra Redonda ACEC, Atwell Island ERMA, Fresno River ERMA, Piedras Blancas ONA, and the BLM land within the Frog Pond, and Salinas River areas of ecological importance.

(f) ***Use of Campfires***—Campfires, camp stoves, and charcoal grills are permitted on BLM-administered public lands within the Bakersfield Field Office, on receipt of a California State Fire Permit and in accordance with prevailing fire conditions and restrictions, unless otherwise prohibited through these supplemental rules, such as in day-use only areas or by California state or county regulation. Permit must be in posses while maintaining a campfire, camp stove or charcoal grill and all permit terms and conditions must be adhered to.

(g) ***Burning of Treated Lumber***—It is unlawful to burn treated lumber and woody materials containing hardware (nails and screws) on public lands.

(h) ***Collection of Combustible Material***—Collection of all combustible materials from public lands is prohibited, except for dead and downed woody materials no greater than 4 inches in diameter. Standing tree—whether living or dead—may not be cut without authorization. Materials must be collected with hand tools only (for example, an axe or saw), and all material must remain to be burned on-site; any removal of such material requires a collection permit.

(i) ***Campfires in Day-Use Only Areas***—In areas designated for day-use only, campfires and the collection of combustible materials for use in a campfire are prohibited. The use of camp stoves and charcoal grills is allowed, in accordance with prevailing fire restrictions.

(j) ***Other Campfire Restrictions***—Campfires and the collection of combustible materials for use in campfires are prohibited in the Ancient Lakeshores ACEC, Bitter Creek ACEC, Compensation Lands ACEC, Cypress Mountain ACEC, Cyrus Canyon ACEC, Hopper Mountain ACEC, Kettleman Hills ACEC, LoKern-Buena Vista ACEC, Los Osos ACEC, Pt. Sal ACEC, Piute Cypress ACEC, Tierra Redonda ACEC, and Atwell Island, Frog Pond, Irish Hills and Salinas River areas of ecological importance.

N.10.4 Closures

(a) ***Public Closure***—The following areas are closed to general public access; authorized, permitted, emergency and administrative access is still permitted: Oil fields with oil well densities higher than 20 wells per 40 acres, the raft launch at Granite Launch; Paradise, Advance and Cherry Falls Recreation Sites; and Granite Cave.

(b) ***Seasonal Closure***—Public access to the recreation site at Advance, along the North Fork of the Kaweah River is prohibited from April 30th through September 30th each year, unless specifically authorized through a BLM-issued permit.

N.10.5 Domesticated Animals

(a) ***Domesticated Animal Control***—Domesticated animals shall remain under their owners control at all times. Within the following areas, all domesticated animals are required to be on a leash: Atwell Island Project (not wetland areas), Wallow Rock RMZ, Dam RMZ, and Gold Fever RMZ.

(b) ***Domesticated Animals at Atwell Island***—All domesticated animals are prohibited from the areas of wetland restoration within the Atwell Island Project.

(c) ***Domesticated Animal Waste***—It shall be unlawful to fail to remove and appropriately dispose of waste deposited by a domesticated animal at any developed site on public lands, including campgrounds, picnic areas, and paved parking areas.

(d) ***Domesticated Animal Abandonment***—It shall be unlawful for any person to willfully abandon a domesticated animal on public lands.

N.10.6 Firearms

Unless specifically addressed by regulations set forth in 43 CFR, the laws and regulations of the State of California and the counties of Kern, Tulare, Fresno, Madera, San Luis Obispo, Ventura, Santa Barbara, and Kings shall govern the use and possession of firearms. Such state and county laws and regulations that are now in effect or that may later be in effect are hereby adopted and made part of these supplemental rules.

(a) ***Discharge of Firearms***—It shall be unlawful to discharge a firearm, as defined in N.10.1 – Definitions (e), unless hunting with a valid state hunting license and in accordance with the laws or law enforcement officers in the performance of their duties, within the following areas: The Dam, Wallow Rock, and Gold Fever RMZs.

(b) ***Prohibition of Airsoft and Paintball Activities*** - It shall be unlawful to engage in airsoft and paintball activities, as defined in N.10.1 – Definitions (f) within the following areas; Ancient Lakeshores, Compensation Lands, and Cyrus Canyon ACECs.

(c) ***Limitation on Airsoft and Paintball Activities*** - It shall be unlawful to engage in airsoft and paintball activities, as defined in N.10.1 – Definitions (f), without a Special Recreation Permit within the following areas; Atwell Island ERMA, Case Mountain ERMA, and Kaweah ACEC.

(d) ***Target Shooting***—Target shooting, where allowed, is governed by the following rules:

(i) Target shooting may occur only where a suitable backdrop exists to prevent ammunition from travelling excessive distances.

(ii) Target shooting is not permitted across any designated route of travel or across any body of water, including flowing rivers and streams, lakes, and ponds.
(iii) Target shooting is not permitted within 150 yards of any man-made object (except targets), structure, camp, or dwelling.
(iv) Targets must be retrievable and suitable for the purpose. Rocks, trees, and other natural features, cultural or historic artifacts, glass, household trash, appliances, cars, and signs do not constitute targets.
(v) All materials used for targets must be retrieved on completion of target shooting, and removed from BLM lands. This includes all spent shells and cartridges.
(vi) Skeet/clay pigeon shooting and any similar style of target shooting that disperses targets in an irretrievable fashion is prohibited.

(e) ***Airsoft and Paintball:*** Airsoft and paintball activities, where allowed, are governed in accordance with the following guidelines and in adherence with state and federal and manufacturer safety instructions:
(i) Airsoft and paintball are not permitted across any designated route of travel or across any body of water, including flowing rivers and streams, lakes, and ponds.
(ii) Airsoft and paintball are not permitted within 150 yards of any man-made object, structure, camp, or dwelling, unless such structure is specifically designed and permitted for use in those activities.
(iii) Biodegradable ammunition must be used.
(iv) All materials associated with air-soft and paintball must be retrieved on completion of the activities.

N.10.7 Hunting and Fishing

Unless specifically addressed by regulations set forth in 43 CFR, the laws and regulations of the State of California and the California Department of Fish and Game and the supplemental rules below shall govern hunting on BLM-managed public lands within the BKFO; any specific state laws regarding hunting and fishing are hereby incorporated.

(a) ***Hunting***—In the following areas all forms of hunting are prohibited, unless specifically allowed through and by BLM authorization or permit; (i) The Dam RMZ, (ii) Wallow Rock RMZ, (iii) Gold Fever RMZ, and (iv) the BLM land within Atwell Island ERMA.
(b) ***Fishing—***All forms of fishing are prohibited, unless specifically allowed by BLM authorization or permit, in the BLM-managed waters within the restoration area at Atwell Island.

N.10.8 Mining

The supplementary rules below apply only to casual use, as defined in 43 CFR, 3809.5:

(a) Casual use (recreational mining and prospecting) is governed by the following rules:

i. Casual Use does not include the disturbance to trees (DBH 4" and greater) and shrubs (taller or wider than 3'); including their root areas (i.e., removal or undermining of these vegetation types will require at a minimum a Notice);

ii. Casual Use does not include any operations on or within 30ft of the centerline of designated routes and trails;
iii. Casual Use does not include any activity that pumps water from water courses for any purpose, except in association with Suction Dredging;
iv. Casual Use does not include the removal of more than one cubic yard of material from the site for offsite processing;
v. Casual Use does not include activity that creates high walls in excess of 3ft or undermines earthen banks, large rocks, or boulders.
vi. Casual Use does not include any high-banking, hydraulic mining, and ground sluicing;
vii. Casual Use does not include any sluices, riffle boxes, and dry washers with collecting surfaces of greater than ten square feet;
viii. Casual use does not include any disturbance that would result in an adverse effect, as described by Section 106 of the NHPA, to listed, eligible and those sites being treated as eligible until formal eligibility evaluations have been completed; and
ix. Casual Use will abide by the discovery clause; whereby all activity will cease upon discovery of any subsurface archaeological, historical, or paleontological remains. The discovery must be left intact and reported to the BLM immediately. Operations may only resume on clearance by the BLM and may require the filing of a Notice or Plan of Operations.

N.10.9 OHVs and Mechanized Equipment

(a) ***Cross-Country Travel—***Cross-country travel off designated routes is prohibited for all motorized and mechanized vehicles, except in designated OHV "open" areas and by uses exempted by 43 CFR, 8340.0-5(a).
(b) ***Edge of Road—***Any vehicle beyond 15 feet from the edge of the disturbed surface of a designated route would be considered to be travelling across country.
(c) ***Use of Designated Routes—***It shall be unlawful to use a route in a manner for which it is not designated, e.g., use of a designed "authorized" route by an unauthorized user.

N.10.10 Other Restrictions

(a) ***Advertising and Commercial Signs—***No person or organization shall announce, advertise, or call to public attention in any way any article, service, or thing for sale or hire, or paste, tack, or otherwise post any commercial sign, placard, or advertisement on public lands without prior authorization from the BLM.
(b) ***Bridge Jumping***—It shall be unlawful to jump from the foot bridge over the San Joaquin River.
(c) ***Concessions, Vending, and Peddling—***It shall be unlawful for any person or organization to operate a concession or expose or offer for sale any service, article or thing, nor shall any person or organization on public lands operate any stand, cart, or vehicle for the

transportation, sale, or display of such items, unless specifically authorized through a Special Recreation Permit issued to include vending.

(d) ***Defacement—***It shall be unlawful for any person to apply graffiti to any natural or man-made surface on any BLM managed lands.

(e) ***Fireworks and Explosives***—Fireworks and explosives of any kind are prohibited on all public lands within the Bakersfield Field Office, without express authorization from the BLM.

(f) ***Memorialization—***It shall be unlawful for any person or organization to establish, erect, or define a memorial site on public lands without prior written authorization from the BLM. Memorial sites include the erection of religious symbols, creation of shrines, the placement of placards or other items identifying persons, events, animals, or other things that may be memorialized.

(g) ***Noncommercial Signs***—No person or organization shall announce, advertise, or call to public attention in any way any article, service, or location, or paste, tack, or otherwise post any sign or placard on public lands without prior authorization from the BLM.

(h) ***Obstructions across rivers***—It shall be unlawful to tie any obstruction from one bank of a river to the other, including cables, ropes, and rafts.

(i) ***Personal Property***—Personal property left unattended without prior authorization for at least 72 hours is deemed abandoned and can duly be removed and disposed of by the United States Government, the Bureau of Land Management, or any person acting on its behalf.

(j) ***Possession of Graffiti Implements—***It shall be unlawful for any person to possess any graffiti implement while in or on any BLM-managed lands, unless otherwise authorized.

N.11 Penalties

Under the Federal Land Policy and Management Act of 1976, 43 USC, 1733(a), if you violate or fail to comply with these supplementary rules, you may be subjected to imprisonment for not more than 12 months, or a fine in accordance with 18 USC 3571, other penalties in accordance with 43 USC, 1733, or both.

Appendix P

Public Comment on the Draft RMP/Draft EIS

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Appendix P – Public Comment on the Draft RMP/Draft EIS

The Draft RMP/ Draft EIS was released for a 90-day public review and comment period on September 9, 2011. During this period, the Bakersfield Field Office received approximately 274 comment letters, emails, or comment forms completed during one of the public open house meetings.

Each submission was carefully reviewed to identify substantive comments. Each substantive comment was numbered separately with the comment submission number and a unique comment identifier (e.g., 125-3). It should be noted that some submissions contained no substantive comments, and as such no response is provided in Chapter 5.

In accordance with regulations on the implementation of the National Environmental Policy Act (40 CFR 1503.4) all substantive comments must be addressed in the Final EIS. Substantive comments are generally those that:

- Question, with reasonable basis, the accuracy of the information in the Draft EIS.
- Question, with reasonable basis, the adequacy of, methodology for, or assumptions used for the environmental analysis.
- Present new information relevant to the analysis.
- Present reasonable alternatives other than those analyzed in the Draft EIS.
- Cause changes or revisions in one or more of the alternatives.

To the extent possible, substantive comments similar in nature were combined and paraphrased. When necessary, however, context of the comment was provided so it might stand-alone in a more complete, comprehensible form. Original comment submissions are available for review by the public at the Bakersfield Field Office.

It should be noted that comments are not treated or tallied as "votes." Rather the substance of the comments help the BLM to understand and weigh the multiple factors considered as part of its decision making process.

Table P-1 identifies commenters, the number given to their comment letter, and their affiliation if any. This information can be used in conjunction with the comment responses provided in Chapter 5, Section 5.5 Comment Response to identify the origin of the comment.

Table P-1
Comment Sources

Comment Submission Number	Commenter Name	Commenter Affiliation
1	Robert Jump	
2	Dave Singleton	State of California, Native American Heritage Commission
3	Norman I. Rilling	
4	Shannon Lodge	
5	Carloe Combs	Tulare Basin Wildlife Partners
6	Steve Evans	Friends of the River
7	Austin Snedden	
8	Rebecca Royal	

Comment Submission Number	Commenter Name	Commenter Affiliation
9	Jack Caufield	Lodi Gem & Mineral Club, Fossils for Fun, Kern County Gem and Mineral Society, Quartzsite Roadrunners Gem & Mineral Society, Buena Vista Museum of Natural History
10	Bob Brister	
11	Carolyn Straub & Steve McHenry	
12	Phillip Simon	
13	Marshall Havner	American Lands Access Association Tule Gem & Mineral Society
14	Angel Campbell	
15	Erik Melchiorre	California State University San Bernardino
16	Greg Meade	CCMA, Sneakers M/C
17	Jerri & Gene Curtis	Bakersfield Trail Blazers
18	James Johnston	Bakersfield Trail Blazers
19	James Sanders	Bakersfield Trail Blazers
20	Eileen Sanders	Bakersfield Trail Blazers
21	Justin Branch	Bakersfield Trail Blazers
22	Eric Mattick	Bakersfield Trail Blazers
23	Dennis Sizemore	
24	Charles Reed	Tule Gem and Mineral Society
25	Tony Hart	Tule Gem and Mineral Society
26	Richard Spencer	Young Men Organization
27	Sam Mudie	Sierra Nevada Alliance Trustee
28	Scott M. Kruse	Friends of the River
29	George Silva	American Lands Access Association Tule Gem & Mineral Society
30	Patrick Harrison	Tule Gem and Mineral Society
31	John Martin	American Lands Access Association Palmdale, Lone Pine, and Palomar Gem & Mineral Societies
32	Christina Lynch	
33	Bill Bingaman	Tule Gem and Mineral Society
34	Martin Dougherty	Long Beach Gem and Mineral Society
35	Kathy Jarrett	Friends of the River
36	Richard Crosland, Ph.D.	Friends of the River
37	Phillip Simon	Friends of the River
38	Dan Silver	Endangered Habitats League
39	Alan Anderson	Friends of the River
40	Stacy and Greg Kline	Friends of the River
41	Roger Reid	Friends of the River
42	Mark Takaro	Friends of the River
43	Ms. Rachael Denny	Friends of the River
44	Dr. Anthony De Riggi	Friends of the River

Comment Submission Number	Commenter Name	Commenter Affiliation
45	Ms. Kathleen Frank	Friends of the River
46	Charles Hammerstad	Friends of the River
47	Ms. J Lasahn	Friends of the River
48	Jan Summers	Friends of the River
49	Dr. Wade Graham	Friends of the River
50	Barbara Bazan	Friends of the River
51	Dr. Robert Rosenberg	Friends of the River
52	William Dvorak	Friends of the River
53	Dr. Michael Molamphy	Friends of the River
54	Frank J. Perruccio	Friends of the River
55	Tom Grasshoff	Friends of the River
56	Pandora Edmonston	Friends of the River
57	Felipe Garcia	Friends of the River
58	Dr. Margery Kampa	Friends of the River
59	Jan Kampa	Friends of the River
60	Sue Ghilotti	Friends of the River
61	Joyce Burk	Friends of the River
62	Michael Rifkind	Friends of the River
63	Herbert Cattanach	Friends of the River
64	Randall Smith	Friends of the River
65	Kit LOFROOS	Friends of the River
66	Janice Foss	Friends of the River
67	Patricia Snow	Friends of the River
68	Robert Algieri	Friends of the River
69	Richard Montgomery	Friends of the River
70	Paul Jarvis	Friends of the River
71	Randall Frank	Friends of the River
72	Dana Shokes	Friends of the River
73	Rae Peronneau	Friends of the River
74	Al Knickerbocker	Friends of the River
75	Julie Ford	Friends of the River
76	Gordon Becker	Friends of the River
77	Tim Thomas	Friends of the River
78	Andrea Ganz	Friends of the River
79	Donald Norton	Friends of the River
80	Judy Schriebman	Friends of the River
81	Tracey Sittig	Friends of the River
82	Kevin Branstetter	Friends of the River
83	Kenneth Lavine	Friends of the River
84	Juan Byron	Friends of the River
85	Dr. David Adams	Friends of the River
86	Henry Gutierrez	Friends of the River

Comment Submission Number	Commenter Name	Commenter Affiliation
87	Larry Keller	Friends of the River
88	Don Hoernschemeyer	Friends of the River
89	Sherman Lewis	Friends of the River
90	Kathy Hanson	Friends of the River
91	Daniel Brower	Friends of the River
92	Beth Obrien	Friends of the River
93	Dr. Janet Anderson	Friends of the River
94	James Peeler	Friends of the River
95	Shawn Trice	Friends of the River
96	William Butler	Friends of the River
97	Walt Levitus	Friends of the River
98	Juliet Bradley	Friends of the River
99	Andrew T and JoAnn Pohorsky	Friends of the River
100	Mr. & Mrs. James Denison	Friends of the River
101	David Seaborg	Friends of the River
102	Joshua Switzky	Friends of the River
103	Dirk Beving	Friends of the River
104	JB Pearce Sr.	Friends of the River
105	Richard Spotts	Friends of the River
106	Don Morrill	Friends of the River
107	Connie Spears	Friends of the River
108	Morteza Danesh	Friends of the River
109	Erik Johnson	Friends of the River
110	Jenny Wilder	Friends of the River
111	Jim Foran	Friends of the River
112	JoAnne Clarke	Friends of the River
113	Scott M. Kruse	Friends of the River
114	George Alderson	Friends of the River
115	Steven B. Giddings	Friends of the River
116	Don Forman	
117	Joel Masser	Friends of the River
118	Dennis P. Davie	Friends of the River
119	Gary Hartsough	Friends of the River
120	Marshall Havner	
121	Donald J. Vieria	American Lands Access Association
122	Michael Arbogast	
123	James Arbogast	
124	Lawrence H. Thompson	Friends of the River
125	Ms. Sandy Zelasko	Friends of the River
126	Donna Miranda-	Tubatulabal Tribe

Comment Submission Number	Commenter Name	Commenter Affiliation
	Begay	
127	Amy Wolfberg	Friends of the River
128	Karen Linarez	Friends of the River
129	Chisholm & Ashley Twisselman	
130	Tom Twisselman	
131	JoAnne Clarke	
132	Robert McLaughlin	Friends of the River
133	Erik Melchiorre	
134	Dennis Huggins	Kern County Mineral Society
135	Carole Clum	
136	Jean Circiello	
137	Sopac McCarthy Mulholland	Sequoia Riverlands Trust
138	Nick Rodin	Friends of the River
139	Robert E. Reynolds	
140	Timothy Elam	
141	Michaea Souza	Friends of the River
142	Tia Triplett	Friends of the River
143	Richard Gibbons	Friends of the River
144	William Mahoney-Watson	Friends of the River
145	Lori Lindburg	Friends of the River
146	Dr. Mark Hoyer	Friends of the River
147	Rob Seltzer	Friends of the River
148	Dr. John Brinkley	Friends of the River
149	Jennifer Quashnick	Friends of the River
150	Nathan Ferguson	Friends of the River
151	Joanne Crandall-Bear	Friends of the River
152	Lesley Hunt	Friends of the River
153	Nina Jones	Friends of the River
154	Dr. Arthur Strauss	Friends of the River
155	Steven Hibshman	Friends of the River
156	Jeff Depew	Friends of the River
157	Jim & Diana Prola	Friends of the River
158	Verne Huser	Friends of the River
159	Susan Rowe	Friends of the River
160	Maureen Lahiff	Friends of the River
161	Roberta Sparkman	Friends of the River
162	John Nathaniel	Friends of the River
163	Deanna Wulff	Friends of the River
164	Matthias Schwartz	Friends of the River
165	Sharon Cavallo	Friends of the River

Comment Submission Number	Commenter Name	Commenter Affiliation
166	Timothy LaVerne	Friends of the River
167	Lowell Young	Friends of the River
168	Harry Surtees	Friends of the River
169	Miranda Everett	Friends of the River
170	Frank Ackerman	Friends of the River
171	Sarah Nash	Friends of the River
172	Jeff Wieland	Friends of the River
173	George Williams	Friends of the River
174	George Williams	Friends of the River
175	Dr. Clyde Wilson	Friends of the River
176	Eileen Heaser	Friends of the River
177	Jack Van den Bogaerde	Friends of the River
178	Laraine Downer	Friends of the River
179	Tyana Maddock	Friends of the River
180	Barbara Mendenhall	Friends of the River
181	Dave Zumwalt	Friends of the River
182	Lisa Reinertson	Friends of the River
183	Patrick McCully	Friends of the River
184	Constance Sutton	Friends of the River
185	John Kolarik	Friends of the River
186	Allen Jamieson	Friends of the River
187	William Mittig	Friends of the River
188	Eric G. Ramstrom	Friends of the River
189	Dr. Gene R. Trapp & Jo Ellen Ryan	Friends of the River
190	Eric Bernhard	Friends of the River
191	Jeremy Shane	Friends of the River
192	Dr. Donna Carr, M.D.	Friends of the River
193	Tim Ryan	Friends of the River
194	Dr. Juliett Lamont	Friends of the River
195	Don Houston	Southern California Gas Company
196	George Johnson	Friends of the River
197	Dennis Huggins	
198	David Chipping	California Native Plant Society, San Luis Obispo Chapter
199	Richard Cochran	Backcountry Horsemen of CA, High Sierra Chapter
200	Rosada Martin	Friends of the River
201	Audrey Evans	Friends of the River
202	Janice Gloe	Friends of the River
203	Matt Gunnell	SoCal High School Cycling League
204	Arthur Unger	
205	Mrs. Damara Stone	Friends of the River
206	Gregory Meisinger	Aera Energy LLC

Comment Submission Number	Commenter Name	Commenter Affiliation
207	Tammy Mebane	Friends of the River
208	Susie Snedden	
209	Richard Snedden	
210	Kenneth & Rosemary Twisselman	
211	Jerry Jonnum	
212	David Hardt	
213	Anonymous	
214	Anonymous	
215	Bruce Miller	
216	Mary Gorden & Silvie Robillard	Southern Sierra Archaeological Society
217	Emmy Cattani	Ranchers for Responsible Conservation
218	Annette Faraglia	Pacific Gas & Electric Company
219	Jennifer Hopper	
220	Jeff Kuyper	Los Padres ForestWatch
221	E.J. Remson	The Nature Conservancy
222	Ronald Jacobsma	Friant Water Authority
223	Chris Evelyn	
224	Michael Painter	Californians for Western Wilderness
225	Paul Martzen	
226	Bruce Whitcher	CORVA
227	Chris Horgan	Stewards of theSequoia
228	Dennis Law	Central Coast Motorcycle Association
229	Darin Layton	Layton Melton Productions, Inc.
230	Allison Diller	Kern River Mountain Bike Association
231	Warren Gross	San Joaquin Grotto
232	Kyle Griffin	
233	Michael Lekas	
234	Charles Nelson	National Speleological Society #54262
235	Marcia Rasmussen	Tehipite Chapter of the Sierra Club
236	Charlotte Campbell	PXP
237	Chris Tulley	
238	Tim Crab	Taft Motorcycle Club
239	Susan Antenen	Conservation Biology Institute
240	Gary Rollinson	Friends of the River
241	Allen Chen	Friends of the River
242	Tom Brown	
243	Nick Ortiz	Western States Petroleum Association
244	Phillip Eddey	San Joaquin Grotto
245	David Weaver	
246	Mark Kinsey	
247	Julie Booker	

Comment Submission Number	Commenter Name	Commenter Affiliation
248	Ryan Baker	
249	Genie Luzwick	
250	Chris Roske	
251	Dr. Kathryn Biacindo	
252	Chris Acree	Friends of the River
253	Michael Connor	Western Watersheds Project
254	David Reynolds	Association of California Water Agencies
255	Bruce Rogers	
256	Mark J. Pishinsky	Venoco, Inc.
257	Lorelei Oviatt	Kern County Planning & Community Development Dept.
258	Shawn Kerns	Occidental of Elk Hills, Inc.
259	Jim Robinson	Vintage Production California, LLC
260	Ray Watson	Kern County Supervisor, District 4
261	Kathleen Goforth	US Environmental Protection Agency, Region IX
262	David Clendenen & Dan York	The Wildlands Conservancy; Wild Wolves Preserve
263	Leonard A. Bidart	Bidart Bros.
264	Reed Tollefson	Audubon California-Kern River Preserve
265	Dave Steindorf	American Whitewater
266	Gary Coats	
267	Steve Evans	Friends of the River California Wilderness Coalition
268	Wendy & Vince Hoss	
269	Terry Harris	
270	Dennis Fox	
271	Jeff Baxter	
272	Liz Robinson	
273	Dennis Tipton	
274	Dale Lincoln	

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Bakersfield Field Office
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