

CHAPTER FOUR

ENVIRONMENTAL CONSEQUENCES

4.1 Introduction

This chapter relates the direct, indirect, residual, and cumulative environmental consequences of the WMRNP Travel Management and Livestock Grazing Program alternatives on resources, land uses, and special designations in the West Mojave planning area.

Motorized transportation and livestock grazing potentially have both beneficial and adverse effects on public lands. Designation of transportation routes for motorized use can have a beneficial impact on the following resources: socioeconomics, minorities, recreation, grazing, and other uses of public lands, low-income and other special populations, and travel and transportation management. In the case of these resource areas, a larger network can have a beneficial effect by expanding means of access, recreation opportunities, and access to commercial uses of the public lands. In contrast, reducing the size of the network can adversely affect these resource areas by reducing access, and can impact these and other resources by changing use patterns. Also, placement of specific restrictions on uses of the routes can have an adverse effect by reducing the ability of users to use a route. The primary beneficial effects of grazing are to the permittees, but due to the predominance of minorities in the sheep grazing industry, grazing also benefits minorities. Grazing is a small element of the socioeconomics and commercial uses of the region.

Motorized transportation and livestock grazing can have adverse impacts on the following resources: air quality, soils, surface water quality, biological resources, cultural resources, visual resources, special designations, noise, and special populations, including minorities and low-income communities. In the case of these resources, a larger network presents a greater potential for having an adverse effect. A smaller network can also have adverse impacts if use patterns are substantially changed as a result. Considering the specific locations of sensitive resources when designating the network and identifying range improvements such as corrals and fencing can substantially avoid or reduce some adverse impacts. Some adverse effects would only occur if the motorized vehicle use or intensive grazing activities were to occur in close proximity to the resource. However, these activities can also contribute to cumulative impacts to these resources and to global climate change. The specific restrictions placed on uses of the routes and locations of concentrated grazing activities can generally be designed to minimize the potential for adverse impacts to occur. However, many impacts are as much the result of past and current disturbances as uses, and some impacts from the disturbances cannot be mitigated in the reasonably foreseeable future, given the nature of particular resources and the landscape.

4.1.1 Decisions Being Analyzed

As discussed in Section 2.1, the decisions to be made as part of the WMRNP for transportation management and livestock grazing include LUP-level decisions and implementation-level decisions. The LUP-level decisions include modification of the goals and objectives to manage the transportation and travel management program and the livestock grazing program, and modification of specific CDCA Plan parameters for the WEMO Planning area to implement the network, as summarized in Table 2.1-1. The goals and objectives for transportation and travel management, in turn, will affect the size and configuration of the resulting transportation

network. The livestock grazing LUP-level decisions have one major outcome related to livestock grazing, to further provide for species conservation and desert tortoise recovery consistent with the 2006 West Mojave Plan and the Federal Court's Summary Judgment and Remedy Orders.

Implementation decisions being considered include designation of routes within the transportation network to meet the established goals and objectives (again, affecting the size of the network), and specific route-use restrictions as needed to meet the CDCA Plan, WEMO, and newly established objectives.

Overall, the decisions have two major outcomes related to the transportation network:

- Which routes are designated for which types of transportation uses; and
- The specific restrictions placed on uses of those routes.

By definition, those features which are not designated for motorized or other types of transportation uses are classified as transportation linear disturbances, and are to be closed.

4.1.2 Analysis Methodology

This Chapter analyzes the environmental consequences of the plan amendment and implementation decisions being considered in WMRNP for transportation management and livestock grazing. As an introduction to the analysis, Section 4.1.4 provides a brief summary of the nine plan amendment decisions for travel management, of the two plan amendments to the livestock grazing program, of route designation, and of implementation strategies associated with each of the alternatives. Sections 4.2 through 4.13 then provide a resource-by-resource analysis of the environmental impacts associated with the alternatives, using the same subsection numbering as used for the description of the affected environment for each resource in Chapter 3. For each resource, each of these sections provides a brief summary of the affected environment for the resource, a description of the impacts which are common to all alternatives, and those associated with Alternatives 1 through 4.

The impact analysis includes the adverse and beneficial impacts that are generally associated with motorized vehicle operation and livestock grazing on public lands. This section discusses the effects of allowing access on motorized routes and non-motorized/non-mechanized routes on public lands; the effects of restricting access on those routes; the effects of eliminating access by designating routes as transportation linear disturbances; and the effects of placing limitations on access, in the form of minimization and mitigation measures. In addition, it includes the effects associated with the plan amendment decisions and implementation strategies related to transportation management and livestock grazing proposed under each alternative. Each impact analysis includes the following:

- A discussion of direct and indirect impacts resulting from the alternative;
- A discussion of whether the impacts are beneficial or adverse;
- Quantification, if applicable, of the impacts that would occur under the alternative;
- A discussion of specific locations of concern for that resource; and
- A description of measures that would avoid or reduce identified adverse impacts.

In general, quantitative analyses related to travel management are based on the mileage and/or acreage of routes designated as motorized, non-motorized, non-mechanized, and closed (transportation linear disturbance) within a geographic area that supports a resource. Two types of acreage calculations were made in the quantitative analyses. The direct acreage associated with the route networks is based on an assumption that the routes are approximately 12 feet in width. This width was used to calculate the acreage of disturbance associated with motorized routes in areas with sensitive resources, such as Special Designation areas, habitat for sensitive wildlife or vegetation, lands inventoried for wilderness characteristics, or areas with specific Visual Resource Inventory (VRI) classifications. It was also used to calculate the effects of closure of routes, such as the amount of particulate matter emissions that may be avoided through re-vegetation of closed routes.

The second acreage calculation was conducted to quantify the areas that may potentially be affected by stopping, parking, and camping adjacent to motorized routes. This calculation is based on a width of 88 feet within DWMA's (the 50 foot from centerline limit, minus the 12 foot width of the route itself), and either 88, 188, or 588 feet outside of DWMA's, depending on the allowable width (50, 100, or 300 feet) in each alternative. The percentage of actual use in these areas is expected to be very low, perhaps 1 percent of the potentially affected area.

For cultural resources, the quantitative analysis of impacts is based on the number of known cultural resources in varying proximity to each route designation type or concentrated area of grazing use. For transportation management, this is organized and analyzed per travel management area, and further refined by the boundaries of DWMA's. The quantitative analysis for cultural resources with respect to livestock grazing is based on the number of known cultural resources located within each grazing allotment.

For recreation and travel management, the analysis is based on the mileage of routes available to recreational and other authorized users, and the overall connectivity of the transportation network.

For livestock grazing, the quantitative analysis is based on the Animal Unit Months (AUMs) that are authorized or reallocated and the acreages each grazing allotment would maintain modify or lose based on the proposal contained under each alternative.

The geographic level of analysis varies by resource, and was developed in an iterative manner. For all resources, the quantities of miles, acres, or numbers of resources was preliminarily done on a WEMO-wide basis, to determine if there were substantial differences among the network alternatives. Once this analysis was complete, the results were evaluated by the BLM resource specialists. If substantial differences between the alternatives were identified, or were otherwise known to the resource specialists based on public comments or their familiarity with specific areas, more geographically-detailed analyses were developed. As a result, the cultural resource analysis was re-developed at a TMA level, in order to identify potential location-specific impacts. Similarly, biological resources were evaluated at the level of the applicable Area of Critical Environmental Concern (ACEC), Desert Wildlife Management Area (DWMA), Critical Habitat Unit (CHU), or other geographic unit used as a management tool by BLM. Livestock grazing was evaluated by grazing allotments within the planning area and the geographic overlap of a resource type or designated area boundary such as ACECs, DWMA's and CHUs, at the grazing allotment level.

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 will 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 WMRNP SEIS. Considerable effort was taken over a period of more than two years to acquire resource data for this SEIS, including acquisition from available geographically-based datasets, contracting data acquisition and analysis for specific resources from regulatory agencies, and conducting field investigations. In the absence of direct quantitative data, impacts are described based on indirect quantitative data, qualitative data, and/or the professional judgment of the interdisciplinary team of technical specialists using best available information, and no incomplete or unavailable information was deemed essential to a reasoned choice among the alternatives analyzed in this chapter.

Section 4.14 presents an analysis of the cumulative impacts of the alternatives. To facilitate comparisons of similarities and differences in impacts among the alternatives, a summary of impacts is presented in Section 4.15.

4.1.3 Assumptions for Analysis

The general assumptions for analysis made in the 2006 WEMO Plan also apply to the WMRNP transportation management and livestock grazing program amendment analysis, as shown in Table 4.1-1.

Table 4.1-1. General Assumptions for Analysis

Category	Assumptions
Impact Analysis	<ul style="list-style-type: none"> • The discussion of impacts is based on the best reasonably available data. Knowledge of the planning area and professional judgment, based on observation and analysis of conditions and responses in similar areas, were used to infer environmental impacts where data is limited. • Acreage figures and other numbers used in this analysis are approximate projections for comparison and analytic purposes only. Readers should not infer that they reflect exact measurements or precise calculations. • Short-term impacts would occur over a 5-year period following implementation, while long-term impacts would occur over a 5- to 30-year period.

Table 4.1-1. General Assumptions for Analysis

Category	Assumptions
Plan Implementation	<ul style="list-style-type: none"> • Implemented actions would comply with all valid existing rights, regulations, and agency and jurisdictional policies. • Implementation of actions on BLM- administered public lands are anticipated to begin within thirty (30) days of signature of the BLM Record of Decision by the BLM California State Director. • If an inconsistency is found between this Plan Amendment and the DRECP Adopted Plan, the DRECP Plan implementation strategy will be followed. • Phasing of implementation would be based on receipt of additional funding and resources for the transportation management and livestock grazing program decisions. • As other agencies and jurisdictions acquire lands within the planning area (e.g., OHV Division, Kern County Acquisition, CDFW mitigation lands) the adopted transportation strategies in this Plan Amendment may need to be adjusted accordingly. • Cultural resource inventory, identification and evaluation will occur in accordance with the stipulations of the signed Programmatic Agreement pursuant to federal regulation.
Long-term Regional Trends	<ul style="list-style-type: none"> • High rates of urban growth would continue, especially in the southern and southwestern portions of the planning area. • The level of recreation use would continue to increase in proportion to regional population growth, and will be higher near the centers of population growth. • The levels of livestock use would continue to decrease in proportion to species conservation and desert tortoise recovery needs and other developments within the desert and on the public lands, such as alternative energy development. • The record of cultural resources present within in the planning area will increase in quantity and quality. • The data available to evaluate the level of impacts resulting from WEMO Plan implementation will increase and more natural resource impacts and cultural resource impacts will be avoided, minimized, or mitigated following the programs of signage, mapping, outreach, monitoring, and adoption of the stipulations of the Programmatic Agreement.

As with the 2006 WEMO Plan, the analysis in this Chapter is based on a general assumption that the overall size of the route network is unrelated to the total miles traveled on the network within the planning area. The total miles traveled in the planning area appears to be primarily the result of population changes, economic activity, public land uses which require access, and demand for recreational opportunities.

The configuration and overall size of the route network will affect the extent to which motorized travel is more dispersed throughout the region or is more concentrated in specific areas, and frequency of use in specific areas can be a factor in impacts on some resources. Any variation in resource impacts based on an increase in the total miles available for use in the WEMO planning area is anticipated to be offset by the intensity of use on a smaller network. All alternative networks are being developed from linear disturbances that already occur on-the-ground. Conversely, the specific locations of motorized use and increased miles within the network would result in variations in effects to resources, depending on specific locations of opened and closed routes.

These general assumptions are supported by observations made by BLM staff as well as visitor use numbers. For example in the Coolgardie subregion a closure of several acres was

implemented to protect Lane Mountain Milkvetch habitat. Staff has observed that this closure shifted the public land users from the closed area to neighboring areas that were not fenced off; however, the closure itself did not increase overall visitation or direct users to other less sensitive areas.

Of the proposed CDCA plan amendment decisions being considered as part of the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes, Incorporation of the TTM Process into the LUP, Updating non-discretionary OHV Area Designations, Identifying Plan Amendment Triggers, and Conforming the Livestock Grazing decisions) are common to all action alternatives. None of these five decisions authorize or remove authorization for motorized vehicle use in a specific area. Four of the decisions (PA-I through PA-IV) would define the route designation process or framework under which future on-the-ground actions are considered. In general, the purposes of these decisions are to clarify the manner in which future route network modifications consider the resource and use factors specified in 43 CFR 8342.1, to facilitate communication of route use limitations to the public, and to facilitate BLM's ability to enforce route use limitations. As a result, these decisions are expected to have no adverse effect on resources, and may benefit resources by facilitating adaptive management changes in response to changing on-the-ground conditions.

The decision eliminating the language that limits the route network to existing routes is necessary to bring the WEMO Plan into conformance with BLM regulations and guidance which require BLM to consider, and potentially authorize new routes (routes where no linear pathway currently exists) when needed to provide access to authorized land uses, or to address other land management needs. None of the alternatives change BLM's legal responsibility to provide access for other authorized land uses such as grazing, energy development, mining, or communications sites, or to develop roads as needed for emergency response and rehabilitation, to avoid safety hazards, or for other critical land management needs.

The authorization of new routes in areas where routes do not currently exist could potentially have adverse impacts to resources within the path of, or in close proximity to those routes. Because the locations of new routes are currently unknown, the nature and magnitude of the potential impacts cannot be predicted. However, the impacts of each specific, newly proposed route would be evaluated as part of the BLM's consideration of the application for land use authorization, or, for agency routes, within the BLM's policy framework for its specific management responsibilities.

As part of this evaluation, BLM would consider the potential impacts of designating the new route as required by 43 CFR 8342.1, evaluate potential alternatives to provide the necessary access, and identify measures to address any identified impacts to sensitive resources. In each case, the duration of the designation of the new route would be the same as the authorized land use it is intended to support. Generally, once the term of the authorized land use expires or a route is no longer needed for the purpose for which it was constructed, the route would be redesignated, and if consistent with 43 CFR 8342.1, would generally be closed; the terms and conditions of the authorized land use may require the lessee, permittee, or ROW holder to rehabilitate the route. BLM may also determine at a later date, consistent with 43 CFR 8342.1 that the route provides necessary access for some other reason and could designate the route accordingly, releasing the authorized land user from their requirement to rehabilitate the route.

Although the overall size of the network would not affect regional-scale resources, specific locations of motorized routes or closed routes, and the authorized uses and minimization and mitigation measures applied to those routes, could affect localized resources. For each individual route under each alternative, the BLM made a route designation determination in consideration of a geographic comparison of the route with respect to potentially impacted resources as required under 43 CFR 8342.1. This process was described in subsection 2.3.

Once each route was preliminarily determined appropriate for designation as an open or limited route under each alternative based on the designation criteria and its proximity to identified resources, the potential overall impacts to each resource were quantified. These quantitative evaluations serve as the basis for the analysis throughout Chapter 4. In general, the magnitude of the adverse impacts to a location-specific resource is proportional to the mileage of motorized routes in that location, the acreage of route-related disturbance, and/or number of potentially affected resources in close proximity to motorized routes. As a result, the analysis in Chapter 4 is based on collective quantification of these mileages, acreages, and numbers of potentially impacted resources to provide an analysis of each network's impacts. Analysis of acreage figures takes into consideration network-wide minimization strategies (i.e. motorized stopping, parking, and camping parameters) that assume an area of potential increased disturbance beyond the designated route prism.

The converse of this is also true. Each alternative includes some amount of potential designation of routes as transportation linear disturbances (closed routes identified for natural or active rehabilitation). However, closure of routes also leads to more gradual beneficial impacts to some resources due to long-term route rehabilitation and re-vegetation, which could continue to increase beyond the life of the 20-year planning horizon. Among the alternatives, the more routes that are closed the greater the beneficial impact on certain resources, including air quality from lower levels of wind erosion of disturbed areas, soil resources which would no longer be compacted, vegetation, and wildlife resources. For these resources, the magnitude of the beneficial impact for each alternative would be roughly proportional to the number of route miles closed, or in the case of livestock grazing, the number of AUMs that are reallocated under that alternative; however, most of these beneficial impacts would be realized beyond the life of the Plan due to the long timeframes required for route rehabilitation and re-vegetation.

Some issues did not factor into the minimization strategies utilized to designate routes for each alternative but were considered in the analysis, and measures may be included to mitigate impacts. Frequency of use is a qualitative factor that may impact certain resources, but such data are not readily available on a network-wide basis, and it could not be directly considered in all route-specific designations. Assumptions about how much opening or closing specific routes will change use patterns are highly speculative on either a regional or a local basis, without substantial knowledge of the specific users of the routes. Frequency of use was considered indirectly in several ways. For instance, one factor in the analyses was knowledge of areas in which impacts had already occurred as a result of frequent use, such as soil erosion areas or highly disturbed areas. Another factor was the results of monitoring programs, such as air quality monitoring near OHV Open Areas, which indirectly measure impacts associated with frequency of use. Finally, the consideration of route designation based on co-location of routes and resources was generally conservative, resulting in closure of routes or implementation of mitigation measures based on the potential for adverse impacts. This process assumes that route use is frequent enough to cause adverse impacts, even if route-specific data are not available to

demonstrate the impacts. Therefore, BLM determined that available methods of indirectly considering and addressing frequency of use were adequate to identify and mitigate any reasonably foreseeable impacts to resources from motorized vehicle use. Additional measures may be subsequently identified in the travel management plans or occur in accordance with the stipulations of the signed Programmatic Agreement (PA) for cultural resources and Endangered/Threatened Species Consultation with USFWS.

4.1.4 Summary of Alternatives

Baseline Inventory of Routes

In 2012 and 2013, BLM updated the inventory of linear features by tracing features from USDA’s one meter-resolution National Agriculture Imagery Program (NAIP) aerial photography into the Ground Transportation Linear Features (GTLF) geospatial database. The inventory consisted of the WEMO Plan network (as corrected), and other linear features that currently exist on the ground, to ensure that all existing features were included in the analysis. Note that this inventory reflects the on-the-ground features existing as of 2013, and thus includes features that existed in 1980 or were developed after 1980 through BLM authorization. In addition, the inventory includes features which resulted from the unauthorized proliferation of routes. It also reflects substantial improvement in technical accuracy, as most of the “new” features are simply the result of better photography since 1980 and were not detected at that time. See Appendix E for a summary of the processes BLM has used over time to address routes in the Plan area.

The mileage and acreage associated with the inventoried routes is presented in Table 4.1-2.

Table 4.1-2. Baseline - Inventoried Linear Disturbance

Use Description	Mileage/Acreage
Total Mileage	14943 miles
Direct Acreage (based on 12 foot width of routes)	21735 acres

Allowances for vehicle stopping, parking, and camping along routes of travel greatly increase the potential for new ground disturbance and the calculated acreage of disturbance. This is a problematic acreage to quantify in the baseline, because it is based on pre-2006 WEMO Plan “existing routes” in many areas, where the route network had not been clarified as major land acquisitions occurred over time. Following the 2006 WEMO Plan, with the establishment of DWMA as ACECs and their associated stopping and parking limits, the potential area of disturbance has been reduced in the DWMA ACEC areas, and the reduction occurring in these areas can be quantified.

The percentage of actual use in the camping, parking and stopping zone is unknown, but is probably very low, perhaps 1 percent of the designated zone. In many regions, group campers utilize previously disturbed areas along the route that may have level ground, campfire rings and fewer obstacles to vehicle access and parking, particularly for larger and heavier RVs and two-wheel drive vehicles. In other areas, dispersed camping along the route results in negligible permanent disturbance.

Within the DWMAs, the stopping, parking, and camping zones are assumed to be occupied desert tortoise habitat, with burrows, food plants, shelter and drinking depressions. Rocky mountainous areas and playas within a DWMA are exceptions. Other ACEC areas protecting threatened and endangered plants, such as the Carbonate Endemic Plants Research Natural Area ACEC near Lucerne Valley, or the Lane Mountain milkvetch ACEC in Coolgardie Mesa and West Paradise, similarly contain resources that are highly sensitive to vehicle damage. The listed plants as well as desert tortoises could be subject to direct impacts by crushing from use of the camping, parking, and stopping areas. Indirect impacts from use of the route network within occupied habitat for threatened and endangered species might include temporary disruption of behavioral patterns of the species or the introduction of weeds, deposition of dust, spread of trash, disturbance by pets, or other effects of human use that could impair growth or reproduction of listed plants and animals.

Baseline Inventory of Other Resources

Primary data for most other resources were already collected and compiled into GIS layers. GIS layers used in the analyses and impact evaluations, along with their sources, are listed below. Most of these data are readily available from the source listed.

- Abandoned Mines (Source: BLM)
- Active Golden Eagle Nest Occurrences (Source: BLM)
- Air Quality (MDAQMD)
- Alkalai Mariposa Lily Occurrences (Source: CNDDDB)
- Areas of Critical Environmental Concern (Source: BLM)
- Bakersfield Cactus Occurrences (Source: CNDDDB)
- Barstow Woolly Sunflower Occurrences (Source: CNDDDB)
- Bendires Thrasher Habitat (Source: BLM)
- Burrowing Owl Occurrences (Source: CNDDDB)
- Charlottes Phacelia Occurrences (Source: CNDDDB)
- Clokeys Cryptantha Occurrences (Source: CNDDDB)
- Cultural Resources Information (Source: BLM, generated from County records)
- Cushenbury Buckwheat Critical Habitat (Source: US Fish and Wildlife Service)
- Cushenbury Buckwhetat Occurrences (Source: CNDDDB)
- Cushenbury Milkvetch Critical Habitat (Source: US Fish and Wildlife Service)
- Cushenbury Milkvetch Occurrences (Source: CNDDDB)
- Cushenbury Oxytheca Critical Habitat (Source: US Fish and Wildlife Service)
- Darwin Mesa Milkvetch Occurrences (Source: CNDDDB)
- Darwin Rock Cress Occurrences (Source: BLM)

- Darwin Valley Beardtongue Occurrences (Source: CNDDDB)
- Darwin Valley Sandpaper Plant Occurrences (Source: CNDDDB)
- Dedeckers Clover Occurrences (Source: CNDDDB)
- Desert Bighorn Sheep Occurrences (Source: CNDDDB)
- Desert Cymopterus Occurrences (Source: CNDDDB)
- Desert Linkages (Source: SC Wildlands)
- Desert Tortoise Critical Habitat (Source: US Fish and Wildlife Service)
- Desert Wildlife Management Areas (Source: BLM)
- Fringed Myotis Occurrences (Source: CNDDDB)
- Gray Vireo Occurrences (Source: CNDDDB)
- Grazing Allotments (Source: BLM)
- Guzzlers (Source: Society for Bighorn Sheep)
- Halls Daisy Occurrences (Source: CNDDDB)
- Kelso Creek Monkeyflower Occurrences (Source: CNDDDB)
- Kern Buckwheat Occurrences (Source: CNDDDB)
- Land Mountain Milkvetch Occurrences (Source: CNDDDB)
- Lands Inventoried for Wilderness Characteristics (Source: BLM)
- Lakes (Source: BLM)
- Little San Bernardino Mountains Gilia Occurrences (Source: CNDDDB)
- Route Densities (Generated by BLM (Margosian) for this project)
- Special Recreation Management Areas Boundaries (Source: BLM)
- Wilderness Areas (Source: BLM)
- Wilderness Study Areas (Source: BLM)
- Least Bells Vireo Occurrences (Source: CNDDDB)
- LeConte's Thrasher habitat (Source: BLM)
- Mojave Fringetoe Lizard Occurrences (Source: CNDDDB)
- Northern Sagebrush Lizard Occurrences (Source: CNDDDB)
- Pallid Bat Occurrences (Source: CNDDDB)
- Spotted Bat Occurrences (Source: CNDDDB)
- Southwestern Willow Flycatcher Critical Habitat (Source: US Fish and Wildlife Service)
- Southwestern Willow Flycatcher Occurrences (Source: CNDDDB)

- Swainson's Hawk Occurrences (Source: CNDDDB)
- Western Smallfooted Myotis Occurrences (Source: CNDDDB)
- Western Mastiff Bat Occurrences (Source: CNDDDB)
- Yellowbilled Cuckoo Occurrences (Source: CNDDDB)
- Mohave Ground Squirrel Population Centers (Source: California Department of Fish and Game)
- Mojave Monkeyflower Occurrences (Source: CNDDDB)
- Mojave Tarplant Occurrences (Source: CNDDDB)
- Ninemile Canyon Phacelia Occurrences (Source: CNDDDB)
- Ninemile Canyon Phacelia Occurrences (Source: BLM)
- Owens Peak Lomatium Occurrences (Source: CNDDDB)
- Parishes Alkaligrass Occurrences (Source: CNDDDB)
- Parishes Daisy Critical Habitat (Source: US Fish and Wildlife Service)
- Parishes Daisy Occurrences (Source: CNDDDB)
- Parishes Phacelia Occurrences (Source: CNDDDB)
- Piute Mountain Jewel Flower Occurrences (Source: CNDDDB)
- Red Rock Poppy Occurrences (Source: CNDDDB)
- Red Rock Tarween Occurrences (Source: CNDDDB)
- Ripleys Cymopterus Occurrences (Source: CNDDDB)
- Robison Monardella Occurrences (Source: CNDDDB)
- Shortjoint Beavertail Cactus Occurrences (Source: CNDDDB)
- Spanish Needle Onion Occurrences (Source: CNDDDB)
- White Margined Beardtongue Occurrences (Source: CNDDDB)
- Unusual Plant Assemblages (Source: BLM)
- Vegetation (Source: California Department of Fish and Game/DRECP)
- National Trails (Recreational and Historical) (Source: BLM)
- OHV Areas (Source: BLM and DOD)
- Parking Locations (Source: BLM)
- Recreation Destinations/Points of Interest (Source: BLM)
- Rock Collecting Areas (Source: BLM)
- SRP Routes (Source: BLM)

- Visual Resources Inventory (Source: Contract to BLM)
- Range Improvements (Source: BLM)
- Residences (Source: Vegetation Layer)
- Sensitive Receptors/Colleges (Source: ESRI)
- Sensitive Receptors/Health Facilities (Source: ESRI)
- Sensitive Receptors/Public Schools (Source: ESRI)
- Sensitive Receptors/Private Schools (Source:ESRI)
- Slopes (Source: Generated from BLM Contour Lines Data)
- Springs (Source: US Geological Survey)
- Washes (Source: BLM)

In addition to route data, additional field data was collected on the condition of riparian waters and springs, on cultural resources sites, wilderness characteristics information, recreational destinations, and MFTL survey data.

4.1.4.1 Alternative 1 - No Action Alternative

Alternative 1 Plan Amendment

Table 2.1-1 summarized the CDCA plan amendment decisions being considered as part of the transportation management and livestock grazing programs of the WMRNP. Under the No Action Alternative, no changes would be made to the CDCA Plan, as previously amended by the 2006 WEMO Plan and the Federal Court's Summary Judgment and Remedy Orders, except in conformance with recent legislation.

As discussed in Section 2.2.1 and Table 2.1-1, the CDCA Plan currently includes language that is not reflective of current policy or regulation. Therefore, the No Action Alternative would, in some respects, not be reflective of current policy and regulation and some inconsistencies between plan guidance and route designations would not be resolved. The Plan Amendments and decisions under the No Action Alternative include:

PA I—Modify CDCA Plan Language Limiting Network to Existing Routes: Under the No Action Alternative this modification would not take place. As discussed on Page 8 of the Court's Summary Judgment Order, the CDCA Plan's language limiting OHV routes to those existing in 1980 is at the very root of the litigation associated with the 2006 WEMO Plan. There are two major difficulties associated with this language. First, as the Court acknowledges, BLM does not have an inventory of the route network as of 1980, so evaluating each linear feature to determine whether it did or did not exist in 1980 is not possible. The second difficulty is that the language does not appear to conform to the FLPMA requirement to consider and authorize administrative routes to support access for newly authorized rights-of-way such as power facilities and transmission lines, weather stations, communications sites, mining claims, or range improvements. In fact, the CDCA Plan language limiting OHV routes to those existing in 1980 could be read as in direct conflict with other CDCA Plan language that provides the framework for making

revisions to route designations in the future. That framework specifically acknowledges that the designations or limitations, including the construction of new routes, may require modification to accommodate future access needs or protection requirements.

PA II—Incorporate TTM Process: Under the No Action Alternative this modification would not take place. The current CDCA Plan is based on the former policy of designating individual routes in Limited Areas as Open, Limited, or Closed. The Open, Limited, Closed Route terminology is no longer applicable under the new TTM Handbook, and must be replaced with a discussion of the current process for designation of the travel network. The previous policy also did not include designation of non-motorized or non-mechanized routes as part of a travel network, so these actions must also be incorporated into the CDCA Plan. The current CDCA Plan also discusses route designations within the context of Multiple Use Class (MUC) designations, including blanket designations of routes in large areas based only on the MUC classification. While MUC classification may be one factor to be considered in considering designation of the travel network, this procedure does not consider route-specific resource conflicts as required by 43 CFR 8342.1.

PA III: Conform OHV Area Designations to Incorporate Changes to Wilderness Designations: Under the No Action Alternative this modification would occur, because it is in response to a legislative decision rather than a land use planning decision. Land-use planning decisions must conform to current legislative and regulatory requirements. The No Action Alternative reflects access area designations that are the result of the *Omnibus Public Land Management Act of 2009*, (Public Law 111-11). OHV Area designations in the CDCA Plan will be updated to incorporate this change. Areas that were Limited Areas and were included in wilderness designations in this legislation are now Closed Areas.

PA IV: Identify Plan Amendment Triggers: Under the No Action Alternative the Plan Modification triggers that are identified in the CDCA Plan and the 2006 WEMO Plan would apply. In discussing future modifications to the travel network in response to changing access needs or protection requirements, the current CDCA Plan states that future plan modifications will be considered on an individual basis. The 2006 WEMO Plan further clarified this guidance to define what minor adjustments may be made. The Plan would not be further amended to comply with the 2012 TTM Handbook in order to provide indicators to guide future plan maintenance, amendments, or revisions related to the travel management network.

PA V: Conform the Livestock Grazing Program in the CDCA Plan to the 2012 Appropriations Act: Under the No Action Alternative this modification would occur, because it is in response to a legislative act rather than a land use planning decision. Land-use planning decisions must conform to current legislative and regulatory requirements. The No Action Alternative reflects changes made under authority of the *2012 Appropriations Act* (Public Law 112-74), including the permanent relinquishment of the Lava Mountain and Walker Pass Common Allotments and reallocation of the 3,368 AUMs in these two allotments from livestock forage and use to wildlife use and ecosystem functions.

PA VI: Adopt TMAs: Under the No Action Alternative, no TMAs would be designated.

PA VII: Designate Competitive Event “C” Routes: Under the No Action alternative the competitive, or “C” routes that are to the northeast of the Spangler Hills Open Area above the Randsburg Wash Road would continue to be available for competitive motorized events managed under a Special Recreation Permit (SRP). There are approximately 20 miles of designated trails that are currently classified as C routes in this area. The Johnson Valley to Parker Valley Corridor would remain available for permitting, subject to approval and receipt of a SRP, and SRP event route parameters identified in the CDCA Plan, as supplemented through compliance with NEPA, Section 106, and the ESA. As identified in the 2006 WEMO Plan speed-controlled corridor would be available between Stoddard Valley and Johnson Valley OHV Areas.

PA VIII: Designate Access Parameters for Dry Lakes: Under the No Action alternative Koehn Dry lakebed would remain designated as “Open”, as it was designated in the WEMO Plan. Cuddeback, Coyote, and Chisholm Lake Trail Dry lakebeds would remain designated consistent with the surrounding area - “Closed to motor vehicle access, except for approved routes of travel or as authorized by Land Use Permit or Special Recreation Permit”.

PA IX: Access to Rand Mountains-Fremont Valley Management Area: Under the No Action alternative the Rand Mountains area would be managed consistent with parameters outlined in 2.2.1.2.4 of the WEMO FEIS.

PA X: Limit Area of Stopping, Parking, and Camping (SPC) Adjacent to Routes: Under the No Action alternative, the stopping and parking rules associated with designated routes would remain as they are currently defined in the CDCA Plan, as modified by the 2006 WEMO Plan in DWMA. Stopping and parking can take place within 50 feet of either side of the route centerline inside DWMA, while camping is restricted to existing disturbed areas adjacent to open routes, within 50 feet. Stopping, parking, and camping can take place within 300 feet of either side of centerline outside of DWMA, in accordance with 43 CFR 8341.1(f)(4), which states that no one may operate an off-road vehicle on public lands in a manner causing, or likely to cause significant, undue damage to or disturbance of the soil, wildlife, and wildlife habitat, improvements, cultural or vegetative resources or other authorized uses of the public lands.”

PA XI: Limit the Livestock Grazing Program in Certain DT Habitat: Under the No Action alternative livestock grazing would continue under the terms and conditions contained in the Final Grazing Decisions issued for active grazing allotments within the West Mojave Planning Area. This would include the continuation of livestock grazing on approximately 117,290 acres of the Ord Mountain Allotment within the Ord-Rodman DWMA and CHU, and the continuation of ephemeral sheep grazing on approximately 6,726 acres of the Cantil Common Allotment and 601 acres of the Shadow Mountain Allotment within the Fremont-Kramer DWMA and CHU. Certain allotments (Table 2-20, 2005 WEMO FEIS) that have been voluntarily relinquished would be unavailable for livestock grazing. Vacant allotments would be subject to NEPA analysis upon receipt of an application to graze, and, if grazing is approved, would be subject to the terms and conditions of the 2006 West Mojave Plan.

Alternative 1 Route Designations

The access network included in the No Action Alternative would consist of 5,338 miles of motorized vehicular routes based on the route network that is currently available for use, as made in the following previous actions discussed in Section 3.1.1.2 and further detailed in Appendix E. The No Action Alternative now consists of:

- The network adopted in the 2006 WEMO Plan, as modified by the Court’s Remedy Order;
- Minor error corrections, such as routes not matching the actual pathway on the ground; and
- Additional routes with right-of-way permits or other authorization instruments identified to-date in the inventory, that underwent an analysis and approval process consistent with 43 CFR 8342.1, and provide current rights of passage.

The No Action network does not include linear features identified after the inventory for the 2006 WEMO Plan except for authorized routes identified above; other post-2006 WEMO inventory features have been designated as closed for the purposes of this analysis. Although the routes were not specifically closed through the designation process and no particular decision was made on these routes, the 2006 WEMO route network is specified as consisting of routes designated as open or limited; all other routes are considered closed (unless they have independent authorization).

The No Action Alternative incorporates all goals and objectives associated with travel management and access currently contained in the CDCA Plan, as well as the biological resource objectives of the 2006 West Mojave Plan. These goals are primarily specified in the MVA Element of the CDCA Plan, but are also addressed in other elements of the CDCA Plan, consistent with the MVA Element.

A summary description of the route network can be found in Section 2.3.2, and key elements of the network can be found in the Summary Table 2.4-1. Table 4.1-3 summarizes the mileage of routes designated in the No Action Alternative.

Table 4.1-3. No Action Alternative - Miles of Routes Designated

Use Description	Mileage	Percentage of Total Network
Motorized	5,189.3	34.6 percent
Subdesignation: Motorcycle	38.3	0.3 percent
Authorized/Administrative	148.7	1.0 percent
Total Motorized	5,338.0	35.6 percent
Non-Motorized	0	0 percent
Non-Mechanized	10.7	0.1 percent
Closed (Transportation Linear Disturbance)	2,398	16.0 percent
Undesignated (Data not available in 2006)	7,214	48.3 percent
Total	14,942.7	

Under the No Action Alternative, implementation of the network would be governed by the strategies outlined in current policy, in the CDCA Plan, in current ACEC Plans, in the 2006 WEMO Plan, Section 2.2.6, as reflected in the current Sign Plan, Maintenance Plan, Monitoring Plan, and Enforcement Plan.

The implementation plans are located on the BLM California Desert District Website at http://www.blm.gov/ca/st/en/fo/cdd/wemo_court_mandates.html. These Implementation Plans place a priority on signing, informational kiosks, and route maintenance actions to clarify the network, which would have beneficial impacts for the recreational user and public land resources.

BLM would continue to implement the 2006 WEMO Plan and actively reclaim and disguise routes based on the biological priorities outlined in the 2006 WEMO Plan Implementation Section (2.6.6.10, p. 2-164), meaning that access on some features that are currently used by motorized vehicles would continue to be physically eliminated per those priorities.

Monitoring and response strategies for other resource values outside of ACECs would be pursued consistent with the BLM's current policies, 43 CFR 8342.1, and the CDCA Plan, as issues are identified.

4.1.4.2 Alternative 2 – Resource Conservation Enhancement

Alternative 2 Plan Amendment

The Alternative 2 travel management framework includes an access network which supports the objectives of increased biological and other resource enhancement in the entire planning area. This network identifies additional access limitation parameters based on the resource enhancement objectives, uses GIS and other technical analysis of current route information and resources, and emphasizes elimination of access as the primary mitigation measure to resolve conflicts (i.e., designating routes closed).

Table 2.1-1 summarized the CDCA plan amendment decisions being considered as part of the travel management and livestock grazing programs of the WMRNP. As discussed in Section 2.2.1 and Table 2.1-1, the CDCA Plan currently includes language that is not reflective of current policy or regulation. The first five plan amendment decisions include modifications necessary to conform the WMRNP to current policy, regulation, and law. As a result, the following decisions would be made under Alternative 2, as well as the other action alternatives (Alternatives 3 and 4):

PA I—Modify CDCA Plan Language Limiting Network to Existing Routes: Under Alternatives 2, 3, and 4, the CDCA Plan's references to existing routes of travel would be deleted, and replaced with language describing the process for designating a travel network in accordance with 43 CFR 8342.1 and the BLM TTM Handbook.

PA II—Incorporate TTM Process: Under Alternatives 2, 3, and 4, the discussions of open, limited, and closed route designations in the CDCA Plan would be updated to conform to the definitions in BLM's TTM Handbook. In general, the linking of route designations to Multiple Use Classes (MUC) would be eliminated. MUC may be a criterion in making individual route decisions in designating the travel network, but is not a replacement for the overall decision process.

PA III: Conform OHV Area Designations to Incorporate Changes to Wilderness Designations or other legislation: Under Alternatives 2, 3, and 4, as with Alternative 1 No Action, this LUP modification would occur, because it is in response to legislative decision rather than a land use planning decision. Land-use planning decisions must conform to current legislative and regulatory requirements. All Alternatives would reflect access area designations that are the result of the *Omnibus Public Land Management Act of 2009*, (Public Law 111-11). OHV Area designations in the CDCA Plan will be updated to incorporate this change. Areas that were Limited Areas and were included in wilderness designations in this legislation are now Closed Areas.

PA IV: Identify Plan Amendment Triggers: Under Alternatives 2, 3, and 4, the CDCA Plan would be modified to provide specific triggers to determine when a plan amendment is appropriate during future changes to the designated travel network, and when changes are within the scope of implementation activities and adaptive management responses.

PA V: Conform the Livestock Grazing Program in the CDCA Plan to the CDCA Appropriations Act: Under Alternatives 2, 3, and 4, this LUP modification would occur, because it is in response to a legislative decision rather than a land use planning decision. Land-use planning decisions must conform to current legislative and regulatory requirements. All Alternatives would reflect changes made under authority of the *2012 Appropriations Act* (Public Law 112-74), including the permanent relinquishment of the Lava Mountain and Walker Pass Common Allotments and reallocation of the 3,368 AUMs in these two allotments from livestock forage and use to wildlife use and ecosystem functions. The remainder of the grazing program in the WEMO Plan would continue to apply to Alternatives 2, 3, and 4, as well as to the No Action Alternative.

Six additional plan amendment decisions would vary between the action alternatives. Under Alternative 2, these decisions include:

PA VI: TMAs: Alternative 2 would include the designation of eight Travel Management Areas (TMAs) as part of the Motor Vehicle Access (MVA) Element of the CDCA Plan, as described in Table 2.3-3.

PA VII: Competitive Event “C” Routes: Under Alternative 2, there would be a seasonal restriction placed upon the use of the currently designated “C” routes for competitive motorized events managed under a SRP. These currently designated “C” routes would be available for use by competitive motorized events only during the months of November, December, and January. The routes designated to the northeast and south of the Spangler Hills Open Area would be open for casual use touring in the area throughout the year. Since OHV competitive events conducted in other OHV Open Areas would be limited to inside the OHV Open Area boundaries under this alternative, the remaining designated long-distance race corridor, the Johnson Valley to Parker Valley Corridor would be removed in the WEMO Planning Area under Alternative 2. A Johnson Valley to Stoddard Valley competitive event corridor would not be established under this alternative.

PA VIII: Dry Lakes: Alternative 2 would add Koehn, Cuddeback, Coyote, and Chisholm Trail Dry lakebeds to the list of designated lakebeds. The only change in access to these lakebeds would be to change the designation of Koehn lakebed from “Open” to “Closed, except as authorized by Land Use Permit or Special Recreation Permit”. The other three

lakebeds would remain “Closed to motor vehicle access, except for approved routes of travel or as authorized by Land Use Permit or Special Recreation Permit”.

PA IX: Access to Rand Mountains-Fremont Valley Management Area: Under Alternative 2, the Rand Mountains-Fremont Valley Management Area would continue to be managed consistent with parameters outlined in 2.2.1.2.4 of the WEMO FEIS.

PA X: SPC Limits: Alternative 2 would limit camping to previously disturbed areas adjacent to designated routes within 50 feet from the route centerline, both inside and outside of DWMA, except as site-specifically designated. Stopping and parking would be limited to within 50 feet of the route centerline throughout the planning area.

PA XI: Livestock Grazing: Alternative 2 would discontinue livestock grazing in DWMA and CHUs and reallocate all of the 4,224 Animal Unit Months (AUM, an expression of livestock stocking commitment based on forage) from livestock forage to wildlife use and ecosystem functions. Public land totaling 159,819 acres would not be available for livestock grazing in six grazing allotments, consistent with 43 CFR 4130.2 (a)—these include a portion of the Ord Mountain, the entire Cronese Lake and Harper Lake, a small portion of the Johnson Valley, and portions of the Shadow Mountain Allotments. These allotments would be unavailable for livestock grazing. A sixth allotment is Cantil Common, which would have its boundary adjusted to close the 6,726 acres in the Fremont-Kramer DWMA and CHU to ephemeral sheep grazing. The remainder of the grazing program in the WEMO Plan would continue to apply to Alternatives 2, 3 and 4, as well as the No Action alternative.

Alternative 2 Route Designation

The access network included in Alternative 2 would consist of 4,293 miles of motorized vehicular routes. A summary description of the Alternative 2 route network can be found in Section 2.3.3, and key elements of the network can be found in the Summary Table 2.4-1. Table 4.1-4 summarizes the mileage of routes designated in Alternative 2.

Table 4.1-4. Alternative 2 - Miles of Routes Designated

Use Description	Mileage	Percentage of Total Network
Motorized	3,949.3	26.0 percent
Subdesignation: Motorcycle	228.5	1.5 percent
Authorized/Administrative	343.7	2.3 percent
Total Motorized	4293	28.3 percent
Non-Motorized	28.3	0.2 percent
Non-Mechanized	35.2	0.2 percent
Closed (Transportation Linear Disturbance)	10,600	69.8 percent
Total	14,956.5	

4.1.4.3 Alternative 3 – Public Lands Access Maintenance

Alternative 3 Plan Amendment

This alternative was developed to support the objectives of maintaining commercial and casual use, including recreational access in the planning area. This alternative also includes plan amendment decisions needed to bring the CDCA Plan and the West Mojave Plan into conformance with current policy, and delineates eight TMAs as part of its travel management framework. The alternative was developed to promote vehicle access to areas of casual user interest including various forms of recreation such as rock-hounding, bird watching, trail riding, extreme 4-wheel driving, horseback riding, camping, backpacking, mountain-bike riding, hunting, wildlife observation, and use of scenic vistas. Inyo, Kern, and San Bernardino County recreation plans were also emphasized in the route designations. Minimization strategies utilize non-closure approaches to the extent possible, and give additional emphasis on access in areas with less conflict.

Table 2.1-1 summarized the CDCA plan amendment decisions being considered as part of the travel management and livestock grazing programs of the WMRNP. As discussed in Section 2.2.1 and Table 2.1-1, the CDCA Plan currently includes language that is not reflective of current policy or regulation. The first five plan amendment decisions include modifications necessary to conform the WMRNP to current policy and regulation. As a result, the first five Plan Amendment decisions discussed under Alternative 2 above (PA I—PA V), would also be adopted under Alternative 3:

Six additional Plan Amendment decisions that would vary between the action alternatives. Under Alternative 3, these decisions include:

PA VI: TMAs: Alternative 3 would include the designation of eight TMAs as part of the MVA Element of the CDCA Plan, as described in Table 2.3-3.

PA VII: Competitive Event “C” Routes: Under Alternative 3, there would be “C” routes available for competitive motorized events managed under a SRP in three distinct areas: the areas to the northeast of the Spangler Hills Open Area; the Summit Range plus the area east of Highway 395; and the urban interface area between the community of Ridgecrest and the Spangler Hills Open Area. In addition, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would be available. The Johnson Valley to Parker Valley Race Corridor would be removed and may be offset by additional routes in the planning area that are identified as competitive use open routes through the route designation process. Any race staging area for C routes would still be limited to MUC Intensive (Class I) lands, and pit areas would be limited to those areas previously dedicated as Pit areas along the route.

Alternative 3 would specify a Johnson Valley connector race or speed-controlled event route-connector(s) between non-connecting portions of the remaining Johnson Valley OHV Recreational Area to provide a corridor that enhances organized vehicle riding opportunities within the Open Area, subject to additional coordination as needed with DOD. Staging and pit areas would be limited to within the Recreation Area. The decision would identify a specific route for the competitive-event connector between the remaining Johnson Valley OHV Recreational Area and the Stoddard Valley OHV Open Area, with appropriate mitigation measures. This connector was adopted in the WEMO

Plan, but no specific route was identified. The Johnson Valley to Parker Valley Corridor would be removed in the WEMO Planning Area under Alternative 3, which has not been used since the listing of the desert tortoise.

PA VIII: Dry Lakes: Alternative 3 would add Koehn, Cuddeback, Coyote, and Chisholm Trail Dry lakebeds to the list of designated lakebeds. Koehn Lakebed would be changed from “Open” to “Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit”. Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds would be changed from “Closed to Motor Vehicle Access, except for designated routes or by Authorization, including Special Recreation Permit” to “Open” to motorized use, subject to appropriate minimization strategies.

PA IX: Access to Rand Mountains-Fremont Valley Management Area: Under Alternative 3, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated upon issuance of a transportation management plan for the area. The remaining general management framework for the Rand Mountain – Fremont Valley Management Area would stay intact as outlined in 2.2.1.2.4 of the WEMO FEIS and the No Action Alternative, and a carefully managed Limited network would be established in the Rand Mountains area.

PA X: SPC Limits: Alternative 3 would limit camping to previously disturbed areas adjacent to designated routes within 50 feet from the route centerline inside DWMA, while stopping and parking would be limited to within 50 feet of the centerline within DWMA. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA. Designated camping and staging areas may be designated which exceed these parameters, with appropriate NEPA compliance and associated consultations.

PA XI: Livestock Grazing: Alternative 3 would discontinue livestock grazing on currently inactive allotments, which include Buckhorn Canyon, Harper Lake, Cronese Lake, Cady Mountain, Johnson Valley, Double Mountain and Oak Creek Allotments. There would be a reallocation of 3,164 AUMs from livestock forage to wildlife use and ecosystem functions on these inactive allotments. The inactive allotments would be unavailable for livestock grazing, including 1,100 AUMs within 41,928 acres in DWMA and CHU. The remainder of the grazing program in the WEMO Plan would continue to apply to Alternatives 2, 3, and 4, as well as the No Action alternative.

Alternative 3 Route Designation

The access network included in Alternative 3 would consist of 10,428 miles of motorized vehicular routes. A summary description of the Alternative 3 route network can be found in Section 2.3.4, and key elements of the network can be found in the Summary Table 2.4-1. Table 4.1-5 summarizes the mileage of routes designated in Alternative 3.

Table 4.1-5. Alternative 3 - Miles of Routes Designated

Use Description	Mileage	Percentage of Total Network
Motorized	10,149.7	67.2 percent
Subdesignation: Motorcycle	147	1.0 percent

Table 4.1-5. Alternative 3 - Miles of Routes Designated

Use Description	Mileage	Percentage of Total Network
Authorized/Administrative	278.3	1.8 percent
Total Motorized	10,428	69.0 percent
Non-Motorized	95.2	0.6 percent
Non-Mechanized	33.9	0.2 percent
Closed (Transportation Linear Disturbance)	4,404	29.2 percent
Total	14,961.1	

4.1.4.4 Alternative 4 – Community Access Enhancement

Alternative 4 Plan Amendment

This alternative would adopt nine TMAs as part of its travel management framework, to incorporate input from BLM’s collaborative community outreach processes. This alternative also includes plan amendment decisions needed to bring the CDCA Plan and the 2006 WEMO Plan into conformance with current policy.

Table 2.1-1 summarized the CDCA plan amendment decisions being considered as part of the travel management and livestock grazing programs of the WMRNP. As discussed in Section 2.2.1 and Table 2.1-1, the CDCA Plan currently includes language that is not reflective of current policy or regulation. The first five plan amendment decisions include modifications necessary to conform the WMRNP to current policy and regulation. As a result, the first five Plan Amendment decisions discussed under Alternative 2 above (PA I—PA V), would also be adopted under Alternative 4:

Six additional Plan Amendment decisions that would vary between the action alternatives. Under Alternative 4, these decisions include:

PA VI: TMAs: Alternative 4 would include the designation of nine TMAs as part of the MVA Element of the CDCA Plan. The boundaries of the nine TMAs included in Alternative 4 are similar to those in Alternatives 2 and 3, with the exception that TMA 7 (Ridgecrest, El Paso, Rands, and Red Mountain Subregions) would be split into two separate TMAs. The Rands and Red Mountain Subregions would remain designated as TMA 7, but the Ridgecrest and El Paso Subregions would be managed separately as TMA 9.

PA VII: Competitive Event “C” Routes: Under Alternative 4, the C routes that are to the northeast of the Spangler Hills Open Area above the Randsburg Wash Road and those found within the Summit Range and east of Highway 395 would be available for competitive motorized events managed under a SRP. If the Johnson Valley-to-Parker Valley Race route is determined to be no longer viable or otherwise deleted, additional (C) open routes may be designated outside of OHV Open Areas with appropriate NEPA and consistent with the WEMO Plan and the applicable travel management plan(s). In addition, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would be available. This alternative would specify a Johnson Valley connector race or speed-controlled route-connector(s) between non-

connecting portions of the remaining Johnson Valley OHV Recreational Area to provide a corridor that enhances organized vehicle riding opportunities within the Open Area. Staging and pit areas would be limited to within the Recreation Area. The decision would identify a specific route for the competitive-event connector between the remaining Johnson Valley OHV Area and the Stoddard Valley OHV Open Area, with appropriate mitigation measures. This connector was adopted in the WEMO Plan, but no specific route was identified.

PA VIII: Dry Lakes: Alternative 4 would add Koehn, Cuddeback, Coyote, and Chisholm Trail Lake lakebeds to the list of designated lakebeds. Koehn Lakebed would be changed from “Open” to “Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit”. Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds would be changed from “Closed to Motor Vehicle Access, except for designated routes or by Authorization, including Special Recreation Permit” to “Open” to motorized use, subject to appropriate minimization strategies.

PA IX: Access to Rand Mountains-Fremont Valley Management Area: Under Alternative 4, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated upon issuance of a transportation management plan for the area. The remaining general management frame work for the Rand Mountain – Fremont Valley Management Area would stay intact as outlined in 2.2.1.2.4 of the WEMO FEIS and the No Action Alternative.

PA X: SPC Limits: Alternative 4 would limit camping to previously disturbed areas adjacent to and within 50 feet from the route centerline inside DWMAs, while stopping and parking would be limited to within 50 feet of the centerline within DWMAs. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMAs. Designated camping areas may be identified that exceed these parameters, with appropriate NEPA compliance and associated consultations.

PA XI: Livestock Grazing: Alternative 4 would discontinue livestock grazing in DWMAs and CHUs on allotments that are currently inactive and vacant, or that become inactive and vacant in the future, and would reallocate all of the 1,100 Animal Unit Months from livestock forage to wildlife use and ecosystem functions. Public land totaling 42,420 acres would not be available for livestock grazing. This includes a small portion of the Johnson Valley Allotment and two grazing allotments, Cronese Lake, and Harper Lake Allotments, in their entirety, consistent with 43 CFR 4130.2 (a). These allotments would not be available for livestock grazing. The remainder of the grazing program in the WEMO Plan would continue to apply to Alternatives 2, 3 and 4, as well as the No Action alternative.

Alternative 4 Route Designation

The access network included in Alternative 4 would consist of 5,782 miles of motorized vehicular routes. A summary description of the Alternative 4 route network can be found in Section 2.3.5, and key elements of the network can be found in the Summary Table 2.4-1. Table 4.1-6 summarizes the mileage of routes designated in Alternative 4.

Table 4.1-6. Alternative 4 - Miles of Routes Designated

Use Description	Mileage	Percentage of Total Network
Motorized	5,543.4	36.8 percent
Subdesignation: Motorcycle	120.9	0.8 percent
Authorized/Administrative	238.6	1.6 percent
Total Motorized	5,782	38.4 percent
Non-Motorized	62.5	0.4 percent
Non-Mechanized	21.8	0.1 percent
Closed (Transportation Linear Disturbance)	9,076	60.3 percent
Total	14,942.1	

4.2 Air Quality

4.2.1 Air Emissions

4.2.1.1 Introduction

Affected Environment Summary

Section 3.2 describes air quality in the planning area, including a description of the portions of the planning area that are in attainment and non-attainment with respect to state and federal standards for priority pollutants. The entire WEMO Planning area occurs or exists in air basins that are currently designated as non-attainment for the California 24 hour and Annual PM10 standard, and most of the planning area is also designated as non-attainment with respect to the federal 24 hour PM10 standard. Overall, ambient PM10 values in the planning area have been steadily decreasing since 1986. A portion of the planning area is designated as non-attainment for the state PM2.5 standard. The entire WEMO Planning area occurs in non-attainment areas for the state 1-Hour and 8-Hour ozone standard, and some portions of the planning area are designated as non-attainment with respect to the federal 8-hour ozone standard. The portion of WEMO within the South Coast Air Quality Management District is designated as non-attainment for the state annual and 1-Hour NO2 standard. The WEMO planning area includes urban and residential areas that have residences, schools, hospitals, and other sites which may be considered sensitive receptors for air quality impacts.

Methodology

The 2005 WEMO FEIS analyzed the air emission impacts associated with the 5,098 mile route network evaluated in that FEIS, and concluded that OHV route designations and OHV competitive events would result in a decrease in PM10 air emissions in both the short- and long-term, due to stabilization of closed routes and elimination of various speed events in DWMA's and other areas. The analysis concluded that the proposed action would not cause or contribute to a new violation, or increase the frequency or severity of an existing violation, of any National Ambient Air Quality Standards (NAAQS), and that no further conformity analysis was required.

In the Summary Judgment Order, the Court held that BLM only analyzed the impact of air emissions on open routes, but did not analyze the impacts of OHV emissions that would occur within OHV Open Areas. The Court required that the analysis be extended to include emissions from OHV Open Areas. In the Remedy Order, the Court vacated the finding of consistency with the Clean Air Act. In addition, the Order (pg. 14) required BLM to implement additional information gathering and monitoring regarding air quality in and around the OHV Open Areas. Finally, the Court made a general finding, for all resources, that the range of route network alternatives evaluated was inadequate. No other deficiencies were identified in the air quality analysis in the 2005 WEMO FEIS.

For this SEIS for the WMRNP, BLM performed the following:

- Contracted with the MDAQMD to compile and evaluate the monitoring results from the 46 ambient air monitoring stations in the WEMO Planning area. The evaluation included specific inventorying of emissions from the OHV Open Areas. The results of this study were reported to BLM in the West Mojave Plan Air Quality Evaluation Report dated April, 2013 (MDAQMD 2013), and are discussed in Chapter 3.2.

- The route designation process for each alternative included evaluation of the location of each route with respect to receptors and residences that could be particularly sensitive to air emissions for criteria pollutants.
- Conducted route evaluation and quantified the miles of motorized routes that could potentially impact sensitive receptors and residents, across four alternative route networks, ranging from 4,293 to 10,428 miles in size.

BLM re-evaluated the 2005 WEMO analysis, and supplemented it with additional information from resource specialists, public comments, changes in conditions within the planning area, and changes in the applicable regulatory framework for air quality. This additional information is incorporated into the evaluation in Section 4.2.1.2 below.

4.2.1.2 Impacts Common to All Alternatives

Air quality impacts associated with the transportation network are caused by gaseous and particulate matter emitted into the air as a result of the direct and indirect effects of use of motorized vehicles (mobile source). Direct emissions include particulate matter less than or equal to 10 microns in size (PM₁₀) emitted as vehicles travel over unpaved routes, and exhaust emissions from motorized vehicles. Exhaust emissions contain EPA and state-regulated criteria pollutants including PM₁₀, volatile organic compounds (VOCs), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and particulate matter less than or equal to 2.5 microns (PM_{2.5}). Nitrogen dioxide (NO₂) and VOCs can react in the atmosphere to form ozone, another criteria pollutant. Motorized vehicle use can also lead indirectly to increased PM₁₀ emissions when use creates disturbance in previously undisturbed areas, thus exposing soils to wind erosion to create fugitive dust.

Because motorized vehicle use, including OHVs, results in both direct and indirect air emissions, any change in the amount of motorized vehicle use as a result of the WMRNP alternatives has the potential to have regional or localized effects on air emissions. Increased motorized vehicle use would result in an increase in direct emissions, which would be considered an adverse impact on air quality, while reductions in motorized vehicle use would lead to a beneficial impact on air quality due to reduced emissions. Similarly, new disturbance created by newly developed routes in previously undisturbed areas would result in increased wind erosion, and therefore an increase in indirect particulate emissions or fugitive dust. Rehabilitation of disturbed areas by closure of routes would reduce indirect emissions and therefore have a beneficial impact on air quality.

The designation of the transportation network under the WMRNP alternatives is unlikely to have any discernible effect on the volume of motorized vehicle use, and therefore no effect on associated direct air emissions. The volume of motorized vehicle use on the transportation network is governed by economic activities such as mining or livestock grazing operations, land use designations, population, and demand for recreation opportunities. Closure of a route does not necessarily result in a corresponding reduction in the miles traveled by users within the region, and designation of a new route does not necessarily result in an increase in miles traveled. If certain routes in a region are closed, users are likely to seek other nearby open routes for the same purpose. Closures or designation of motorized routes can affect the density of motorized vehicle use in certain areas, but are not likely to affect overall number of vehicles in operation, and therefore overall emissions in the region.

The designation of the route network as part of the WMRNP alternatives would result in an effect on regional PM₁₀ emissions associated with wind erosion. In general, the total amount of PM₁₀ emissions originating from wind erosion of soil in an area is expected to be proportional to the total amount of disturbance. Change in the overall disturbance level between alternatives will begin to manifest slowly, and increase over time, beyond the horizon of the planning effort. The MDAQMD report provide in Appendix D concluded that the thousands of miles of maintained and unmaintained unpaved roads and tracks in the WEMO Planning Area is a primary contributor to regional dust problems. Any development of new routes in previously undisturbed areas is expected to increase wind erosion of soil from that area, and would result in an adverse impact on air quality. In contrast, closure and re-vegetation of routes would lead to a decrease in wind erosion, and therefore decrease indirect PM₁₀ emissions, and would constitute a beneficial impact on air quality. The long-term assumption is that closed routes will eventually be reclaimed by natural processes, resulting in a gradual reduction in indirect emissions. Active rehabilitation of routes can speed the recovery process, resulting in a more rapid reduction in these indirect emissions. Active rehabilitation generally extends to the visual horizon. Natural re-vegetation may not occur over the entire previously disturbed closed route, depending on soil factors and this process may take years, decades, or longer.

Because the transportation network alternatives include differing mileage of designated motorized routes and transportation linear disturbances (closed routes), the alternatives would result in differing indirect air emissions, and would therefore differ in their adverse or beneficial impacts to air quality. In addition, although the overall direct emissions are expected to be the same regardless of the size of the transportation network, the variation of designated motorized routes and transportation linear disturbances among the alternatives would result in differences in the specific locations of localized emissions. As a result, some alternatives may impact more or fewer sensitive receptors than others. These differences in impacts among the alternatives are analyzed in Sections 4.2.1.3, 4.2.1.4, 4.2.1.5, and 4.2.1.6 below.

Under all alternatives, there would be changes in both direct and indirect emissions in the future as new routes are designated for motorized use, or existing routes are designated as transportation linear disturbances (closed routes). Some of these changes in emissions could potentially occur within close proximity to sensitive receptors or residences, and would therefore have adverse or beneficial effects on those receptors. However, the amount of these changes in emissions is expected to be minimal. In the future, after implementation of the project, new motorized routes would only be designated as a result of the TTM process, and closure of existing designated routes would only occur as a result of the same process. The mileage of routes that would be added or removed from the network is expected to be minimal compared to the current inventory. In the case of Rights-of-Way (ROW) authorizations, the BLM's authorizations are only provided following evaluation under the designation criteria, environmental review and consideration of air quality impacts for any proposed ROW. Therefore, the specific emissions, receptors, and impacts are considered at the time of authorizations and mitigation measures are developed and applied to avoid or reduce adverse impacts on a case-by-case basis.

Chapter 2 discusses the general resource protection and motorized access objectives that were incorporated into the development of the transportation network alternatives. These objectives were used to inform decisions regarding which linear features would be included in the motorized, non-motorized, and non-mechanized transportation network, and which features

would be closed (i.e., designated as transportation linear disturbances), under each alternative. In that analysis, air quality impacts, in the form of proximity of motorized use to sensitive receptors (schools, hospitals, and residential areas), were considered as a criterion in determining which routes would remain open and which would be closed under the various alternatives. In addition, the WMRNP alternatives include consideration of stopping and parking distances from routes in order to minimize potential disturbance in previously undisturbed areas, thus reducing the potential for indirect emissions through wind erosion. Therefore, minimization of air quality impacts was a factor both in development of the alternative route networks, and in the specific limitations placed on routes in those networks.

Emissions in OHV Open Areas

In 2012, the BLM asked for an Air Quality Evaluation from the Mojave Desert Air Quality Management District (MDAQMD) to identify the contribution of motorized vehicle use, including OHVs, to air emissions in the planning area (MDAQMD 2013). Air emissions from OHVs and OHV Open Areas are monitored through both regional-scale and neighborhood scale monitors. Emissions associated with OHVs in Open Areas and on motorized routes near population centers are monitored by neighborhood-specific monitors near those population centers. In the MDAQMD's emission inventory process, OHVs are directly inventoried as mobile sources, as the subcategory off-highway recreational vehicles. Inventory results indicate OHV exhaust is a negligible contributor to criteria pollutants in the WEMO Planning Area, except for VOC emissions. OHV VOC emissions are relatively high compared to other motorized vehicles because OHV engines are typically carbureted, rich burn engines without catalytic controls and hence have greater unburned fuel in their exhaust. VOC emissions, in turn, are a precursor to ozone formation, and ozone is a regional pollutant. Although OHV exhaust is a negligible contributor to local emissions, it is a significant contributor to regional VOC emissions.

PM₁₀ emissions from wind erosion of disturbed surfaces can be substantial in the planning area. However, as discussed in Section 3.2, the MDAQMD report concluded that OHV Open Areas are not a significant contributor to either total unpaved road dust or fugitive windblown dust subcategories, and thus are not a significant contributor to regional PM₁₀ emissions. This is because the area of use on the OHV Open Areas is small relative to the total mileage of maintained and unmaintained unpaved roads and tracks, as well as tens of millions of acres of land disturbed for other uses.

Although the use of OHV Open Areas generates indirect emissions of particulates, the MDAQMD study concluded that these emissions are small relative to the total emissions in the planning area. In addition, no changes to the Open Areas are proposed as part of the WMRNP. The Open Areas in the planning area were designated in the CDCA Plan, and no new areas or changes to existing areas are proposed. Therefore, the WMRNP alternatives would have no adverse effect on air emissions from OHV Open Areas.

Emissions from Livestock Grazing Allotments

Local air districts have federal and State air quality jurisdiction over all grazing allotments located in the WEMO Planning area, and have been delegated authority to implement the Clean Air Act from the EPA. These include the Mojave Desert Air Quality Management District (MDAQMD) in San Bernardino County, Antelope Valley Air Quality Management District

(AVAQMD) in Los Angeles County, Eastern Kern Air Pollution Control District (EKAPCD) in Kern County, and Great Basin Unified Air Pollution Control District (GBUAPCD) in Inyo County.

All local air districts have analyzed impacts from existing sources for PM₁₀, and prepared a State Implementation Plans (SIP) for the their respective jurisdictional areas which identify both existing sources of emissions and also control measures to manage existing emissions and reduce new emissions (MDAQMD, 1995). In the MDAQMD SIP, Miscellaneous Area Sources were considered to be a minor category of PM₁₀ emissions in the planning area, generating only 1.3% of total emissions in 1990. Agricultural activity is a small contributor within this miscellaneous category, and livestock grazing operations are a small portion of the agricultural activity contributions. No measures were identified in the SIP specific to existing livestock grazing activities, and renewals of leases were exempted from conformity determinations consistent with the SIP, due to their nominal (less than 15 tons/year) contributions to air quality in the Mojave Desert planning area (BLM, 1997). These results are consistent will all other air district SIPs in the WEMO Planning area. Under cumulative effects, since the effects of grazing on PM₁₀ are nominal, grazing would not contribute to cumulative effects.

Livestock grazing operations would utilize motorized vehicles in day to day operations by using the transportation network of Open or Limited routes. This use is necessary to facilitate the grazing operation but the amount of emission produced by one or two vehicles is minimal and the direct and indirect impacts to air quality under all alternatives would be de minimis.

Federal Conformity

A federal conformity analysis is required for any federal action within any federal non-attainment or maintenance area. The Clean Air Act and its implementing rules (40 CFR 93) state that federal agencies must make a determination that proposed actions in federal non-attainment/maintenance areas conform to the applicable state implementation plan (SIP) before the action is taken. In addition, the action cannot cause or contribute to any new violation of the National Ambient Air Quality Standards (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 areas within the West Mojave planning area that meet the criteria of being federal non-attainment or maintenance areas are as follows:

- The Owens Valley portion of the Great Basin Valleys Air Basin (GBVAB) is designated as severe non-attainment for PM₁₀.
- The Indian Wells Valley portion of the Mojave Desert Air Basin (MDAB) is designated as Attainment/Maintenance for PM₁₀.
- The Kern River/Cummings Valley portion of the MDAB is designated as serious non-attainment for PM₁₀.
- The Searles Valley and Mojave Desert portions of the MDAB and the Salton Sea Air Basin (SSAB) are designated as moderate non-attainment for PM₁₀.
- The Eastern Kern County and Mojave Desert (modified) portions of the MDAB are designated as non-attainment for ozone.

- The SSAB is designated as non-attainment for ozone.
- The SSAB is designated as moderate non-attainment for PM_{2.5}.

None of the alternatives under consideration would increase emissions of the criteria pollutants. Alternative 2, the Resource Conservation Enhancement Alternative, would result in reductions of PM₁₀ emissions due to active and natural restoration of closed routes. The No Action, Public Lands Access Maintenance, and Community Access Enhancement Alternatives would result in smaller or minimal reductions in the amount of these emissions, but would not increase emissions because they would not increase miles traveled, and would not increase the mileage of disturbed soil on motorized vehicle routes. The MDAQMD report confirmed that OHV Open Areas were not a substantial contributor to regional PM₁₀ emissions. The projected growth of population and transportation in the public land areas are still substantially lower than projections in the regional plans. As a result, no further conformity analysis is necessary. A formal conformity determination is not required because the No Action Alternative is currently in conformance with the SIP and all the other alternatives would be in conformance with the SIP.

Resource-Specific Minimization and Mitigation Measures

Resource-specific minimization and mitigation measures that were considered as part of the route designation process for each alternative, and that will be considered for each route during implementation of the WMRNP, were described in Table 2.1-4. For air resources, these include:

- Close the access route;
- Reroute access to another less-impacting route;
- Modify access to direct use to areas with a lower impact;
- Harden access route;
- Apply water or similar application during high use periods;
- Limit the route to lower intensity use or prohibit SRP use;
- Install/Implement Erosion Prevention Best Management Practices;
- Install signs; and
- Determine that no additional minimization and mitigation measure is needed based on area or site evaluation.

Residual Impacts After Implementation of Mitigation Measures

Residual impacts, in the form of air emissions from the use of motorized routes and indirect emissions from wind erosion in areas with soil disturbance, would continue to occur on motorized routes even after mitigation measures were applied. The magnitude of ongoing emissions from motorized vehicles are expected to be the same under all alternatives, as the overall mileage traveled is expected to remain the same regardless of the extent of the route network. The magnitude of residual indirect emissions from wind erosion would be related to the mileage of routes closed under each alternative and the soil texture of closed routes. Upon completion of closures and natural re-vegetation, wind erosion emission would be roughly proportional to the mileage and acreage of motorized routes closed under each alternative. These

differences would be substantially manifest beyond the life of the project (20 years). Estimates of natural reclamation vary depending upon soil texture; within 20 years, most routes in desert environments would begin to show signs of reclamation in the absence of additional disturbance from use, but would be subject to some level of wind erosion that would vary depending on soil texture. It is anticipated that closures will proceed at the same rate under all alternatives, and the differences would begin to be manifest over a longer timeframe.

4.2.1.3 Impacts Associated with the No Action Alternative

Alternative 1 Plan Amendment

Under the No Action Alternative, none of the proposed plan amendment decisions would be adopted. Two non-discretionary LUP Conformity determinations would occur as plan maintenance actions to align the CDCA Plan with recent wilderness and livestock grazing program legislation.

Of the nine other Plan Amendment decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Identification of Plan Amendment Triggers; Conforming the Livestock Grazing decisions, and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any specific on-the-ground actions. Therefore, these decisions would not result in direct impacts to air resources. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider air resources and use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public;
- Facilitate BLM's ability to enforce route use limitations;
- Reallocate forage on the Lava Mountain and Walker Pass Common Allotments; and
- Update the Access Area designation maps to recognize that new wilderness areas are Closed Areas.

These amendments are expected to have no adverse effect on resources, and may benefit air resources by facilitating adaptive management changes in response to changing on-the-ground conditions. By not adopting these decisions under the No Action Alternative, these potential beneficial effects would not be achieved. In addition, by not adopting these decisions, the CDCA Plan would not be amended to conform to current policy or regulation. The effects of these five decisions are considered nominal and will not be discussed further in this Section.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping,

parking, and camping distances, and changes to the livestock grazing program. The current management practices associated with these specific decisions as well as any changes to motorized vehicle use in the locations specified in the decisions under the action alternatives, do have the potential to impact air resources in those locations. These impacts are relatively small as compared to the impacts common to all alternatives addressed in 4.2.1.2. Specific impacts from these amendments under the No Action alternative are addressed in the following paragraphs.

PA VII: Competitive events may authorize large numbers of vehicles traveling at a high rate of speed, which has the potential to increase fugitive dust emissions in the local area. While these emissions may be substantial, they will also be localized and short in duration, and are similar to the effects from non-competitive organized events. Additional analysis occurs as part of the SRP permitting process, and appropriate mitigation measures are included.

Under the No Action Alternative, the overall number of competitive-use SRPs issued are not anticipated to change in the planning area—the limiting factor on the number and size of events over the last 10 years has been economic activity, weather, and, in more recent years, available staff and resources. Therefore, impacts to air quality across the planning area should be nominal from the designation of these routes.

PA VIII: The levels of use on the one lakebed, Koehn, that would remain designated as “Open” to OHV use are relatively light, and the impacts to air quality from this use is nominal. The other lakebeds would experience use on designated routes. Motorized vehicle use of dry lakebeds has the potential to increase fugitive dust emissions. Disturbance of soils on dry lakes by wind erosion is very significant on playas, and the wind erosion worsens when salt crusts from the last flood event are crushed by motor vehicles exposing fine sediments under the crust to winds blustering across a playa unobstructed by surface roughness. Because Koehn, Coyote, and Chisholm lakebeds are currently receiving relatively light use, the severity of impacts on the lakebeds is also low, and is not anticipated to substantially increase in the near future. Cuddeback lakebed currently receives substantial use and its soil crusts are highly modified from past use. Therefore, its continued use may have an adverse impact on air quality by the direct impacts to the lakebed, as well as by facilitating additional intensive recreational use on the lakebed and on the access routes to the lakebed that are located elsewhere in the area. While this decision may occasionally increase emissions in the local area, it would not have a direct adverse impact on regional air quality. The use or closure of these lakebeds would not impact sensitive receptors.

PA IX: Based on staff observations and informal discussions with visitors to the area there has been an observed shift in use patterns for the Rand Mountains-Fremont Valley Management Area. The shift has been from using the designated trails as a recreational trail riding experience to more of a travel network to go from one area to another. Additionally staff has observed a shift in camping patterns away from the management area to being closer to the developments and services that have been established within the California City area. The air quality impacts from this use are nominal.

PA X: The reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 50 feet for SPC would result in limiting future disturbances and allowing previously disturbed areas to become re-vegetated over time, thus gradually reducing air emissions associated with wind erosion. Camping would be allowed adjacent to designated routes in previously disturbed

areas, not to exceed 50 feet from the centerline, throughout the WEMO Planning Area. This decision would also reduce the amount of new disturbance that would occur, having a similar reduction in air emissions. The effect of these actions would be a net beneficial impact on local and regional air quality.

PA XI: The livestock grazing program under the No Action Alternative continues to decrease in both extent and intensity. The livestock that would remain on public lands in the WEMO Planning area result in nominal emission levels, and would continue to be de minimis (MDAQMD, 1995).

Alternative 1 Route Designation

The evaluation of impacts common to all alternatives concluded that regional direct particulate and VOC emissions from motorized vehicles would not change among the alternatives, and therefore the impacts to regional air quality from all alternatives from direct emissions would be the same. As shown in Figure 3.2-3 and discussed in section 3.2, regional air quality, as measured by PM₁₀ emissions, has steadily improved since 1986. This includes the time period since the 2006 WEMO Plan. However, the locations of direct emissions would vary among the alternatives, and therefore some alternatives may have a greater adverse or beneficial effect on sensitive receptors. The mileage of routes in close proximity to sensitive receptors and residents under the No Action Alternative is presented in Table 4.2-1.

Table 4.2-1. Alternative 1 - Miles of Routes in Proximity to Sensitive Receptors and Residents for Air Quality Impacts

Resource Description	Motorized	Authorized/ Administrative	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Miles of route within 1 mile of Sensitive Receptor	23.2	0	0	0	106.6
Miles of route within 300 feet of Residences	126.3	4.8	0	0	419.8

The analysis of impacts common to all alternatives also concluded that indirect air emissions associated with wind erosion of disturbed areas would vary among alternatives, depending on the amount of routes left open to motorized vehicles and the amount of routes closed (designated as transportation linear disturbances). These differences between alternatives will be manifest primarily beyond the life of the plan. Two factors limit more immediate changes. Routes are being actively rehabilitated to the visual horizon, and active rehabilitation will continue under all alternatives over the life of the plan. The majority of closed miles would naturally reclaim. For desert soils, depending on the particular texture of the soils, in 100 years most routes would be 60 to 80 percent reclaimed.

Under the No Action Alternative, active route closures would occur as opportunities are identified and funding becomes available. Over the long term (100 years or more of consistent active rehabilitation activities and natural reclamation of routes) there would be reductions in emissions of particulate matter from closed routes, and corresponding declines in ambient PM₁₀

concentrations, as routes designated as closed and undesignated linear features are allowed to naturally re-vegetate. USEPA estimates the average emission of PM₁₀ wind erosion of disturbed soils as 1.7 pounds per acre per day. Based on this estimate, and an assumption that each route is 12 feet wide, the closure of 9,594 miles of routes under Alternative 1 would result in an eventual reduction of PM₁₀ emissions of 4,329 tons/year. This would result in corresponding declines in ambient PM₁₀ concentrations. Although these reductions would be beneficial, they would not substantially change the number of yearly exceedances of state or federal PM₁₀ standards or change the attainment status of any air district, and much of the change that does occur would not be manifest in the reasonably foreseeable future. The reductions cited here are beyond the planning horizon of this planning project. Over the life of the project, the reductions in emissions would not vary between alternatives.

Alternative 1 Minimization and Mitigation Measures

Table 2.3-1 describes the network-wide minimization and mitigation measures that are currently specified in the CDCA Plan, WEMO Plan, and/or the Court’s Remedy Order, and which are therefore applicable under Alternative 1, the No Action Alternative. Whether they were applied during the route designation process or are mitigation measures, these considerations reduce overall direct and/or indirect air emissions, or reduce the proximity of those emissions to sensitive receptors or residences. Measures such as limiting new ground disturbance in DWMA’s, vertical mulching closed routes, and implementing stopping and parking limits of 50 feet from route centerlines in DWMA’s and 300 feet outside of DWMA’s, and limiting camping to disturbed areas adjacent to open routes, would reduce PM₁₀ emissions by minimizing disturbance of currently undisturbed areas and allowing currently disturbed areas outside the DWMA 50-foot limits to naturally re-vegetate, as compared to pre-2006 conditions before these limitations were enacted. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific air quality impacts, including direct vehicle emissions and emissions in close proximity to sensitive receptors, are considered before authorizing new motorized routes.

4.2.1.4 Impacts Associated with Alternative 2

Alternative 2 Plan Amendment

Of the decisions being considered in the WMRNP, six of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Identification of Plan Amendment Triggers; Conforming the Livestock Grazing decisions, Conforming the Access Area Designations, and Designation of TMAs) would amend BLM’s procedures for managing travel and transportation and livestock grazing management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct impacts to air quality. These decisions would only define the route designation process, and the LUP framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider air resources and use factors specified in 43 CFR 8342.1;

- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM's ability to enforce route use limitations.
- Reallocate forage on the Lava Mountain and Walker Pass Common Allotments.
- Update the Access Area designation maps to recognize that new wilderness areas are Closed Areas.

These amendments are expected to have no adverse effect on resources, and may benefit air resources by facilitating adaptive management changes in response to changing on-the-ground conditions. By adopting these decisions, the CDCA Plan would be amended to conform to current policy, regulation, and law.

As a result of the modification of the language limiting the route network to existing routes, new routes could potentially be identified in locations with no existing routes, and could have adverse impacts to localized resources near that route. New routes may be established to provide access for new authorized uses, or to avoid identified impacts to resources. The impacts to air resources from each new route would be evaluated as part of the BLM's consideration of the application for land use authorization. As part of that evaluation, BLM would consider the potential impacts of the new route as required by 43 CFR 8342.1, potential alternatives to provide the necessary access, and minimization and mitigation measures to address any identified impacts to air resources.

In the case of routes established to provide access to authorized uses, the duration of the designation of the new route would be the same as authorized land use it is intended to support. Once the term of the authorized land use expires, the route would generally be considered for closure, and the terms and conditions of the authorized land use would require the lessee, permittee, or ROW holder to rehabilitate the route. BLM may also determine at a later date that, consistent with 43 CFR 8342.1, the route provides necessary access for some other reason and could designate the route accordingly, releasing the authorized land user from their requirement to rehabilitate the route. In the case of alternative routes established to address impacts to resources, these new routes may become permanent.

Five of the plan amendment decisions being considered would modify on-the-ground authorization of livestock grazing and motorized vehicle use. The air quality impacts of these decisions under Alternative 2 are as follows:

PA VII: Competitive events may authorize large numbers of vehicles traveling at a high rate of speed, which has the potential to increase fugitive dust emissions in the local area. While these emissions may be substantial, they will also be localized and short in duration, and are similar to the effects from non-competitive organized events. Additional analysis occurs as part of the SRP permitting process, and appropriate mitigation measures are included.

As pointed out in the No Action Alternative, the overall number of SRP permits are not anticipated to increase—the limiting factor on the number of events is currently a function of seasonal availability, staff and resources. This means that there is not anticipated to be a substantial increase in the number of OHVs using public land in the area. Some increase may occur however on any particular weekend, and designating the “C” routes does not authorize individual SRP events to use these routes. Under Alternative 2, there would be a seasonal restriction placed upon the use of the currently designated “C” routes for competitive motorized

events managed under a SRP. These routes would be available for use by competitive motorized events during the months of November, December, and January. This decision would reduce local emissions associated with motorized use of those “C” routes during the remainder of the year, and would therefore have a nominal beneficial impact on local air quality during these periods of inactivity. However, the users of those routes are expected to use other routes and areas within the planning area for recreation, and the overall amount of emissions within the planning area is expected to remain the same. Therefore, this decision would not have a direct adverse or beneficial impact on regional air quality.

Since OHV competitive events conducted in other OHV Open Areas would be limited to inside the Open Area boundaries under this alternative, the remaining designated long-distance race corridor, the Johnson Valley to Parker Valley Corridor would be removed under Alternative 2. An event has not been run in this corridor since the listing of the desert tortoise as threatened in 1989; therefore, other routes and areas within the planning area are not anticipated to receive increased use for recreation as a result of the elimination of this competitive event route. Therefore, this plan amendment decision would not have any effect on local or regional air quality.

PA VIII: Motorized vehicle use of dry lake beds has the potential to increase fugitive dust emissions. Disturbance of soils on dry lakes by wind erosion is very significant on playas, and the wind erosion worsens when salt crusts from the last flood event are crushed by motor vehicles exposing fine sediments under the crust to winds blustering across a playa unobstructed by surface roughness. The closure of Koehn Lakebed under Alternative 2 would reduce local emissions associated with motorized use of that area over the long term, and would therefore have a net beneficial impact on local air quality. Because Koehn lakebed is currently receiving relatively light use, the amount of displaced use to other routes would be low. Therefore, this plan amendment decision is not expected to have an indirect, adverse impact on air quality by increasing the recreational use of routes in other areas. While this decision may reduce emissions in a local area, it would not have a direct adverse or beneficial impact on regional air quality.

PA IX: The implementation of the permit system in the Rand Mountains-Fremont Valley Management Area would continue. The system does not directly impact air quality, but indirectly may do so by dissuading some users from using this area. This may have nominal local beneficial effects. However, the users of those routes are expected to use other routes and areas within the Planning area for recreation, and the overall amount of emissions within the planning area is expected to remain the same. Therefore, this decision would not have a direct adverse or beneficial impact on regional air quality.

PA X: Limiting stopping and parking to previously disturbed areas within 50 feet from the route centerline, both inside and outside of DWMA's would result in the same impacts as the No Action alternative. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 50 feet. This reduction would result in allowing previously disturbed areas to become re-vegetated over time, thus gradually reducing air emissions associated with wind erosion. Camping would be allowed adjacent to designated routes in previously disturbed areas, not to exceed 50 feet from the centerline, throughout the WEMO Planning Area. This decision would also reduce the amount of new disturbance that would occur, having a similar reduction in air emissions. The effect of these actions would be a net beneficial impact on local and regional air quality.

PA XI: Discontinuing livestock grazing on portions of the Ord Mountain, Cantil Common, Shadow Mountain Allotments, a small portion of the Johnson Valley Allotment and the entire Harper Lake and Cronese Lake Allotments would result in less grazing use, thus lower overall emissions when compared to No Action, that would be generated from the remaining grazing operations within the West Mojave Planning Area. Again, direct and indirect impacts to air quality from grazing operations would continue to be de minimis (MDAQMD 1995).

Alternative 2 Route Designation

Section 4.2.1.2 described the general impacts to air quality that are common to all alternatives. That analysis concluded that regional direct emissions from motorized vehicles would not change among the alternatives, and therefore the impacts to regional air quality from all alternatives from direct emissions would be the same. However, the locations of those direct emissions would vary among the alternatives, and therefore some alternatives may have a greater adverse or beneficial effect on sensitive receptors. The mileage of routes in close proximity to sensitive receptors and receptors under Alternative 2 is presented in Table 4.2-2.

Table 4.2-2. Alternative 2 - Miles of Routes in Proximity to Sensitive Receptors and Residents for Air Quality Impacts

Resource Description	Motorized	Authorized/ Administrative	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
Miles of route within 1 mile of Sensitive Receptor	19.2	0.1	8.5	0	105.2
Miles of route within 300 feet of Residences	80.0	5.8	1.9	0	474.8

The analysis in Section 4.2.1.2 also concluded that indirect air emissions associated with wind erosion of disturbed areas would vary among alternatives, depending on the amount of routes left open to motorized vehicles and the amount of routes closed (designated as transportation linear disturbances). Closed routes would be naturally re-vegetated by nature and scheduled for route rehabilitation actions, as needed. USEPA estimates the average emission of PM₁₀ wind erosion of disturbed soils as 1.7 pounds per acre per day. Based on this estimate, and an assumption that each route is 12 feet wide, the closure of 10,600 miles of routes under Alternative 2 would result in an eventual reduction of PM₁₀ emissions of 4,783 tons/year. This would result in corresponding declines in ambient PM₁₀ concentrations. Although these reductions would be beneficial, they would not be substantial enough to substantially change the number of yearly exceedances of state or federal PM₁₀ standards or change the attainment status of any air district.

Alternative 2 Minimization and Mitigation Measures

Table 2.3-5 describes the network-wide minimization and mitigation measures that would be applied under Alternative 2. Whether they were applied during the route designation process or are mitigation measures, these measures would reduce overall direct and/or indirect air emissions, or reduce the proximity of those emissions to sensitive receptors or residences. Measures such as limiting new ground disturbance in DWMAs, disguising closed routes, limiting

permitted events to OHV Open Areas only, and implementing stopping and parking limits of 50 feet from route centerlines, and further limiting camping in disturbed areas adjacent to open routes to within 50 feet of centerline, would reduce PM₁₀ emissions by minimizing disturbance of currently undisturbed areas and allowing currently disturbed areas outside these limits to naturally re-vegetate. Requirements for plan amendments and NEPA reviews of future major route network changes would ensure that specific air quality impacts, including direct vehicle emissions and emissions in close proximity to sensitive receptors, are considered before authorizing new motorized routes.

4.2.1.5 Impacts Associated with Alternative 3

Alternative 3 Plan Amendment

Of the decisions being considered in the WMRNP, PA I – PA VI are decisions that would amend BLM’s procedures for managing travel and transportation and livestock grazing management in the planning area, and would not authorize any on-the-ground actions. These decisions would be the same under Alternative 3 as for Alternative 2, and therefore effect of these decisions on air quality is the same as discussed for Alternative 2.

Five of the plan amendment decisions being considered would modify on-the-ground authorization of livestock grazing and motorized vehicle use. The air quality impacts of these decisions under Alternative 3 are as follows:

PA VII: Competitive events may authorize large numbers of vehicles traveling at a high rate of speed, which has the potential to increase fugitive dust emissions in the local area. While these emissions may be substantial, they will also be localized and short in duration. It is anticipated that the overall number of SRP permits will not increase. This means that there should be no measurable increase in the number of OHVs using public land in the area. Additionally, designating the C routes does not authorize individual SRP events to use these routes, and additional analysis will occur as part of the SRP permitting process. Therefore, there should be no direct impacts to air quality across the planning area from the designation of these routes.

Under Alternative 3, the: “C” route network available for competitive motorized events managed under a SRP would be expanded in three distinct areas: the areas to the northeast of the Spangler Hills Open Area; the Summit Range plus the area east of Highway 395; and the urban interface area between the community of Ridgecrest and the Spangler Hills Open Area. Overall, the localized air quality impacts from Alternative 3 would be moderately higher than the impacts from the No Action Alternative., and substantially higher than under Alternative 2, based on the number of miles and seasons of use between the alternatives.

The Johnson Valley to Parker Valley Race Corridor would be removed, but may be offset by additional routes in the planning area that are identified as competitive use open routes through the route designation process. There are no beneficial impacts from the corridor deletion, because the corridor has not been used for a competitive event in over 20 years.

In addition, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would be available. The decision to adopt a Johnson Valley to Stoddard Valley Competitive Event Corridor would result in more intensive emissions along the designated route, and may increase limited access area use that otherwise might occur within the OHV Open Area. However, with the MCAGACC military base expansion and resulting

reduced OHV Open Area, some of that use is anticipated to transfer to this area anyway, unless a corridor is provided. In consideration of this, overall air quality impacts from this decision are considered nominal.

PA VIII: Under Alternative 3, Koehn Lakebed would be designated as “Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit”. The impacts of the closure of Koehn Lakebed would be the same as discussed for Alternative 2.

Alternative 3 would also designate Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds as open to motorized use. Motorized vehicle use of dry lake beds has the potential to increase fugitive dust emissions. Disturbance of soils on dry lakes by wind erosion is very significant on playas, and the wind erosion worsens when salt crusts from the last flood event are crushed by motor vehicles exposing fine sediments under the crust to winds blustering across a playa unobstructed by surface roughness. While this plan amendment decision would not increase the overall recreational use of routes, it may transfer recreational use to areas which are more prone to generating fugitive dust emissions, due to finer soil grain size. Therefore, this decision would increase emissions in a local area, and may have an adverse impact on regional air quality.

PA IX: Under Alternative 3, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. By eliminating the permit requirement, this decision may result in an increase in recreational use of these routes, and thus an increase in localized fugitive dust emissions. However, this additional use would likely be transferred from other areas, which would have a corresponding reduction in fugitive dust emissions which would be beneficial in those areas. The overall net regional air emissions are not likely to be changed by this decision.

PA X: Alternative 3 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA's, while stopping and parking would be limited to within 50 feet of the centerline within DWMA's. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 100 feet. As discussed for Alternative 2, this reduction would result in allowing previously disturbed areas to become re-vegetated over time, thus gradually reducing air emissions associated with wind erosion. This decision would also reduce the amount of new disturbance that would occur, having a similar reduction in air emissions. The effect of these actions would be a net beneficial impact on local and regional air quality. However, the beneficial impact would be lower than that for Alternative 2, because Alternative 3 would allow for a wider area of disturbance (100 feet versus 50 feet).

PA XI: Alternative 3 would discontinue livestock grazing on currently inactive allotments, which include Buckhorn Canyon, Harper Lake, Cronese Lake, Cady Mountain, Johnson Valley, Double Mountain and Oak Creek Allotments. Direct and indirect impacts to air quality from the current grazing operations within the West Mojave Planning Area would continue to be de minimis as determined in No Action (MDAQMD 1995), because Alternative 3 would result in the same or fewer grazing operations within the Planning Area.

Alternative 3 Route Designation

Section 4.2.1.2 described the general impacts to air quality that are common to all alternatives. That analysis concluded that regional direct emissions from motorized vehicles would not change among the alternatives, and therefore the impacts to regional air quality from all

alternatives from direct emissions would be the same. However, the locations of those direct emissions would vary among the alternatives, and therefore some alternatives may have a greater adverse or beneficial effect on sensitive receptors. The mileage of routes in close proximity to sensitive receptors and receptors under Alternative 3 is presented in Table 4.2-3.

Table 4.2-3. Alternative 3 - Miles of Routes in Proximity to Sensitive Receptors and Residents for Air Quality Impacts

Resource Description	Motorized	Authorized/ Administrative	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
Miles of route within 1 mile of Sensitive Receptor	77.2	0	7.3	0	47.1
Miles of route within 300 feet of Residences	455	12.6	4.5	0	90.8

The analysis in Section 4.2.1.2 also concluded that indirect air emissions associated with wind erosion of disturbed areas would vary among alternatives, depending on the amount of routes left open to motorized vehicles and the amount of routes closed (designated as transportation linear disturbances). Closed routes would be reclaimed by nature and scheduled for route rehabilitation actions, as needed. USEPA estimates the average emission of PM₁₀ wind erosion of disturbed soils as 1.7 pounds per acre per day. Based on this estimate, and an assumption that each route is 12 feet wide, the closure of 4,404 miles of routes under Alternative 3 would result in an eventual reduction of PM₁₀ emissions of 1,987 tons/year. This would result in corresponding declines in ambient PM₁₀ concentrations. Although these reductions would be beneficial, they would not be substantial enough to substantially change the number of yearly exceedances of state or federal PM₁₀ standards or change the attainment status of any air district.

Alternative 3 Minimization and Mitigation Measures

Table 2.3-8 describes the network-wide minimization and mitigation measures that would be applied under Alternative 3. Many of these measures would act to reduce overall indirect and/or indirect air emissions, or to reduce the proximity of those emissions to sensitive receptors or residences. Measures such as limiting new ground disturbance in DWMAs, disguising closed routes, limiting permitted events to OHV Open Areas only, and implementing stopping and parking limits of 50 feet from route centerlines in DWMAs and 100 feet from route centerlines outside of DWMAs would reduce indirect PM₁₀ emissions by minimizing disturbance of currently undisturbed areas. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific air quality impacts, including direct vehicle emissions and emissions in close proximity to sensitive receptors, are considered before authorizing new motorized routes.

4.2.1.6 Impacts Associated with Alternative 4

Alternative 4 Plan Amendment

Of the decisions being considered in the WMRNP, PA I – PA VI are decisions that would amend BLM’s procedures for managing travel and transportation and livestock grazing management in the planning area, and would not authorize any on-the-ground actions. These decisions would be the same under Alternative 4 as for Alternatives 2 and 3 with one exception, and therefore effect of these decisions on air quality is the same as discussed for Alternative 2. The exception is for the designation of TMAs, these decisions would include nine TMAs under Alternative 4 rather than eight, as for Alternatives 2 and 3. The effect of all these decisions on air resources is the same as discussed for Alternative 2, essentially nominal.

Five of the plan amendment decisions being considered would modify on-the-ground authorization of livestock grazing and motorized vehicle use. The air quality impacts of these decisions under Alternative 4 are as follows:

PA VII: Competitive events may authorize large numbers of vehicles traveling at a high rate of speed, which has the potential to increase fugitive dust emissions in the local area. While these emissions may be substantial, they will also be localized and short in duration. It is anticipated that the overall number of SRP permits will not increase. Additionally, designating the “C” routes does not authorize individual SRP events to use these routes, and additional analysis will occur as part of the SRP permitting process. Therefore, there should be no direct impacts to air quality across the planning area from the designation of these routes.

Under Alternative 4, the C route network includes areas northeast of the Spangler Hills Open Area above the Randsburg Wash Road and within the Summit Range and east of Highway 395, available for competitive motorized events managed under a SRP. The Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would also be available. The network is more extensive than Alternatives 1 and 2, but less extensive as Alternative 3. Likewise, the localized air quality impacts from Alternative 4 would be moderately higher than the impacts from the No Action Alternative., and substantially higher than under Alternative 2, but lower than Alternative 3, based on the number of miles and seasons of use between the alternatives.

The proposals for the disposition of three competitive or speed-controlled corridors to serve events are same in Alternative 4 as Alternative 3, and the impacts are the same for both alternatives as well. These impacts are greater than for Alternative 2 or the No Action Alternative.

PA VIII: Under Alternative 4, Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds would all be designated as open to motorized use. Motorized vehicle use of dry lake beds has the potential to increase fugitive dust emissions. Koehn Lakebed would be designated as “Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit”. The impacts of the closure of Koehn Lakebed would be the same as discussed for Alternative 2. In general, this decision is likely to increase local emissions on Cuddeback, Coyote, and Chisholm Trail Lake lakebeds, having a direct, adverse impact in those local areas, as identified in Alternative 3, by potentially transferring recreational use to these lakebed areas which are more prone to generating fugitive dust emissions, due to finer soil grain size.

PA IX: Under Alternative 4, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. As indicated under Alternative 3, eliminating the permit requirement may result in an increase in recreational use of these routes, and thus an increase in localized fugitive dust emissions. However, this additional use would likely be transferred from other planning area routes, which would have a corresponding reduction in fugitive dust emissions which would be beneficial in those areas. The overall net regional air emissions are not likely to be changed by this decision.

PA X: Alternative 4 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA's, while stopping and parking would be limited to within 50 feet of the centerline within DWMA's. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 100 feet. The impacts of this decision would be the same as those discussed for Alternative 3.

PA XI: The discontinuation of livestock grazing on a small portion of the Johnson Valley Allotment and on the entire Harper Lake and Cronese Lake Allotments would result in approximately the same emission levels that would be generated from facilitating the remaining grazing operations within the West Mojave Planning Area under No Action. Again, direct and indirect impacts to air quality from the remaining grazing operations would continue to be de minimis (MDAQMD, 1995).

Alternative 4 Route Designation

Section 4.2.1.2 described the general impacts to air quality that are common to all alternatives. That analysis concluded that regional direct emissions from motorized vehicles would not change among the alternatives, and therefore the impacts to regional air quality from all alternatives from direct emissions would be the same. However, the locations of those direct emissions would vary among the alternatives, and therefore some alternatives may have a greater adverse or beneficial effect on sensitive receptors. The mileage of routes in close proximity to sensitive receptors and receptors under Alternative 4 is presented in Table 4.2-4.

Table 4.2-4. Alternative 4 - Miles of Routes in Proximity to Sensitive Receptors and Residents for Air Quality Impacts

Resource Description	Motorized	Authorized/ Administrative	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
Miles of route within 1 mile of Sensitive Receptor	25.9	0.8	2.4	0	100.8
Miles of route within 300 feet of Residences	126.4	6.1	0.3	0.3	411.2

The analysis in Section 4.2.1.2 also concluded that indirect air emissions associated with wind erosion of disturbed areas would vary among alternatives, depending on the amount of routes left

open to motorized vehicles and the amount of routes closed (designated as transportation linear disturbances). Closed routes would be naturally re-vegetated over the long-term, and would also be scheduled for route rehabilitation actions, as needed. USEPA estimates the average emission of PM₁₀ wind erosion of disturbed soils as 1.7 pounds per acre per day. Based on this estimate, and an assumption that each route is 12 feet wide, the closure of 9,076 miles of routes under Alternative 4 would result in an eventual reduction of PM₁₀ emissions of 4,096 tons/year. This would result in corresponding declines in ambient PM₁₀ concentrations. Although these reductions would be beneficial, they would not be substantial enough to substantially change the number of yearly exceedances of state or federal PM₁₀ standards or change the attainment status of any air district.

Alternative 4 Minimization and Mitigation Measures

Table 2.3-8 describes the network-wide minimization and mitigation measures that would be applied under Alternative 4. Many of these measures would act to reduce overall indirect and/or indirect air emissions, or to reduce the proximity of those emissions to sensitive receptors or residences. Measures such as limiting new ground disturbance in DWMA, disguising closed routes, limiting permitted events to OHV Open Areas only, and implementing stopping and parking limits of 50 feet from route centerlines in DWMA and 100 feet from route centerlines outside of DWMA would reduce indirect PM₁₀ emissions by minimizing disturbance of currently undisturbed areas. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific air quality impacts, including direct vehicle emissions and emissions in close proximity to sensitive receptors, are considered before authorizing new motorized routes.

4.2.2 Climate Change

4.2.2.1 Introduction

Affected Environment Summary

Section 3.2 describes the sources and effects of global climate fluctuations and climate change, including forecasted changes in the local landscape and ecology of the Mojave Desert. These include changes in flooding frequency and severity, with flood risks likely to become greater as winter precipitation increases under changing climate conditions. Within desert environments such as the Mojave, desert scrub vegetation types are expected to expand.

Methodology

The 2005 WEMO EIS did not specifically analyze the global climate change impacts associated with the 5,098 mile route network evaluated in that EIS. The Court's Summary Judgment and Remedy Orders did not specifically reach conclusions, or provide direction, regarding the need for analysis of impacts on global climate change.

For this SEIS for the WMRNP and livestock grazing program, BLM re-evaluated the 2005 WEMO analysis, and supplemented it with additional information from resource specialists. This additional information is incorporated into the evaluation in Section 4.2.2.2 below.

4.2.2.2 Impacts Common to All Alternatives

GHG emissions in the United States come mostly from energy production, with more than half the energy-related emissions coming from large stationary sources such as power plants (EPA 2012a). Approximately one-third of GHG emissions come from motor vehicle transportation, including motorized vehicles using the transportation network on public lands (EPA 2012a). Vehicles used for recreation, livestock grazing operations, vehicles used to support construction and operations for authorized users, and motorized access to private lands all result in emission of GHGs. Because motorized vehicle use, including vehicles used for recreation and livestock grazing operations, results in direct emissions of GHGs, any change in the amount of motorized vehicle use as a result of the WMRNP alternatives has the potential to contribute incrementally to an increase or decrease in global emissions.

As discussed in section 4.1.3, the designation of the transportation network under the WMRNP alternatives would have no discernible effect on the volume of motorized vehicle use, and therefore no effect on associated GHG emissions. The volume of motorized vehicle use on the transportation network is governed by other factors than the number of vehicle miles, including economic activity, population, and demand for recreation opportunities. Closure of a route does not necessarily mean a corresponding reduction in the miles traveled by recreationists within the region, and designation of a new route does not necessarily mean an increase in miles traveled. If certain routes in a region are closed, recreation users are likely to use other nearby open routes for the same purpose. Closure or authorization of motorized routes can affect the density of motorized vehicle use in certain areas, but are not anticipated to affect overall use based on the history of authorizations in the planning area, and therefore are not likely to adversely affect overall GHG emissions in the region. In any case, the potential for increased GHG emissions from a particular authorization for a project, and/or the access associated with the project, would be analyzed in conjunction with the project environmental review.

Motorized vehicle use can also impact the GHG balance by the removal of vegetation and biological soil crusts, which act to uptake carbon dioxide (CO₂). The removal of biological soil crusts is essentially irreversible. A study of the Mojave Desert indicated that the desert may uptake carbon in amounts as high as 100 grams per square meter per year (Wohlfahrt and others 2008). This would equate to a maximum reduction in carbon uptake, calculated as carbon dioxide (CO₂), of 1.48 metric tons of CO₂ per acre per year for areas with complete vegetation removal. However, no routes in previously undisturbed areas are proposed under the WMRNP, so there would be no adverse impacts to climate change through this process. Under each alternative, existing routes are designated as transportation linear disturbances (closed routes), and the agency will be actively pursuing rehabilitation of these routes. As these routes become re-vegetated over the long-term, the new vegetation would uptake CO₂, resulting in an overall beneficial impact to global climate change. Because routes are anticipated to be re-vegetated at the same rate under all alternatives, the uptake of CO₂ is not anticipated to vary among alternatives, in the short term. Over the longer term adverse impacts would be greater in proportion to the number of miles of routes designated available for use.

Chapter 2 discusses the general resource protection and motorized access objectives that were incorporated into the development of the transportation network alternatives. These objectives were used to inform decisions regarding which linear features would be included in the motorized, non-motorized, and non-mechanized transportation network, and which features would be closed (i.e., designated as transportation linear disturbances), under each alternative.

Because the configuration of the transportation network would not affect GHG emissions, GHG emissions were not considered as a criterion in determining which routes would remain open and which would be closed under the various alternatives. In addition, no alternative-specific mitigation measures were developed to address GHG emissions.

Of the plan amendment decisions being considered, the following decisions would not authorize on-the-ground actions, and therefore would not result in direct emissions of greenhouse gases (GHG):

- Modification of Language Limiting Route Network to Existing Routes;
- Incorporation of the TTM Process;
- Updating OHV Area Designations;
- Identification of Plan Amendment Triggers; and
- Designation of TMAs.

These plan amendment decisions would not designate routes or authorize on-the-ground actions and therefore they would not have direct impacts to global climate change. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

The other five plan amendment decisions being considered would result in changes in on-the-ground use of motorized vehicles. These include modification of C routes, motorized use of dry lakes, the need for permits for motorized use in the Rand Mountains-Fremont Valley Management Area, allowable stopping, parking, and camping distances, and changes in grazing allotments. However, as discussed above, these decisions would not result in an increase or decrease in the amount of motorized vehicle use, and would therefore not affect GHG emissions.

Because there would be no difference in GHG emissions among the alternatives, GHG emissions are not discussed further for the individual alternatives.

Although vehicle use for livestock grazing operation results in a contribution of direct GHG emissions, this contribution would be considered de minimis. Livestock grazing operations on public lands within the West Mojave Planning Area would also generate methane gases (CH₄) from livestock flatulation and waste. These widely distributed methane emissions would not equate and would be far less than the concentrated methane emissions from a small dairy operation. Therefore, grazing operations within the planning area's contributions to methane emissions would be considered de minimis and poses no adverse impacts.

Resource-Specific Minimization and Mitigation Measures

Because no adverse direct or indirect impacts to global climate change were identified, no resource-specific minimization or mitigation measures were developed for GHG emissions in particular.

Residual Impacts After Implementation of Mitigation Measures

Because no incremental adverse impacts to global climate change were identified, there would be no residual impacts.

4.3 Soil and Water Resources

4.3.1 Soil Resources

4.3.1.1 Introduction

Affected Environment Summary

Section 3.3 describes the soil resources in the planning area. Soils in the desert function to support the ecology of the local area, as well as global carbon balance. With respect to ecology, soil resources form the habitat within which vegetation grows, and in which wildlife finds cover. With respect to carbon balance, soils not only support carbon sequestration in vegetation and biological soil crusts, but in inorganic form as well. The characteristics of soils which support these functions include grain size and texture, mineral composition, level of compaction, fertility, vegetation cover, presence of biological soil crusts, and water content. Any activities, including motorized vehicle use and livestock grazing, which may modify soil characteristics have the potential to impact resources, including the ecological and carbon sequestration functions that are supported by the soils.

Methodology

The 2005 WEMO EIS analyzed the impacts of the 5,098 mile route network evaluated in that EIS with respect to soil erosion, compaction, and other soil resource impacts. The analysis included a general discussion of the effects of OHV use on soil compaction, water erosion, mechanical displacement, wind erosion, and biological soil crusts.

In the Summary Judgment Order, the Court held that the general discussion of the impacts of OHV use on soils was adequate, but that the 2005 WEMO EIS did not evaluate the proposed route network with respect to specific locations of potentially impacted soils. The Court also made a finding that the 2005 WEMO EIS did not adequately discuss the impacts of livestock grazing on soil resources. Finally, the Court made a general finding, for all resources, that the range of route network alternatives evaluated was inadequate. No other deficiencies were identified in the soil resource analysis in the 2005 WEMO EIS.

For this SEIS for the WMRNP, BLM performed the following:

- The route designation process for each alternative included evaluation of the location of each route with respect to soils that were determined to be potentially prone to erosion. This included areas in which routes were present on slopes greater than 10 percent, as well as specific locations where soil erosion was known to occur.
- Conducted route evaluation and quantified the miles of motorized routes that could potentially impact erosion-prone soils, across four alternative route networks, ranging from 4,293 to 10,428 miles in size.
- Re-evaluated the 2005 WEMO analysis, and supplemented it with additional information from resource specialists, public comments, and changes in conditions within the planning area. This additional information is incorporated into the evaluation in Section 4.3.1.2 below.
- Addressed cumulative impacts of both OHV use and grazing on soils, is provided in Section 4.14 below.

4.3.1.2 Impacts Common to All Alternatives

The direct sources of effects on soil resources from motorized vehicle use, including use of OHVs, result from changing the physical properties of soils through compaction, mechanical displacement, or removal of vegetation or biological soil crusts that stabilize surficial soils. These physical changes, in turn, affect rates of water infiltration into soil, potential for wind and water erosion, moisture retention in soils, and soil chemistry. The analysis presented below highlights potential adverse impacts in areas with soils of concern to managers as described in Section 3.3.1 Soil and Geology. Identification of these areas provide needed information to managers that will inform eventual future decisions for travel management in the West Mojave planning area under the Selected Alternative.

Compaction

Soil compaction can occur due to pressure exerted by animals, pedestrians, and vehicles. Areas frequently susceptible to soil compaction are motor vehicle routes, developed and undeveloped camping areas, sites for livestock watering, and mine operation sites. A far-reaching impact from vehicular travel on desert soils is soil compaction that results from the force of vehicle wheels rolling over the soil surface. The degree of soil compaction from vehicular traffic depends in part on soil characteristics such as soil particle size, particle size distribution, organic matter content, soil moisture, and soil structure. Uniform coarse-grained soils tend to be less susceptible to compaction than fine-grained or poorly-graded soils or soils that consist of a diverse range of particle types. In the latter case, smaller particles are more easily wedged among larger particles when compaction force is applied.

The immediate impact of soil compaction is an increase in soil bulk density, i.e., the packing density of soil particles. Low bulk density means that more “macropore” space is present in a soil to fill with air or water. Compacted soils with high bulk density indicate that soil has less macropore space for air and water. When motor vehicles compact soils, other soil properties begin to change as well. Compaction essentially “squishes out” the pore space between soil particles. The macropores that remain are smaller than before compaction. Reduced macropore space in a soil decreases soil volume, thus leaving a surface subsided slightly below the level of surrounding uncompacted soil, such as vehicle tracks that persist long-term on desert soil surfaces.

As a soil becomes more compacted, the shearing of soil surfaces by vehicles breaks up (“pulverizes”) soil particles. With repeated vehicle passes over a vehicle trail, the sideways shearing movement of soil decreases while compaction is occurring. Soil pulverized and made finer by shearing forms small berms of loosened soil at each side of the vehicle tire. This finer material is a potential source of fugitive dust. Pulverized soil particles are frequently small enough to become windborne and can increase concentrations of particular matter in the air above expected natural concentrations.

Because soil compaction reduces the amount of water that the soil can retain, the fertility of the soil is reduced. Plant growth and habitat suitability for ground-dwelling species of wildlife diminish likewise.

Four main factors affect how the type of vehicle will compact and shear a desert soil (Nortjé et al. 2012):

- Weight of a vehicle and its load
- Tire pressure and size
- Track or trail size
- Vehicle speed

As a rule of thumb, the heavier a vehicle is, the wider and deeper is the zone of compaction. The pressure of compaction decreases with soil depth. Modifications to vehicle design, particularly to tire size, can moderate soil compaction. Large wide tires disperse compaction force from a vehicle over a larger surface area and thus reduce the depth of the zone of compaction in a soil.

Most soils, including desert soils and sands, are susceptible to compaction from repeated motorized vehicular driving or from animal trampling at sites for range improvements to benefit domestic livestock, such as watering facilities or holding corrals. Motorized routes, trails, hill-climbs, and livestock watering and holding facilities are intensely compacted. Rangeland Health determinations conducted by BLM staff in the field for EAs prepared as part of reauthorizing West Mojave grazing allotments between 2007 and 2013 demonstrated that the soil standard for Rangeland Health (43 CFR 4180) was being met allotment-wide based, with the exception of areas at or associated with watering facilities or holding corrals. These types of facilities typically occupied an area of one acre or less per facility. In addition, support areas such as staging areas, pit areas, viewing areas, and parking for event participants and viewers can become compacted. The amount of compaction depends on vehicle characteristics, amount of activity, soil type, and soil moisture content at the time of impact. Motorized vehicle activity on wet soils tends to result in greater compaction than on dry soils. Some cohesion-less sands, such as sand dunes, are very resistant to compaction whether wet or dry. Many dry lake bed soils have considerable resistance to compaction if driven on when dry.

Compaction of soils can have impacts to biological resources and water quality, as well as increase the potential for storm water flood damage. Compacted soils result in decreased water infiltration rates, which in turn reduce soil moisture levels necessary to support vegetation. Compaction can also make it more difficult or impossible for native plants to establish themselves, affecting the ability of an area to recover after vegetation has been impacted. By decreasing water infiltration rates and leaving areas denuded of vegetation, compacted soils increase storm water runoff rates which can, in turn, lead to increased storm water flow and flood damage downstream of compacted areas. Reduced infiltration leads to increased overland water flow volume during infrequent but often intense desert rainstorms. Added surface water flow during and after a storm more easily overpowers the forces of cohesion and friction holding surface soil particles together. More soil particles downslope of compacted soils are eroded and transported overland as a result. The sediment load increases in the water flow cumulatively downslope and downstream, with potential adverse impacts to water quality. Overland water flow moves to washes and streams as compacted areas upslope shed a greater amount of runoff water than they would if left undisturbed. More water volume also accelerates gully erosion in rills and creeks at “knick” points in the landscape where the slope suddenly increases. The added sediment being transported may cause water quality to decline.

Residence time is the average time that rainwater remains at the site where it falls. By infiltrating into a soil and becoming part of the groundwater, water resides on site longer. With compaction, less water infiltrates and more water flows offsite, thus shortening the average amount of time

that water remains near where it strikes the ground. A longer residence time for water benefits soil organisms and vegetation at a site. With a shorter residence time for water, the soil has less water available for seed germination and plant growth.

More runoff in the water system during rainfall lowers the threshold amount of precipitation needed for flooding to start. At a watershed scale, one cumulative impact of soil compaction from widespread vehicular traffic and the resulting shortened residence time is that flooding becomes more frequent.

De-compaction and Wind Erosion

Motorized vehicle use and livestock use can also de-compact soils by mechanical displacement and/or removal of stabilizing vegetation and crusts. Intense vehicle use in steep areas (primarily hill climbs on slopes over 20 percent) and long-term livestock watering and holding facilities displaces soil, and leaves the remaining soil vulnerable to water erosion. Water erosion of soils removes organic and nutrient material that supports vegetation, and introduces sediment load to downstream water bodies, affecting water quality. Areas identified as having potential for increased soil erosion rates are those with slopes greater than 10 percent, and those mapped by BLM as being prone to erosion.

Wind erosion of soils is a major issue in the planning area. Wind erosion occurs whenever bare, loose, dry soil is exposed to wind of sufficient speed to cause soil movement, either rolling, bouncing, saltating (lauching), or aerosolizing into the air. Wind speeds as low as 21 to 24 km per hour above the soil surface can launch medium-sized particles in soils prone to wind erosion. Medium-sized particles become detached and enter the wind stream momentarily, but then fall back to the ground by force of gravity. Return from saltation causes them to impact other particles of differing sizes and set them into motion. Fifty to 80 percent of total soil movement may result from these particulate collisions. Wind erosion rates for soils may increase as soil properties (e.g., soil bulk density) or vegetative cover change. Erosion potential is magnified when percent slope (steepness) of a site is higher or when slopes are longer. In the planning area, approximately 2.3 million acres of the overall 9.1 million acres have slopes greater than ten percent (Figure 3.3-1).

Vehicle traffic on desert soils generates fugitive airborne dust. Vehicle tires passing at even low speeds over an erodible desert soil surface provide sufficient energy to detach fine soil particles and generate dust. Especially where numbers of people gather in the desert for vehicle-based recreation activities, exposure to high concentrations of fugitive dust is likely. Fugitive dust generated on the BLM public lands may also affect communities that lie downwind.

Recent studies funded by the BLM at the Nellis Dunes Recreation Area northeast of Las Vegas, NV, shed light on the roles of soils and vehicular recreation in producing fugitive dust. Research studies covered five aspects of fugitive dust:

- Susceptibility of different soil types to produce dust during OHV riding
- Effect of different OHV types on amounts of dust production
- Effect of OHV velocities on dust production
- An estimate of the annual contribution of dust emissions stemming from OHV recreation
- An estimate of naturally-occurring arsenic in soils and in the dust produced by OHVs

Results from these studies apply specifically to conditions at Nellis Dunes Recreation Area. Some of the results may not apply to conditions at all areas in the West Mojave planning area because the soils present, the mix of vehicles used, and the chemical composition of soil minerals may differ. Methods from these studies to gather data about soils and dust and the resulting mapping products, however, show how OHV recreation managers can obtain and apply soils information for decision making in regard to protecting soils and OHV riders on public lands. The following findings from the Nellis Dunes studies bear on soil resource management in the West Mojave Desert.

- Soil texture greatly influences the amount of fugitive dust created from vehicle shearing on a desert soil. At Nellis Dunes, a four-wheeler always generates more dust on finer silt soils than on coarser sand soils. Soils with a high amount of silt have on average lighter-weight soil particles that require less wind energy to become detached soil particles and airborne. As the finer textured soil particles become airborne selectively over time, the portion of the soil with fine-textured particles decreases. As a result, fugitive dust emissions from a well-used trail usually decline over time.
- Vehicle velocity affects soil shearing and fugitive dust emissions. At or below 12 km per hour, a four-wheel vehicle causes the release of little fugitive dust on either silty soil (fine) or sandy soil (coarse) surfaces. Increasing speeds with the same four-wheeler generates greater volumes of dust from both silt and sand. The rate of increase in fugitive dust emissions from higher speeds, however, is much greater from silty soils as compared to emissions from sandy soils. This increased impact occurs even though the amount of time that the force applied from the faster moving vehicle over the soil is actually shorter.
- Effect of vehicle types is significant. Driving at any speed, a four-wheeler produces more fugitive dust emissions than a two-wheeled dirt bike over the same soil surface. The vehicle contact surface of the dirt bike with soil is smaller, but the dirt bike is also lighter weight and thus less forceful in detaching particles from the soil surface. At speeds above 20 km per hour, dust production increases exponentially more in the heavier vehicle. Interactions between soil textures, for example silt vs. sand, and different vehicle types may not always be so predictable. Experimental dune buggy results in low-dust sand environments were similar to the four-wheeler. But, on silt soils the dust emissions from the dune buggy were about one-third less than those from the four-wheeler.
- Fugitive dust emissions from vehicles are poorly described. Few data are available to account for the role of vehicular recreation and travel in producing fugitive dust at an OHV recreation area on an annual basis. At the BLM Nellis Dunes Recreation Area, researchers found that dust emissions increased most over background levels of wind-generated dust when OHVs traveled across silt soils. Soil texture was the most important factor for determining increased dust emissions when vehicles rode over soil surfaces. In contrast, OHVs were found to generate little dust from sand soils, and particularly from coarse-grained sandy soils. Winds by themselves naturally created most of the emissions coming from sand soils.

Public Health

One disease of potential health concern in California warm deserts is Valley Fever, known medically as coccidioidomycosis, a disease with initially flu-like symptoms caused by inhalation

of spores of the fungi *Coccidioides immitis* and *C. posadasii*, both originating in soils. These fungi grow and reproduce in the upper 5 to 20 centimeters of soils. Mature fungal spores can be released into the air during surface disturbing activities. Implementing dust control measures can reduce the risk of infection.

The source of concern for OHV riders in the Californian warm deserts is that the Mojave Desert lies midway between the two focal areas of the disease: the San Joaquin Valley in California and the eastern Sonoran Desert in Arizona. Because OHV riders are mobile travelers, they may visit OHV recreation sites in both those focal areas as well as OHV sites in the Californian warm deserts. The only way to contract the disease is by inhalation of dust containing fungus spores. The disease does not spread by contagion from person to person.

About ten percent of people exposed to the fungal spores develop severe symptoms of the disease and one percent of people experience the disease spreading to other organs of the body. Motorized vehicular recreation may disturb soils that have naturally high concentrations of the fungal species that cause valley fever and thus increase personal exposure to spores.

A recent study of the Tucson, AZ, area has found that nine percent of soils samples contained valley fever spores. Studies, involving soil scientists, to examine the spectrum of soils in California deserts that are likeliest to host fungus spores are not yet available. However, the NRCS is developing a predictive algorithm to identify soils most likely to present health risks to people. In the San Joaquin Valley, the valley fever fungus appears to be particularly present in saline or alkaline soils.

Potential human exposure to Valley Fever as a result of mechanical displacement of infected soils could be increased if people gathered in close proximity to routes, such as during organized OHV events, or if route use occurred in close proximity to residences.

In addition to biological hazards, soils may contain hazardous constituents which may pose an inhalation hazard. Most toxic air pollutants have no known safe levels and some may accumulate in the human body from repeated exposures. Some toxic minerals have naturally high concentrations in desert soils or in areas where waste from abandoned mining operations remains on the ground surface. Scientists from the University of Nevada and from the USGS are currently studying the extent and concentrations of dust containing naturally-occurring arsenic, asbestos-like minerals, and perchlorate minerals in the Mojave Desert to determine the risks to people's health.

Two specific mineral types are potentially toxic particulates in desert dusts where OHV recreation takes place: arsenic-containing minerals and minerals that have the pointed, fibrous crystal shape of asbestos. Scientists working in the Mojave Desert in California have found several areas where concentrations of naturally occurring arsenic are high. Owens Lake is, for example, one arsenic hotspot. Areas with motorized vehicular trails passing through abandoned gold and silver mine sites often have an environmental legacy of exposed mine wastes containing elevated levels of toxic metals and metalloids including arsenic.

Effect of Route Designations

Because motorized vehicle use, including OHVs and livestock watering and holding facilities causes soil compaction, mechanical displacement, and removal of stabilizing materials, any change in the amount of motorized vehicle use or development of additional livestock watering and holding facilities as a result of the WMRNP alternatives has the potential to have direct

effects on soil resources, as well as resulting in indirect effects on air quality, water quality, storm water flow, vegetation, and human health. New or increased motorized vehicle use in places that have not previously been subjected to motorized vehicle use could result in either compaction or de-compaction, depending on the characteristics of the soil, the slope, the type of motorized vehicle, and the manner in which the vehicle is used. Continued motorized vehicle and livestock use in already compacted areas may not lead to additional compaction, but it would ensure that natural recovery does not occur. Continued motorized vehicle use on loose soils would lead to ongoing mechanical displacement and loss of soil through erosion, which are direct, adverse impacts to soil resources. Indirect impacts on air quality, water quality, storm water flow, vegetation, and human health would be adverse, and would continue until the affected soils were allowed to recover. Reductions in motorized vehicle and livestock use would lead, over time, to restoration of original soil conditions, which would be a beneficial effect. Closure of routes to motorized vehicles and grazing allotments would allow soils to gradually recover, and therefore have a beneficial impact on soil resources. Active restoration, including de-compaction by raking or other mechanical means, can speed this process.

The significance of the impact on soil resources differs depending on whether impacts occur in close proximity to sensitive resources. Compaction and erosion that adversely affects vegetation would be more or less significant depending on the presence or absence of sensitive plant species, unusual plant assemblages, or riparian areas. Increased introduction of sediment due to water erosion would be more or less significant depending on the proximity to surface water bodies or aquatic resources. Increases in PM_{10} emissions due to wind erosion can have regional effects, and would not be limited to the local area.

The alternatives being evaluated as part of the WMRNP would result in differences in the mileage and specific locations of routes that are available for motorized vehicle use, or are closed by being designated as transportation linear disturbances. The designation of specific routes as part of the transportation network under the WMRNP alternatives would affect the overall mileage of routes on which motorized vehicle use is allowed, as well as specific locations for motorized vehicle use. Therefore, direct impacts on soil resources, and resulting indirect impact to other resources, would vary among the alternatives. Under all alternatives, there would be changes in impacts to soil resources in the future as new routes are designated for motorized use, or existing routes are designated as transportation linear disturbances. Some of these changes could potentially occur within close proximity to sensitive resources, and would therefore have adverse or beneficial effects on those resources. In the future, after implementation of the project, new motorized routes would only be designated as a result of new requests for authorized uses, and closure of existing routes would only occur as authorized users cease operations and allow their authorized use to expire. The total mileage of designated routes that would be added or removed from the network as a result of these authorizations is expected to be minimal compared to the current baseline inventory. In the case of new authorizations, including range improvements, BLM's authorization would only be provided following environmental review and consideration of soil resource impacts. Therefore, the specific resources and impacts would be considered at the time of authorization, and minimization or mitigation measures would be developed and applied to avoid or reduce adverse impacts.

Chapter 2 discusses the general resource protection and motorized access objectives that were incorporated into the development of the transportation network alternatives. These objectives were used to inform decisions regarding which linear features would be included in the

motorized, non-motorized, and non-mechanized transportation network, and which features would be closed (i.e., designated as transportation linear disturbances), under each alternative. In that analysis, soil resource impacts were considered as a criterion in determining which routes would remain open and which would be closed under the various alternatives. Soil resource impacts were considered in several ways. The potential for increased soil erosion was considered by evaluating route locations with respect to slope, with areas of slope greater than 10 percent or areas with noted soil erosion issues being considered for minimization and mitigation measures such as route closure or other measures. In addition, the WMRNP alternatives include consideration of stopping and parking distances from routes in order to minimize disturbance in previously undisturbed areas, thus reducing the potential for soil compaction. Therefore, minimization of soil resource impacts was a factor both in development of the alternative route networks, in the specific limitations placed on routes in those networks, and in mitigation measures to be implemented on routes being designated as available for motorized use. These measures differ among the alternatives, and are therefore discussed in more detail in Sections 4.3.1.3, 4.3.1.4, 4.3.1.5, and 4.3.1.6 below.

Effect of Livestock Grazing

Grazing animals can apply compressional and shear forces to the soil and biological soil crusts (BSCs). These direct impacts are limited to congregation areas (corrals and watering troughs). Indirect impacts to soils and BSCs would occur in a highly distributed manner. Biological soil crust response to these disturbances is highly variable. Moisture and burial are two important factors relating to the degree of impact. With coarse textured sandy soils, moist crusts are better able to withstand disturbances than dry soils (Belnap 2003 and BLM 2001). Many of the biological crust species are not mobile and cannot survive burial. However, as Belnap (2002 and 2005 and BLM 2001) noted, the hot desert crusts are simple crusts that are highly mobile and quick to recover from disturbance. The large, filamentous cyanobacteria can move 5mm per day if it is wet (Belnap 2003 and BLM 2001). Although rain and moist soils occur at the start of the grazing season, grazing in the later part of the spring can reduce the cover of biological soil crusts because the soils are dry. These simple crusts would likely recover within days once the rain returns because the crusts are simple, site recovery outside of congregation areas should be such that the impact would not be substantial (BLM -TR 1730-2 2001).

Resource-Specific Minimization and Mitigation Measures

Resource-specific minimization and mitigation measures that were considered as part of the route designation process for each alternative, and mitigation measures that may be applied for each route during implementation of the WMRNP, were described in Table 2.1-4. For soil resources, these include:

- Select alternative route to minimize off-route disturbance;
- Implement seasonal restrictions, designated as motorized only by permit, or designate closure under certain conditions (such as when route is wet);
- Permit lower intensity use;
- Install access type restrictor;

- Install/implement Erosion Prevention Best Management Practices, Re-align route to minimize impact to environmentally sensitive area;
- Restrict stopping/parking/camping;
- Add parking/camping area;
- Install barriers or fencing;
- Narrow route;
- Install educational information such as signs;
- Determination that no additional minimization and mitigation measure is needed based on area or site evaluation; and
- Limit livestock congregation areas in grazing allotments to those required to facilitate the operation and maintain livestock distribution.

Residual Impacts after Implementation of Mitigation Measures

Some residual effects in impacted areas are likely to continue after application of mitigation measures, both with continued motorized vehicle use, and following closure of routes. Although continued motorized vehicle use in areas subjected to compaction may not result in increases in compaction, it also would not allow recovery in those areas. The same is true in areas where de-compaction and removal of stabilizing surfaces has increased the potential for erosion. Even closure of routes in those areas may not result in recovery in the short-term, unless active rehabilitation efforts are taken. If routes are closed, mechanical displacement of soils and potential exposure to Valley Fever would be reduced in those areas. Residual impacts would continue at existing congregation areas within grazing allotments in the planning area.

The evaluation of impacts common to all alternatives points out that many of the impacts associated with soil resources are indirect impacts that occur to other resources (air quality, water quality, vegetation, or human health) as a result of soil compaction, disturbance, or erosion.

4.3.1.3 Impacts Associated with the No Action Alternative

Alternative 1 Plan Amendment

Under the No Action Alternative, none of the proposed plan amendment decisions would be adopted.

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct impacts to soil resources. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered. Part of that framework is consideration of soils that are well-suited and ill-suited for being part of a designated route system for diverse reasons such as topography, erosion rates, hazards to public health, associated sensitive wildlife species, and other features taken up individually below.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider soil resources and use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM's ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may benefit soil resources by facilitating adaptive management changes in response to changing on-the-ground conditions. By not adopting these decisions under the No Action Alternative, these potential beneficial effects would not be achieved. In addition, by not adopting these decisions, the CDCA Plan would not be amended to conform to current policy or regulation.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. Changes to motorized vehicle use in the locations specified in these decisions under the action alternatives do have the potential to impact soil resources in those locations. However, the routes in the Rand-Fremont system and the currently designated "C" routes are not prone to soil erosion or other sensitive soils factors, and additional protective measures such as fencing along major arteries and SRP measures have been implemented to address potential issues that might arise adjacent to the routes; therefore, the No Action Alternative would have no direct or indirect impact to soil resources, in addition to the impacts identified in the 2006 WEMO Plan.

Livestock Grazing: Under the No Action alternative, on-going but highly localized direct impacts to soils from compaction by livestock would continue at congregation areas in active grazing allotments. Limited, indirect impacts to soils and BSCs would continue in active grazing allotments.

Alternative 1 Route Designation

The evaluation of impacts common to all alternatives concluded that many of the impacts associated with soil resources are indirect impacts that occur to other resources (air quality, water quality, vegetation, or human health) as a result of soil compaction, disturbance, or erosion. The indirect effects of compaction, disturbance, or erosion of soils on those resources are considered in their separate resource sections. For instance, wind erosion of disturbed soils is a component of PM₁₀ emissions evaluated in the air quality analysis.

The primary direct impact on soils associated with motorized vehicle use is the loss of soil through mechanical displacement and erosion. As discussed in Chapter 2, areas identified as having potential for soil loss due to mechanical displacement or erosion are those with slopes greater than 10 percent, and those mapped by BLM as having documented erosion issues. Therefore, because the specific locations of motorized routes vary among the alternatives, some alternatives may have a greater adverse or beneficial effect on soil resources. The mileage of

routes associated with those areas that are deemed to have the potential for soil loss under the No Action Alternative is presented in Table 4.3-1.

Table 4.3-1. Alternative 1 – Acreage and Mileage of Routes in Areas with Potential for Soil Loss

Resource Description	Motorized	Authorized/ Administrative	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Miles of Routes in Areas with Greater than 10 Percent Slope	716.9 miles	29.1 miles	0 miles	7.2 miles	1673.3 miles

Alternative 1 Minimization and Mitigation Measures

Table 2.3-1 describes the network-wide minimization and mitigation measures that are currently specified in the CDCA Plan, WEMO Plan, and/or the Court’s Remedy Order, and which are therefore applicable under Alternative 1, the No Action Alternative. Whether they were applied during the route designation process or are mitigation measures, these measures would reduce soil compaction, disturbance, or erosion that directly lead to soil loss and indirect adverse impacts to other resources. Measures such as limiting new ground disturbance in DWMA’s, disguising closed routes, and limiting stopping and parking to 50 feet or less from route centerlines in DWMA’s and 300 feet outside of DWMA’s reduce soil compaction or disturbance in currently undisturbed areas, thus minimizing the potential for soil loss or indirect effects to other resources in new areas as compared to pre-2006 conditions before these limitations were enacted. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific soil resource impacts, including direct soil loss, compaction, disturbance, and erosion, as well as indirect impacts to other resources from these direct impacts, are considered before authorizing new motorized routes.

Limit livestock congregation areas in grazing allotments to those required to facilitate the operation and maintain livestock distribution.

4.3.1.4 Impacts Associated with Alternative 2

Alternative 2 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMA’s) would amend BLM’s procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct impacts to soil resources. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;

- Clarify the manner in which future route network modifications consider soil resources and use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM's ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may benefit soil resources by facilitating adaptive management changes in response to changing on-the-ground conditions. By adopting these decisions, the CDCA Plan would be amended to conform to current policy and regulation.

As a result of the modification of the language limiting the route network to existing routes, new routes could potentially be designated in locations with no existing routes, and could have adverse impacts to localized resources near that route. New routes may be established to provide access for new authorized uses, or to avoid identified impacts to resources. The impacts to soil resources from each new route would be evaluated as part of the BLM's consideration of the application for land use authorization. As part of that evaluation, BLM would consider the potential impacts of the new route as required by 43 CFR 8342.1, potential alternatives to provide the necessary access, and minimization and mitigation measures to address any identified impacts to soil resources. In the case of routes established to provide access to authorized uses, the duration of the designation of the new route would be the same as authorized land use it is intended to support. Once the term of the authorized land use expires, the route would generally be considered for closure, and the terms and conditions of the authorized land use would require the lessee, permittee, or ROW holder to rehabilitate the route. BLM may also determine at a later date, consistent with 43 CFR 8342.1, that the route provides necessary access for some other reason and could designate the route accordingly, releasing the authorized land user from their requirement to rehabilitate the route. In the case of routes established to address impacts to resources, the new route may be permanent.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The soil resource impacts of these decisions under Alternative 2 are as follows:

PA VII: Competitive events may authorize large numbers of vehicles traveling at high speed. These events may potentially increase soil compaction and erosion in a specific area of the event. Problems stemming from increased water runoff after the event(s) may cause excessive rilling and gullying. The BLM may have to maintain, at higher cost, C routes more frequently than surrounding designated routes. The BLM anticipates that the overall number of SRP applications will not increase. Rather, it is likely that several applicants may request to use C routes in addition to the adjacent Open Area for courses. There should be no measurable increase in the number of OHV riders using public land in the area. Additionally, designating C routes does not authorize individual SRP events to use these routes. Further analysis of impacts to soil resources will be part of the SRP permitting process. No direct impacts to soil resources would stem from designating C routes.

Alternative 2 would institute a seasonal restriction on the use of the currently designated C routes for competitive motorized events managed under conditions of a SRP. These routes would be available for use by competitive motorized events during the months of November, December, and January only. The seasonal limitations on C routes may reduce their use for racing events, and thus have locally beneficial impacts on soil resources in those areas.

Since OHV competitive events conducted in other OHV Open Areas would be limited to inside the Open Area boundaries under this alternative, the single remaining designated long-distance race corridor, the Johnson Valley to Parker Valley Corridor would no longer be available for OHV use under Alternative 2. The elimination of the Johnson Valley to Parker event may reduce soil compaction and other soil disturbances in that corridor. An event has not been run in this corridor since the listing of the desert tortoise as threatened in 1989; therefore, other routes and areas within the planning area are not anticipated to receive increased use for recreation as a result of the elimination of this competitive event route. Therefore, this plan amendment decision would not have any effect on soil resources.

PA VIII: Alternative 2 would designate Koehn Lakebed as closed to motorized vehicles. There would be no change to the use of Cuddeback, Coyote, or Chisholm Trail Lakes. In general, dry lakebeds are flat and therefore are not prone to soil erosion, so motorized use of vehicles on the lakebeds is not expected to increase erosion of soils. However, disturbance of soils on dry lakes by wind erosion is very significant on playas, and the wind erosion worsens when salt crusts from the last flood event are crushed by motor vehicles exposing fine sediments under the crust to winds blustering across a playa unobstructed by surface roughness. Therefore, closure of Koehn dry lake would reduce local air emissions associated with wind erosion in that area. Because Koehn lakebed is currently receiving relatively light use, the amount of displaced use to other routes would be low. Therefore, this plan amendment decision is not expected to have an indirect, adverse impact on soil resources by increasing the recreational use of routes in sensitive soil areas.

PA IX: The routes in the Rand-Fremont system are not prone to soil erosion or other sensitive soils factors, and additional protective measures such as fencing along major arteries and SRP measures have been implemented to address potential issues that might arise adjacent to the routes; therefore Alternative 2 would have no direct or indirect impact to soil resources.

PA X: Alternative 2 would limit stopping and parking to previously disturbed areas within 50 feet from the route centerline, both inside and outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 50 feet. Camping would be allowed adjacent to designated routes in previously disturbed areas, not to exceed 50 feet from the centerline, throughout the WEMO Planning Area. Although users are currently permitted to stop, park, and camp up to 300 feet from routes in areas prone to soil erosion, they are unlikely to do so because those are areas of steep slopes, which are the area most prone to soil erosion. This plan amendment may have beneficial impacts by reducing motorized travel on undisturbed areas outside of designated routes, but the beneficial impact is expected to be small.

PA XI: Under this alternative, on-going but highly localized direct impacts to soils from compaction by livestock would continue at congregation areas in active grazing allotments. Discontinuing livestock grazing on portions of the Ord Mountain, Cantil Common, Shadow Mountain Allotments, a small portion of the Johnson Valley Allotment and the entire Harper Lake and Cronese Lake Allotments would allow for the slow de-compaction of soils at

previously used water troughs and corral facilities associated with these allotments. Limited, indirect impacts to soils and BSCs would continue in active grazing allotments. The scope and relative impacts of these effects are roughly equivalent to the number of acres that would still be subject to grazing under this alternative (see Table 4.7-1).

Alternative 2 Route Designation

The mileage of routes associated with those areas that are deemed to have the potential for soil loss under Alternative 2 is presented in Table 4.3-2.

Table 4.3-2. Alternative 2 - Acreage and Mileage of Routes in Areas with Potential for Soil Loss

Resource Description	Motorized	Authorized/ Administrative	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Miles of Routes in Areas with Greater than 10 Percent Slope	510.4	107.8	8.7	16.9	1787.4

Alternative 2 Minimization and Mitigation Measures

Table 2.3-5 describes the network-wide minimization and mitigation measures to be applied under Alternative 2. Many of these measures would act to reduce soil compaction, disturbance, or erosion that lead to direct soil loss or indirect adverse impacts to other resources. Measures such as limiting new ground disturbance in DWMA's, disguising closed routes, limiting permitted events to OHV Open Areas only, and implementing stopping and parking limits of 50 feet from route centerlines would reduce soil compaction or disturbance in currently undisturbed areas, thus minimizing the potential for soil loss or indirect effects to other resources in new areas. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific soil resource impacts, including direct soil loss, as well as compaction, disturbance, and erosion leading to indirect impacts to other resources, are considered before authorizing new motorized routes.

Limit livestock congregation areas in grazing allotments to those required to facilitate the operation and maintain livestock distribution.

4.3.1.5 Impacts Associated with Alternative 3

Alternative 3 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. These decisions would be the same under Alternative 3 as for Alternative 2, and therefore effect of these decisions on soil resources is the same as discussed for Alternative 2.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of “C” routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The soil resource impacts of these decisions under Alternative 3 are as follows:

PA VII: Under Alternative 3, there would be C routes available for competitive motorized events managed under a SRP in three distinct areas: the areas to the northeast of the Spangler Hills Open Area; the Summit Range plus the area east of Highway 395; and the urban interface area between the community of Ridgecrest and the Spangler Hills Open Area. For the C routes northeast of the Spangler Hills Open Area, this decision would result in the potential for increased soil erosion on 71.6 miles of routes. In addition, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but may be offset by additional routes in the planning area that are identified as competitive use open routes through the route designation process. Because the locations of replacement routes are not known the soil resource impacts of those routes would be considered through the route designation process.

PA VIII: Under Alternative 3, Koehn Lakebed would be designated as “Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit”. The impacts of the closure of Koehn Lakebed would be the same as discussed for Alternative 2.

Alternative 3 would also designate Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds as open to motorized use. In general, the lakebeds are flat, and therefore are not prone to soil erosion, so motorized use of vehicles on the lakebeds is not expected to have soil resource impacts. However, disturbance of soils on dry lakes by wind erosion is very significant on playas, and the wind erosion worsens when salt crusts from the last flood event are crushed by motor vehicles exposing fine sediments under the crust to winds blustering across a playa unobstructed by surface roughness. Therefore, this decision could have an adverse effect on soil resources on the lakebeds.

PA IX: Under Alternative 3, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. There are no soils in this area which are prone to erosion. Therefore, eliminating the permit requirement would not have any impact on soil resources.

PA X: Alternative 3 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA, while stopping and parking would be limited to within 50 feet of the centerline within DWMA. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA. This would be a reduction in the limits that are currently authorized outside of DWMA from 300 feet to 100 feet. This would be a reduction from the limits in the No Action Alternative, but would still allow a larger area of disturbance than Alternative 2 (100 feet in Alternative 3 versus 50 feet in Alternative 2). In general, although users are currently permitted to stop, park, and camp up to 300 feet from routes in areas prone to soil erosion, they are unlikely to do so, because those are areas of steep slopes. Therefore, although this plan amendment decision may have beneficial impacts by reducing

motorized travel on undisturbed areas outside of designated routes, the beneficial impact is expected to be limited.

PA XI: Alternative 3 would discontinue livestock grazing on currently inactive allotments, which include Buckhorn Canyon, Harper Lake, Cronese Lake, Cady Mountain, Johnson Valley, Double Mountain and Oak Creek Allotments. Under this alternative, on-going but highly localized direct impacts to soils from compaction by livestock would continue at congregation areas in active grazing allotments. The discontinuation of livestock grazing on inactive allotments would ensure that no future direct and indirect impacts would occur on those allotments. Limited, indirect impacts to soils and BSCs would continue in active grazing allotments. The scope and relative impacts of these effects are roughly equivalent to the number of acres that would still be subject to grazing under this alternative (see Table 4.7-1).

Alternative 3 Route Designation

The mileage of routes associated with those areas that are deemed to have the potential for soil loss under Alternative 3 is presented in Table 4.3-3.

Table 4.3-3. Alternative 3 - Acreage and Mileage of Routes in Areas with Potential for Soil Loss

Resource Description	Motorized	Authorized/ Administrative	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Miles of Routes in Areas with Greater than 10 Percent Slope	1636.9	46.4	10.4	24.8	739.5

Alternative 3 Minimization and Mitigation Measures

Table 2.3-8 describes the network-wide minimization and mitigation measures that would be applied under Alternative 3. Many of these measures would act to reduce soil compaction, disturbance, or erosion that lead to direct soil loss or indirect adverse impacts to other resources. Measures such as limiting new ground disturbance in DWMA's, disguising closed routes, limiting permitted events to OHV Open Areas only, and implementing stopping and parking limits of 50 feet from route centerlines in DWMA's and 100 feet from route centerlines outside of DWMA's would reduce soil compaction or disturbance in currently undisturbed areas, thus minimizing the potential for soil loss or indirect effects to other resources in new areas. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific soil resource impacts, including direct soil loss, as well as compaction, disturbance, and erosion leading to indirect impacts to other resources, are considered before authorizing new motorized routes.

Limit livestock congregation areas in grazing allotments to those required to facilitate the operation and maintain livestock distribution.

4.3.1.6 Impacts Associated with Alternative 4

Alternative 4 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Except for the designation of TMAs, these decisions would be the same under Alternative 4 as for Alternatives 2 and 3, and therefore effect of these decisions on soil resources is the same as discussed for those alternatives.

Under Alternative 4, the boundaries of the nine TMAs included in Alternative 4 are similar to those in Alternatives 2 and 3, with the exception that TMA 7 (Ridgecrest, El Paso, Rands, and Red Mountain sub-regions) would be split into two separate TMAs. This decision would designate the current Coordinated Access Planning Area (CAPA) as a separate TMA. The CAPA area consists of the Ridgecrest and El Paso sub-regions, which would be split from the Rands and Red Mountain sub-regions, thus creating two separate TMAs. This decision would be made to facilitate BLM's ability to manage intense recreation use, public interest, and local agency interest in this area near Ridgecrest, and would therefore have no direct effect on soil resources. However, this decision would make it easier for BLM to consider soil resource impacts in future route designation decisions in this intensively used area, and thus have an indirect, beneficial effect on soil resources.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The soil resource impacts of these decisions under Alternative 4 are as follows:

PA VII: Under Alternative 4, the C routes that are to the northeast of the Spangler Hills Open Area above the Randsburg Wash Road and those found within the Summit Range and east of Highway 395 would be available for competitive motorized events managed under a SRP. Alternative 4 would allow for a potential increase in erosion on 57.9 miles of routes. The Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would also be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but the decision would identify a specific route for the speed-controlled connector between the remaining Johnson Valley OHV Area and the Stoddard Valley OHV Open Area, with appropriate mitigation measures.

PA VIII: Under Alternative 4, Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds would all be designated as open to motorized use. Koehn Lakebed would be designated as "Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit". The impacts of the closure of Koehn Lakebed would be the same as discussed for Alternative 2. The soil resource impacts at Cuddeback, Coyote, and Chisholm Trail Lake lakebeds would be the same as those described for Alternative 3, which would also designate these lakebeds as open to motorized vehicles.

PA IX: Under Alternative 4, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. The impacts of this decision would be the same as those discussed for Alternative 3.

PA X: Alternative 4 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA's, while stopping and parking would be limited to within 50 feet of the centerline within DWMA's. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 100 feet. The impacts of this decision would be the same as those discussed for Alternative 3.

PA XI: Under Alternative 4, on-going but highly localized direct impacts to soils from compaction by livestock would continue at congregation areas in active grazing allotments. Limited, indirect impacts to soils and BSC's would continue in active grazing allotments. The scope and relative impacts of these effects are roughly equivalent to the number of acres that would still be subject to grazing under this alternative (see Table 4.7-1).

Alternative 4 Route Designation

Section 4.3.1.2 described the general impacts to soil resources that are common to all alternatives. That analysis concluded that many of the impacts associated with soil resources are indirect impacts that occur to other resources (air quality, water quality, vegetation, or human health) as a result of soil compaction, disturbance, or erosion. The effect of compaction, disturbance, or erosion of soils on those resources is considered in their separate resource sections. For instance, wind erosion of disturbed soils is a component of PM₁₀ emissions evaluated in the air quality analysis.

The primary direct impact on soils associated with motorized vehicle use is the loss of soil through mechanical displacement and erosion. As discussed in Chapter 2, areas identified as having potential for soil loss due to mechanical displacement or erosion are those with slopes greater than 10 percent, and those mapped by BLM as having documented erosion issues. Therefore, because the specific locations of motorized routes vary among the alternatives, some alternatives may have a greater adverse or beneficial effect on soil resources. The mileage of routes associated with those areas that are deemed to have the potential for soil loss under Alternative 4 is presented in Table 4.3-4.

Table 4.3-4. Alternative 4 - Acreage and Mileage of Routes in Areas with Potential for Soil Loss

Resource Description	Motorized	Authorized/ Administrative	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Miles of Routes in Areas with Greater than 10 Percent Slope	817.5	41.3	15.8	8.3	1553.7

Alternative 4 Minimization and Mitigation Measures

Table 2.3-8 describes the network-wide minimization and mitigation measures that would be applied under Alternative 4. Many of these measures would act to reduce soil compaction, disturbance, or erosion that lead to direct soil loss or indirect adverse impacts to other resources.

Measures such as limiting new ground disturbance in DWMA's, disguising closed routes, limiting permitted events to OHV Open Areas only, and implementing stopping and parking limits of 50 feet from route centerlines in DWMA's and 100 feet from route centerlines outside of DWMA's would reduce soil compaction or disturbance in currently undisturbed areas, thus minimizing the potential for soil loss or indirect effects to other resources in new areas. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific soil resource impacts, including direct soil loss, as well as compaction, disturbance, and erosion leading to indirect impacts to other resources, are considered before authorizing new motorized routes.

Limit livestock congregation areas in grazing allotments to those required to facilitate the operation and maintain livestock distribution.

4.3.2 Water Resources

4.3.2.1 Introduction

Affected Environment Summary

Section 3.3 describes the water resources in the planning area, including groundwater, surface water, and riparian areas. The planning area is very arid, with limited precipitation and few surface water bodies. Nearly all developed water sources in the area are accessed from groundwater, and much of the groundwater in the regional aquifers outside of the Mojave River floodplain is not recharged by current precipitation. Most of the biological resources in the area, including state or federally listed and BLM sensitive species, are dependent upon the presence of groundwater either directly or for their habitat. The only prominent surface water body in the planning area is the Mojave River, which originates near the southern boundary of the planning area. Most surface water channels in the area are ephemeral, and even the above ground flow of the Mojave River is intermittent in most places. Perennial flows occur only near Victorville, in the vicinity of Camp Cady, and in Afton Canyon.

Methodology

The 2005 WEMO EIS analyzed the water quality impacts of the 5,098 mile route network evaluated in that EIS. The analysis included a general discussion of the effects of the proposed action on water quality, as a result of soil erosion.

Similar to soil resources, the Court held that the general discussion of the impacts to water quality was adequate, but that the 2005 WEMO EIS did not perform an evaluation of the proposed route network with respect to specific locations of potentially impacted water resources. The Court also made a general finding, for all resources, that the range of route network alternatives evaluated was inadequate. No other deficiencies were identified in the water resource analysis in the 2005 WEMO EIS.

For this SEIS for the WMRNP, BLM performed the following:

- The route designation process for each alternative included evaluation of the location of each route with respect to water bodies and desert washes.
- Conducted the evaluation, and quantified the miles of motorized routes in desert washes across four alternative route networks ranging from 4,293 to 10,428 miles in size.

- Re-evaluated the 2005 WEMO analysis, and supplemented it with additional information from resource specialists, public comments, and changes in conditions within the planning area. This additional information is incorporated into the evaluation in Section 4.3.2.2 below.

4.3.2.2 Impacts Common to All Alternatives

Water quality impacts associated with motorized vehicle and livestock use are primarily associated with increases in sediment released to surface water bodies by storm water erosion. In general, increased storm water erosion is an indirect effect of soil resource impacts discussed in Section 4.3.1. Compaction of soils associated with motorized vehicle and livestock use can lead to increased storm water runoff rates which, in turn, can have increased erosional potential. In addition, motorized vehicle and livestock use can de-compact soils or otherwise remove vegetation, crusts, or other stabilizing features that protect soil from erosion. These effects are exacerbated when the disturbance occurs directly in, or adjacent to, flowing streams or ephemeral desert washes.

OHV use can also increase erosion of soil through creation of vehicle cuts and tracks (Ouren and others 2007). These can act as conduits for runoff, concentrating storm water flow. Once rills form and re-direct storm water flow, erosion can make the rills even deeper, exacerbating the problem. In extreme cases, the route itself can become the primary storm water drainage, completely re-configuring the drainage system in an area. This can impact water quality downstream through sedimentation, and can also create a deficit in soil moisture and infiltration.

Motorized vehicle use on the transportation network also requires the use of petroleum fuels which, if released, can impact surface water or groundwater quality (Ouren and others 2007). In most cases, motorized vehicles carry very limited volumes of these fuels, so the threat to water quality is minor. Fueling is generally done at commercial service stations, which have precautions in place to avoid fuel releases. In some cases, such as organized events, fueling of OHVs can be done from small containers or tanks carried by trucks. In these cases, the types of precautions available at commercial fueling stations would not be in place. However, the volume of fuel handled is still expected to be limited.

Chapter 2 discusses the general resource protection and motorized access objectives that were incorporated into the development of the transportation network alternatives. These objectives were used to inform decisions regarding which linear features would be included in the motorized, non-motorized, and non-mechanized transportation network, and which features would be closed (i.e., designated as transportation linear disturbances), under each alternative. In that analysis, water quality impacts were considered as a criterion in determining which routes would remain open and which would be closed under the various alternatives. Water quality impacts were considered by evaluating route locations with respect to proximity to desert washes, and either placing limitations or closing routes that are parallel to, or predominantly within, a wash. In addition, the WMRNP alternatives include consideration of stopping and parking distances from routes in order to minimize disturbance in previously undisturbed areas, thus reducing the potential for soil erosion, which can impact water quality. Therefore, minimization of water quality impacts was a factor both in development of the alternative route networks, and in the specific limitations placed on routes in those networks. These minimization

and mitigation measures differ among the alternatives, and are therefore discussed in more detail in Sections 4.3.2.3, 4.3.2.4, 4.3.2.5, and 4.3.2.6 below.

Livestock Grazing

Livestock grazing and native wildlife can have a direct, negative impact to water quality due to their presence and use at undeveloped springs and creeks from the potential release of fecal coliform contamination into natural water sources. Most developed water sources have been fenced and the water piped to a trough to protect the sources from livestock impacts to soils, vegetation and limit the release of fecal coliform. The sampling of chemical constituents is typically not occurring during the PFC assessment process, so the direct impacts from livestock grazing and the release of fecal coliform is not known. Unidentified levels of fecal coliform contamination are probable, both from wildlife and from livestock. Most of the developed spring sources are protected from substantial levels of contamination from livestock by fencing or natural/man-made features where water is then piped to a trough. Overall, impacts to water quality from livestock grazing at protected spring sources is considered nominal because spring sources are protected from direct access by livestock. There is some level of de-watering from spring developments and the pumping of ground water in the form of wells for livestock use. This indirect impact has not been quantified but can be substantial over long periods of time.

Resource-Specific Minimization and Mitigation Measures

Resource-specific minimization and mitigation measures that were considered as part of the route designation process for each alternative, and that will be considered for each route during implementation of the WMRNP, were described in Table 2.1-4. For water resources associated with desert washes, these include:

- Re-align route to avoid environmentally sensitive area;
- Install barriers and maintain existing barriers;
- Remove Attractants;
- Install educational information such as signs;
- Install step-over;
- Install fencing;
- Seasonal or complete closure;
- Monitor the route for signs of increasing impacts to a sensitive resource;
- Determination that no additional minimization or mitigation measure is needed based on site evaluation; and
- Exclude livestock by fencing unprotected natural springs and other natural sources to protect and maintain water quality where feasible.

Residual Impacts After Implementation of Mitigation Measures

Some residual effects in desert wash areas are likely to continue after application of mitigation measures, both with continued motorized vehicle use, and following closure of routes. Motorized vehicle use in desert washes would continue to create the potential for erosion of

those areas. Closure of routes in those areas may not result in recovery in the short-term, unless active rehabilitation efforts are taken.

4.3.2.3 Impacts Associated with the No Action Alternative

Alternative 1 Plan Amendment

Under the No Action Alternative, none of the proposed plan amendment decisions would be adopted.

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct impacts to water resources. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider water resources and use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM's ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may benefit water resources by facilitating adaptive management changes in response to changing on-the-ground conditions. By not adopting these decisions under the No Action Alternative, these potential beneficial effects would not be achieved. In addition, by not adopting these decisions, the CDCA Plan would not be amended to conform to current policy or regulation.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. Changes to motorized vehicle use in the locations specified in these decisions under the action alternatives do have the potential to impact water resources in those locations. However, no water resources are found along the current designated "C" routes or the designated Rand-Fremont routes system, therefore no impacts to water resources are anticipated as a result of the No Action alternative.

Livestock grazing and native wildlife can have a direct, negative impact to water quality as discussed above in Section 4.3.2.2, Impacts Common to All Alternatives.

Alternative 1 Route Designation

The evaluation of impacts common to all alternatives concluded that motorized vehicles can have adverse impacts on surface water quality, especially if ground disturbance or fuel releases occur in close proximity to water bodies. The mileage of routes associated with desert washes under the No Action Alternative is presented in Table 4.3-5.

Table 4.3-5. Alternative 1 - Miles of Routes in Proximity to Desert Washes

Resource Description	Motorized	Authorized/ Administrative	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Mileage Parallel to or Predominantly in a Wash	329.4	53.5	0	0	483.7

Alternative 1 Minimization and Mitigation Measures

Table 2.3-1 describes the network-wide minimization and mitigation measures that are currently specified in the CDCA Plan, WEMO Plan, and/or the Court’s Remedy Order, and which are therefore applicable under Alternative 1, the No Action Alternative. Whether they were applied during the route designation process or are mitigation measures, these measures would act to reduce soil compaction, disturbance, or erosion that lead to degradation of water quality. Measures such as limiting new ground disturbance in DWMA’s, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines in DWMA’s and 300 feet outside of DWMA’s would reduce soil compaction or disturbance in currently undisturbed areas, thus minimizing the potential for water quality impacts, as compared to pre-2006 conditions before these limitations were enacted. However, motorized vehicle use in washes is currently permitted under the No Action Alternative. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific water quality impacts are considered before authorizing new motorized routes.

Exclude livestock by fencing unprotected natural springs and other natural sources to protect and maintain water quality where feasible.

4.3.2.4 Impacts Associated with Alternative 2

Alternative 2 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMA’s) would amend BLM’s procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct impacts to water resources. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;

- Clarify the manner in which future route network modifications consider water resources and use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM's ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may benefit water resources by facilitating adaptive management changes in response to changing on-the-ground conditions. By adopting these decisions, the CDCA Plan would be amended to conform to current policy and regulation.

As a result of the modification of the language limiting the route network to existing routes, new routes could potentially be designated in locations with no existing routes, and could have adverse impacts to localized resources near that route. New routes may be established to provide access for new authorized uses, or to avoid identified impacts to resources. The impacts to water resources from each new route would be evaluated as part of the BLM's consideration of the application for land use authorization. As part of that evaluation, BLM would consider the potential impacts of the new route as required by 43 CFR 8342.1, potential alternatives to provide the necessary access, and minimization and mitigation measures to address any identified impacts to water resources. In the case of routes established to provide access to authorized uses, the duration of the designation of the new route would be the same as authorized land use it is intended to support. Once the term of the authorized land use expires, the route would generally be considered for closure, and the terms and conditions of the authorized land use would require the lessee, permittee, or ROW holder to rehabilitate the route. BLM may also determine at a later date, consistent with 43 CFR 8342.1, that the route provides necessary access for some other reason and could designate the route accordingly, releasing the authorized land user from their requirement to rehabilitate the route. In the case of routes established to address impacts to resources, the new route may be permanent.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The water resource impacts of these decisions under Alternative 2 are as follows:

PA VII: It is anticipated that the overall number of SRP applications will not increase. This means that there should be no measurable increase in the number of OHVs using public land in the area. Additionally, designating the C routes does not authorize individual SRP events to use these routes, and additional analysis will occur as part of the SRP permitting process. Therefore, there should be no direct impacts to water resources.

Under Alternative 2, there would be a seasonal restriction placed upon the use of the currently designated C routes for competitive motorized events managed under a SRP. These routes would be available for use by competitive motorized events during the months of November, December, and January. The seasonal limitations on C routes may reduce their use for motorized events, and thus have localized beneficial impacts on water resources in those areas.

Since OHV competitive events conducted in other OHV Open Areas would be limited to inside the Open Area boundaries under this alternative, the remaining designated long-distance race corridor, the Johnson Valley to Parker Valley Corridor would be removed under Alternative 2. The elimination of the Johnson Valley to Parker event may reduce soil disturbance and erosion that occurs in that area. An event has not been run in this corridor since the listing of the desert tortoise as threatened in 1989; therefore, other routes and areas within the planning area are not anticipated to receive increased use for recreation as a result of the elimination of this competitive event route. Therefore, this plan amendment decision would not have any effect on water resources.

PA VIII: Alternative 2 would designate Koehn Lakebed as closed to motorized vehicles. There would be no change to the use of Cuddeback, Coyote, or Chisholm Trail Lakes. In general, the lakebeds are flat, and are not associated with desert washes. In addition, although the lakebeds can become filled with water, they would not be used by motorized vehicles during times when they are flooded. As a result, motorized use of vehicles on the lakebeds is not expected to have water resource impacts. Therefore, this decision would not have any effect on water resources on the lakebeds. Because Koehn lakebed is currently receiving relatively light use, the amount of displaced use to other routes would be low. Therefore, this plan amendment decision is not expected to have an indirect, adverse impact on water resources by increasing the recreational use of routes in desert washes.

PA IX: No water resources are found along the designated Rand-Fremont routes system, therefore no impacts to water resources are anticipated as a result of Alternative 2.

PA X: Alternative 2 would limit stopping and parking to previously disturbed areas within 50 feet from the route centerline, both inside and outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 50 feet. Camping would be allowed adjacent to designated routes in previously disturbed areas, not to exceed 50 feet from the centerline, throughout the WEMO Planning Area. This reduction from the limits in the No Action Alternative would result in allowing previously disturbed areas to become re-vegetated over time, thus gradually reducing the potential for erosion that could impact water quality. This decision would also reduce the amount of new disturbance that would occur in desert washes, having a similar reduction in water quality impacts. The effect of these actions would be a net beneficial impact on water resources.

PA XI: See Section 4.3.2.2, Impacts Common to All Alternatives.

Alternative 2 Route Designation

Section 4.3.2.2 described the general impacts to water resources that are common to all alternatives. That analysis concluded that motorized vehicles can have adverse impacts on surface water quality, especially if disturbance or releases occur in close proximity to water bodies. The mileage of routes associated with desert washes under Alternative 2 is presented in Table 4.3-6.

Table 4.3-6. Alternative 2 - Miles of Routes in Proximity to Desert Washes

Resource Description	Motorized	Authorized/ Administrative	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Mileage Parallel to or Predominantly in a Wash	184.6	12.9	1.9	2	667.6

Alternative 2 Minimization and Mitigation Measures

Table 2.3-5 describes the network-wide minimization and mitigation measures that would be applied under Alternative 2. Many of these measures would act to reduce soil compaction, disturbance, or erosion that lead to degradation of water quality. Measures such as limiting new ground disturbance in DWMA's, disguising closed routes, and implementing stopping, parking, and implementing stopping and parking limits of 50 feet from route centerlines would reduce soil compaction or disturbance in currently undisturbed areas, thus minimizing the potential for water quality impacts. In addition, Alternative 2 would consider motorized vehicle use in washes on a case-by-case basis, as opposed to allowing motorized vehicles in all washes, which is currently permitted under the No Action Alternative. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific water quality impacts are considered before authorizing new motorized routes.

Exclude livestock by fencing unprotected natural springs and other natural sources to protect and maintain water quality where feasible.

4.3.2.5 Impacts Associated with Alternative 3

Alternative 3 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. These decisions would be the same under Alternative 3 as for Alternative 2, and therefore effect of these decisions on water quality is the same as discussed for Alternative 2.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The water quality impacts of these decisions under Alternative 3 are as follows:

PA VII: Under Alternative 3, there would be C routes available for competitive motorized events managed under a SRP in three distinct areas: the areas to the northeast of the Spangler Hills Open Area; the Summit Range plus the area east of Highway 395; and the urban interface area between the community of Ridgecrest and the Spangler Hills Open Area. There are no

water resources associated with these areas, so the plan amendment would not have any adverse impacts to water resources. In addition, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but may be offset by additional routes in the planning area that are identified as competitive use open routes through the route designation process. Because the locations of replacement routes are not known the water quality impacts of those routes would be considered through the route designation process.

PA VIII: Under Alternative 3, Koehn Lakebed would be designated as “Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit”. The impacts of the closure of Koehn Lakebed would be the same as discussed for Alternative 2.

Alternative 3 would also designate Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds as open to motorized use. In general, the lakebeds are flat, and are not associated with desert washes. In addition, although the lakebeds can become filled with water, they would not be used by motorized vehicles during times when they are flooded. As a result, motorized use of vehicles on the lakebeds is not expected to have water resource impacts. Therefore, this decision would not have any effect on water resources on the lakebeds.

PA IX: Under Alternative 3, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. There are no water resources present in this area. Therefore, eliminating the permit requirement would not have any impact on water resources.

PA X: Alternative 3 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA, while stopping and parking would be limited to within 50 feet of the centerline within DWMA. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA. This would be a reduction in the limits that are currently authorized outside of DWMA from 300 feet to 100 feet. This would be a reduction from the limits in the No Action Alternative, but would still allow a larger area of disturbance than Alternative 2 (100 feet in Alternative 3 versus 50 feet in Alternative 2). This reduction would result in allowing previously disturbed areas to become re-vegetated over time, thus gradually reducing the potential for erosion that could impact water quality. This decision would also reduce the amount of new disturbance that would occur in desert washes, having a similar reduction in water quality impacts. The effect of these actions would be a net beneficial impact on water resources.

PA XI: See Section 4.3.2.2, Impacts Common to All Alternatives.

Alternative 3 Route Designation

Section 4.3.2.2 described the general impacts to water resources that are common to all alternatives. That analysis concluded that motorized vehicles can have adverse impacts on surface water quality, especially if disturbance or releases occur in close proximity to water bodies. The mileage of routes associated with desert washes under Alternative 3 is presented in Table 4.3-7.

Table 4.3-7. Alternative 3 - Miles of Routes in Proximity to Desert Washes

Resource Description	Motorized	Authorized/ Administrative	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Mileage Parallel to or Predominantly in a Wash	611	48.7	2.4	1.2	218.7

Alternative 3 Minimization and Mitigation Measures

Table 2.3-8 describes the network-wide minimization and mitigation measures that would be applied under Alternative 3. Many of these measures would act to reduce soil compaction, disturbance, or erosion that lead to degradation of water quality. Measures such as limiting new ground disturbance in DWMAs, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines in DWMAs and 100 feet from route centerlines outside of DWMAs would reduce soil compaction or disturbance in currently undisturbed areas, thus minimizing the potential for water quality impacts. In addition, Alternative 3 would consider motorized vehicle use in washes on a case-by-case basis, as opposed to allowing motorized vehicles in all washes, which is currently permitted under the No Action Alternative. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific water quality impacts are considered before authorizing new motorized routes.

Exclude livestock by fencing unprotected natural springs and other natural sources to protect and maintain water quality where feasible.

4.3.2.6 Impacts Associated with Alternative 4

Alternative 4 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM’s procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Except for the designation of TMAs, these decisions would be the same under Alternative 4 as for Alternatives 2 and 3, and therefore effect of these decisions on water resources is the same as discussed for those alternatives.

Under Alternative 4, the boundaries of the nine TMAs included in Alternative 4 are similar to those in Alternatives 2 and 3, with the exception that TMA 7 (Ridgecrest, El Paso, Rands, and Red Mountain sub-regions) would be split into two separate TMAs. This decision would designate the current Coordinated Access Planning Area (CAPA) as a separate TMA. The CAPA area consists of the Ridgecrest and El Paso sub-regions, which would be split from the Rands and Red Mountain sub-regions, thus creating two separate TMAs. This decision would be made to facilitate BLM’s ability to manage intense recreation use, public interest, and local agency interest in this area near Ridgecrest, and would therefore have no direct effect on water resources. However, this decision would make it easier for BLM to consider water quality

impacts in future route designation decisions in this intensively used area, and thus have an indirect, beneficial effect on water resources.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of “C” routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The water resource impacts of these decisions under Alternative 4 are as follows:

PA VII: Under Alternative 4, the C routes that are to the northeast of the Spangler Hills Open Area above the Randsburg Wash Road and those found within the Summit Range and east of Highway 395 would be available for competitive motorized events managed under a SRP. There are no water resources associated with these areas, so this decision would not have any adverse impacts to water resources. The Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would also be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but the decision would identify a specific route for the speed-controlled connector between the remaining Johnson Valley OHV Area and the Stoddard Valley OHV Open Area, with appropriate mitigation measures.

PA VIII: Under Alternative 4, Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds would all be designated as open to motorized use. Koehn Lakebed would be designated as “Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit”. The impacts of the closure of Koehn Lakebed would be the same as discussed for Alternative 2. The water resource impacts at Cuddeback, Coyote, and Chisholm Trail Lake lakebeds would be the same as those described for Alternative 3, which would also designate these lakebeds as open to motorized vehicles. In general, the lakebeds are flat, and are not associated with desert washes. In addition, although the lakebeds can become filled with water, they would not be used by motorized vehicles during times when they are flooded. As a result, motorized use of vehicles on the lakebeds is not expected to have water resource impacts.

PA IX: Under Alternative 4, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. The impacts of this decision would be the same as those discussed for Alternative 3.

PA X: Alternative 4 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA, while stopping and parking would be limited to within 50 feet of the centerline within DWMA. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA. This would be a reduction in the limits that are currently authorized outside of DWMA from 300 feet to 100 feet. The impacts of this decision would be the same as those discussed for Alternative 3.

PA XI: Livestock and native wildlife can have a direct, negative impact to water quality due to their presence and use at undeveloped springs and creeks from the potential release of fecal coliform contamination into natural water sources. Most developed water sources have been fenced and the water piped to a trough to protect the sources from livestock impacts to soils, vegetation and limit the release of fecal coliform. Under this alternative, the need to water livestock would be reduced from the closure of the Harper Lake and Cronese Lake Allotments, and a portion of the Johnson Valley Allotment. The sampling of chemical constituents is

typically not occurring during the PFC assessment process, so the direct impacts from livestock grazing and the release of fecal coliform is not known. Unidentified levels of fecal coliform contamination are probable, both from wildlife and from livestock. Most of the developed spring sources are protected from substantial levels of contamination from livestock by fencing or natural/man-made features where water is then piped to a trough. Overall, impacts to water quality from livestock grazing at protected spring sources is considered nominal because spring sources are protected from direct access by livestock. There is some level of de-watering from spring developments and the pumping of ground water in the form of wells for livestock use. This indirect impact has not been quantified but can be substantial over long periods of time.

Alternative 4 Route Designation

Section 4.3.2.2 described the general impacts to water resources that are common to all alternatives. That analysis concluded that motorized vehicles can have adverse impacts on surface water quality, especially if disturbance or releases occur in close proximity to water bodies. The mileage of routes associated with desert washes under Alternative 4 is presented in Table 4.3-8.

Table 4.3-8. Alternative 4 - Miles of Routes in Proximity to Desert Washes

Resource Description	Motorized	Authorized/ Administrative	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Mileage Parallel to or Predominantly in a Wash	351.8	62.9	10.7	2.5	439.1

Alternative 4 Minimization and Mitigation Measures

Table 2.3-8 describes the network-wide minimization and mitigation measures that would be applied under Alternative 4. Many of these measures would act to reduce soil compaction, disturbance, or erosion that lead to degradation of water quality. Measures such as limiting new ground disturbance in DWMA's, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines in DWMA's and 100 feet from route centerlines outside of DWMA's would reduce soil compaction or disturbance in currently undisturbed areas, thus minimizing the potential for water quality impacts. In addition, Alternative 3 would consider motorized vehicle use in washes on a case-by-case basis, as opposed to allowing motorized vehicles in all washes, which is currently permitted under the No Action Alternative. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific water quality impacts are considered before authorizing new motorized routes.

Exclude livestock by fencing unprotected natural springs and other natural sources to protect and maintain water quality where feasible.

4.3.3 Riparian Areas

4.3.3.1 Introduction

Affected Environment Summary

Section 3.3 describes the riparian areas in the planning area. Aquatic wetland and riparian habitat within the planning area is primarily located along the Mojave River and along the Sierra Mountain Front. Springs primarily occur in the mountains, and most of them support an area of riparian vegetation near the water source and in a linear zone leading downstream from the water source. The extent of these areas is usually limited, as evaporation and infiltration of the water removes it from the surface.

The riparian areas in the planning area, including the results of Proper Functioning Condition (PFC) assessments performed in 2012 through 2014, are listed in Table 3.3-1. Wetland and riparian habitats can be rated under PFC assessments as at-risk or non-functional due to vehicle use, camping, parking, route proliferation, and indirect impacts that may be associated with casual access by vehicles, exploratory mining activity, or distribution of riparian obligate invasive plants (*Tamarix* sp., *Arrundo donax*, etc.). Of the riparian areas, two springs within the Rattlesnake Canyon Grazing Allotment were rated as “functioning at risk” due to road encroachment.

Methodology

The 2005 WEMO EIS analyzed the impacts of the 5,098 mile route network evaluated in that EIS with respect to riparian areas and springs. The analysis included a discussion of the effects of OHV use on riparian areas and springs, including identification of specific riparian areas and springs that were impacted by OHV use.

Similar to soil resources, the Court held that the analysis of impacts to specific riparian areas and springs flowing from the proposed route network and grazing was inadequate. In addition, the Remedy Order (pg. 15) required BLM to implement additional information gathering and monitoring regarding riparian areas, including new proper functioning condition (PFC) assessments for all of the springs and seeps in the WEMO area. Finally, the Court made a general finding, for all resources, that the range of route network alternatives evaluated was inadequate. No other deficiencies were identified in the riparian area analysis in the 2005 WEMO EIS.

For this SEIS for the WMRNP, BLM performed the following:

- The route designation process for each alternative included evaluation of the location of each route with respect to the locations of all riparian areas and springs inventoried in the planning area.
- Implemented PFC assessments on more than 100 riparian areas and springs throughout the planning area to include grazing allotments. The assessments included areas outside of grazing allotments, as well as assessments associated with Rangeland Health Assessments on active allotments. In addition, BLM completed a comprehensive GIS analysis of all springs, as identified on the National Hydrography Dataset (NHD). This compilation included a review of more than 3.1 million acres, and identified 183 springs on BLM public lands. The assessment identified a total of 152 route features that intersected within a 100-meter buffer of these areas. BLM has also awarded a contract to

the U.S. Fish and Wildlife Service (USFWS) to complete riparian area mapping of 90 quadrangles at a scale of 1:24,000 within the Barstow and Ridgecrest Field Office areas.

- Conducted route evaluation and quantified the miles of motorized routes that could potentially impact riparian areas and springs across four alternative route networks, ranging from 4,293 to 10,428 miles in size.
- Re-evaluated the 2005 WEMO analysis, and supplemented it with additional information from resource specialists, public comments, and changes in conditions within the planning area. This additional information is incorporated into the evaluation in Section 4.3.3.2 below.
- BLM addressed cumulative impacts of both OHV use and grazing on riparian areas and springs, provided in Section 4.14 below.

4.3.3.2 Impacts Common to All Alternatives

Disturbance of wetland areas directly reduces available habitat for wildlife species. Additionally, disturbance indirectly reduce wildlife habitat by introducing or spreading invasive plants, which can decrease the diversity and abundance of wildlife species that would otherwise be high in riparian areas. The impacts associated with motorized routes and livestock grazing in wetland and riparian areas may range from minor, where they are fenced and have limited visitation, to substantial, where they have no fencing to control vehicular access and overnight activities are occurring, taking into consideration access to at-risk or non-functional wetlands based on PFC criteria. PFC assessments are on-going within the planning area. The vast majority of at-risk or non-functional wetlands are due to direct impacts from mining activities, private land encroachment and occasionally livestock grazing. Road encroachment typically results in indirect impacts from passing vehicles, unless vehicles leave the road and enter the riparian area.

Chapter 2 discusses the general resource protection and motorized access objectives that were incorporated into the development of the transportation network alternatives. These objectives were used to inform decisions regarding which linear features would be included in the motorized, non-motorized, and non-mechanized transportation network, and which features would be closed (i.e., designated as transportation linear disturbances), under each alternative. In that analysis, riparian resource impacts were considered as a criterion in determining which routes would remain open and which would be closed under the various alternatives. Riparian area impacts were considered by evaluating route locations with respect to proximity to identified riparian areas and springs, and either placing limitations or closing routes that are within 50 feet of a riparian area or 300 feet of a spring. To date, PFC assessments have revealed that vehicle routes have little to no direct impacts to riparian areas with only a few exceptions, such as where they physically lead to the removal of riparian vegetation such as at stream crossings. In addition, the WMRNP alternatives include consideration of stopping and parking distances from routes in order to minimize disturbance in previously undisturbed areas, thus reducing the potential for new impacts to riparian areas. Therefore, minimization of riparian area impacts was a factor both in development of the alternative route networks, and in the specific limitations placed on routes in those networks. These minimization and mitigation measures differ among the alternatives, and are therefore discussed in more detail in Sections 4.3.3.3, 4.3.3.4, 4.3.3.5, and 4.3.3.6 below.

If sensitive, riparian habitat (UPA) are not fenced out or otherwise modified for avoidance, activities such as upstream mining, direct use of water sources by water-rights holders, vehicle use, and cattle (as well as wildlife) grazing activities may (1) dewater riparian areas, (2) result in damaged, trampled and destroyed vegetation, (3) result in utilization of the riparian vegetation, and (4) impact water quality. These direct impacts result in a decrease in vigor or complete elimination of vegetation from the riparian habitat associated with spring sources, where otherwise vegetation would be robust and often unique to the wetter microclimate. Smaller spring sources can also be indirectly impacted by livestock and wildlife hoof action that typically creates divots known as “punching” in wet soils, which can increase erosion and can create poor water quality conditions.

Resource-Specific Minimization and Mitigation Measures

Resource-specific minimization and mitigation measures that were considered as part of the route designation process for each alternative, and that will be considered for each route during implementation of the WMRNP, were described in Table 2.1-4. For riparian areas, these include:

- Rehabilitate disturbance;
- Modify access to a less impacting designation;
- Limit the route to lower intensity use or prohibit Special Recreation Permitted use;
- Install access type restrictor;
- Re-align route to avoid environmentally sensitive area;
- Restrict stopping/parking/camping;
- Add parking area;
- Install barriers and maintain existing barriers;
- Remove Attractants;
- Install Educational Construct such as installing signs;
- Install step-over;
- Install fencing;
- Narrow route;
- Install/Implement Erosion Prevention Best Management Practices;
- Harden water crossing;
- Seasonal closure during bird nesting season;
- Monitor the route for signs of increasing impacts to a sensitive resource;
- Determine that no additional minimization and mitigation measure is needed based on site evaluation; and
- Exclude livestock by fencing unprotected natural springs and other natural sources to protect, maintain or enhance riparian habitat where feasible.

For springs, these measures include:

- Modify access to a less impacting designation;
- Limit the route to lower intensity use or prohibit Special Recreation Permitted use;
- Install access type restrictor;
- Re-align route to avoid environmentally sensitive area;
- Restrict stopping/parking/camping;
- Add parking area;
- Add or modify hiking trail access;
- Install barriers and maintain or upgrade existing barriers;
- Remove Attractants;
- Construct or Install Educational information such as signs;
- Install step-over;
- Install barriers;
- Narrow route;
- Install/Implement Erosion Prevention Best Management Practices;
- Seasonal closure during bird nesting season;
- Monitor the route for signs of increasing impacts to a sensitive resource; and
- Determine that no minimization and mitigation measure is needed based on site evaluation.

Residual Impacts After Implementation of Mitigation Measures

Residual effects to riparian areas and springs are likely to continue after application of mitigation measures, both with continued motorized vehicle use, and following closure of routes. Where motorized vehicle use is still allowed near riparian areas and springs, the impacts would be reduced from those that would have existed without mitigation measures. However, those vehicles could still disturb and compact soil, and damage vegetation. Closure of routes in those areas may not result in recovery in the short-term, unless active rehabilitation efforts are taken.

4.3.3.3 Impacts Associated with the No Action Alternative

Alternative 1 Plan Amendment

Under the No Action Alternative, none of the proposed plan amendment decisions would be adopted.

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management

in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct impacts to riparian areas. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider riparian areas and use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM's ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may benefit riparian areas by facilitating adaptive management changes in response to changing on-the-ground conditions. By not adopting these decisions under the No Action Alternative, these potential beneficial effects would not be achieved. In addition, by not adopting these decisions, the CDCA Plan would not be amended to conform to current policy or regulation.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. Changes to motorized vehicle use in the locations specified in these decisions under the action alternatives do have the potential to impact riparian areas in those locations. However, no water resources are found along the current designated "C" routes or the designated Rand-Fremont routes system, therefore no impacts to riparian areas are anticipated as a result of the No Action alternative.

As discussed under Impacts Common to all alternatives, sensitive, riparian habitat (UPA) may be impacted if they are not fenced or other avoidance measures implemented. With the exception of the Round Mountain Allotment, developed water sources have been fenced to exclude livestock from riparian areas, including springs. Isolated undeveloped springs and seeps are rarely used and in rough terrain usually not accessible by vehicle to the lessees and therefore are typically not fenced. In the Round Mountain Allotment, most natural sources are not fenced since the season of use is winter and riparian resources are dormant during that time period. There would be direct impacts to riparian resources during this season of use in this allotment. During the winter months, cattle do not congregate at water sources; therefore, this impact to water quality and riparian vegetation is short lived and dissipates after the cattle have been removed.

Alternative 1 Route Designation

The evaluation of impacts common to all alternatives concluded that motorized vehicles can have adverse impacts on riparian areas and springs. The mileage of routes associated with riparian areas and springs under the No Action Alternative is presented in Table 4.3-9.

Table 4.3-9. Alternative 1 - Miles of Routes in Proximity to Riparian/Spring Areas

Resource Description	Motorized	Authorized/ Administrative	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Mileage Within 50 Feet of Riparian Area	13.9	2.3	0	0	31.2
Mileage Within 300 feet of Spring	2.8	0.2	0	0	9

These impacts are concentrated in those subregions along the Mojave River and along the Sierra Mountain Front, which are areas with higher densities of riparian areas and springs.

Alternative 1 Minimization and Mitigation Measures

Table 2.3-1 describes the network-wide minimization and mitigation measures that are currently specified in the CDCA Plan, WEMO Plan, and/or the Court’s Remedy Order, and which are therefore applicable under Alternative 1, the No Action Alternative. Whether they were applied during the route designation process or are mitigation measures, these measures act to reduce impacts to riparian areas. These include the one percent limit on allowable new ground disturbance in DWMA’s, distance limitations on stopping and parking, and efforts to disguise and rehabilitate closed routes. Measures such as limiting new ground disturbance in DWMA’s, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines in DWMA’s and 300 feet outside of DWMA’s would reduce soil compaction or disturbance in currently undisturbed areas, thus minimizing the potential for new impacts to riparian areas, as compared to pre-2006 conditions before these limitations were enacted. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific riparian area impacts are considered before authorizing new motorized routes.

Exclude livestock by fencing unprotected natural springs and other natural sources to protect, maintain or enhance riparian habitat where feasible.

4.3.3.4 Impacts Associated with Alternative 2

Alternative 2 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMA’s) would amend BLM’s procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct impacts to riparian areas. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider riparian areas and use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM's ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may benefit riparian areas by facilitating adaptive management changes in response to changing on-the-ground conditions. By adopting these decisions, the CDCA Plan would be amended to conform to current policy and regulation.

As a result of the modification of the language limiting the route network to existing routes, new routes could potentially be designated in locations with no existing routes, and could have adverse impacts to localized resources near that route. New routes may be established to provide access for new authorized uses, or to avoid identified impacts to resources. The impacts to riparian areas of each new route would be evaluated as part of the BLM's consideration of the application for land use authorization. As part of that evaluation, BLM would consider the potential impacts of the new route as required by 43 CFR 8342.1, potential alternatives to provide the necessary access, and minimization and mitigation measures to address any identified impacts to riparian areas. In the case of routes established to provide access to authorized uses, the duration of the designation of the new route would be the same as authorized land use it is intended to support. Once the term of the authorized land use expires, the route would generally be considered for closure, and the terms and conditions of the authorized land use would require the lessee, permittee, or ROW holder to rehabilitate the route. BLM may also determine at a later date, consistent with 43 CFR 8342.1, that the route provides necessary access for some other reason and could designate the route accordingly, releasing the authorized land user from their requirement to rehabilitate the route. In the case of routes established to address impacts to resources, the new route may be permanent.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The riparian area impacts of these decisions under Alternative 2 are as follows:

PA VII: It is anticipated that the overall number of SRP applications will not increase. This means that there should be no measurable increase in the number of OHVs using public land in the area. Additionally, designating the C routes does not authorize individual SRP events to use these routes, and additional analysis will occur as part of the SRP permitting process. Therefore, there should be no direct impacts to riparian areas.

Under Alternative 2, there would be a seasonal restriction placed upon the use of the currently designated C routes for competitive motorized events managed under a SRP. These routes would be available for use by competitive motorized events during the months of November, December, and January. The seasonal limitations on C routes may reduce their use for motorized events, and thus have localized beneficial impacts on riparian areas near those routes.

Since OHV competitive events conducted in other OHV Open Areas would be limited to inside the Open Area boundaries under this alternative, the remaining designated long-distance race corridor, the Johnson Valley to Parker Valley Corridor would be removed under Alternative 2. The elimination of the Johnson Valley to Parker event may reduce impacts to riparian areas in that area. An event has not been run in this corridor since the listing of the desert tortoise as threatened in 1989; therefore, other routes and areas within the planning area are not anticipated to receive increased use for recreation as a result of the elimination of this competitive event route. Therefore, this plan amendment decision would not have any effect on riparian areas.

PA VIII: Alternative 2 would designate Koehn Lakebed as closed to motorized vehicles. There would be no change to the use of Cuddeback, Coyote, or Chisholm Trail Lakes. In general, the lakebeds are not associated with riparian areas, and this decision would not have any direct effect on riparian areas. Because Koehn lakebed is currently receiving relatively light use, the amount of displaced use to other routes would be low. Therefore, this plan amendment decision is not expected to have an indirect, adverse impact on riparian areas by increasing the recreational use of routes in close proximity to riparian areas.

PA IX: No water resources are found along the designated Rand-Fremont routes system, therefore no impacts to riparian areas are anticipated as a result of Alternative 2.

PA X: Alternative 2 would limit stopping and parking to previously disturbed areas within 50 feet from the route centerline, both inside and outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 50 feet. Camping would be allowed adjacent to designated routes in previously disturbed areas, not to exceed 50 feet from the centerline, throughout the WEMO Planning Area. This reduction from the limits in the No Action Alternative would result in allowing previously disturbed areas to become re-vegetated over time, thus gradually reducing the potential for erosion that could impact riparian areas. This decision would also reduce the potential for stopping, parking, and camping to create new disturbance within riparian areas. The effect of these actions would be a net beneficial impact on riparian areas.

PA XI: As discussed under Impacts Common to all alternatives, sensitive, riparian habitat (UPA) may be impacted if they are not fenced or other avoidance measures implemented. Under this alternative, livestock grazing would be discontinued on portions of the Ord Mountain, Cantil Common, Shadow Mountain Allotments, a small portion of the Johnson Valley Allotment and the entire Harper Lake and Cronese Lake Allotments.. Due to these closures, any direct impacts to riparian habitats located on these allotments would cease. These direct impacts result in a decrease in vigor or complete elimination of vegetation from the riparian habitat associated with spring sources, where otherwise vegetation would be robust and often unique to the wetter microclimate. Smaller spring sources can also be indirectly impacted by livestock and wildlife hoof action that typically creates divots known as "punching" in wet soils, which can increase erosion and can create poor water quality conditions.

With the exception of the Round Mountain Allotment, developed water sources have been fenced to exclude livestock from riparian areas, including springs. Isolated undeveloped springs and seeps are rarely used and in rough terrain usually not accessible by vehicle to the lessees and therefore are typically not fenced. In the Round Mountain Allotment, most natural sources are not fenced since the season of use is winter and riparian resources are dormant during that time period. There would be direct impacts to riparian resources during this season of use in this

allotment. During the winter months, cattle do not congregate at water sources; therefore, this impact to water quality and riparian vegetation is short lived and dissipates after the cattle have been removed.

Alternative 2 Route Designation

Section 4.3.3.2 described the general impacts to riparian areas that are common to all alternatives. That analysis concluded that motorized vehicles can have adverse impacts on riparian areas and springs. The mileage of routes associated with riparian areas and springs under Alternative 2 is presented in Table 4.3-10.

Table 4.3-10. Alternative 2 - Miles of Routes in Proximity to Riparian/Spring Areas

Resource Description	Motorized	Authorized/ Administrative	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Mileage Within 50 Feet of Riparian Area	6.1	3	0	0.4	37.4
Mileage Within 300 feet of Spring	1.9	0.1	0	0	10

The reductions in impacts, as compared to the No Action Alternative, are concentrated in those subregions along the Mojave River and along the Sierra Mountain Front, which are areas with higher densities of riparian areas and springs.

Alternative 2 Minimization and Mitigation Measures

Table 2.3-5 describes the network-wide minimization and mitigation measures that would be applied under Alternative 2. Many of these measures would act to reduce impacts to riparian areas. These include the one percent limit on allowable new ground disturbance in DWMA's, distance limitations on stopping and parking, and efforts to disguise and rehabilitate closed routes. Measures such as limiting new ground disturbance in DWMA's, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines would reduce soil compaction or disturbance in currently undisturbed areas, thus minimizing the potential for impacts to riparian areas. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific riparian area impacts are considered before authorizing new motorized routes.

Exclude livestock by fencing unprotected natural springs and other natural sources to protect, maintain or enhance riparian habitat where feasible.

4.3.3.5 Impacts Associated with Alternative 3

Alternative 3 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management

in the planning area, and would not authorize any on-the-ground actions. These decisions would be the same under Alternative 3 as for Alternative 2, and therefore effect of these decisions on riparian areas is the same as discussed for Alternative 2.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of “C” routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The impacts of these decisions to riparian areas under Alternative 3 are as follows:

PA VII: Under Alternative 3, there would be C routes available for competitive motorized events managed under a SRP in three distinct areas: the areas to the northeast of the Spangler Hills Open Area; the Summit Range plus the area east of Highway 395; and the urban interface area between the community of Ridgecrest and the Spangler Hills Open Area. There are no riparian areas associated with these areas, so the plan amendment would not have any adverse impacts to riparian areas. In addition, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but may be offset by additional routes in the planning area that are identified as competitive use open routes through the route designation process. Because the locations of replacement routes are not known the riparian area impacts of those routes would be considered through the route designation process.

PA VIII: Under Alternative 3, Koehn Lakebed would be designated as “Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit”. The impacts of the closure of Koehn Lakebed would be the same as discussed for Alternative 2.

Alternative 3 would also designate Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds as open to motorized use. In general, the lakebeds are not associated with riparian areas, and this decision would not have any direct effect on riparian areas.

PA IX: Under Alternative 3, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. There are no riparian areas present in this area. Therefore, eliminating the permit requirement would not have any impact on riparian areas.

PA X: Alternative 3 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA, while stopping and parking would be limited to within 50 feet of the centerline within DWMA. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA. This would be a reduction in the limits that are currently authorized outside of DWMA from 300 feet to 100 feet. This would be a reduction from the limits in the No Action Alternative, but would still allow a larger area of disturbance than Alternative 2 (100 feet in Alternative 3 versus 50 feet in Alternative 2). This reduction would result in allowing previously disturbed areas to become re-vegetated over time, thus gradually reducing the potential for erosion that could impact riparian areas. This decision would also reduce the potential for stopping, parking, and camping to create new disturbance within riparian areas. The effect of these actions would be a net beneficial impact on riparian areas located adjacent to the routes that are designated as available for motorized use outside of DWMA.

PA XI: As discussed under Impacts Common to all alternatives, sensitive, riparian habitat (UPA) may be impacted if they are not fenced or other avoidance measures implemented. With the exception of the Round Mountain Allotment, developed water sources have been fenced to exclude livestock from riparian areas, including springs. Isolated undeveloped springs and seeps are rarely used and in rough terrain usually not accessible by vehicle to the lessees and therefore are typically not fenced. In the Round Mountain Allotment, most natural sources are not fenced since the season of use is winter and riparian resources are dormant during that time period. There would be direct impacts to riparian resources during this season of use in this allotment. During the winter months, cattle do not congregate at water sources; therefore, this impact to water quality and riparian vegetation is short lived and dissipates after the cattle have been removed.

Alternative 3 Route Designation

Section 4.3.3.2 described the general impacts to riparian areas that are common to all alternatives. That analysis concluded that motorized vehicles can have adverse impacts on riparian areas and springs. The mileage of routes associated with riparian areas and springs under Alternative 3 is presented in Table 4.3-11.

Table 4.3-11. Alternative 3 - Miles of Routes in Proximity to Riparian/Spring Areas

Resource Description	Motorized	Authorized/ Administrative	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Mileage Within 50 Feet of Riparian Area	26.9	3.7	0	0.4	16.6
Mileage Within 300 feet of Spring	6.5	0.2	0	0	5.3

The increase in impacts, as compared to the No Action Alternative, is concentrated in those subregions along the Mojave River and along the Sierra Mountain Front, which are areas with higher densities of riparian areas and springs.

Alternative 3 Minimization and Mitigation Measures

Table 2.3-8 describes the network-wide minimization and mitigation measures that would be applied under Alternative 3. Many of these measures would act to reduce impacts to riparian areas. These include the one percent limit on allowable new ground disturbance in DWMA's, distance limitations on stopping and parking, and efforts to disguise and rehabilitate closed routes. Measures such as limiting new ground disturbance in DWMA's, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines in DWMA's and 100 feet from route centerlines outside of DWMA's would reduce soil compaction or disturbance in currently undisturbed areas, thus minimizing the potential for impacts to riparian areas. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific riparian area impacts are considered before authorizing new motorized routes.

Exclude livestock by fencing unprotected natural springs and other natural sources to protect, maintain or enhance riparian habitat where feasible.

4.3.3.6 Impacts Associated with Alternative 4

Alternative 4 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Except for the designation of TMAs, these decisions would be the same under Alternative 4 as for Alternatives 2 and 3, and therefore effect of these decisions on riparian areas is the same as discussed for those alternatives.

Under Alternative 4, the boundaries of the nine TMAs included in Alternative 4 are similar to those in Alternatives 2 and 3, with the exception that TMA 7 (Ridgecrest, El Paso, Rands, and Red Mountain sub-regions) would be split into two separate TMAs. This decision would designate the current Coordinated Access Planning Area (CAPA) as a separate TMA. The CAPA area consists of the Ridgecrest and El Paso sub-regions, which would be split from the Rands and Red Mountain sub-regions, thus creating two separate TMAs. This decision would be made to facilitate BLM's ability to manage intense recreation use, public interest, and local agency interest in this area near Ridgecrest, and would therefore have no direct effect on riparian areas. However, this decision would make it easier for BLM to consider riparian area impacts in future route designation decisions in this intensively used area, and thus have an indirect, beneficial effect on riparian areas.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The impacts of these decisions to riparian areas under Alternative 4 are as follows:

PA VII: Under Alternative 4, the C routes that are to the northeast of the Spangler Hills Open Area above the Randsburg Wash Road and those found within the Summit Range and east of Highway 395 would be available for competitive motorized events managed under a SRP. There are no riparian areas associated with these areas, so this decision would not have any adverse impacts to riparian areas. The Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would also be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but the decision would identify a specific route for the speed-controlled connector between the remaining Johnson Valley OHV Area and the Stoddard Valley OHV Open Area, with appropriate mitigation measures.

PA VIII: Under Alternative 4, Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds would all be designated as open to motorized use. Koehn Lakebed would be designated as "Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit". The impacts of the closure of Koehn Lakebed would be the same as discussed for Alternative 2. The

riparian area impacts at Cuddeback, Coyote, and Chisholm Trail Lake lakebeds would be the same as those described for Alternative 3, which would also designate these lakebeds as open to motorized vehicles. In general, the lakebeds are not associated with riparian areas, and this decision would not have any direct effect on riparian areas.

PA IX: Under Alternative 4, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. The impacts of this decision would be the same as those discussed for Alternative 3.

PA X: Alternative 4 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA's, while stopping and parking would be limited to within 50 feet of the centerline within DWMA's. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 100 feet. This reduction would result in allowing previously disturbed areas to become re-vegetated over time, thus gradually reducing the potential for erosion that could impact riparian areas. This decision would also reduce the potential for stopping, parking, and camping to create new disturbance within riparian areas. The effect of these actions would be a net beneficial impact on riparian areas located adjacent to the routes that are designated as available for motorized use outside of DWMA's.

PA XI: As discussed under Impacts Common to all alternatives, sensitive, riparian habitat (UPA) may be impacted if they are not fenced or other avoidance measures implemented. Under this alternative, livestock grazing would be discontinued on the Harper Lake, Cronese Lake, and a small portion of the Johnson Valley Allotments. Due to these closures, any direct impacts to riparian habitats located on these allotments would cease. These direct impacts result in a decrease in vigor or complete elimination of vegetation from the riparian habitat associated with spring sources, where otherwise vegetation would be robust and often unique to the wetter microclimate. Smaller spring sources can also be indirectly impacted by livestock and wildlife hoof action that typically creates divots known as "punching" in wet soils, which can increase erosion and can create poor water quality conditions.

With the exception of the Round Mountain Allotment, developed water sources have been fenced to exclude livestock from riparian areas, including springs. Isolated undeveloped springs and seeps are rarely used and in rough terrain usually not accessible by vehicle to the lessees and therefore are typically not fenced. In the Round Mountain Allotment, most natural sources are not fenced since the season of use is winter and riparian resources are dormant during that time period. There would be direct impacts to riparian resources during this season of use in this allotment. During the winter months, cattle do not congregate at water sources; therefore, this impact to water quality and riparian vegetation is short lived and dissipates after the cattle have been removed.

Alternative 4 Route Designation

Section 4.3.3.2 described the general impacts to riparian areas that are common to all alternatives. That analysis concluded that motorized vehicles can have adverse impacts on riparian areas and springs. The mileage of routes associated with riparian areas and springs under Alternative 4 is presented in Table 4.3-12.

Table 4.3-12. Alternative 4 - Miles of Routes in Proximity to Riparian/Spring Areas

Resource Description	Motorized	Authorized/ Administrative	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
Mileage Within 50 Feet of Riparian Area	12.5	2.3	0.1	0.4	32.2
Mileage Within 300 feet of Spring	3.7	0.3	0.1	0	7.9

The increase in impacts, as compared to the No Action Alternative, is concentrated in those subregions along the Mojave River and along the Sierra Mountain Front, which are areas with higher densities of riparian areas and springs.

Alternative 4 Minimization and Mitigation Measures

Table 2.3-8 describes the network-wide minimization and mitigation measures that would be applied under Alternative 4. Many of these measures would act to reduce impacts to riparian areas. These include the one percent limit on allowable new ground disturbance in DWMA, distance limitations on stopping and parking, and efforts to disguise and rehabilitate closed routes. Measures such as limiting new ground disturbance in DWMA, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines in DWMA and 100 feet from route centerlines outside of DWMA would reduce soil compaction or disturbance in currently undisturbed areas, thus minimizing the potential for impacts to riparian areas. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific riparian area impacts are considered before authorizing new motorized routes.

Exclude livestock by fencing unprotected natural springs and other natural sources to protect, maintain or enhance riparian habitat where feasible.

4.4 Biological Resources

Table 4-26 of the 2006 WEMO Plan presented general assumptions regarding the impact of motorized vehicle access on wildlife, with a focus on the desert tortoise. These assumptions have been reviewed and revised for the WMRNP, as shown in Table 4.4-1. The major revision is that the general assumptions regarding the impact of motorized vehicle access on tortoise are more broadly considered to be applicable to other wildlife, vegetation, and areas designated for their protection, including DWMA's.

Table 4.4-1. General Assumptions Regarding Impacts of Motorized Routes on Vegetation, Wildlife, and Areas Specially Designated for their Protection

Category	Assumptions
Desired Results	<p>An overall objective of the transportation network goal is to designate and implement a route network that would provide for public access, authorized uses, and the following desired results:</p> <ul style="list-style-type: none"> • Fewer losses of tortoises and other wildlife to crushing, poaching, pet collection, intentional vandalism, and similar activities requiring vehicle access. • Less degradation and loss of occupied habitat (first priority) and suitable habitat (second priority). • Larger blocks of unfragmented habitat, which would be achieved if vehicle use is prevented on designated closed routes, does not result in increased cross-country travel in adjacent areas, and promotes recovery of suitable habitats more quickly than would naturally occur. • Route closure in higher density wildlife areas is likely to provide the most benefit in terms of avoiding mortalities and other losses. • Route closure in lower density wildlife areas would alleviate losses of animals that are critically important to natural repatriation.
Function and Importance of DWMA's	<ul style="list-style-type: none"> • All public lands in DWMA's are important for tortoise conservation and recovery, as well as conservation of other vegetation and wildlife species present within the DWMA. • Lands that currently support relatively lower tortoise densities are no less important for tortoise recovery than lands supporting relatively higher densities. • DWMA's are the primary land base on which conservation goals, recovery efforts, and mitigation standards can be achieved.
Impacts to Wildlife and Vegetation	<ul style="list-style-type: none"> • Motorized routes in wildlife habitat are assumed to potentially have adverse impacts to individuals due to vehicle strikes and noise. • Wildlife and vegetation are more likely to be adversely impacted in regions supporting higher densities of motorized routes than in areas of lower route densities. • Vehicle-based impacts are proportionate to the number of existing roads in an area. Both allowed uses (e.g., vehicle use that remains on existing roads) and prohibited uses (i.e., cross-country travel outside BLM Open Areas, dumping, vandalism, collection) are more likely to occur where roads are relatively more common. • If left unchecked, vehicle use in areas of above-average human disturbances would continue to result in loss of wildlife and vegetation, degradation of habitat, and seriously undermine conservation and recovery efforts for listed species.

4.4.1 Vegetation Resources

4.4.1.1 Introduction

Affected Environment Summary

Sections 3.4.3 and 3.4.4 describe the vegetation in the planning area, including vegetative communities, unusual plant assemblages (UPAs), and special status plant species. More than 91 percent of the planning area is located in the Mojave Basin and Range Ecoregion. Because elevations and moisture gradients in this ecoregion can vary abruptly across short distances, plant communities also vary greatly. Communities in the higher elevations include Joshua tree woodland, sagebrush steppe, pinyon-juniper woodland, and cottonwood/willow riparian vegetation. The southern part of the planning area gradually transitions to Mojave Desert vegetation dominated by creosote bush and white bursage. Unique desert wetland communities include mesquite bosques, as well as freshwater and saltwater marshes. The northwestern portion of the planning area is in the Sierra Nevada Ecoregion, comprising about six percent of the planning area. The southwestern portion of the planning area is in the Southern California Mountains Ecoregion, and is dominated by chaparral.

The CDCA Plan recognized areas throughout the CDCA as Unusual Plant Assemblages (UPAs), which are extraordinary based on unusual age, unusual size, unusually high cover density, or disjunction from main centers of distribution. Areas with restricted and discontinuous habitats are also UPAs, and include seeps, springs, and riparian areas, as well as plants growing on restricted substrates such as limestone outcrops or sand dunes.

A total of 46 special status plant species potentially occur within the planning area (BLM 2005, 2013a, b; Dudek and ICF International 2012). Special status plant species include those designated as threatened or endangered under the Endangered Species Act, as well as those designated as BLM Sensitive Species. Many of these special status plant species are located in areas that are specifically designated for protection of these species, including USFWS Designated Critical Habitat (DCH), or BLM-designated Desert Wildlife Management Areas (DWMAs), Areas of Critical Environmental Concern (ACECs), or conservation areas. These special designations commonly carry management prescriptions to protect these species, including limitations on future land uses, and limitations on motorized vehicle use.

Methodology

The 2005 WEMO EIS analyzed the impacts of the 5,098 mile route network evaluated in that EIS with respect to natural communities and special status vegetation species. The analysis included a discussion of the effects of the proposed changes in the motorized vehicle network on specific vegetation species. The Court evaluated the analysis specific to the Barstow woolly sunflower, desert cymopterus, and Mojave monkeyflower, and found that the analysis was sufficient. The Court also evaluated the analysis of OHV use and grazing on the spread of non-native plants, and found that analysis to be adequate. However, the Court's evaluation of the impact of OHV use on Unusual Plant Assemblages (UPAs) concluded that there was no discussion of the impact on OHVs on specific UPA areas. The Remedy Order (pg. 15) required BLM to implement additional information gathering and monitoring regarding UPAs. Finally, the Court made a general finding, for all resources, that the range of route network alternatives evaluated was inadequate. No other deficiencies were identified in the vegetation analysis in the 2005 WEMO EIS.

For this SEIS for the WMRNP, BLM performed the following:

- The route designation process for each alternative included evaluation of the location of each route with respect to the UPA areas designated within the planning area. The process also included evaluation of the location of each route with respect to an updated inventory of locations of special status plants and ACECs designated for protection of vegetation resources.
- Conducted route evaluation and quantified the miles of motorized routes that could potentially impact UPAs and other vegetation resources across four alternative route networks, ranging from 4,293 to 10,428 miles in size.
- Re-evaluated the 2005 WEMO analysis, and supplemented it with additional information from resource specialists, public comments, changes in conditions within the planning area, and changes in the applicable regulatory framework for vegetation resources. This additional information is incorporated into the evaluation in Section 4.4.1.2 below.

4.4.1.2 Impacts Common to All Alternatives

The impacts from OHV use and livestock grazing on vegetation were summarized by Ouren and others (2007). Motorized routes have both direct and indirect effects on vegetation. Direct impacts result from the occupation of land area by the road surface, whether it is asphalt, cement, or compacted soil, which removes that land area as potential habitat for vegetation. This effect can be expanded when motorized or mechanized vehicles leave the main route, resulting in additional ground disturbance of adjacent areas. This occurs in areas where stopping, parking, or camping activities are allowed, and in route proliferation areas. It can also occur in areas where road conditions have degraded through erosion or overuse, and vehicle operators find it easier to create new disturbance than to continue on the designated route. The severity of the effect on vegetation is amplified in areas of rare vegetative communities, UPAs, or special status plant habitat.

There are also a variety of indirect effects of motorized vehicle use on vegetation. These include:

- Alterations in surface water flow and percolation, especially where the roadbed is not at grade level (Trombulak and Frissell 2000);
- An increase in overall plant height, plant biomass, and foliage arthropods through "water harvesting" adjacent to compacted roadbeds (Johnson *et al.* 1975, Vasek *et al.* 1975b), yielding an overall increase in vegetation production (especially problematic in regards to nonnative invasive species), even after considering the denudation of the roadbed;
- Providing a corridor of dispersal for some species of non-native invasive weeds (Trombulak and Frissell 2000), especially those adapted to disturbed lands;
- Changes in the fire ecology in areas due to associated increases in non-native invasive weeds; and
- Increased occurrence of fires started by visitors.

Motorized vehicle routes can serve as corridors by which non-native plant species can more easily invade wildlife habitat. Brooks (1998 in Boarman 1999) found that the number of non-native plant species increase near roads. At least two mechanisms seem to be at work in the

process of invasion. First, vehicles may transport seeds of non-native species along routes of travel on their wheels and undercarriages. The existence of a network of routes may result in seeds of invasive plants being carried far from the sites where they were originally introduced. Secondly, many non-native plant species tend to colonize disturbed areas more readily than native species; road beds and berms along routes of travel are highly disturbed and therefore provide ample opportunity for these species to become established and spread. Some disturbance of soils adjacent to routes of travel likely occurs. Such disturbance can be caused by routine maintenance, drivers leaving the roadbed to pass another vehicle or to avoid a wet or sandy area, and recreation users pulling off routes of travel to camp or park; unauthorized cross-country travel that is facilitated by routes of travel also contributes to soil disturbance. This invasion of invasive non-natives is further enhanced through "water harvesting", the concentration of precipitation runoff adjacent to compacted roadbeds.

Disturbance of soils can accelerate the spread of invasive non-native plant species by destruction of soil crusts and cryptogams. These non-native species, in turn, can out-compete the native plant species (Lovich and Bainbridge 1999); non-native species are often better competitors than native species and may reduce the abundance of important forage plants. Generally, the relatively few species of non-native plants do not contain the variety of nutrients that wildlife obtains from native plants; over time, this decrease in available nutrients may place wildlife under physiological stress.

Most observations such as those described in the previous paragraphs have been describing the result of cross-country travel or heavy use of roads. However, regarding "light" use by vehicles, Boarman (1999) notes that "very little data are available to evaluate those impacts" because most studies have been conducted in areas of heavy use. Boarman (1999) acknowledges that light use can affect habitat but that "very light, basically non-repeated vehicle use probably has little long-term impact."

Motorized vehicle use can also impact vegetation adjacent to routes by releasing fugitive dust. Fugitive dust can settle on plant foliage, resulting in reducing plant growth rates, size, and survivorship (Ouren and others 2007).

Motorized vehicle use can create edge effects which impact the ecology adjacent to the routes. Compaction of soil on the route itself results in an increase in precipitation runoff directly adjacent to the route, which can lead to greater plant growth directly along the edges of routes (Ouren and others 2007). This may not necessarily be beneficial for vegetation. The increase in water could make these areas susceptible to non-native vegetation, or could attract wildlife into the area near the route, where they could be more at risk for vehicle strikes.

Several annotated bibliographies address the effects of roads on vegetation and natural communities; among these are Ouren and others 2007; Boarman 1999, Rowland 1980, and Spellerberg and Morrison 1989. Trombulak and Frissell (2000) reviewed the literature on ecological effects of roads, and Lovich and Bainbridge (1999) reviewed a variety of degrading activities, including roads. These bibliographies and literature reviews elaborate on the effects listed above, provide additional publications, and describe other effects of roads. The compaction and loss of vegetation that has already occurred on the more heavily used roadbeds as a result of past route use may prevent natural re-vegetation of native species consistent with the surrounding area. Therefore, designating heavily used routes of travel as motorized may have minor direct effects to the vegetation, at least in the reasonably foreseeable future, because

impacts on these routes have already occurred and are likely to continue, even if the route is closed. The horizon for natural re-vegetation of these routes is anticipated to be substantially beyond the planning horizon. However, indirect effects from the use of these routes would decrease if the routes were closed.

Vegetation impacts were considered in the development of alternative goals and objectives, in designation of individual routes, and in defining specific implementation parameters. Chapter 2 discusses the general resource protection and motorized access objectives that were incorporated into the development of the transportation network alternatives. These objectives were used to inform decisions regarding which linear features would be included in the motorized, non-motorized, and non-mechanized transportation network, and which features would be closed (i.e., designated as transportation linear disturbances), under each alternative. The goals and objectives developed for Alternative 2 focus on enhancing sensitive resource values and areas, including threatened and endangered species as well as other sensitive biological and non-biological landscape factors, and managing access to de-emphasize casual multiple-use motorized and mechanized touring. In contrast, the goals and objectives for Alternative 3 focus on meeting the diverse transportation, access, and recreational needs of the public, and managing access to emphasize casual multiple-use motorized and mechanized touring.

Vegetation impacts were also considered by evaluating route locations with respect to DWMA, ACECs, DCH, and other identified habitat features. In addition, the WMRNP alternatives include consideration of stopping and parking distances from routes in order to minimize disturbance in previously undisturbed areas, thus reducing the potential for new impacts to vegetation. Therefore, minimization of impacts to vegetation was a factor both in development of the alternative route networks, and in the specific limitations placed on routes in those networks. These minimization and mitigation measures differ among the alternatives, and are therefore discussed in more detail in Sections 4.8.3, 4.8.4, 4.8.5, and 4.8.6 below.

Natural Communities

In the context of the entire Mojave Desert, the WEMO Plan connects to public lands in the Inyo, Sequoia, Angeles and San Bernardino National Forests. New conservation near the latter two Forests includes the linkage to the Poppy Preserve, the Big Rock Creek Conservation Area, and the Carbonate Endemic Plants ACEC. The linkages within Los Angeles County would prevent future isolation of the Poppy Preserve and Saddleback Buttes State Park. The WEMO Plan adjoins the Coachella Valley Multiple Species Habitat Conservation Plan near Morongo Valley, and land uses in this area are compatible with both habitat linkages and protection of species in common to the two plans (triple-ribbed milkvetch and Little San Bernardino Mountains gilia). The WEMO Plan recognized the impacts from recreation and route designation to natural communities, and concluded that impacts of recreation and route designation to natural communities are primarily cumulative in nature. Some species are more sensitive to route specific impacts because of their very limited distribution. However, most of the more intensively used OHV Open areas are within the creosote bush scrub, desert wash and saltbush scrub communities. Riding on playas is also popular and may impact the adjacent alkali sink scrub vegetation. In remote or mountainous areas, most travel is confined to roads, so that the woodland communities (Joshua tree woodland, scrub oak, pinyon pine woodland, juniper woodland) suffer relatively fewer direct vehicle impacts.

Outside of the OHV Open Areas, habitat fragmentation is an issue in other areas with a large number of routes, depending to some extent on the frequency of use. This fragmentation is exacerbated in areas with substantial route proliferation. Of the four alternatives evaluated in this SEIS, Alternative 3 would result in the greatest increase in open motorized routes within sensitive biological areas, and therefore would have the greatest potential for impacts to sensitive biological resources. No Action would result in the greatest potential impact to habitat outside of DWMA, and Alternative 3 would result in the greatest potential impact to habitat within DWMA, based on area-wide potential for disturbance.

Alternative 2, by closing the largest mileage of routes and applying the most restrictive minimization and mitigation measures, would result in the fewest adverse impacts to biological receptors over the long-term. All alternatives include an immediate strategy of signing closed routes and providing educational information for the public, which will result in a moderate level of compliance of the route network. The rate of active closures anticipated is similar for all alternatives, so active disturbances would not vary substantially by alternative in the reasonably foreseeable future. Alternative 2 is anticipated to reduce and displace overall use to outside DWMA and MGS habitat to some degree, but is also likely to result in an increased intensity of use on the remaining network in these areas. Other alternatives are likely to change the balance between use and intensity in these sensitive areas. In other ACEC, use and intensity of use is not anticipated to substantially change.

Where motorized routes exist, the contribution to cumulative biological impacts in sensitive areas would still be adverse. Providing additional opportunities in less sensitive areas and directing recreational and commercial activities to OHV Open Areas and the less sensitive areas mediates the cumulative impacts but does not eliminate them. When placed in context of other developments within the West Mojave, including land development, mining and recreational use of habitat lands, as well as the beneficial effects of WEMO management strategies, additional wilderness designation, enhanced protection of sensitive habitat on Fort Irwin, and DRECP strategies, the reduction in surface disturbance by measures to manage, enforce, and restore routes impacting vehicle-sensitive species would be beneficial under all alternatives. In the long-term, Alternative 3 does not directly benefit the species in DWMA as well as No Action, which is an adverse impact to natural communities.

Livestock Grazing - Upland Vegetation and Upland UPAs

The utilization by livestock, horses and other wildlife of upland vegetation and potentially upland UPAs for forage directly impacts the vegetation in a number of ways. Key forage plant species for livestock consumption are palatable species that may be utilized frequently, when available, as forage. Grazing utilization measures the proportion of degree of the current years forage production that is consumed or destroyed by livestock (ITR-Utilization Studies 1996). Utilization of key species during the critical growing period, typically spring may prevent formation of a seed-head and dissemination of seed. If this occurs year after year to the same population of forage species, a negative impact to recruitment occurs. If high levels of utilization occurs to a given population of forage species, those plant have less leaf area to absorb sunlight, produces lower levels of carbohydrates, and expends a considerable amount of energy on re-growth. This type of scenario results in poor plant vigor, lower abundance, and poor age-class distribution. As previously mentioned, forage utilization, plant vigor, abundance and age-class distribution of key species are generally more intensely impacted around water

sources or high-use facilities due to constant soil compaction from trampling and continual cropping of vegetation from cattle and horses. Direct impacts to resource conditions adjacent to water developments are expected, and the area impacted will vary in size. These types of negative impacts have occurred in portion of West Mojave allotments where the Native Species Standard is not being achieved.

Areas that have been affected by other habitat disturbing factors are more vulnerable to impacts from livestock and vehicles. In particular, wildfire may result in closure of areas for multiple years to allow vegetative reproduction and return of native communities. Under indirect effects, those areas identified as not achieving the Native Species Standard may be subject to a livestock grazing deferment in the spring and fall grazing during the critical growing periods. BLM anticipates slow, but positive progress towards improvement of degraded native plant communities as a result of this corrective management action and reverse the downward trend in rangeland health. This deferment from grazing during the critical growing period for native species is anticipated to favor recruitment, vigor and enhance species diversity in native plant communities previously degraded by past grazing practices in portions of the allotment. Desert tortoises prefer certain native annual forbs over non-native annual forbs (Jennings 1997). BLM has not inventoried for these annual native species so their abundance on West Mojave allotments is unknown, however under all alternatives native annual forbs located in the “deferment areas” would have the opportunity to germinate, grow and disseminate seed.

The additional changes in grazing practice as described in the 2006 WEMO Plan are anticipated to make positive progress toward achievement of the Native Species Standard by reducing the utilization thresholds from 40% to as low as 25% on select key species allotment wide which would allow for greater leaf area to absorb sunlight. This improves plant vigor and production, and reduces the contribution of grazing to vegetation impacts. There are two other grazing operational prescriptions contained in the 2006 WEMO Plan that would not authorize ephemeral portion of the perennial/ephemeral authorization and would not authorize temporary non-renewable use, regardless of production. These provisions would further reduce use of forage species on the allotments in more productive years, providing for very high recruitment and increased vigor.

The 2006 WEMO grazing prescription that requires exclusion from portions of select allotments when ephemeral production is less than 230 lbs./acre has a beneficial impact to the vegetation that is excluded from grazing during those seasons. This would minimize impacts to reproduction and plant growth during these poorer production years. However, already stressed vegetation in portions of the allotment where grazing would be allowed may suffer from slightly higher levels of utilization, which in turn can mean lower or no reproduction and poorer plant vigor during those growing seasons, unless stocking rates are appropriately adjusted.

Natural climate fluctuations can also have a significant effect on desert vegetation, but not all desert natives are consistently affected by these fluctuations. Beatley (1980) concluded that most of the living plants in the Mojave Desert in 1963 were still present when she re-measured her plots in 1975. An additional 20-30% of the plants measured in 1975 were new, and total cover had increased as a result of high rainfall in the late 1960s. Beatley concluded that the size and cover of woody perennial plants in the Mojave Desert are strongly correlated with precipitation.

The period between 1975, when Beatley last measured the plots, and 2000 had several climatic extremes. The period of 1977-1984 was one of the wettest periods of the 20th century, and

extreme droughts occurred in 1989-1991 (Hunter, 1994), 1996, and 1999. Many shrubs died during these years, making droughts a major mechanism for change in Mojave Desert ecosystems. Despite the droughts, the increase in biomass between 1963 and 2000 is striking. Associations dominated by creosote bush (*Larrea tridentata*) had large increases in the sizes of individual plants as well as increases in total cover. Some blackbrush assemblages, in contrast, lost total cover, probably as a result of the droughts, reflecting the significant differences in drought tolerance between various native species of the desert. Some non-native species such as red brome (*bromus madritensis*, ssp. *Rubens*) can be extremely hardy during drought periods, and during those periods readily outcompete native species (Monitoring Of Ecosystem Dynamics In The Mojave Desert: The Beatley Permanent Plots, USGS Fact Sheet 040-01, Webb, Robert H, et al.).

Special Status Plants

The WEMO SEIS would result in direct and indirect impacts, both positive and negative, to most of the sensitive plant species addressed in this Plan. The beneficial, direct impacts include the establishment of large, unfragmented habitat blocks, strategies to block up public lands in those areas, measures to reduce tortoise mortality, measures to minimize disturbance impacts to conserved lands and measures addressing unique components of diversity, such as endemic species, disjuncts and habitat specialists.

Most special status plants are locally distributed in distinct areas, although new populations are occasionally identified. Generally projects are designed to avoid concentrations of these species. Mining projects have, in the past, adversely affected listed and sensitive species. Usually, the most sensitive areas are withdrawn or otherwise protected from these types of use. Based on BLM records, cattle grazing activities have not been identified as adversely affecting BLM special status plant species that are located within allotments, like the Mojave monkey flower, or Unusual Plant Assemblages (UPA). Areas identified for protection of special status plants do not authorize grazing, unless their distribution makes fencing impracticable. Cattle generally do not prefer to graze the Mojave monkeyflower or many of the other BLM special status plant species because they often occur in unique habitats, such as rocky, mountainous habitats, so the potential for grazing this species is low; however livestock could potentially utilize and trample BLM special status plant species. Again, this potential is low because livestock are not concentrated where special status plant species populations exist.

Invasive, Non-Native Species

Invasive species can occur as a result of direct spread of seeds, stressing of native habitat, and surface disturbance and loss of native vegetation, which facilitate the colonization of invasives over many native species. Natural wind conditions in the desert, non-native plantings, wildfire, vehicle use, and the presence of livestock and wildlife can directly spread the seeds of invasive species. Mechanisms for spread include airborne-spread of seeds, seeds sticking to vehicles or to the hides of animals, and deposition of seed through livestock and wildlife digestive systems (Belsky 2000). Historically, non-native plantings by rural residents and project managers, often as windbreaks, have been major contributors to non-native species spread. Current practices prohibit such plantings on authorized projects, but seeds may still be spread by the use of equipment and vehicles on site. Similar spread of seeds is associated with OHV use as described in previous sections. Wildfire continues to be a major source of introduction of non-native

species. Post-fire rehabilitation efforts provide for some level of planting or seeding to encourage native species to more quickly be reestablished. Projects which authorize disturbances create conditions that can encourage invasive species. These species can then spread far beyond the project boundaries. These project impacts are minimized by the use of best management practices, such as specific plantings of native species, and treating weed populations with herbicide applications.

The extent to which poor grazing practices contribute to the spread of non-native invasive species on the West Mojave allotments is unknown. However, some grazing practices like overgrazing do reduce the diversity, and reproductive abilities of these native, desert plant communities (Boarman 1999). This in turn promotes the establishment and spread of non-native invasive species that now occupy habitat once primarily inhabited by native species, because poor grazing practices degrade palatable native plant species resulting in a reducing its ability to reproduce, poor plant vigor, poor age class distribution and lower overall productivity. This allows highly aggressive non-native herbaceous plants to invade habitat occupied by stressed native species or habitat once occupied by native species.

The West Mojave allotments that authorize year-long continuous use, often grazing the same area at the same time, year after year, may have contributed to a transition of the native herbaceous ground cover to invasive and non-native species over portions of the West Mojave allotments. This is also the case in areas that serve as corral facilities for livestock and wild horse and burro distribution and collection. The lack of periodic rest for native species in these areas contributes to habitat more vulnerable to invasion by non-natives. The palatability of non-native vs. native plant species to livestock varies based the species and phenological stage. Overall livestock prefer native forbs over non-native forbs however non-natives forbs typically germinate earlier in the growing season and are generally grazed in an earlier phenology stage than natives which can in some years favor native forbs in the production of seed into the seed bank. Depending on density, the utilization of native forbs can be lower than utilization levels on non-native forbs because native forbs are most palatable when there is the highest level of forage diversity available to the cattle.

Grazing practices that allow for periodic recruitment opportunities commonly have lower densities of non-native species and are more compatible with sustaining native plant communities. Mitigation measures like the deferment of grazing in the spring and fall, strict compliance with the grazing prescriptions contained in the 2006 WEMO Plan, and the other grazing stipulations identified in that plan and in subsequent allotment-specific environmental assessments aid in improving native plant communities and in reducing the spread of non-native invasive species. The lowered utilization thresholds on key forage plants and other requirements should improve the overall trend of native plant communities. However, once such communities get established, they can be very difficult to eradicate.

Overall, the current densities of non-native invasive species on the allotments being analyzed in this document is consider light to moderate based on ocular estimates. Annual fluctuations in densities are directly influenced by the amounts of late winter and/or early spring precipitation.

Resource-Specific Minimization and Mitigation Measures

Resource-specific minimization and mitigation measures that were considered as part of the route designation process and the grazing program management alternatives for each alternative,

and that will be considered for each route during implementation of the WMRNP, were described in Table 2.1-4. For rare and special-status plant species, these include:

- Restrict stopping/parking/camping;
- Add parking/camping area;
- Install barriers and maintain or upgrade existing barriers;
- Remove Attractants;
- Modify access to a less impacting designation;
- Limit the route to lower intensity use or prohibit Special Recreation Permitted use;
- Install access type restrictor;
- Re-align route to avoid environmentally sensitive area;
- Construct or Install Educational information such as signs;
- Install step-over;
- Install fencing;
- Narrow route;
- Install/Implement Erosion Prevention Best Management Practices;
- Monitor the route for signs of increasing impacts to a sensitive resource; and
- Determine that no additional minimization and mitigation measure is needed based on site evaluation.

For protected vegetation resources, these include:

- Restrict stopping/parking/camping;
- Add parking/camping area;
- Install barriers and maintain or upgrade existing barriers;
- Remove Attractants;
- Modify access to a less impacting designation;
- Limit the route to lower intensity use or prohibit Special Recreation Permitted use;
- Install access type restrictor;
- Re-align route to avoid environmentally sensitive area;
- Install barriers and maintain or upgrade existing barriers;
- Construct or Install Educational information such as signs;
- Install step-over;
- Install fencing;
- Narrow route;

- Install/Implement Erosion Prevention Best Management Practices;
- Monitor the route for signs of increasing impacts to a sensitive resource;
- Determine that no additional minimization and mitigation measure is needed based on site evaluation; and
- Maintain and enforce reduced utilization thresholds for livestock grazing based on the season of use and range conditions.

Residual Impacts After Implementation of Mitigation Measures

Residual effects to vegetation resources would continue after application of mitigation measures, both with the livestock grazing program, with continued motorized vehicle use, and following closure of routes. Where motorized vehicle use is still allowed in areas with special-status vegetation species or UPAs, the impacts would be reduced from those that would have existed without mitigation measures. However, those vehicles could still damage vegetation if they traveled into undisturbed areas. Closure of routes in those areas may not result in recovery in the short-term, unless active rehabilitation efforts are taken.

4.4.1.3 Impacts Associated with the No Action Alternative

Alternative 1 Plan Amendment

Under the No Action Alternative, none of the proposed plan amendment decisions would be adopted.

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct impacts to natural communities, special-status vegetation species, or UPAs. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider vegetation and use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM's ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may benefit vegetation resources by facilitating adaptive management changes in response to changing on-the-ground conditions. By not adopting these decisions under the No Action Alternative, these potential beneficial effects would not be achieved. In addition, by not adopting these decisions, the CDCA Plan would not be amended to conform to current policy or regulation.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of “C” routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. Impacts may still occur to vegetation as a result of motor vehicle use in these areas on remaining available routes, despite adopted measures, including fencing, oversight, and measures to increase public information prior to use of routes in the Rand-Fremont area.

Livestock Grazing - Upland Vegetation and Upland UPAs

The impacts common to all alternatives would apply to all allotments being actively grazed under the No Action Alternative. See Table 4.7-1 for the remaining grazing acres potentially affected.

Alternative 1 Route Designation

The evaluation of impacts common to all alternatives concluded that motorized vehicles can have adverse impacts on vegetative communities, special status plant species, and UPAs. Adverse impacts would primarily occur directly through removal of vegetation, soil disturbance, and disturbance of hydrology, and would therefore be focused in areas on or adjacent to motorized routes. Indirect impacts to these resources could also occur due to the spread of invasive plants. Again, these impacts would be focused close to the routes, although they could spread to adjacent areas. The mileage of routes associated with vegetative communities, special status plant species, and UPAs under the No Action Alternative is presented in Tables 4.4-2, 4.4-3, and 4.4-4, respectively.

Table 4.4-2. Alternative 1 – Acreage and Mileage of Routes Within Identified Vegetative Communities

Resource Description	Motorized	Authorized/ Admini- strative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Agriculture	0	0	0	16	0	0	1.5
Arizonan upland Sonoran desert scrub	0.4	0	0.6	25	0	0	0.3
California Annual and Perennial Grassland	57.2	1	84.7	3399	0	1.4	64.2
California annual forb/grass vegetation	10.4	0	15.1	267	0	0	28
Californian broadleaf forest and woodland	0.2	0	0.3	71	0	0.2	6

Table 4.4-2. Alternative 1 – Acreage and Mileage of Routes Within Identified Vegetative Communities

Resource Description	Motorized	Authorized/ Admini- strative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Californian evergreen coniferous forest and woodland	7.1	0	10.3	1175	0	0	46.9
Californian mesic chaparral	0	0	0	60	0	0	0.6
Californian montane conifer forest	21.3	0	31	1608	0	0.3	25
Californian warm temperate marsh/seep	0	0	0	0	0	0	0.1
Californian xeric chaparral	1.4	0	2	60	0	1.7	8.5
Central and south coastal California seral scrub	0	0	0	0	0	0	0.5
Central and South Coastal Californian coastal sage scrub	11.2	0.5	17	1591	0	0	62.2
Desert Playa	77.2	45.6	178.6	4575	0	0	107.1
Developed	30.1	2.2	47	1264	0	0	74.1
Disturbed Lands	5.7	0	8.3	224	0	0	17.8
Great Basin cool semi-desert alkali basin	0.3	0	0.4	18	0	0	0.4
Inter-Mountain Dry Shrubland and Grassland	400.6	5.9	591.3	22208	0	3.2	1071.5
Inter-Mountain West mesic tall sagebrush shrubland and steppe	9.2	0	13.4	388	0	0.3	29.2
Intermontane deep or well-drained soil scrub	104.1	3.7	156.8	3801	0	0	209.4
Intermontane seral shrubland	4.3	0.7	7.3	269	0	0	8.3
Intermountain Shadscale - Saltbush Scrub	156.6	0.6	228.7	1569	0	0	145.4

Table 4.4-2. Alternative 1 – Acreage and Mileage of Routes Within Identified Vegetative Communities

Resource Description	Motorized	Authorized/ Admini- strative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Lower Bajada and Fan Mojavean-Sonoran desert scrub	3518.7	62.8	5209.5	107729	0	0	6397.1
Madrean Warm Semi-Desert Wash Woodland/Scrub	7.1	1	11.8	420	0	0	10.5
Mediterranean California naturalized annual and perennial grassland	3.9	0	5.7	88	0	0	14.4
Mojave and Great Basin upper bajada and toeslope	166.2	15	263.6	7567	0	0	443.9
Mojavean semi-desert wash scrub	96.5	3.8	145.9	1306	0	0	93.5
North American warm desert bedrock cliff and outcrop	266	1.1	388.5	13102	0	0	343.8
North American warm desert dunes and sand flats	12.4	0.3	18.5	410	0	0	36.4
Not Mapped	6	0	8.7	4	0	1.1	5.9
Open Water	0	0	0	1	0	0	0.4
Rocky Mountain mesic subalpine forest and woodland	0	0	0	0	0	0	0.1
Rural	5.7	0	8.3	427	0	0	47.6
Shadscale-saltbush cool semi-desert scrub	138.9	0.3	202.5	3360	0	0	191.9
Sonoran-Coloradan semi-desert wash woodland/scrub	37.6	0.9	56	381	0	0	34.6
Southern Great Basin semi-desert grassland	0.3	0	0.4	3	0	0	0.2

Table 4.4-2. Alternative 1 – Acreage and Mileage of Routes Within Identified Vegetative Communities

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Southwestern North American introduced riparian scrub	0.3	0	0.4	9	0	0	1.4
Southwestern North American riparian evergreen and deciduous woodland	0.3	0	0.4	2	0	0	0.6
Southwestern North American Riparian, Flooded and Swamp Forest/Scrubland	3.6	0.2	5.5	64	0	0	4.4
Southwestern North American riparian/wash scrub	0	0	0	2	0	0	0.3
Southwestern North American salt basin and high marsh	9	2	16	172	0	0	21.4
Western Great Basin montane conifer woodland	19.8	1	30.3	1367	0	2.4	38.8
Western Mojave and Western Sonoran Desert borderland chaparral	0	0	0	16	0	0	0.4

Table 4.4-3. Alternative 1 - Acreage and Mileage of Routes Within Range or Other Protected Habitat for Special Status Plant Species

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Bakersfield Cactus	0	0	0	0	0	0	0
Barstow Woolly Sunflower	5.8	0	8.4	138	0	0	12.6
Charlotte's Phacelia	2.2	0.6	4.1	168	0	0	5.9

Table 4.4-3. Alternative 1 - Acreage and Mileage of Routes Within Range or Other Protected Habitat for Special Status Plant Species

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Clokey's Cryptantha	4.1	0	6	215	0	0	7
Cushenbury Buckwheat	0.6	0.2	1.2	101	0	0	1.7
Cushenbury Milk Vetch	1.0	1.7	3.9	216	0	0	2.6
Darwin Rock Cress	0	0	0	0	0	0	0.4
Death Valley Sandpaper Plant	3.1	0	4.5	226	0	0	11.1
Desert Cymopterus	19.3	0	28.1	62	0	0	10.6
Kelso Creek Monkeyflower	3.1	0	4.5	151	0	0	27
Kern Buckwheat	0.8	0	1.2	23	0	0	0.2
Lane Mountain Milk Vetch	5.3	0.3	8.1	4	0	0	10.9
Little San Bernardino Mountains Gilia	1.7	0	2.5	79	0	0	1
Mojave Monkeyflower	8.4	0	12.2	334	0	0	15.6
Mojave Tarplant	0.1	0	0.1	0	0	0	1.1
Ninemile Canyon Phacelia	0	0	0	0	0	0	3
Parish's Daisy	1.1	2.5	5.2	241	0	0	3.4
Parish's Phacelia	4.8	0.3	7.4	109	0	0	11.4
Red Rock Poppy	26.3	0	38.3	0	0	0	24.8
Ripley's Cymopterus	0.5	0	0.7	44	0	0	1.8
Robinson's Monardella	0	0	0	0	0	0	0.2
Short-joint Beavertail	0	0	0	17	0	0	0.4
White-margined Beardtongue	12.8	0	18.6	547	0	0	8

Table 4.4-4. Alternative 1 - Acreage and Mileage of Routes Within Designated Areas for Unusual Plant Assemblages

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
I A 3 Olancha Greasewood Assemblage	13.6	0	19.8	1382	0	0	48.8
I B 3 Kelso Valley Oak Woodland Assemblage	0	0	0	7	0	0	17
I D 2 Desert Saltbush Assemblage	883.7	5.5	1293	9240	0	0	1200.8
II E Yuha Desert/Cronese Valley/Ward-Chemehuevi Valley Crucifixion Thorn Assemblage	2.3	0	3.3	15	0	0	11.1
II F Ord Mountain Jojoba Assemblage	0	0	0	0	0	0	0
III B 1 Mesquite Thickets	11	1	17.5	746	0	0	10.3
III B 2 Salt and Brackish Water Marshes Vegetation	0.6	0	0.9	7	0	0	0
III B 4 Palm Oases Vegetation	4.6	0	6.7	324	0	0	3.9
IV A 5 Mojave Sink Desert Willow Assemblage	4.2	0	6.1	339	0	0	7.2
IV B 1 Johnson Valley/Lucerne Valley Creosote Bush Clones	242.4	15.8	375.6	9361	0	0	797.3
IV B 2 Fry Mountains Ancient Mojave Yucca Clones	0	0	0	0	0	0	0
IV C 3 Pipes Canyon Huge Joshua Trees	57.5	0	83.6	3466	0	0	42.4

The carbonate endemic plant species are mostly within the Bighorn subregion for route designation. The routes within the habitat have been designated as limited, with motorized use restricted to claimholders, landowners and authorized persons. The terrain generally prevents off-road travel, and use of these roads is infrequent. The mileage of designated routes within the Carbonate Endemic Plants Research Natural Area under each alternative is discussed in Section 4.11.

Alternative 1 Minimization and Mitigation Measures

Table 2.3-1 describes the network-wide minimization and mitigation measures that are currently specified in the CDCA Plan, WEMO Plan, and/or the Court's Remedy Order, and which are therefore applicable under Alternative 1, the No Action Alternative. Whether they were applied during the route designation process or are mitigation measures, these measures act to reduce impacts to vegetation. Measures such as limiting new ground disturbance in DWMA's, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines in DWMA's and 300 feet outside of DWMA's would reduce soil compaction or disturbance in currently undisturbed areas, thus minimizing the potential for new direct or indirect effects to vegetation, as compared to pre-2006 conditions before these limitations were enacted. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific vegetation impacts are considered before authorizing new motorized routes.

Maintain and enforce reduced utilization thresholds for livestock grazing based on the season of use and range conditions.

4.4.1.4 Impacts Associated with Alternative 2

Alternative 2 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMA's) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct impacts to vegetation. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider vegetation and use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM's ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may benefit vegetation by facilitating adaptive management changes in response to changing on-the-ground

conditions. By adopting these decisions, the CDCA Plan would be amended to conform to current policy and regulation.

As a result of the modification of the language limiting the route network to existing routes, new routes could potentially be designated in locations with no existing routes, and could have adverse impacts to localized resources near that route. New routes may be established to provide access for new authorized uses, or to avoid identified impacts to resources. The impacts to vegetation of each new route would be evaluated as part of the BLM's consideration of the application for land use authorization. As part of that evaluation, BLM would consider the potential impacts of the new route as required by 43 CFR 8342.1, potential alternatives to provide the necessary access, and minimization and mitigation measures to address any identified impacts to vegetation. In the case of routes established to provide access to authorized uses, the duration of the designation of the new route would be the same as authorized land use it is intended to support. Once the term of the authorized land use expires, the route would generally be considered for closure, and the terms and conditions of the authorized land use would require the lessee, permittee, or ROW holder to rehabilitate the route. BLM may also determine at a later date, consistent with 43 CFR 8342.1, that the route provides necessary access for some other reason and could designate the route accordingly, releasing the authorized land user from their requirement to rehabilitate the route. In the case of routes established to address impacts to resources, the new route may be permanent.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The vegetation impacts of these decisions under Alternative 2 are as follows:

PA VII: It is anticipated that the overall number of SRP applications will not increase. This means that there should be no measurable increase in the number of OHVs using public land in the area. Additionally, designating the C routes does not authorize individual SRP events to use these routes, and additional analysis will occur as part of the SRP permitting process. Therefore, there should be no direct impacts to vegetation.

Under Alternative 2, there would be a seasonal restriction placed upon the use of the currently designated C routes for competitive motorized events managed under a SRP. These routes would be available for use by competitive motorized events during the months of November, December, and January. The seasonal limitations on C routes may reduce their use for motorized events, and thus have localized beneficial impacts on vegetation in those areas.

Since OHV competitive events conducted in other OHV Open Areas would be limited to inside the Open Area boundaries under this alternative, the remaining designated long-distance race corridor, the Johnson Valley to Parker Valley Corridor would be removed under Alternative 2. The elimination of the Johnson Valley to Parker event is expected to be beneficial to vegetation in that area. An event has not been run in this corridor since the listing of the desert tortoise as threatened in 1989; therefore, other routes and areas within the planning area are not anticipated to receive increased use for recreation as a result of the elimination of this competitive event route. Therefore, this plan amendment decision would not have any effect on vegetation by

increasing the recreational use of routes that are in close proximity to sensitive vegetation communities, special-status plants, or UPAs.

PA VIII: Alternative 2 would designate Koehn Lakebed as closed to motorized vehicles. There would be no change to the use of Cuddeback, Coyote, or Chisholm Trail Lakes. In general, the lakebeds are unvegetated, and are not associated with sensitive vegetation communities, special-status plants, or UPAs on the lakebeds; however lakebed edges may be associated with such communities. Since Koehn lakebed would be closed, and there would be no change to the status of the other three lakebeds, there would not be a direct effect to vegetation resources. Because Koehn lakebed is currently receiving relatively light use, the amount of displaced use to other routes would be low. Therefore, this plan amendment decision is not expected to have an indirect, adverse impact on vegetation by increasing the recreational use of routes in areas with sensitive vegetation communities, special-status plants, or UPAs.

PA IX: Impacts may still occur to vegetation as a result of motor vehicle use in these areas on remaining available routes, despite adopted measures, including fencing, oversight, and measures to increase public information prior to use of routes in the Rand-Fremont area.

PA X: Alternative 2 would limit stopping and parking to previously disturbed areas within 50 feet from the route centerline, both inside and outside of DWMAs. This would be a reduction in the limits that are currently authorized outside of DWMAs from 300 feet to 50 feet. Camping would be allowed adjacent to designated routes in previously disturbed areas, not to exceed 50 feet from the centerline, throughout the WEMO Planning Area. This reduction from the limits in the No Action Alternative would result in allowing previously disturbed areas to become re-vegetated over time, thus gradually reducing vegetation impacts in those areas. This decision would also reduce the amount of new disturbance, having a similar reduction in vegetation impacts. The effect of these actions would be a net beneficial impact on vegetation resources.

PA XI: Impacts to upland vegetation, UPAs, special-status plants, and native plants and native plant communities are discussed in the *Impacts Common to All Alternatives* Section. Under this alternative, grazing would be discontinued on portions of the Ord Mountain, Cantil Common and Shadow Mountain Allotments, a small portion of the Johnson Valley Allotment, and the entire Harper Lake and Cronese Lake Allotments. This reduction in grazing use of 165,893 acres would have a direct, beneficial impact on upland vegetation, UPAs, special-status plants, and native plants and native plant communities in the Western Mojave Desert.

Alternative 2 Route Designation

Section 4.4.1.2 described the general impacts to vegetation resources that are common to all alternatives. That analysis concluded that motorized vehicles can have adverse impacts on vegetative communities, special status plants species, and UPAs. Adverse impacts would primarily occur directly through removal of vegetation, soil disturbance, and disturbance of hydrology, and would therefore be focused in areas on or adjacent to motorized routes. Indirect impacts to these resources could also occur due to the spread of invasive plants. Again, these impacts would be focused close to the routes, although they could spread to adjacent areas. The mileage of routes associated with vegetative communities, special status plants, and UPAs under Alternative 2 is presented in Tables 4.4-5, 4.4-6, and 4.4-7, respectively.

Table 4.4-5. Alternative 2 - Acreage and Mileage of Routes Within Identified Vegetative Communities

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Agriculture	0	0	0	5	0	0	1.5
Arizonan upland Sonoran desert scrub	0.6	0	0.9	7	0	0	0.1
California Annual and Perennial Grassland	61.3	0.5	89.9	716	0	0	62.2
California annual forb/grass vegetation	7.6	0	11.1	84	0.2	0	30.5
Californian broadleaf forest and woodland	0.6	0.1	1	9	0	0.1	5.6
Californian evergreen coniferous forest and woodland	15.6	0	22.7	186	0	0	40.3
Californian mesic chaparral	0.3	0	0.4	5	0	0	0.3
Californian montane conifer forest	20.4	0.2	30	244	0	2.2	23.9
Californian warm temperate marsh/seep	0	0	0	0	0	0	0.1
Californian xeric chaparral	5.8	0.1	8.6	75	0	0	5.8
Central and south coastal California seral scrub	0	0	0	0	0	0	0.5
Central and South Coastal Californian coastal sage scrub	22.4	1.9	35.3	278	0	0	53.3
Desert Playa	76.9	7.8	123.2	1006	0	0	148.4
Developed	16.8	1	25.9	202	0.1	0	96.5
Disturbed Lands	3.7	2.5	9	63	0	0	17.4
Great Basin cool semi-desert alkali basin	0.3	0	0.4	3	0	0	0.4

Table 4.4-5. Alternative 2 - Acreage and Mileage of Routes Within Identified Vegetative Communities

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Inter-Mountain Dry Shrubland and Grassland	260.8	106.6	534.4	17	1.4	13.5	1094.9
Inter-Mountain West mesic tall sagebrush shrubland and steppe	4.9	0.5	7.9	58	0.1	0.9	32.3
Intermontane deep or well- drained soil scrub	74	1.6	110	881	0	0	240.6
Intermontane seral shrubland	3.3	0.5	5.5	41	0	0	10.1
Intermountain Shadscale - Saltbush Scrub	96.7	0.9	142	1086	0	0	203.6
Lower Bajada and Fan Mojavean- Sonoran desert scrub	2721	183.4	4224.6	32663	26.4	11.3	7043.3
Madrean Warm Semi-Desert Wash Woodland/Scrub	6.7	0	9.7	72	0	0.3	11.9
Mediterranean California naturalized annual and perennial grassland	2.6	0.1	3.9	29	0	0	14.9
Mojave and Great Basin upper bajada and toeslope	133.1	9.1	206.8	1681	0	0	481.6
Mojavean semi- desert wash scrub	44.3	1.5	66.6	473	0.1	2	143.7
North American warm desert bedrock cliff and outcrop	207.3	4.7	308.4	2454	0	2.1	397.3
North American warm desert dunes and sand flats	5.4	0.1	8	66	0	0	44.2

Table 4.4-5. Alternative 2 - Acreage and Mileage of Routes Within Identified Vegetative Communities

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Not Mapped	3.9	0	5.7	1	0	0	0
Open Water	0	0	0	0	0	0	0.4
Rocky Mountain mesic subalpine forest and woodland	0	0	0	0	0	0	0.1
Rural	3.1	0.2	4.8	42	0	0	52.1
Shadscale- saltbush cool semi-desert scrub	108.7	16.1	181.5	620	0	0.3	204.5
Sonoran- Coloradan semi- desert wash woodland/scrub	15.2	0.1	22.3	162	0	0	58.2
Southern Great Basin semi- desert grassland	0.3	0	0.4	3	0	0	0.2
Southwestern North American introduced riparian scrub	0.2	0	0.3	2	0	0	1.6
Southwestern North American riparian evergreen and deciduous woodland	0.1	0	0.1	1	0	0	0.8
Southwestern North American Riparian, Flooded and Swamp Forest/Scrubland	1.6	0.7	3.3	11	0	0	5.9
Southwestern North American riparian/wash scrub	0	0	0	0	0	0	0.3
Southwestern North American salt basin and high marsh	4	2.5	9.5	75	0	0	25.4

Table 4.4-5. Alternative 2 - Acreage and Mileage of Routes Within Identified Vegetative Communities

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Western Great Basin montane conifer woodland	18.2	0.8	27.6	220	0	2.5	40.8
Western Mojave and Western Sonoran Desert borderland chaparral	0	0	0	1	0	0	0.3

Table 4.4-6. Alternative 2 - Acreage and Mileage of Routes Within Range or Other Protected Habitat for Special Status Plant Species

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Bakersfield Cactus	0	0	0	0	0	0	0
Barstow Woolly Sunflower	0	0	0	48	0	0	0
Charlotte's Phacelia	0	0	0	28	0	0	0
Clokey's Cryptantha	0	0	0	48	0	0	0
Cushenbury Buckwheat	0	0	0	16	0	0	0.4
Cushenbury Milk Vetch	2.6	0	3.8	37	0	0	2.7
Darwin Rock Cress	0	0	0	0	0	0	0
Death Valley Sandpaper Plant	2.9	0.7	5.2	42	0	0	8.6
Desert Cymopterus	4.9	0	7.1	52	0	0	7.1
Kelso Creek Monkeyflower	2.4	0	3.5	28	0	0	3.5
Kern Buckwheat	0.7	0	1	7	0	0.1	0.3
Lane Mountain Milk Vetch	0.4	0	0.6	4	0	0	16.2
Little San Bernardino Mountains Gilia	1.2	0	1.7	20	0	0	1

Table 4.4-6. Alternative 2 - Acreage and Mileage of Routes Within Range or Other Protected Habitat for Special Status Plant Species

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Mojave Monkeyflower	6	0	8.7	70	0	0	18.1
Mojave Tarplant	0	0	0	0	0	0	1.2
Ninemile Canyon Phacelia	0	0	0	0	0	0	0
Parish's Daisy	2.6	0.2	4.1	42	0	0	4.1
Parish's Phacelia	2.9	0.2	4.5	35	0	0	13.9
Red Rock Poppy	6.3	0	9.2	0	0	0	31.2
Ripley's Cymopterus	0.6	0	0.9	8	0	0	1.5
Robinson's Monardella	0	0	0	0	0	0	0.2
Short-joint Beavertail	0.2	0	0.3	3	0	0	0.2
White-margined Beardtongue	7.9	0	11.5	89	0	0	12.6

Table 4.4-7. Alternative 2 - Acreage and Mileage of Routes Within Designated Areas for Unusual Plant Assemblages

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
I A 3 Olancha Greasewood Assemblage	19.2	0	27.9	234	0	0	42.8
I B 3 Kelso Valley Oak Woodland Assemblage	0	0	0	0	0	0	15.8
I D 2 Desert Saltbush Assemblage	588	3.6	860.5	6850	0	1	1477.5
II E Yuha Desert/Cronese Valley/ Ward- Chemehuevi Valley Crucifixion Thorn Assemblage	1.2	0	1.7	15	0	0	12.2

Table 4.4-7. Alternative 2 - Acreage and Mileage of Routes Within Designated Areas for Unusual Plant Assemblages

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
II F Ord Mountain Jojoba Assemblage	0	0	0	0	0	0	0
III B 1 Mesquite Thickets	11.2	0.2	16.6	126	0	0	10.8
III B 2 Salt and Brackish Water Marshes Vegetation	0	0.6	0.9	0	0	0	0
III B 4 Palm Oases Vegetation	4.6	0	6.7	55	0	0	3.9
IV A 5 Mojave Sink Desert Willow Assemblage	4.2	0	6.1	52	0	0	7.2
IV B 1 Johnson Valley/Lucerne Valley Creosote Bush Clones	229.7	2.4	337.6	2854	0	0	805.5
IV B 2 Fry Mountains Ancient Mojave Yucca Clones	0	0	0	0	0	0	0
IV C 3 Pipes Canyon Huge Joshua Trees	52.6	1.7	79	646	0	0	44.8

The carbonate endemic plant species are mostly within the Bighorn subregion for route designation. The routes within the habitat have been designated as limited, with motorized use restricted to claimholders, landowners and authorized persons. The terrain generally prevents off-road travel, and use of these roads is infrequent. The mileage of designated routes within the Carbonate Endemic Plants Research Natural Area under each alternative is discussed in Section 4.11.

Alternative 2 Minimization and Mitigation Measures

Table 2.3-5 describes the network-wide minimization and mitigation measures that would be applied under Alternative 2. Many of these measures would act to reduce impacts to vegetation. Measures such as limiting new ground disturbance in DWMA's, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines would reduce soil compaction or disturbance in currently undisturbed areas, thus minimizing the potential for direct

or indirect effects to vegetation. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific vegetation impacts are considered before authorizing new motorized routes.

Maintain and enforce reduced utilization thresholds for livestock grazing based on the season of use and range conditions.

4.4.1.5 Impacts Associated with Alternative 3

Alternative 3 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. These decisions would be the same under Alternative 3 as for Alternative 2, and therefore effect of these decisions on vegetation is the same as discussed for Alternative 2.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The impacts of these decisions to vegetation under Alternative 3 are as follows:

PA VII: Under Alternative 3, there would be C routes available for competitive motorized events managed under a SRP in three distinct areas: the areas to the northeast of the Spangler Hills Open Area; the Summit Range plus the area east of Highway 395; and the urban interface area between the community of Ridgecrest and the Spangler Hills Open Area. Alternative 3 could potentially impact the suspected Red Rock Poppy occurrence south of the Spangler Hills Open Area. In addition, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but may be offset by additional routes in the planning area that are identified as competitive use open routes through the route designation process. Because the locations of replacement routes are not known the vegetation impacts of those routes would be considered through the route designation process.

PA VIII: Under Alternative 3, Koehn Lakebed would be designated as "Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit". The impacts of the closure of Koehn Lakebed would be the same as discussed for Alternative 2.

Alternative 3 would also designate Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds as open to motorized use. In general, the lakebeds are unvegetated, and are not associated with sensitive vegetation communities, special-status plants, or UPAs. Therefore, this decision would not have any direct effect on vegetation resources on the lakebeds.

PA IX: Under Alternative 3, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. The species Clokey's cryptantha and Red Rock Poppy occur within the Rand Mountains-Fremont Valley Management Area. In addition, two

UPAs, the Salt and Brackish Water Marshes Vegetation and the Desert Saltbrush Assemblage, occur within the area. Not requiring a visitor to complete an educational orientation program before visiting an area may result in an adverse impact if the visitor is unaware of the special resources within the particular area. These impacts maybe overcome through other educational mediums and materials such as kiosks and brochures.

PA X: Alternative 3 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA's, while stopping and parking would be limited to within 50 feet of the centerline within DWMA's. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 100 feet. This would be a reduction from the limits in the No Action Alternative, but would still allow a larger area of disturbance than Alternative 2 (100 feet in Alternative 3 versus 50 feet in Alternative 2). This reduction would result in allowing previously disturbed areas to become re-vegetated over time, thus gradually reducing vegetation impacts in those areas. This decision would also reduce the amount of new disturbance, having a similar reduction in vegetation impacts. The effect of these actions would be a net beneficial impact on vegetation resources located adjacent to the routes that are designated as available for motorized use outside of DWMA's.

PA XI: Impacts to upland vegetation, UPAs, special-status plants, and native plants and native plant communities are discussed in the *Impacts Common to All Alternatives* Section. Under this alternative, grazing would be discontinued on the Buckhorn, Harper Lake, Cronese Lake, Cady Mountain, Johnson Valley, Double Mountain, and Oak Creek Allotments. This reduction in grazing would have a direct, beneficial impact on upland vegetation, UPAs, special-status plants, and native plants and native plant communities in the Western Mojave Desert.

Alternative 3 Route Designation

Section 4.4.1.2 described the general impacts to vegetation resources that are common to all alternatives. That analysis concluded that motorized vehicles can have adverse impacts on vegetative communities, special status plants species, and UPAs. Adverse impacts would primarily occur directly through removal of vegetation, soil disturbance, and disturbance of hydrology, and would therefore be focused in areas on or adjacent to motorized routes. Indirect impacts to these resources could also occur due to the spread of invasive plants. Again, these impacts would be focused close to the routes, although they could spread to adjacent areas. The mileage of routes associated with vegetative communities, special status plants, and UPAs under Alternative 3 is presented in Tables 4.4-8, 4.4-9, and 4.4-10, respectively.

Table 4.4-8. Alternative 3 - Acreage and Mileage of Routes Within Identified Vegetative Communities

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Agriculture	1.5	0	2.2	32	0	0	0
Arizonan upland Sonoran desert scrub	0.7	0	1	16	0	0	0

Table 4.4-8. Alternative 3 - Acreage and Mileage of Routes Within Identified Vegetative Communities

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
California Annual and Perennial Grassland	90.5	2.6	135.4	1922	0	0	32.7
California annual forb/grass vegetation	30.3	0.3	44.5	459	0.2	0	9
Californian broadleaf forest and woodland	3.7	0.4	6.0	106	0	0.1	2.2
Californian evergreen coniferous forest and woodland	46.2	1.2	68.9	1095	0.2	0.1	10.3
Californian mesic chaparral	0.4	0	0.6	14	0	0	0.2
Californian montane conifer forest	35.3	0.2	51.6	781	0	2.3	10.7
Californian warm temperate marsh/seep	0	0	0	0	0	0	0.1
Californian xeric chaparral	8.7	0	12.7	200	0	0	2.9
Central and south coastal California seral scrub	0	3.5	0	0	0	0	0.5
Central and South Coastal Californian coastal sage scrub	62.2	0	90.5	1277	0	0	17.6
Desert Playa	154.4	39.2	281.6	3592	0	0	42.1
Developed	79.6	6	124.5	1550	0.9	0	22.3
Disturbed Lands	15.7	0	22.8	236	0.1	0	7.9
Great Basin cool semi-desert alkali basin	0.7	0	1	14	0	0	0

Table 4.4-8. Alternative 3 - Acreage and Mileage of Routes Within Identified Vegetative Communities

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Inter-Mountain Dry Shrubland and Grassland	1055.5	11.5	1552	22793	27.4	21.3	378.1
Inter-Mountain West mesic tall sagebrush shrubland and steppe	15.7	0.8	24	414	0	1	21.7
Intermontane deep or well-drained soil scrub	204.1	2.6	300.7	4561	1.1	0	109.7
Intermontane seral shrubland	8.9	1.4	15	205	0	0	3.8
Intermountain Shadscale - Saltbush Scrub	197.3	0.8	288.1	2503	1.3	0	104.5
Lower Bajada and Fan Mojavean-Sonoran desert scrub	6585.3	161.6	9813.7	122258	56.2	4.9	3313.9
Madrean Warm Semi-Desert Wash Woodland/ Scrub	14.9	0.6	22.5	324	0	0	3.7
Mediterranean California naturalized annual and perennial grassland	8.2	0	11.9	120	0	0	9.4
Mojave and Great Basin upper bajada and toeslope	390.9	12.6	586.9	10166	0	0.7	223.2
Mojavean semi-desert wash scrub	130.9	3.8	195.9	1765	0.2	1.2	56.9

Table 4.4-8. Alternative 3 - Acreage and Mileage of Routes Within Identified Vegetative Communities

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
North American warm desert bedrock cliff and outcrop	478.7	13.9	716.5	10339	3.7	0	124.7
North American warm desert dunes and sand flats	36.3	0.3	53.2	813	0	0	13.3
Not Mapped	0	0	0	1	0	0	0
Open Water	0.4	0	0.6	7	0	0	0
Rocky Mountain mesic subalpine forest and woodland	0.1	0	0.1	0	0	0	0
Rural	51.6	0	75.1	1197	0.1	0	3.7
Shadscale- saltbush cool semi-desert scrub	282.7	9.9	425.6	3091	4.7	0	36.8
Sonoran- Coloradan semi-desert wash woodland/ scrub	51.4	0.8	75.9	652	0	0	22
Southern Great Basin semi-desert grassland	0.3	0	0.4	3	0	0	0.2
Southwestern North American introduced riparian scrub	1.7	0	2.5	31	0	0	0.1
Southwestern North American riparian evergreen and deciduous woodland	0.8	0	1.2	16	0	0	0.1

Table 4.4-8. Alternative 3 - Acreage and Mileage of Routes Within Identified Vegetative Communities

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Southwestern North American Riparian, Flooded and Swamp Forest/ Scrubland	2.4	0	3.5	36	0	0	5.9
Southwestern North American riparian/wash scrub	0	0	0	1	0	0	0.3
Southwestern North American salt basin and high marsh	18.4	3.1	31.3	349	0	0.2	10.9
Western Great Basin montane conifer woodland	38.7	0.3	56.7	853	0	0	0
Western Mojave and Western Sonoran Desert borderland chaparral	0.4	0	0.6	10	0.1	3.3	20.4

Table 4.4-9. Alternative 3 - Acreage and Mileage of Routes Within Range or Other Protected Habitat for Special Status Plant Species

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Bakersfield Cactus	0	0	0	0	0	0	0
Barstow Wooly Sunflower	7.8	0	11.3	92	0	0	11.5
Charlotte's Phacelia	5.4	0	7.9	108	0	1.7	1.8

Table 4.4-9. Alternative 3 - Acreage and Mileage of Routes Within Range or Other Protected Habitat for Special Status Plant Species

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Clokey's Cryptantha	10	0	14.5	172	0	0	0.3
Cushenbury Buckwheat	2.1	0	3.1	61	0	0	0.5
Cushenbury Milk Vetch	4.5	0	6.5	108	0	0	0.9
Darwin Rock Cress	0	0	0	0	0	0	0
Death Valley Sandpaper Plant	15.8	0	23	275	0	0	0
Desert Cymopterus	8.4	0	12.2	97	0	0	3.6
Kelso Creek Monkeyflower	5.5	0	8	141	0	0	0.4
Kern Buckwheat	0.8	0	1.2	14	0	0.1	0.1
Lane Mountain Milk Vetch	5.5	0	8	63	0	0	11.1
Little San Bernardino Mountains Gilia	2.8	0	4.1	53	0	0	0
Mojave Monkeyflower	15.8	0.5	23.7	249	0	0	8.2
Mojave Tarplant	1.4	0	2	0	0	0	0
Ninemile Canyon Phacelia	0	0	0	0	0	0	0
Parish's Daisy	5.9	0.1	8.7	151	0	0	0.8
Parish's Phacelia	12.4	1.4	20.1	256	0	0	3.2
Red Rock Poppy	34.1	0	49.6	0	0	0	4.9
Red Rock Tarween	34.1	0	49.6	0	0	0	4.9
Ripley's Cymopterus	2.2	0	3.2	41	0	0	0.2
Robinson's Monardella	0.2	0	0.3	5	0	0	0

Table 4.4-9. Alternative 3 - Acreage and Mileage of Routes Within Range or Other Protected Habitat for Special Status Plant Species

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Short-joint Beavertail	0.4	0	0.6	9	0	0	0
White- margined Beardtongue	20.2	0.2	29.7	401	0	0	0.5

Table 4.4-10. Alternative 3 - Acreage and Mileage of Routes Within Designated Areas for Unusual Plant Assemblages

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
I A 3 Olancha Greasewood Assemblage	59.7	0	86.8	1343	0	0	4.2
I B 3 Kelso Valley Oak Woodland Assemblage	13.8	0	20.1	2293	0	0	2.8
I D 2 Desert Saltbush Assemblage	1300.3	3.6	1896.6	16348	7	0.9	810.1
II E Yuha Desert/ Cronese Valley/ Ward- Chemehuevi Valley Crucifixion Thorn Assemblage	9.1	0	13.2	185	0	0	5.1
II F Ord Mountain Jojoba Assemblage	0	0	0	0	0	0	0
III B 1 Mesquite Thickets	16	0	23.3	299	0	0	7.5
III B 2 Salt and Brackish Water Marshes Vegetation	0	0.9	1.3	7	0	0	0

Table 4.4-10. Alternative 3 - Acreage and Mileage of Routes Within Designated Areas for Unusual Plant Assemblages

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
III B 4 Palm Oases Vegetation	5.2	0	7.6	118	0	0	3.9
IV A 5 Mojave Sink Desert Willow Assemblage	5.5	0.8	9.2	144	0	0	5.3
IV B 1 Johnson Valley/Lucerne Valley Creosote Bush Clones	0	0	0	2451	0	0	0
IV B 2 Fry Mountains Ancient Mojave Yucca Clones	748.7	20.4	1118.7	10977	0	0	300
IV C 3 Pipes Canyon Huge Joshua Trees	88.6	0	128.9	1881	0	0	13.4

The carbonate endemic plant species are mostly within the Bighorn subregion for route designation. The routes within the habitat have been designated as limited, with motorized use restricted to claimholders, landowners and authorized persons. The terrain generally prevents off-road travel, and use of these roads is infrequent. The mileage of designated routes within the Carbonate Endemic Plants Research Natural Area under each alternative is discussed in Section 4.11.

Alternative 3 Minimization and Mitigation Measures

Table 2.3-8 describes the network-wide minimization and mitigation measures that would be applied under Alternative 3. Many of these measures would act to reduce impacts to vegetation. Measures such as limiting new ground disturbance in DWMA's, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines in DWMA's and 100 feet from route centerlines outside of DWMA's would reduce soil compaction or disturbance in currently undisturbed areas, thus minimizing the potential for direct or indirect effects to vegetation. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific vegetation impacts are considered before authorizing new motorized routes.

Maintain and enforce reduced utilization thresholds for livestock grazing on active allotments based on the season of use and range conditions.

4.4.1.6 Impacts Associated with Alternative 4

Alternative 4 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Except for the designation of TMAs, these decisions would be the same under Alternative 4 as for Alternatives 2 and 3, and therefore effect of these decisions on vegetation is the same as discussed for those alternatives.

Under Alternative 4, the boundaries of the nine TMAs included in Alternative 4 are similar to those in Alternatives 2 and 3, with the exception that TMA 7 (Ridgecrest, El Paso, Rands, and Red Mountain sub-regions) would be split into two separate TMAs. This decision would designate the current Coordinated Access Planning Area (CAPA) as a separate TMA. The CAPA area consists of the Ridgecrest and El Paso sub-regions, which would be split from the Rands and Red Mountain sub-regions, thus creating two separate TMAs. This decision would be made to facilitate BLM's ability to manage intense recreation use, public interest, and local agency interest in this area near Ridgecrest, and would therefore have no direct effect on vegetation. However, this decision would make it easier for BLM to consider vegetation impacts in future route designation decisions in this intensively used area, and thus have an indirect, beneficial effect on vegetation.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The vegetation impacts of these decisions under Alternative 4 are as follows:

PA VII: Under Alternative 4, the C routes that are to the northeast of the Spangler Hills Open Area above the Randsburg Wash Road and those found within the Summit Range and east of Highway 395 would be available for competitive motorized events managed under a SRP. Alternative 4 could potentially impact the suspected Red Rock Poppy occurrence south of the Spangler Hills Open Area. The Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would also be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but the decision would identify a specific route for the speed-controlled connector between the remaining Johnson Valley OHV Area and the Stoddard Valley OHV Open Area, with appropriate mitigation measures.

PA VIII: Under Alternative 4, Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds would all be designated as open to motorized use. Koehn Lakebed would be designated as "Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit". The impacts of the closure of Koehn Lakebed would be the same as discussed for Alternative 2. The vegetation impacts at Cuddeback, Coyote, and Chisholm Trail Lake lakebeds would be the same as those described for Alternative 3, which would also designate these lakebeds as open to motorized vehicles. In general, the lakebeds are unvegetated, and are not associated with

sensitive vegetation communities, special-status plants, or UPAs. Therefore, this decision would not have any direct effect on vegetation resources on the lakebeds.

PA IX: Under Alternative 4, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. The impacts of this decision would be the same as those discussed for Alternative 3.

PA X: Alternative 4 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA's, while stopping and parking would be limited to within 50 feet of the centerline within DWMA's. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 100 feet. This reduction would result in allowing previously disturbed areas to become re-vegetated over time, thus gradually reducing vegetation impacts in those areas. This decision would also reduce the amount of new disturbance, having a similar reduction in vegetation impacts. The effect of these actions would be a net beneficial impact on vegetation resources located adjacent to the routes that are designated as available for motorized use outside of DWMA's.

PA XI: Impacts to upland vegetation, UPAs, special-status plants, and native plants and native plant communities are discussed in the *Impacts Common to All Alternatives* Section. Under this alternative, grazing would be discontinued on Harper Lake, Cronese Lake, and a small portion of the Johnson Valley Allotments. This reduction in grazing use of 78,991 acres would have a direct, beneficial impact on upland vegetation, UPAs, special-status plants, and native plants and native plant communities in the Western Mojave Desert.

Alternative 4 Route Designation

Section 4.4.1.2 described the general impacts to vegetation resources that are common to all alternatives. That analysis concluded that motorized vehicles can have adverse impacts on vegetative communities, special status plants species, and UPAs. Adverse impacts would primarily occur directly through removal of vegetation, soil disturbance, and disturbance of hydrology, and would therefore be focused in areas on or adjacent to motorized routes. Indirect impacts to these resources could also occur due to the spread of invasive plants. Again, these impacts would be focused close to the routes, although they could spread to adjacent areas. The mileage of routes associated with vegetative communities, special status plants, and UPAs under Alternative 4 is presented in Tables 4.4-11, 4.4-12, and 4.4-13, respectively.

Table 4.4-11. Alternative 4 - Acreage and Mileage of Routes Within Identified Vegetative Communities

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
Agriculture	0	0	0	6	0	0	1.5

Table 4.4-11. Alternative 4 - Acreage and Mileage of Routes Within Identified Vegetative Communities

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Arizonan upland Sonoran desert scrub	0.4	0	0.6	7	0	0	0.3
California Annual and Perennial Grassland	58	1.8	87	1325	0	2.6	61.6
California annual forb/grass vegetation	9.7	0	14.1	123	0.6	0	28.3
Californian broadleaf forest and woodland	0.5	0	0.7	12	0	0.2	5.6
Californian evergreen coniferous forest and woodland	10.3	0	15	237	0	1.2	44.3
Californian mesic chaparral	0	0	0	0	0	0	0.6
Californian montane conifer forest	21.8	0	31.7	506	0	0.4	24.4
Californian warm temperate marsh/seep	0	0	0	0	0	0	0.1
Californian xeric chaparral	1.2	0.2	2	35	0	0	10.2
Central and south coastal California seral scrub	0	0	0	0	0	0	0.5
Central and South Coastal Californian coastal sage scrub	15.2	1.2	23.9	343	0	0	60.4
Desert Playa	83.4	45.6	187.6	2472	0	0	100.7
Developed	30.3	2.5	47.7	523	0	0.2	70.1
Disturbed Lands	5.8	0	8.4	90	0	0	17.8

Table 4.4-11. Alternative 4 - Acreage and Mileage of Routes Within Identified Vegetative Communities

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Great Basin cool semi-desert alkali basin	0.3	0	0.4	6	0	0	0.4
Inter-Mountain Dry Shrubland and Grassland	503.3	7.7	743.3	9428	6.3	4	964.6
Inter-Mountain West mesic tall sagebrush shrubland and steppe	12	0.2	17.7	249	0.1	0.5	26.8
Intermontane deep or well-drained soil scrub	101.9	6.4	157.5	2027	7.7	0.3	200.9
Intermontane seral shrubland	4.2	0.7	7.1	95	0	0	8.6
Intermountain Shadscale - Saltbush Scrub	158.2	0.6	231	2035	0	0	135.1
Lower Bajada and Fan Mojavean-Sonoran desert scrub	3686.7	124	5542.8	61536	36.7	5.2	6126.9
Madrean Warm Semi-Desert Wash Woodland/ Scrub	6.5	2.5	13.1	181	0	0	9.6
Mediterranean California naturalized annual and perennial grassland	4.7	0	6.8	70	0	0.2	13.4
Mojave and Great Basin upper bajada and toeslope	180.3	14.2	282.9	3769	0	1.3	429.9
Mojavean semi-desert wash scrub	99.4	5.3	152.3	1327	8.1	1.1	80.5

Table 4.4-11. Alternative 4 - Acreage and Mileage of Routes Within Identified Vegetative Communities

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
North American warm desert bedrock cliff and outcrop	275	15	421.8	6218	0.5	3.1	318.5
North American warm desert dunes and sand flats	13.8	0.8	21.2	330	0	0	34.4
Not Mapped	0	0	0	0	0	0	0
Open Water	0	0	0	0	0	0	0.4
Rocky Mountain mesic subalpine forest and woodland	0.1	0	0.1	0	0	0	0
Rural	5	0	7.3	114	0	0	48.1
Shadscale-saltbush cool semi-desert scrub	158.6	4.3	236.9	1679	2.6	0	164.7
Sonoran-Coloradan semi-desert wash woodland/scrub	36.4	1.5	55.1	477	0	0.9	34.4
Southern Great Basin semi-desert grassland	0.3	0	0.4	0	0	0	0.2
Southwestern North American introduced riparian scrub	0.3	0	0.4	6	0	0	1.4
Southwestern North American riparian evergreen and deciduous woodland	0.3	0	0.4	4	0	0	0.6

Table 4.4-11. Alternative 4 - Acreage and Mileage of Routes Within Identified Vegetative Communities

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Southwestern North American Riparian, Flooded and Swamp Forest/ Scrubland	2.1	0.3	3.5	22	0	0	6.1
Southwestern North American riparian/wash scrub	0.3	0	0.4	5	0	0	0
Southwestern North American salt basin and high marsh	9.1	2	16.1	172	0	0.2	21.1
Western Great Basin montane conifer woodland	24.7	1.8	38.5	583	0	1.4	35.3
Western Mojave and Western Sonoran Desert borderland chaparral	0	0	0	1	0	0	0.4

Table 4.4-12. Alternative 4 - Acreage and Mileage of Routes Within Range or Other Protected Habitat for Special Status Plant Species

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Bakersfield Cactus	0	0	0	0	0	0	0
Barstow Woolly Sunflower	5.8	0	8.4	78	0	0	12.2
Charlotte's Phacelia	1.2	0.6	2.6	38	0.2	0	6.8
Clokey's Cryptantha	4.1	0	6	71	0	0	7
Cushenbury Buckwheat	0.2	0.2	0.6	23	0	0.2	1.9

Table 4.4-12. Alternative 4 - Acreage and Mileage of Routes Within Range or Other Protected Habitat for Special Status Plant Species

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Cushenbury Milk Vetch	0.7	1.8	3.6	65	0	0	3
Darwin Rock Cress	0	0	0	0	0	0	0
Death Valley Sandpaper Plant	8.8	0	12.8	194	0.3	0	5.1
Desert Cymopterus	5.4	0	7.9	65	0	0	6.5
Kelso Creek Monkeyflower	3.3	0	4.8	69	0	0	2.5
Kern Buckwheat	0.7	0	1	13	0	0	0.4
Lane Mountain Milk Vetch	5.3	0.3	8.1	65	0	0	10.9
Little San Bernardino Mountains Gilia	1.5	0.2	2.5	39	0	0	1
Mojave Monkeyflower	8.4	0	12.2	142	0	0	15.6
Mojave Tarplant	0.1	0	0.1	0	0	0	1.1
Ninemile Canyon Phacelia	0.3	0	0.4	7	0	0	0
Parish's Daisy	1	2.5	5.1	90	0	0	3.7
Parish's Phacelia	7.4	0.3	11.2	138	0	0	8.8
Red Rock Poppy	13.8	0	20.1	0	0	0	25.1
Ripley's Cymopterus	0.4	0	0.6	8	0	0	1.7
Robinson's Monardella	0	0	0	0	0	0	0.2
Short-joint Beavertail	0	0	0	0	0	0	0.4
White-margined Beardtongue	12.8	0	18.6	288	0	0	8

Table 4.4-13. Alternative 4 - Acreage and Mileage of Routes Within Designated Areas for Unusual Plant Assemblages

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
I A 3 Olancha Greasewood Assemblage	29.5	0	42.9	694	0	0	33
I B 3 Kelso Valley Oak Woodland Assemblage	0	0	0	0	0	0	17
I D 2 Desert Saltbush Assemblage	889.4	5.5	1301.7	5164	0	2.5	1178.6
II E Yuha Desert/Cronese Valley/Ward- Chemehuevi Valley Crucifixion Thorn Assemblage	1.2	0	1.7	15	0	0	12.2
II F Ord Mountain Jojoba Assemblage	0	0	0	0	0	0	
III B 1 Mesquite Thickets	11.7	1.4	19.1	270	0	0	9.2
III B 2 Salt and Brackish Water Marshes Vegetation	0.6	0	0.9	7	0	0	0
III B 4 Palm Oases Vegetation	4.6	0	6.7	110	0	0	3.9
IV A 5 Mojave Sink Desert Willow Assemblage	4.3	0.9	7.6	122	0	0	6.3
IV B 1 Johnson Valley/Lucerne Valley Creosote Bush Clones	248.8	15.9	385	4393	0	0	792
IV B 2 Fry Mountains Ancient Mojave Yucca Clones	0	0	0	0	0	0	0

Table 4.4-13. Alternative 4 - Acreage and Mileage of Routes Within Designated Areas for Unusual Plant Assemblages

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
IV C 3 Pipes Canyon Huge Joshua Trees	60.1	0.7	88.4	6797	0	0	39.1

The carbonate endemic plant species are mostly within the Bighorn subregion for route designation. The routes within the habitat have been designated as limited, with motorized use restricted to claimholders, landowners and authorized persons. The terrain generally prevents off-road travel, and use of these roads is infrequent. The mileage of designated routes within the Carbonate Endemic Plants Research Natural Area under each alternative is discussed in Section 4.11.

Alternative 4 Minimization and Mitigation Measures

Table 2.3-8 describes the network-wide minimization and mitigation measures that would be applied under Alternative 4. Many of these measures would act to reduce impacts to vegetation. Measures such as limiting new ground disturbance in DWMA's, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines in DWMA's and 100 feet from route centerlines outside of DWMA's would reduce soil compaction or disturbance in currently undisturbed areas, thus minimizing the potential for direct or indirect effects to vegetation. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific vegetation impacts are considered before authorizing new motorized routes.

Maintain and enforce reduced utilization thresholds for livestock grazing on active allotments based on the season of use and range conditions.

4.4.2 Wildlife Resources

4.4.2.1 Introduction

Affected Environment Summary

Section 3.4.4.2 describes wildlife present in the planning area. A total of 50 special status wildlife species were identified as potentially occurring within the planning area (BLM 2005, 2013a,b; Dudek and ICF International 2012). BLM has determined that thirty of these special status wildlife species would not be affected by the proposed action or alternatives based on their habitat requirements and/or known distributions. Of the 20 species potentially affected by the proposed action or alternatives, 19 species have known suitable habitat locations within the project area. Similar to vegetation, these special status wildlife species are commonly located in areas that are specifically designated for protection of these species, including designated critical habitat (DCH), DWMA's, ACEC's, or other conservation areas. These special designations

commonly carry management prescriptions to protect these species, including limitations on future land uses, and limitations on motorized vehicle use.

Methodology

The 2005 WEMO EIS analyzed the impacts of the 5,098 mile route network evaluated in that EIS with respect to wildlife habitat, wildlife corridors, and special status wildlife species. The analysis included a discussion of the effects of OHV use on specific wildlife species, including the desert tortoise, Mohave ground squirrel, and others. The Court evaluated the analysis specific to the Mojave fringe-toed lizard and found that the analysis was inadequate, because it reached a conclusion of no impacts while at the same time acknowledging that there was no recent data on population status and density. The Remedy Order (pg. 15) required BLM to implement additional information gathering and monitoring regarding the status of the Mojave fringe-toed lizard and its habitat. Finally, the Court made a general finding, for all resources, that the range of route network alternatives evaluated was inadequate. No other deficiencies were identified in the analysis of impacts to any other wildlife species, corridors, or habitat.

For this SEIS for the WMRNP, BLM performed the following:

- The route designation process for each alternative included evaluation of the location of each route with respect to the inventoried locations of wildlife corridors and habitat for special status wildlife species, including the Mojave fringe-toed lizard.
- Conducted focused surveys for the Mojave fringe-toed lizard in nine locations in 2012 and 2013. The results of those surveys are presented in Section 3.4, and they were used in the GIS analysis during the development of route network alternatives.
- Conducted route evaluation and quantified the miles of motorized routes that could potentially impact wildlife habitat and corridors across four alternative route networks, ranging from 4,293 to 10,428 miles in size.
- Re-evaluated the 2005 WEMO analysis, and supplemented it with additional information from resource specialists, public comments, changes in conditions within the planning area, and changes in the applicable regulatory framework for wildlife. This additional information is incorporated into the evaluation in Section 4.4.2.2 below.
- Evaluated the impacts of changes in grazing allocation on habitat for special status wildlife species associated with each of the alternatives.
- Addressed cumulative impacts of both OHV use and grazing on wildlife corridors and habitat for special status species.

4.4.2.2 Impacts Common to All Alternatives

As with vegetation, motorized vehicle use and grazing have both direct and indirect effects on wildlife habitat and individuals. By removing vegetation and compacting soil, motorized vehicle routes directly occupy land area that would otherwise be occupied by wildlife, and eliminate plants that would serve as forage and shelter. In addition, motorized vehicles present a direct strike risk to individuals, reducing populations in close proximity to motorized routes.

Each of the indirect effects discussed with respect to vegetation, including changes in hydrology, increase in invasive plants, changes in fire ecology, edge effects, and proliferation of disturbance

due to operation of vehicles outside of the route and grazing would have a similar effect on the quality of those areas for wildlife habitat. Motorized vehicle use would also potentially have an indirect effect on wildlife, such as nesting birds, through the introduction of noise, dust, and light sources. Maintaining routes as motorized routes also acts to provide human access to areas of sensitive wildlife habitat. Increased human access can have an indirect adverse effect on wildlife by introducing noise sources, attracting predators such as ravens, and by allowing dogs to have access to sensitive wildlife areas. Motorized vehicle impacts are generally proportionate to the number of existing routes in an area. Both allowed uses (e.g., vehicle use that remains on existing roads) and prohibited uses (i.e., cross-country travel outside BLM Open Areas, dumping, vandalism, collection) are more likely to occur where roads are relatively more common. Grazing impacts are generally proportionate to the acreage of active allotments allocated to livestock.

The edge effect of an increase in vegetation density due to precipitation runoff can result in attracting wildlife to the edges of routes (Ouren and others 2007). This can result in increased mortality due to vehicle strikes. This edge effect also tends to increase the density and vigor of non-native invasive species which are generally poorer quality food resources for herbivorous sensitive species such as the desert tortoise.

OHV routes can also impact wildlife habitat by causing fragmentation, reducing patch size, and increasing the ratio of edge to interior. These effects can be adverse to species which require large blocks of contiguous habitat, or corridors linking patches of habitat (or linking management units such as Critical Habitat Units for desert tortoise). Severing or impinging upon linkages may be especially significant in relation to the ability of wildlife species to move in response to climate change. The presence of routes can inhibit animal movement due to reluctance of individuals to cross even narrow routes (Ouren and others 2007).

Wildlife impacts were considered in the development of alternative goals and objectives, in designation of individual routes, and in defining specific implementation parameters. Chapter 2 discusses the general resource protection and motorized access objectives that were incorporated into the development of the transportation network alternatives. These objectives were used to inform decisions regarding which linear features would be included in the motorized, non-motorized, and non-mechanized transportation network, and which features would be closed (i.e., designated as transportation linear disturbances), under each alternative. The goals and objectives developed for Alternative 2 focus on enhancing sensitive resource values and areas, including threatened and endangered species and other sensitive biological and non-biological landscape factors, and managing access to de-emphasize casual multiple-use motorized and mechanized touring. In contrast, the goals and objectives for Alternative 3 focus on meeting the diverse transportation, access, and recreational needs of the public, and managing access to emphasize casual multiple-use motorized and mechanized touring.

Wildlife impacts were also considered by evaluating route locations with respect to DWMAAs, ACECs, DCH, the Mohave Ground Squirrel Core Areas, nest locations (for golden eagles), wildlife corridors, and other identified habitat features. In addition, the WMRNP alternatives include consideration of stopping and parking distances from routes in order to minimize disturbance in previously undisturbed areas, thus reducing the potential for new impacts to wildlife habitat and individuals in those areas. Therefore, minimization of wildlife impacts was a factor both in development of the alternative route networks, and in the specific limitations placed on routes in those networks. These minimization and mitigation measures differ among

the alternatives, and are therefore discussed in more detail in Sections 4.4.2.3, 4.4.2.4, 4.4.2.5, and 4.4.2.6 below.

The general manner in which motorized vehicle use and grazing impacts wildlife is similar for many species, and therefore discussion of the effects of vehicle impacts, soil compaction, and many other impacts for each individual species would be redundant. The following discussion is focused on the desert tortoise because it has the most widespread habitat of any of the special-status wildlife species in the planning area. However, the effects discussed are expected to be applicable to other wildlife species in the planning area. Additional discussions are presented for other species where specific data regarding impacts of motorized vehicle use and grazing are available, including the Mohave ground squirrel, Mojave fringe-toed lizard, bighorn sheep, and bird species. Impacts to all special-status wildlife species, including species not discussed here, were still considered as part of the route designation process, and identification of minimization and mitigation measures. Chapter 3 presents maps of the distribution of all species within the planning area, and the tables in Sections 4.4.2.3, 4.4.2.4, 4.4.2.5, and 4.4.2.6 below summarize the mileage and acreage of routes of each designation type within the habitat of all species and differences in allocation of grazing allotments between livestock and wildlife species.

Desert Tortoise

Designating and implementing a motorized vehicle access network in DWMA that is supported by land use laws and compatible with tortoise recovery is the single most important management action that could be implemented to minimize the widest variety of known human impacts to desert tortoise. The goal is to designate and implement a route network throughout DWMA that would provide for public access, authorized uses, and the following desired results:

- Fewer losses of tortoises to crushing, poaching, pet collection, intentional vandalism, and similar activities requiring vehicle access;
- Less degradation and loss of occupied habitat (first priority) and suitable habitat (second priority);
- Larger blocks of unfragmented habitat, which would be achieved if vehicle use is prevented on closed routes, does not result in increased cross-country travel in adjacent areas, and promotes recovery of suitable habitats more quickly than would naturally occur;
- Route closure in higher density tortoise areas is likely to provide the most benefit in terms of avoiding mortalities and other losses;
- Route closure in lower density tortoise areas would alleviate losses of animals that are critically important to natural repatriation and population recovery.

Motorized vehicle use can have both direct and indirect effects on desert tortoises and their habitat. The primary direct effect is vehicles striking desert tortoises while driving on routes of travel. As is usually the case, hatchling desert tortoises are the most difficult individuals to detect and may be inadvertently struck by vehicles. However, they may be at somewhat less risk than sub-adult and adult desert tortoises because their territories are presumably smaller, they may move around less and therefore are less likely to encounter a road. Their propensity to be more active during cooler times of the year may extend the periods during which they are at risk from vehicle strikes.

Although larger individuals can be seen on roads more readily than the younger, smaller ones, vehicles can travel at speeds that reduce the ability of drivers to detect and avoid desert tortoises. Rises and turns in roads also decrease the ability of drivers to detect desert tortoises. The actual level of mortality that would occur along a specific road would be influenced by many variables and is difficult to predict; the level and type of use of the road by vehicles and the number of desert tortoises present during periods of heavy use are primary factors that are difficult to predict. Mortality associated with vehicle strikes would be greatest in the spring and fall, in areas where desert tortoises are most common. Along heavily used roads, the number of desert tortoises is depressed for some distance from the edge of the road; along lightly used roads, no significant difference exists in the distribution of desert tortoises (Von Seckenforff, Hoff and Marlow 2002).

Based on a review of the literature, the USGS (Ouren Et al. 2007) concludes that an “important concern” regarding OHV effects on desert tortoise is the susceptibility of this species to mortality on all types of roads. According to the Recovery Plan (USFWS 2011), effects to desert tortoise habitat from roads, routes, trails, and railroads occur during initial stages or off-highway vehicle route/trail establishment when vegetation and soils are lost or severely degraded. Hoff and Marlow (2002) as cited in the Recovery Plan (USFWS 2011) demonstrated that there is a detectable impact on the abundance of desert tortoise sign adjacent to roads and highways with traffic levels from 220 to over 5,000 vehicles per day and the extent of the detectable impacts was positively correlated with the measured traffic level; the higher the traffic counts, the greater the distance from the road reduced tortoise sign was observed. The Recovery Plan also states that Hoff and Marlow (2002) concluded that unpaved access roads with lower traffic levels may have significant effects on tortoises. As cited in the Recovery Plan, Boarman (2002) concludes that off-highway vehicle activities remain an important source of habitat degradation and could result in reductions in desert tortoise densities (Boarman 2002). Therefore, the extent of mortality of desert tortoises is anticipated to increase as the density of roads and the number of animals increase. At some point, vehicle use on roads (and other activities that accompany vehicle use) would likely reduce the number of desert tortoises to a point where the level of mortality also decreases, simply because fewer desert tortoises live in the region.

Some routes of travel are located in washes. Washes can provide important resources to desert tortoises because they often support forage plants at times when upland areas do not; desert tortoises also frequently use the banks of washes to construct their burrows. At times, desert tortoises may use washes to move through their territories; they may travel along washes more frequently in extremely rugged terrain. Consequently, vehicle use in washes has the potential to have a relatively greater degree of impact on desert tortoises than the use of roads. Adverse effects would be greatest in more narrow, vegetated washes where vehicles do not have room to maneuver around shrubs or avoid riding partially up banks; the ability of drivers to see desert tortoises in these washes is also diminished. In wide washes, where flooding causes relatively frequent disturbance and few shrubs are present, the quality of desert tortoise habitat is already reduced; therefore motorized vehicles will likely have less of an effect on desert tortoises or their habitat.

The human activities that routes of travel accommodate may pose a greater threat to desert tortoises than being struck by a moving vehicle because of the variety of indirect effects that can result. Routes of travel through the desert increase the frequency at which people can interact with desert tortoises. These interactions can lead to uninformed or malicious interactions that

result in injury, mortality, or collection of desert tortoises. Unauthorized handling or restraint of a desert tortoise could induce physiological stress that reduces the animal's ability to withstand high temperatures. Additionally, desert tortoises may seek shelter in the shade of vehicles parked along a route of travel and be crushed when those vehicles are subsequently moved. Improper disposal of food wastes and trash left by users of routes of travel can attract predators of the desert tortoise, especially common ravens. Pet dogs brought onto public lands by people using routes of travel could disturb, injure, or kill desert tortoises.

The CDCA Plan currently allows cars and trucks to drive and park up to 300 feet from a route of travel. This authorized off-road use can crush desert tortoises, which would be more difficult to see away from roads, destroy their burrows, crush shrubs that they use for cover, and disturb soils and allow invasion by non-native plant species. In some areas, recreation users prefer specific sites where they can congregate, which degrades habitat to the point that desert tortoises would be unlikely to forage or burrow in these areas.

An increase in non-native plants can also increase the spreading of fire across the desert landscape (Lovich and Bainbridge 1999, Brooks and Esque 2002). Neither desert tortoises nor the plant species upon which they depend are adapted to fire; consequently, fires could result in a substantial loss of desert tortoises and severely alter the plant community structure within their habitat (Brooks and Esque 2002). Also, non-native plants tend to provide less nutrition value than do native species.

Most routes of travel are not used on such a frequent basis that they would inhibit movement or be likely to result in traffic-induced mortality of the desert tortoise. Most use of routes of travel involves recreational activities, which generally occur at higher levels on weekends and holidays. However, some routes of travel are maintained such that the bed of the road is lowered and side berms raised so much, that if desert tortoises enter that roadway, they cannot exit. These animals are subsequently threatened with predation, exposure to extreme temperatures, collection, and collision with vehicles.

The USFWS notes that neither the BLM or the USFWS has definitive information on how differing route networks affect the desert tortoise (USFWS 2002a); obviously roadless areas would have the least adverse effect on desert tortoises and their habitat; it follows that with increasing amounts of open routes within the planning area, the greater the impact to the desert tortoise and its habitat. However, the use patterns on the open route network may be as important, particularly in areas where tortoises are more likely to be found.

The BLM grazing program was analyzed in the 2006 WEMO Plan, and the decisions from the planning effort led to grazing that was substantially curtailed in desert tortoise DWMA, with additional measures included for the allotments that are still available for grazing. In addition, a mechanism for voluntary relinquishment of active leases was adopted in the WEMO Plan. BLM is considering whether to further modify the BLM grazing program in the WEMO Planning area by completely discontinuing grazing in DWMA (or parts of allotments adjacent to DWMA). The strategy of discontinuing livestock grazing from desert tortoise recovery areas was recommended in the 1994 Recovery Plan. Although no longer specifically recommended in the 2011 Revised Recovery Plan, discontinuation of livestock grazing is consistent with the recommendation of "continuing to minimize impacts to tortoise from livestock grazing within tortoise recovery areas" (*Revised Recovery Plan for the Mojave Population of the Desert*

Tortoise, May 6, 2011, Section 2.16, p. 78). Therefore, reductions in grazing extent within DWMA's (or areas adjacent to DWMA's is considered a net benefit for this species.

Mojave Fringe-Toed Lizard

Similar to the desert tortoise, motorized vehicle use can have both direct and indirect effects on Mojave fringe-toed lizards and their habitat. The primary direct effects include vehicle collision and habitat loss or modification. It is assumed that there would be adverse impacts to the Mojave fringe-toed lizard where motorized routes pass through suitable and occupied habitat.

Although data on OHV use in habitat near the Mojave River is not available, recent observations from BLM staff indicate a low potential for OHV use off the designated routes and into the channel due to the topography of the area. This would result in minimal adverse effects to this species. Additionally, Mojave fringe-toed lizards are rarely found in the stream channel. Instead, sand bars and adjacent habitat with the preferred vegetation components are more important for this species than the stream channel. These are the same areas where designated open routes tend to be concentrated. Additional observations indicate that the road within the stream channel of the Mojave River is blown out during flood events every five years or so. These natural causes contribute to the loss of individuals as well.

Mohave Ground Squirrel

The Mohave ground squirrel (MGS) is a medium-sized species that would experience similar threats from motorized vehicles as those described for desert tortoise. OHVs may pose a threat to the MGS by crushing individuals or burrows, and degrading habitats (Gustafson 1993, Laabs 1998). With time, the plant diversity and abundance decreases in areas with intense OHV use (Laabs 1998), which reduces cover needed by the species for shade and forage. Gustafson (1993; citing Bury and Luckenbach 1977), reported that even light OHV use in the Mojave Desert can result in lost or compacted topsoil, unavailability of seeds for birds and mammals, and disrupted soil mantles. Gustafson (1993) reported, "...it is known that the squirrel is run over by vehicle[s]," but did not provide any specific reports.

There is anecdotal evidence that the MGS may be killed on both paved and dirt roads, although it has been suggested that they are too quick for this to happen. For example, during tortoise surveys conducted near Water Valley, northwest of Barstow, in 1998, LaRue crushed a juvenile male MGS on a dirt road as it attempted to cross in front of his truck. In 1997, LaRue observed a juvenile male (likely a hybrid) as it was crushed on National Trails Highway, several miles north of Helendale. One of the nine MGS observed in 1998 (LaRue, unpublished data) darted into burrows that were located in the berms of a dirt road. The juvenile female was observed for about 20 minutes eating cryptantha alongside the road, and later using two different burrows located in berms on opposite sides of the road. Recht (1977) also observed MGS feeding on Russian thistle that was congregated along shoulders of roads in northeastern Los Angeles County.

Goodlett and Goodlett (1991) have shown, in the Rand Mountains, that the heaviest vehicle impacts occur immediately adjacent to both open and closed routes. It is plausible, then, that individual MGS using resources adjacent to roads are more likely to be in harm's way than those animals occurring in roadless areas. It is also plausible that juvenile MGS, which are most likely to travel longer distances than adults, are somewhat more susceptible to vehicle impacts than adults. Although adults may still be susceptible to vehicle impacts within their somewhat- fixed

home ranges, dispersing juveniles are likely to encounter more roads than an adult living within a fixed region.

The potential to crush squirrels likely increases as the prevalence and use of roads increases in a given region. Given the relatively higher incidence of cross-country travel in open areas (1998-2001 WMP data), vehicle impacts are more likely to occur there and other places with similar densities of cross-country tracks, depending on resident and dispersing populations of the MGS.

Bighorn Sheep

OHV-related effects such as habitat fragmentation and reduced habitat connectivity are generally associated with area-sensitive wildlife species including, but not limited to, desert tortoise, mountain lion, gray wolf, and black bear. Small and medium-sized wildlife species may be more likely than larger species to experience direct OHV impacts from vehicle collisions and/or habitat destruction. For larger animals, such as the Bighorn sheep, OHV-related effects such as noise would be more likely to occur than direct mortality from vehicular impact.

Vehicular traffic is a source of noise and other stimuli which has the potential for disturbing wildlife along roads and trails. Excessive noise from OHV activities would directly impact wildlife, including potential disturbance effects from physiological impacts such as stress, and/or altered behaviors and population distribution/dispersal patterns, which can lead to declines in local population size, survivorship, and productivity (Ouren et. al. 2007).

Larger animals also exhibit responses to the intensity of traffic and traffic noise. Lyren (2001) found that coyotes changed their road-crossing periods in response to changes in traffic intensity throughout the day, and Singer (1978) reported that, in response to the shifting of truck gears, mountain goats ran away from a road edge when the truck was 1 km (0.6 mi) away from them, and they ran away from a lick that was 400 m (437.4 yd) from the road. For bighorn sheep, the most prominent potential OHV-related effects would be direct impacts from noise and general disturbance; vehicle intrusion into occupied habitat, especially lambing areas, can be a minor threat. Often, bighorn sheep will move away from otherwise suitable habitat due to increased human activity.

The potential also exists for unrestricted off-roading activities within areas where bighorn sheep are known to occur; such activities could result in destruction of plants and/or foraging habitat that bighorn sheep depend on.

Bird Summary

In addition to habitat fragmentation, routes and trails also create habitat edges, which can result in indirect edge effects related to OHVs. Often, these edge effects extend into the desert interior, well beyond a route's actual footprint. Because vegetation cover can be greater along road edges, many species may be attracted to right-of-way habitats; however, these areas that provide ample resources may also impose higher mortality rates. For example, birds may be attracted to lush roadside vegetation for breeding, nesting, or foraging, but they may be at great risk of mortality due to being hit by vehicles. Areas of extensive OHV use have also been documented as exhibiting decreased species density and diversity (Ouren et. al 2007).

The following special status bird species have known suitable habitat within the project area and could potentially be affected by the proposed action or alternatives: Bendire's thrasher, burrowing owl, gray vireo, least bell's vireo, LeConte's thrasher, Swainson's hawk, and golden eagle. The

primary potential OHV threat to special-status birds in the project area would likely be disturbance (including noise), specifically disturbance to nest sites and disturbance to foraging behavior.

Potential OHV-related threats to burrowing owls include direct mortality from vehicle collisions (this species has a high tolerance for vehicle disturbance, but this causes high numbers of collisions), habitat degradation, and disturbance by vehicles at nest sites. Similarly, LeConte's thrashers can be sensitive to vehicle traffic during the nesting season, especially off road travel in washes. Golden eagles and/or other raptors could experience potential impacts from OHV use through disturbance to foraging behavior, loss of prey species (e.g., lizards, small mammals), and disturbance of nest sites. Off-road vehicle disturbance to prairie falcon nest sites has been documented, as well as declines in prey species in the Mojave Desert due to OHV effects (Berry 1980). A recent study of OHV recreation volume effects on breeding raptors and their habitat (Spaul and Heath 2014) concluded that the majority of recreational traffic did not illicit a discernible response from nearby eagles, unless prolonged activity occurred near the bird or nest. Additionally, a study of changes in golden eagle reproduction related to increased OHV activity in Idaho between 1999 and 2009 showed a correlation between significant increases in OHV use and decreases in occupancy and success of territories in close proximity to recreational trails and parking areas (Steenhof, Brown, and Kochert 2014).

In recent years, BLM offices in other locations have implemented seasonal wildlife closures to protect several bird species, including the golden eagle, during sensitive nesting periods (BLM 2012). Because human disturbance, such as off-road vehicle activity, has the potential to result in nest failure or abandonment, specific routes or trails can be closed during certain months to preserve nesting and roosting habitat. BLM has also implemented seasonal closures of grazing allotments to protect several riparian bird species such as Least Bell's Vireo and Southwestern Willow Flycatchers.

Resource-Specific Minimization and Mitigation Measures

Resource-specific minimization and mitigation measures that were considered as part of the route designation process for each alternative, and that will be considered for each route during implementation of the WMRNP, were described in Table 2.1-4. For wildlife, the measures were developed specifically for special-status species, desert tortoise habitat in DWMA's, near active golden eagle nests, in the Mohave Ground Squirrel Core Area, and in wildlife corridors. These measures are described below.

For special-status wildlife resources, potential minimization and mitigation measures include:

- Construct Wildlife Bypass;
- Restrict stopping/parking/camping;
- Add Install barriers;
- Maintain existing barriers;
- Remove Attractants;
- Seasonal use restriction; and

- Determine that no additional minimization and mitigation measure is needed based on site evaluation.

For tortoise habitat in DWMA's, potential minimization and mitigation measures include:

- Install Wildlife Bypass;
- Install Wildlife Safety Zone signs;
- Modify access to a less impacting designation;
- Seasonal Use Restriction;
- Install access type restrictor;
- Re-align route to avoid designated area;
- Restrict stopping/parking/camping;
- Add parking/camping area;
- Install barriers and maintain or upgrade existing barriers;
- Remove Attractants;
- Construct or Install Educational information such as signs;
- Install fencing;
- Narrow route;
- Maintain berms so that they do not adversely impact the movement of desert tortoise;
- Monitor the route for signs of increasing impacts to a sensitive resource, and
- Determination that no additional minimization and mitigation measure is needed based on site evaluation.

For golden eagle nests, potential minimization and mitigation measures include:

- Seasonal closure during nesting season;
- Install access type restrictor;
- Re-align route to avoid environmentally sensitive area;
- Limit the route to lower intensity use or prohibit Special Recreation Permitted use;
- Restrict stopping/parking/camping;
- Install barriers;
- Remove Attractants;
- Construct or Install Educational information such as signs;
- Monitor the route for signs of increasing impacts to a sensitive resource, and
- Determine that no additional minimization and mitigation measure is needed based on site evaluation.

For the Mohave Ground Squirrel Core Area, potential minimization and mitigation measures include:

- Construct Wildlife Bypass;
- Install Wildlife Safety Zone signs;
- Modify access to a less impacting designation;
- Limit the route to lower intensity use or prohibit Special Recreation Permitted use;
- Install access type restrictor;
- Re-align route to avoid designated area;
- Restrict stopping/parking/camping;
- Add parking/camping area;
- Install barriers and maintain or upgrade existing barriers;
- Remove Attractants;
- Construct or Install Educational information such as signs;
- Install fencing;
- Narrow route;
- Monitor the route for signs of increasing impacts to a sensitive resource, and
- Determine that no additional minimization and mitigation measure is needed based on site evaluation.

For wildlife corridors, potential minimization and mitigation measures include:

- Construct Wildlife Bypass;
- Install Wildlife Safety Zone signs;
- Modify access to a less impacting designation;
- Limit the route to lower intensity use or prohibit Special Recreation Permitted use;
- Install access type restrictor;
- Re-align route to avoid designated area;
- Restrict stopping/parking/camping;
- Add parking/camping area;
- Install barriers and maintain or upgrade existing barriers;
- Remove Attractants;
- Construct or Install Educational information such as signs;
- Install fencing;
- Narrow route;

- Maintain berms so that they do not adversely impact the movement of desert tortoise;
- Monitor the route for signs of increasing impacts to a sensitive resource; and
- Determine that no additional minimization and mitigation measure is needed based on area evaluation.

Residual Impacts After Implementation of Mitigation Measures

Residual effects to wildlife would continue after application of mitigation measures, both with continued motorized vehicle use, and following closure of routes. Although impacts would be reduced from those that would have existed without mitigation measures, motorized vehicles could still impact special-status wildlife, wildlife habitat, and wildlife corridors. Impacts would continue to occur due to direct strikes by motorized vehicles, motorized vehicle noise, and disturbance of soil and vegetation in wildlife habitat and corridors. Closure of routes in those areas may not result in recovery in the short-term, unless active rehabilitation efforts are taken.

4.4.2.3 Impacts Associated with the No Action Alternative

Alternative 1 Plan Amendment

Under the No Action Alternative, none of the proposed plan amendment decisions would be adopted.

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct impacts to wildlife. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider wildlife and use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM's ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may benefit wildlife resources by facilitating adaptive management changes in response to changing on-the-ground conditions. By not adopting these decisions under the No Action Alternative, these potential beneficial effects would not be achieved. In addition, by not adopting these decisions, the CDCA Plan would not be amended to conform to current policy or regulation.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson

Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. Changes to motorized vehicle use in the locations specified in these decisions under the action alternatives do have the potential to impact wildlife in those locations. Impacts may still occur to desert tortoise, Mohave ground squirrel, burrowing owls, pallid bats, and small lizards and animals as a result of motor vehicle use in these areas on remaining available routes, as summarized in section 4.4.1.2 Impacts Common to All Alternatives, despite adopted measures, including fencing, oversight, and measures to increase public information prior to use of routes in the Rand-Fremont area.

Forage that was allocated to livestock grazing within grazing allotments that will be reallocated to wildlife resources under the No Action Alternative is presented in Table 4.4-16.

Alternative 1 Route Designation

The evaluation of impacts common to all alternatives concluded that the use of motorized vehicles on the designated network can have adverse impacts on wildlife habitat, and on special status wildlife species. Like the analysis of impacts to vegetation, these impacts would be focused in areas in close proximity to the motorized routes. The mileage of routes associated with wildlife corridors and special status wildlife areas under the No Action Alternative is presented in Tables 4.4-14 and 4.4-15, respectively.

Table 4.4-14. Alternative 1 - Acreage and Mileage of Routes Within Wildlife Corridors

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
Routes Within Wildlife Corridor	2219.5	29.8	3271.7	75185	0	0.3	3683.6

Table 4.4-15. Alternative 1 - Acreage and Mileage of Routes Within Range or Other Protected Habitat for Special Status Wildlife Species

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
Bendire's Thrasher	10.2	0	14.8	404	0	0	70.1
Bighorn Sheep	81.3	0.1	118.4	2660	0	0	142.3
Burrowing Owl	4.3	0.1	6.4	52	0	0	4.6

Table 4.4-15. Alternative 1 - Acreage and Mileage of Routes Within Range or Other Protected Habitat for Special Status Wildlife Species

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Desert Tortoise (Total within Critical Habitat)	2118.2	43.8	3144.7	21460	0	0	2665.4
Desert Tortoise (Fremont-Kramer Designated Critical Habitat Unit only)	916.3	5.7	1341.1	7825	0	0	1231.1
Desert Tortoise (Ord-Rodman Designated Critical Habitat Unit only)	281.1	18.8	436.2	2695	0	0	520
Desert Tortoise (Superior-Cronese Designated Critical Habitat Unit only)	116.2	15.3	191.3	6947	0	0	64.3
Desert Tortoise (Pinto Mountains Designated Critical Habitat Unit only)	818.1	4	1195.8	1340	0	0	686
Fringed Myotis	0.1	0	0.1	5	0	0	0.1
Gray Vireo	0	0	0	0	0	0	0.7
Least Bell's Vireo	0	0	0	19	0	0	2.4
LeConte's Thrasher	9	0	13.1	598	0	0	18
Mojave Fringe-toed Lizard ¹	19.7	0	28.7	569	0	0	28.3

Table 4.4-15. Alternative 1 - Acreage and Mileage of Routes Within Range or Other Protected Habitat for Special Status Wildlife Species

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Northern Sagebrush Lizard	0	0	0	14	0	0	0.1
Pallid Bat	5.4	0	7.9	240	0	0	23.3
Spotted Bat	0	0	0	0	0	0	0.4
Swainson's Hawk	0	0	0	19	0	0	0.7
Western Mastiff Bat	2.7	0	3.9	147	0	0	3.3
Golden Eagle 0-.5 Miles of active nests	20.8	2.3	33.6	901	0	0	79.1
Mohave Ground Squirrel	850.6	0	1237.2	21043	0	0	2026.7

1 Mojave fringe-toed lizard is at risk from any route within its sand habitat between April 1 and September 30.

Table 4.4-16. Alternative 1(No Action Alternative) – AUMs by Acres of Grazing Allotments Re-allocated From Grazing to Wildlife Resources

Allotment	Re-Allocation of AUMs by Acres Within DWMA and CHU	Re- Allocation of AUMs by Acres Outside DWMA and CHU
Ord Mountain (Ord-Rodman DWMA/CHU)	0	0
Cantil Common (Fremont-Kramer DWMA/CHU)	0	0
Shadow Mountain (Fremont-Kramer DWMA/CHU)	0	0
Harper Lake (Superior-Cronese DWMA/CHU)	0	0
Cronese Lake (Superior-Cronese DWMA/CHU)	0	0
Buckhorn Canyon (Fremont-Kramer DWMA/CHU)	0	0
Johnson Valley	0	0
Cady Mountain	0	0
Double Mountain	0	0
Oak Creek	0	0
Total Acres Re-Allocated	0	0

Alternative 1 Minimization and Mitigation Measures

Table 2.3-1 describes the network-wide minimization and mitigation measures that are currently specified in the CDCA Plan, WEMO Plan, and/or the Court's Remedy Order, and which are therefore applicable under Alternative 1, the No Action Alternative. Whether they were applied during the route designation process or are mitigation measures, these measures act to reduce impacts to wildlife habitat and individuals. Measures such as limiting new ground disturbance in DWMA's, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines in DWMA's and 300 feet outside of DWMA's would reduce the potential for direct vehicle strikes to wildlife, and for degradation of wildlife habitat in areas adjacent to routes, as compared to pre-2006 conditions before these limitations were enacted. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific wildlife impacts are considered before authorizing new motorized routes.

4.4.2.4 Impacts Associated with Alternative 2

Alternative 2 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct impacts to wildlife. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider wildlife and use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM's ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may benefit wildlife by facilitating adaptive management changes in response to changing on-the-ground conditions. By adopting these decisions, the CDCA Plan would be amended to conform to current policy and regulation.

As a result of the modification of the language limiting the route network to existing routes, new routes could potentially be designated in locations with no existing routes, and could have adverse impacts to localized resources near that route. New routes may be established to provide access for new authorized uses, or to avoid identified impacts to resources. The impacts to wildlife of each new route would be evaluated as part of the BLM's consideration of the application for land use authorization. As part of that evaluation, BLM would consider the potential impacts of the new route as required by 43 CFR 8342.1, potential alternatives to provide the necessary access, and minimization and mitigation measures to address any identified impacts to wildlife. In the case of routes established to provide access to authorized

uses, the duration of the designation of the new route would be the same as authorized land use it is intended to support. Once the term of the authorized land use expires, the route would generally be considered for closure, and the terms and conditions of the authorized land use would require the lessee, permittee, or ROW holder to rehabilitate the route. BLM may also determine at a later date, consistent with 43 CFR 8342.1, that the route provides necessary access for some other reason and could designate the route accordingly, releasing the authorized land user from their requirement to rehabilitate the route. In the case of routes established to address impacts to resources, the new route may be permanent.

Five of the plan amendment decisions being considered would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include changes to C routes, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, and changes in allowable stopping, parking, and camping distances. The wildlife impacts of these decisions under Alternative 2 are as follows:

PA VII: All proposed C routes are located outside of the protected habitat for any of the special status wildlife species being considered with the exception of the Mohave ground squirrel. Under this alternative approximately 3 miles of routes fall within MGS core population areas. Under Alternative 2, there would be a seasonal restriction placed upon the use of the currently designated C routes for competitive motorized events managed under a SRP. These routes would be available for use by competitive motorized events during the months of November, December, and January. With the implementation of a seasonal closure the potential for a direct take of the species should be very low.

Since OHV competitive events conducted in other OHV Open Areas would be limited to inside the Open Area boundaries under this alternative, the remaining designated long-distance race corridor, the Johnson Valley to Parker Valley Corridor would be removed under Alternative 2. An event has not been run in this corridor since the listing of the desert tortoise as threatened in 1989, and so deletion of this event in the plan amendment would be beneficial to the tortoise. Since the event has not been run in this corridor 1989, other routes and areas within the planning area are not anticipated to receive increased use for recreation as a result of the elimination of this competitive event route. Therefore, this plan amendment decision would not have any effect on wildlife by increasing the recreational use of routes in other areas.

PA VIII: Alternative 2 would designate Koehn Lakebed as closed to motorized vehicles. There would be no change to the use of Cuddeback, Coyote, or Chisholm Trail Lakes. In general, the lakebeds do not support wildlife, and are not associated with wildlife corridors or special-status wildlife. Since Koehn lakebed would be closed, and there would be no change to the status of the other three lakebeds, there would not be a direct effect to wildlife. Because Koehn lakebed is currently receiving relatively light use, the amount of displaced use to other routes would be low. Therefore, this plan amendment decision is not expected to have an indirect, adverse impact on wildlife by increasing the recreational use of routes in other areas.

PA IX: There would be no change to access to the Rand Mountains-Fremont Valley Management Area under Alternative 2. Impacts may still occur to desert tortoise, Mohave ground squirrel, burrowing owls, pallid bats, and small lizards and animals as a result of motor vehicle use in the Rand-Fremont area, despite fencing and measures to increase public information prior to use of routes in the Rand-Fremont area.

PA X: Alternative 2 would limit stopping and parking to previously disturbed areas within 50 feet from the route centerline, both inside and outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 50 feet. Camping would be allowed adjacent to designated routes in previously disturbed areas, not to exceed 50 feet from the centerline, throughout the WEMO Planning Area. This reduction from the limits in the No Action Alternative would reduce the potential for motorized vehicle use to impact wildlife in those areas. The effect of these actions would be a net beneficial impact on wildlife resources.

PA XI: Discontinuing livestock grazing in DWMA's and re-allocate all of the Animal Unit Months (AUM, an expression of livestock stocking commitment based on forage) from livestock forage to wildlife use and ecosystem functions would enhance habitat of special-status species, including the listed desert tortoise. This includes portions of the Ord Mountain, Cantil Common, and Shadow Mountain Allotments, a small portion of the Johnson Valley Allotment and the entire Harper Lake and Cronese Lake Allotments.

Alternative 2 Route Designation

Section 4.4.2.2 described the general impacts to wildlife that are common to all alternatives. That analysis concluded that motorized vehicles can have adverse impacts on wildlife habitat, and on special status wildlife species. Like the analysis of impacts to vegetation, these impacts would be focused in areas in close proximity to the motorized routes. The mileage of routes associated with wildlife corridors and special status wildlife areas under Alternative 2 is presented in Tables 4.4-17 and 4.4-18, respectively. Forage that was allocated to livestock grazing within grazing allotments that will be reallocated to wildlife resources under Alternative 2 is presented in Table 4.4-19.

Table 4.4-17. Alternative 2 - Acreage and Mileage of Routes Within Wildlife Corridors

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Routes Within Wildlife Corridor	1592.6	160.8	2544.6	19906	10	17.1	4173.1

Table 4.4-18. Alternative 2 - Acreage and Mileage of Routes Within Range or Other Protected Habitat for Special Status Wildlife Species

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Bendire's Thrasher	6.2	2.6	12.8	103	0	0.2	64
Bighorn Sheep	57.1	0.3	83.5	424	0	0.5	157.6
Burrowing Owl	0.2	0	0.3	13.0	0	0	2.5

Table 4.4-18. Alternative 2 - Acreage and Mileage of Routes Within Range or Other Protected Habitat for Special Status Wildlife Species

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Desert Tortoise (Total within Critical Habitat)	1698.9	48.6	2396.4	18916	0	1.3	3161.5
Desert Tortoise (Fremont-Kramer Designated Critical Habitat Unit only)	623.9	36.4	960.4	7465	0	1.3	1496.1
Desert Tortoise (Ord-Rodman Designated Critical Habitat Unit only)	255.1	6.1	380	2692	0	0	553.3
Desert Tortoise (Superior-Cronese Designated Critical Habitat Unit only)	615.0	6	903	6950	0	0	1075.1
Desert Tortoise (Pinto Mountains Designated Critical Habitat Unit only)	121.2	0.1	176.4	1340	0	0	75.5
Fringed Myotis	0.1	0	0.1	1	0	0	0.1
Gray Vireo	0	0	0	0	0	0	0.7
Least Bell's Vireo	0.4	0	0.6	5	0	0	0.3
LeConte's Thrasher	7.1	0.2	10.6	96.0	0	0	19.5
Mojave Fringe-toed Lizard ¹	9.5	0.2	14.1	59.0	0	0.3	38
Northern Sagebrush Lizard	0	0	0	0	0	0	0.1
Pallid Bat	3.3	0.3	5.2	10	0	0	25.1
Spotted Bat	0	0	0	0	0	0	0.3
Swainson's Hawk	0.2	0	0.3	2	0	0	0.5
Western Mastiff Bat	2	0	2.9	24	0	0	4
Golden Eagle 0-.5 Miles of active nests	16.3	5.9	32.3	234	0	0	79.9
Mohave Ground Squirrel	415.9	0	604.9	4824	14.2	0	2446.5

1 - Mojave fringe-toed lizard is at risk from any route within its sand habitat between April 1 and September 30.

Table 4.4-19. Alternative 2 – AUMs by Acres of Grazing Allotments Re-allocated From Grazing to Wildlife Resources as Compared to the No Action Alternative

Allotment	Re-Allocation of AUMs by Acres Within DWMA and CHU	Re- Allocation of AUMs by Acres Outside DWMA and CHU
Ord Mountain (Ord-Rodman DWMA/CHU)	117,290	0
Cantil Common (Fremont-Kramer DWMA/CHU)	6,726	0
Shadow Mountain (Fremont-Kramer DWMA/CHU)	601	0
Harper Lake (Superior-Cronese DWMA/CHU)	15,936	2,182
Cronese Lake (Superior-Cronese DWMA/CHU)	25,992	22,517
Buckhorn Canyon (Fremont-Kramer DWMA/CHU)	0	7,634
Total Acres Re-Allocated	166,545	32,333

Alternative 2 Minimization and Mitigation Measures

Table 2.3-5 describes the network-wide minimization and mitigation measures that would be applied under Alternative 2. Many of these measures would act to reduce impacts to wildlife habitat and individuals. Measures such as limiting new ground disturbance in DWMA, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines would reduce the potential for direct vehicle strikes to wildlife, and for degradation of wildlife habitat in areas adjacent to routes. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific wildlife impacts are considered before authorizing new motorized routes.

4.4.2.5 Impacts Associated with Alternative 3

Alternative 3 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM’s procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. These decisions would be the same under Alternative 3 as for Alternative 2, and therefore effect of these decisions on wildlife is the same as discussed for Alternative 2.

Five of the plan amendment decisions being considered would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include changes to C routes, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, and changes in allowable stopping, parking, and camping distances. The wildlife impacts of these decisions under Alternative 3 are as follows:

PA VII: Under Alternative 3, there would be C routes available for competitive motorized events managed under a SRP in three distinct areas: the areas to the northeast of the Spangler

Hills Open Area; the Summit Range plus the area east of Highway 395; and the urban interface area between the community of Ridgecrest and the Spangler Hills Open Area. These proposed C routes are outside of the protected habitat for any of the special status wildlife species being considered with the exception of the Mohave ground squirrel. Under this alternative approximately 28 miles of routes fall within MGS core population areas. In addition, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but may be offset by additional routes in the planning area that are identified as competitive use open routes through the route designation process. Because the locations of replacement routes are not known the wildlife impacts of those routes would be considered through the route designation process.

PA VIII: Under Alternative 3, Koehn Lakebed would be designated as “Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit”. The impacts of the closure of Koehn Lakebed would be the same as discussed for Alternative 2.

Alternative 3 would also designate Cuddeback, Coyote, and Chisholm Trail Lakebeds as open to motorized use. In general, the lakebeds do not support wildlife, and are not associated with wildlife corridors or special-status wildlife. Therefore, this decision would not have any direct effect on wildlife resources on the lakebeds.

PA IX: Under Alternative 3, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. The desert tortoise, pallid bat, Mohave ground squirrel, and burrowing owl occur within the Rand Mountains-Fremont Valley Management Area. Not requiring a visitor to complete an educational orientation program before visiting an area may result in an adverse impact if the visitor is unaware of the special resources within the particular area. These impacts maybe overcome through other educational mediums and materials such as kiosks and brochures.

PA X: Alternative 3 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA's, while stopping and parking would be limited to within 50 feet of the centerline within DWMA's. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 100 feet. This would be a reduction from the limits in the No Action Alternative, but would still allow a larger area of disturbance than Alternative 2 (100 feet in Alternative 3 versus 50 feet in Alternative 2). This reduction would result in allowing previously disturbed areas to become re-vegetated over time, thus gradually reducing wildlife impacts in those areas. This decision would also reduce the potential for motorized vehicle use to impact wildlife in those areas. The effect of these actions would be a net beneficial impact on wildlife resources located adjacent to the routes that are designated as available for motorized use outside of DWMA's.

PA XI: Alternative 3 would discontinue livestock grazing on currently inactive allotments, which include Buckhorn Canyon, Harper Lake, Cronese Lake, Cady Mountain, Johnson Valley, Double Mountain and Oak Creek Allotments. Livestock grazing would continue under the terms and conditions contained in the Final Grazing Decisions issued for active grazing allotment within the West Mojave Planning Area. This would include the continuation of livestock grazing on approximately 117,290 acres of the Ord Mountain Allotment within the Ord-Rodman DWMA, and the continuation of ephemeral sheep grazing on approximately 6,196 acres of the Cantil

Common Allotment and 596 acres of the Shadow Mountain Allotment within the Fremont-Kramer DWMA.

Alternative 3 Route Designation

Section 4.4.2.2 described the general impacts to wildlife that are common to all alternatives. That analysis concluded that motorized vehicles can have adverse impacts on wildlife habitat, and on special status wildlife species. Like the analysis of impacts to vegetation, these impacts would be focused in areas in close proximity to the motorized routes. The mileage of routes associated with wildlife corridors and special status wildlife areas under Alternative 3 is presented in Tables 4.4-20 and 4.4-21, respectively. Forage that was allocated to livestock grazing within grazing allotments that will be reallocated to wildlife resources under Alternative 3 is presented in Table 4.4-22.

Table 4.4-20. Alternative 3 - Acreage and Mileage of Routes Within Wildlife Corridors

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Routes Within Wildlife Corridor	4064.1	75.4	6021	82720	41.3	20	1788.4

Table 4.4-21. Alternative 3 - Acreage and Mileage of Routes Within Range or Other Protected Habitat for Special Status Wildlife Species

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Bendire's Thrasher	47.4	3.6	74.2	1079	0	0.2	23.2
Bighorn Sheep	110.5	3.1	165.2	691	0.9	2.8	99
Burrowing Owl	1.3	0	1.9	32	0	0	2.2
Desert Tortoise (Total within Critical Habitat)	2762.5	109.8	4178	32005	6.1	0	2005.4
Desert Tortoise (Fremont- Kramer Designated Critical Habitat Unit only)	1189.3	8.4	1742	13157	5.6	0	954.4

Table 4.4-21. Alternative 3 - Acreage and Mileage of Routes Within Range or Other Protected Habitat for Special Status Wildlife Species

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Desert Tortoise (Ord-Rodman Designated Critical Habitat Unit only)	381.1	36	606.7	4440	0	0	397.1
Desert Tortoise (Superior-Cronese Designated Critical Habitat Unit only)	993.2	61.7	1534.4	11700	0.5	0	640.5
Desert Tortoise (Pinto Mountains Designated Critical Habitat Unit only)	188.2	3.8	279.3	2112	0	0	4.8
Fringed Myotis	0.1	0	0.1	2	0	0	0.1
Gray Vireo	0	0	0	0	0	0	0.7
Least Bell's Vireo	0.5	0	0.7	11	0.2	0	0
LeConte's Thrasher	15.6	0.1	22.8	338	0	0	11.6
Mojave Fringe-toed Lizard ¹	30	1.1	45.2	574	0	0.3	16.7
Northern Sagebrush Lizard	0	0	0	0	0	0	0
Pallid Bat	16.5	6.4	33.3	69	0	0	6.1
Spotted Bat	0.3	0	0.4	6	0	0	0
Swainson's Hawk	0.7	0	1	14	0	0	0
Western Mastiff Bat	6	0	8.7	140	0	0	0

Table 4.4-21. Alternative 3 - Acreage and Mileage of Routes Within Range or Other Protected Habitat for Special Status Wildlife Species

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
Golden Eagle 0-.5 Miles of active nests	57	3.3	87.7	986	0	0	43.6
Mohave Ground Squirrel	1721	0	2503	45515	31.7	0	1160.8

Mojave fringe-toed lizard is at risk from any route within its sand habitat between April 1 and September 30.

Table 4.4-22. Alternative 3 – AUMs by Acres of Grazing Allotments Re-allocated From Grazing to Wildlife Resources as Compared to the No Action Alternative

Allotment	Re-Allocation of AUMs by Acres Within DWMA and CHU	Re- Allocation of AUMs by Acres Outside DWMA and CHU
Ord Mountain (Ord-Rodman DWMA)	0	0
Cantil Common (Fremont-Kramer DWMA)	0	0
Shadow Mountain (Fremont-Kramer DWMA)	0	0
Harper Lake (Superior-Cronese DWMA)	0	0
Cronese Lake (Superior-Cronese DWMA)	0	0
Buckhorn Canyon (Fremont-Kramer DWMA)	0	0
Total Acres Re-Allocated	0	0

Alternative 3 Minimization and Mitigation Measures

Table 2.3-8 describes the network-wide minimization and mitigation measures that would be applied under Alternative 3. Many of these measures would act to reduce impacts to wildlife habitat and individuals. Measures such as limiting new ground disturbance in DWMA, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines in DWMA and 100 feet from route centerlines outside of DWMA would reduce the potential for direct vehicle strikes to wildlife, and for degradation of wildlife habitat in areas adjacent to routes. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific wildlife impacts are considered before authorizing new motorized routes.

4.4.2.6 Impacts Associated with Alternative 4

Alternative 4 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Except for the designation of TMAs, these decisions would be the same under Alternative 4 as for Alternatives 2 and 3, and therefore effect of these decisions on wildlife is the same as discussed for those alternatives.

Under Alternative 4, the boundaries of the nine TMAs included in Alternative 4 are similar to those in Alternatives 2 and 3, with the exception that TMA 7 (Ridgecrest, El Paso, Rands, and Red Mountain sub-regions) would be split into two separate TMAs. This decision would designate the current Coordinated Access Planning Area (CAPA) as a separate TMA. The CAPA area consists of the Ridgecrest and El Paso sub-regions, which would be split from the Rands and Red Mountain sub-regions, thus creating two separate TMAs. This decision would be made to facilitate BLM's ability to manage intense recreation use, public interest, and local agency interest in this area near Ridgecrest, and would therefore have no direct effect on wildlife. However, this decision would make it easier for BLM to consider wildlife impacts in future route designation decisions in this intensively used area, and thus have an indirect, beneficial effect on wildlife.

Five of the plan amendment decisions being considered would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include changes to C routes, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, and changes in allowable stopping, parking, and camping distances. The wildlife impacts of these decisions under Alternative 4 are as follows:

PA VII: Under Alternative 4, the C routes that are to the northeast of the Spangler Hills Open Area above the Randsburg Wash Road and those found within the Summit Range and east of Highway 395 would be available for competitive motorized events managed under a SRP. All proposed C routes are outside of the protected habitat for any of the Special Status Wildlife species being considered with the exception of the Mohave Ground Squirrel. Under this alternative approximately 23 miles of routes fall within MGS core population areas. The Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would also be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but the decision would identify a specific route for the speed-controlled connector between the remaining Johnson Valley OHV Area and the Stoddard Valley OHV Open Area, with appropriate mitigation measures.

PA VIII: Under Alternative 4, Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds would all be designated as open to motorized use. Koehn Lakebed would be designated as "Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit". The impacts of the closure of Koehn Lakebed would be the same as discussed for Alternative 2. The wildlife impacts at Cuddeback, Coyote, and Chisholm Trail Lake lakebeds would be the same as those described for Alternative 3, which would also designate these lakebeds as open to motorized vehicles. In general, the lakebeds do not support wildlife, and are not associated with

wildlife corridors or special-status wildlife. Therefore, this decision would not have any direct effect on wildlife resources on the lakebeds.

PA IX: Under Alternative 4, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. The impacts of this decision would be the same as those discussed for Alternative 3.

PA X: Alternative 4 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMAs, while stopping and parking would be limited to within 50 feet of the centerline within DWMAs. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMAs. This would be a reduction in the limits that are currently authorized outside of DWMAs from 300 feet to 100 feet. This reduction would result in allowing previously disturbed areas to become re-vegetated over time, thus gradually reducing wildlife impacts in those areas. This decision would also reduce the potential for motorized vehicle use to impact wildlife in those areas. The effect of these actions would be a net beneficial impact on wildlife resources located adjacent to the routes that are designated as available for motorized use outside of DWMAs.

PA XI: Alternative 4 would discontinue livestock grazing in DWMAs and CHUs on allotments that are currently inactive and vacant, or that become inactive and vacant in the future, and reallocate all of the 1,100 Animal Unit Months from livestock forage to wildlife use and ecosystem functions. Public land totaling 42,420 acres would not be available for livestock grazing for a small portion of the Johnson Valley Allotment and two grazing allotments, Cronese Lake, and Harper Lake Allotments, in their entirety, consistent with 43 CFR 4130.2 (a). These allotments would be unavailable for livestock grazing. This reduction in grazing would have a direct, beneficial impact on wildlife in those areas.

Alternative 4 Route Designation

Section 4.4.2.2 described the general impacts to wildlife that are common to all alternatives. That analysis concluded that motorized vehicles can have adverse impacts on wildlife habitat, and on special status wildlife species. Like the analysis of impacts to vegetation, these impacts would be focused in areas in close proximity to the motorized routes. The mileage of routes associated with wildlife corridors and special status wildlife areas under Alternative 4 is presented in Tables 4.4-23 and 4.4-24, respectively. Forage that was allocated to livestock grazing within grazing allotments that will be reallocated to wildlife resources under Alternative 4 is presented in Table 4.4-25.

Table 4.4-23. Alternative 4 - Acreage and Mileage of Routes Within Wildlife Corridors

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
Routes Within Wildlife Corridor	2341.3	68	3504.4	12136	30.9	16.1	3479.7

Table 4.4-24. Alternative 4 - Acreage and Mileage of Routes Within Range or Other Protected Habitat for Special Status Wildlife Species

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Bendire's Thrasher	17.8	0	25.9	353	0	0	57.9
Bighorn Sheep	72.3	6.3	114.3	1166	0	1.6	135.8
Burrowing Owl	1.0	0.1	1.6	27	0	0	2.4
Desert Tortoise (Total within Critical Habitat)	2224.6	85.8	3360.6	25078	0	5.8	2517.4
Desert Tortoise (Fremont- Kramer Designated Critical Habitat Unit only)	907.5	24	1355	10672	0	5.9	1213
Desert Tortoise (Ord-Rodman Designated Critical Habitat Unit only)	312.4	17.6	480	1580	0	0	489.9
Desert Tortoise (Superior- Cronese Designated Critical Habitat Unit only)	891.1	39.4	1354	10487	0	0	767.5
Desert Tortoise (Pinto Mountains Designated Critical Habitat Unit only)	127.5	4.9	192.6	1469	0	0	64.3
Fringed Myotis	0.1	0	0.1	2	0	0	0.1
Gray Vireo	0	0	0	0	0	0	0.7
Least Bell's Vireo	0	0	0	0	0	0	2.4
LeConte's Thrasher	9	0	13.1	217	0	0	18
Mojave Fringe- toed Lizard ¹	20.3	0	29.5	426	0	0.3	27.4
Northern Sagebrush Lizard	0	0	0	0	0	0	0.1
Pallid Bat	4.9	0	7.1	95	0	0	23.9
Spotted Bat	0	0	0	0	0	0	0.4
Swainson's Hawk	0	0	0	1	0	0	0.6
Western Mastiff Bat	4.7	0	6.8	110	0	0	1.3

Table 4.4-24. Alternative 4 - Acreage and Mileage of Routes Within Range or Other Protected Habitat for Special Status Wildlife Species

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Golden Eagle 0-.5 Miles of active nest	24.5	2.3	39	486	0	0	75.4
Mohave Ground Squirrel	896	0	1303.3	16267	3.2	0	1975.5

1 - Mojave fringe-toed lizard is at risk from any route within its sand habitat between April 1 and September 30

Table 4.4-25. Alternative 4 – AUMs of Acres of Grazing Allotments Re-allocated From Grazing to Wildlife Resources as Compared to the No Action Alternative

Allotment	Re-Allocation of AUMs by Acres Within DWMA and CHU	Re- Allocation of AUMs by Acres Outside DWMA and CHU
Ord Mountain (Ord-Rodman DWMA)	0	0
Cantil Common (Fremont-Kramer DWMA)	0	0
Shadow Mountain (Fremont-Kramer DWMA)	0	0
Harper Lake (Superior-Cronese DWMA)	15,936	2,182
Cronese Lake (Superior-Cronese DWMA)	25,992	22,517
Buckhorn Canyon (Fremont- Kramer DWMA)	0	0
Johnson Valley (Ord-Rodman DWMA)	601	0
Total Acres Re-Allocated	45,529	24,699

Alternative 4 Minimization and Mitigation Measures

Table 2.3-8 describes the network-wide minimization and mitigation measures that would be applied under Alternative 4. Many of these measures would act to reduce impacts to wildlife habitat and individuals. Measures such as limiting new ground disturbance in DWMA, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines in DWMA and 100 feet from route centerlines outside of DWMA would reduce the potential for direct vehicle strikes to wildlife, and for degradation of wildlife habitat in areas adjacent to routes. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific wildlife impacts are considered before authorizing new motorized routes.

4.5 Socioeconomics and Environmental Justice

4.5.1 Introduction

Affected Environment Summary

Section 3.5 describes the socioeconomic conditions in the WEMO Planning area. The planning area is a substantial geographic region covering more than 3.3 million acres, encompassing portions of five counties, and including over 733,000 residents. Although the population base is significant, it is diverse and widely dispersed in scattered concentrations ranging from as few as 30,000 residents in such areas as Barstow and Ridgecrest to more than 300,000 residents in the Palmdale-Lancaster area of Los Angeles County and also the Victor Valley area of San Bernardino County.

Although it encompasses substantial rural areas, the WEMO planning area is situated along the periphery of the huge Los Angeles metropolitan area, and the southern portion of the Central Valley population and employment base. Within the planning area, industries such as aerospace, mining, military, and government operations have long provided local employment to area residents. However, overall economic growth throughout the West Mojave is increasingly influenced and driven by growth trends associated with the larger economic region of Southern California. The regional study area for socioeconomic analysis includes Inyo, Kern, Los Angeles, and San Bernardino counties. Localized study areas include incorporated cities and communities within the Planning Area with populations of 10,000 or greater. This population threshold is used to define the local study area from a programmatic perspective.

The transportation network on public lands is needed to provide access to residences, as well as to authorized users of public lands for commercial activities such as grazing, mining, energy production, and communications. Therefore, the connectivity of the network can affect socioeconomic activity by facilitating or limiting access for these activities. The transportation network also affects the level, location, and types of recreational activities occurring in the planning area. The network provides access to areas where recreational users can experience the solitude of the desert, and areas which retain their rural character. Whether the network is the focus of the recreational experience (i.e., for OHV touring), or is simply a means to access recreation areas, the configuration of motorized and closed routes can affect localized socioeconomic activity related to recreation.

This analysis cannot evaluate all the site-specific impacts to environmental justice issues associated with travel management and new designations for motorized recreation. Instead, the analysis uses best readily available information to characterize high asymmetric economic and social burdens on low-income people.

Methodology

The 2005 WEMO EIS analyzed the impacts of the proposed action on socioeconomics in the planning area, including the effects of OHV use on recreation levels and the resulting socioeconomic impacts. It did not specifically analyze impacts associated with the 5,098 mile route network to environmental justice populations. The Court's Summary Judgment and Remedy Order did not specifically reach conclusions, or provide direction, regarding the sufficiency of the socioeconomic analysis, or the need for analysis of environmental justice impacts.

For this SEIS for the WMRNP, BLM performed the following:

- Used 2010 census data to update the socioeconomic analysis in Section 3.5, and to identify minority and low income populations for the environmental justice analysis.
- Conducted route evaluation and quantified the miles of motorized routes that could potentially impact minority and low income populations across four alternative route networks, ranging from 4,293 to 10,428 miles in size.
- Re-evaluated the 2005 WEMO analysis, and supplemented it with additional information from resource specialists, public comments, and changes in conditions within the planning area. This additional information is incorporated into the evaluation in Section 4.5.2 below.

4.5.2 Impacts Common to All Alternatives

This chapter provides an analysis of potential socioeconomic and environmental justice impacts associated with comprehensive travel management for motorized vehicular access (MVA) and off-highway motor vehicle recreation within the WEMO Planning Area for the alternatives.

As part of the development of the WEMO Plan (BLM 2006), the agency commissioned an analysis of the impact of the Plan on socioeconomic activity (Gobar 2003). In support of this SEIS for the WMRNP, BLM reviewed that report's analysis of the impact of recreation on employment and income in the planning area. Although specific recreational user numbers and dollar values of socioeconomic activity have increased since 2003, the report's general discussion and conclusions regarding the impact of the transportation network on recreation-driven socioeconomic activity are still valid, and are generally common to all alternatives.

The transportation network in the West Mojave Planning area supports socioeconomics by meeting the needs of the resident and visitor population for accessing housing, employment locations, and recreation, as well as supporting the transport of raw materials, food, fuels, and commercial products associated with modern society. The Motorized Vehicle Access (MVA) Element of the CDCA Plan established overarching goals and objectives to support these needs, including providing for constrained motorized vehicle access in a manner that balances the needs of all desert users, private landowners, and other public agencies, and continuing to recognize ways of access and opportunities for exploration and development on public lands, including access to critical mineral resources, potential energy resources, and minerals of local and State importance. The network also supports socioeconomics in providing access to, and a network to be used for, outdoor recreational activities. In meeting these needs to support the resident and visitor populations, the MVA Element also specified that the transportation network was to be designated, to the degree possible, to avoid adverse impacts to desert resources.

The impacts of the WMRNP can be both beneficial and adverse to socioeconomic conditions. Designation of major arterial routes as part of the WMRNP has a beneficial effect in providing access as needed for housing, industry, employment, recreation, and transport of goods within and across the planning area. Conversely, designation of routes as transportation linear disturbances, or closing routes can be adverse by limiting access, or by increasing the time and cost needed for access. These actions can, in turn, have a localized impact on specific commercial operations that support recreation, such as campgrounds, hotels, restaurants, and

stores. This impact would be beneficial in areas where routes remain open, and adverse in areas where routes are closed.

For routes in rural areas, maintenance and designation of motorized routes would support OHV-based recreation and tourism. Recreation and tourism, in turn, create jobs and generate tax revenue, having a beneficial effect on socioeconomic conditions. Sectors most directly influenced by recreation activities include: selected transportation services; retail activities involving the sale of food, provisions, gas, and meals; specialized services such as lodging, vehicle repair, and recreation; and directed government services (rangers and sheriff). Overall, employment identified for each of these sectors is primarily driven by current urbanization throughout the West Mojave, not recreation visitors. Recreational visits are expected to augment identified employment levels, but not necessarily drive a significant share of jobs. As an example, OHV usage throughout the West Mojave is broadly estimated to attract roughly 2 million visitors per year. This level of trip-volume is consistent with annual shopper-trips describing a busy neighborhood shopping center (i.e.: 120,000-square-foot center supporting roughly 200 retail jobs) (Gobar 2003). Most OHV visitors, however, are part of a larger group, which significantly reduces realistic shopper-trip potential associated with OHV recreation, particularly for non-dining retail expenditures. In addition, a substantial portion of OHV trip-related expenditures are made within the hometown location of recreation visitors who primarily drive to the planning area from the Metropolitan Areas of Southern California and the southern portion of the Central Valley. Consequently, although expenditures are not likely to support more than 50 retail sector jobs providing \$30,360 in annual income per worker, on average. A greater portion of OHV visitors can be expected to make dining-related expenditures during a given visit. A 60 percent incident rate describing the purchase of a hot or cold meal while within the West Mojave suggests equivalent economic support for roughly 140 restaurant jobs providing an average of \$14,960 in annual income per worker, on average (Gobar 2003).

On a combined basis, the above levels of retail support for OHV visitor expenditures represent roughly 190 jobs or about 0.8 percent of food store and dining retail sector jobs that currently exist throughout the West Mojave. The magnitude of effect used to describe the influence of outdoor recreation activity on the retail sector of the West Mojave tends to characterize the level of effect for other employment sectors identified. Reported recreation visitor activity in the planning area generates a notable but supplemental level of economic support for the current employment base of the region. The maximum possible effect of recreation activity on West Mojave employment and income, therefore, is substantially less than the above levels of employment describing those sectors influenced by recreation activity.

Chapter 2 discusses the general resource protection and motorized access objectives that were incorporated into the development of the transportation network alternatives. These objectives were used to inform decisions regarding which linear features would be included in the motorized, non-motorized, and non-mechanized transportation network, and which features would be closed (i.e., designated as transportation linear disturbances), under each alternative. In that analysis, issues that affect the socioeconomic conditions in the planning area were considered as a criterion in determining which routes would remain open and which would be closed under the various alternatives. The primary consideration was in ensuring that route connections are maintained where transportation features cross jurisdictional boundaries. This is the most important criterion in ensuring completeness of the transportation network in providing access between residences, employment locations, schools, businesses, and recreation

opportunities. Maintaining route connections is also critical to facilitating the transport of goods and services into and across the region, and to providing access to construct and maintain infrastructure for power, water, fuel, and sewage needs.

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires each federal agency to “Identify and address, as appropriate, disproportionately high and adverse human health or environmental effects on minority populations and low-income populations.” Motorized vehicle use of the transportation network would not result in production of toxic or hazardous products.

The WMRNP contains low-income and minority populations that qualify as environmental justice populations. Figure 3.5-1 identifies the locations of census tracts within the planning area containing greater than 50% minority and those tracts with identified low-income populations along with boundaries of TMAs. Environmental impacts associated with different types of motorized recreation that could impact all populations include:

- Vehicular Noise
- Air Quality and Public Health
- Water Quality and Quantity
- Damage to Cultural Resources
- Carbon Emissions and Impacts to Climate Change
- Loss of Recreation Access and Opportunity
- Loss of Soil and Vegetation / Scenic and Landscape Values

These impacts are discussed in the relevant sections. However, should the impacts of these burdens fall disproportionately on people in US Census tracts identified here, an environmental justice issue may arise.

Impacts to these populations are both beneficial and adverse. Route designations can be beneficial by augmenting both recreational and employment opportunities for areas that contain environmental justice populations. Recreational tourism activity would promote employment opportunities in sectors such as transportation services and retail. Retail services typically involve the sale of food and provisions that facilitate outdoor recreation. Additionally, increased employment would generate income and increased tax revenue within the planning area, potentially benefiting minority communities. Low cost local recreational options would also be a beneficial impact to environmental justice populations. The current route network meets demand of localities inside and outside of the planning area, including the urban areas of Los Angeles and Las Vegas, thus benefiting environmental justice populations that may reside out of the planning area. Adverse impacts would result from noise emissions and pollution associated with OHV use near environmental justice populations.

Local socioeconomic conditions, including employment rates, addition or loss of industries, military installations, and even single employers can impact the local or regional economies of San Bernardino, Kern, Los Angeles, and Inyo Counties. Grazing is anticipated to continue at or below current stocking rates. These stocking levels are at their lowest point when compared to historic levels, and if the WEMO Plan is fully implemented, are expected to continue to

decrease. Therefore grazing continues to have a nominal influence on local economies in the area.

Resource-Specific Minimization and Mitigation Measures

Because no adverse impacts to socioeconomics were identified, no resource-specific minimization and mitigation measures were developed for socioeconomic effects to include livestock grazing.

Residual Impacts After Implementation of Mitigation Measures

Because no adverse impacts to socioeconomics were identified, there would be no residual impacts after mitigation measures were implemented.

4.5.3 Impacts Associated with the No Action Alternative

Alternative 1 Plan Amendment

Under the No Action Alternative, none of the proposed plan amendment decisions would be adopted.

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct impacts to socioeconomics or environmental justice. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider socioeconomics, environmental justice, and use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM's ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may benefit socioeconomics and environmental justice by facilitating adaptive management changes in response to changing on-the-ground conditions. By not adopting these decisions under the No Action Alternative, these potential beneficial effects would not be achieved. In addition, by not adopting these decisions, the CDCA Plan would not be amended to conform to current policy or regulation.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping,

parking, and camping distances, and changes to the livestock grazing program. However, because there are currently no known impacts to socioeconomics or environmental justice associated with these areas and activities, there would be no impacts to socioeconomic or environmental justice conditions as a result of the No Action alternative.

Local socioeconomic conditions, including employment rates, addition or loss of industries, military installations, and even single employers can impact the local or regional economies of San Bernardino, Kern, Los Angeles, and Inyo Counties. Grazing is anticipated to continue at or below current stocking rates. These stocking levels are at their lowest point when compared to historic levels, and if the WEMO Plan is fully implemented, are expected to continue to decrease. Therefore grazing continues to have a nominal influence on local economies in the area.

Alternative 1 Route Designation

In general, motorized access has a beneficial impact on socioeconomics by supporting the larger regional transportation network, facilitating local access for businesses, commercial users and residents, and providing recreation access and opportunities. However, as discussed in Section 4.1.3, the analysis in this Chapter is based on a general assumption that the overall size of the route network is unrelated to the total miles traveled on the network within the planning area. Socioeconomic activity associated with recreation would not be substantively affected by the overall size of the network and, therefore, overall socioeconomic impacts in the planning area would not vary among route network alternatives. Localized effects to these resources would occur depending on specific locations of opened and closed routes, but the regional scale of recreation and associated socioeconomic activity would not change.

Environmental justice minority and low-income populations are located within the WEMO planning area. Environmental justice low-income and minority populations are portrayed in Figure 3.5-1. Additionally, Table 4.5-1 details all of the census tracts within the project area as well as associated route mileage by census tract. As noted in Table 4.5-1, many tracts containing environmental justice populations are not transected by the BLM route network. Of the 55 census tracts within the WEMO planning area that are transected by the route network, 20 census tracts, or 36 percent of the census tracts that are transected by the route network, contain environmental justice populations. The limited number of census tracts that contain environmental justice populations and are transected by the route network, indicate that environmental justice populations would not bear a disproportionately high level of adverse impacts.

Table 4.5-1. Alternative 1 Mileage of Routes within Census Tracts

Location/County	Census Tracts	Motorized	Non-Mechanized	Closed	Grand Total
Inyo	8*	404.2	0	553.0	957.2
Kern	52.01*	109.6	0	318.1	427.6
	52.03* ¹	161.4	0	754.7	916.1
	53 ¹	0	0	0.3	0.3
	54.01	0	0	0	0

Table 4.5-1. Alternative 1 Mileage of Routes within Census Tracts

Location/County	Census Tracts	Motorized	Non-Mechanized	Closed	Grand Total
Kern (continued)	54.02	0	0	0.4	0.4
	54.03	0	0	0	0
	54.04	0	0	0.0	0.0
	55.01	341.9	0	862.9	1,204.8
	55.06	0	0	19.9	19.9
	55.07 ¹	0	0	0	0
	55.08 ¹	0	0	21.9	21.9
	561	0	0	0	0
	57	0	0	1.2	1.2
	58.01	0	0	0	0
	58.02 ¹	0	0	1.3	1.3
	591	0	0	0	0
	60.04*	58.2	0.3	172.3	230.9
	60.07*	4.5	3.0	197.9	205.4
	651	404.5	0	1,120.2	1,524.7
Los Angeles	9001.02 ¹	0	0	38.0	38.0
	9001.03 ¹	0	0	0	0
	9001.04 ¹	0	0	0	0
	9002.01	0	0	1.2	1.2
	9003	0	0	0	0
	9005.01 ¹	0	0	0	0
	9005.04	0	0	0	0
	9005.05 ¹	0	0	0	0
	9005.06	0	0	0	0
	9005.07 ¹	0	0	0	0
	9005.08 ¹	0	0	0	0
	9006.02 ¹	0	0	0	0
	9006.05 ¹	0	0	0	0
	9006.06 ¹	0	0	0	0
	9006.07 ^{1,2}	0	0	0	0
	9006.08 ¹	0	0	0	0
	9006.09 ¹	0	0	0	0
	9007.01 ¹	0	0	0	0
	9007.03 ¹	0	0	0	0
	9007.04 ¹	0	0	0	0
	9007.05	0	0	0	0
	9008.03 ²	0	0	0	0
	9008.04 ¹	0	0	0	0
	9008.05	0	0	0	0
	9008.06 ^{1,2}	0	0	0	0
9009	0	0	0	0	

Table 4.5-1. Alternative 1 Mileage of Routes within Census Tracts

Location/County	Census Tracts	Motorized	Non-Mechanized	Closed	Grand Total
Los Angeles (continued)	9010.03 ²	0	0	0	0
	9010.04	0	0	0	0
	9010.07	0	0	0	0
	9010.08	0	0	0	0
	9010.09	0	0	0	0
	9010.10 ¹	0	0	0	0
	9010.11	0	0	0	0
	9011.01	0	0	0	0
	9011.02	0	0	0	0
	9012.05	0	0	0	0
	9012.09*	0	0	0.5	0.5
	9012.10	0	0	0.0	0.0
	9012.13	0	0	0	0
	9100.01 ²	0	0	0.3	0.3
	9100.02	0	0	0.5	0.5
	9101.01 ^{1,2}	0	0	0	0
	9102.01 ^{1,2}	0	0	0	0
	9102.02	0	0	0	0
	9102.05	0	0	0	0
	9102.06	0	0	0	0
	9102.07	0	0	0	0
	9102.08	0	0	0	0
	9102.09	0	0	0.1	0.1
	9102.10	0	0	0	0
	9103.01	0	0	0	0
	9103.02	0	0	0	0
	9104.01	0	0	0	0
	9104.02 ^{1,2}	0	0	0	0
	9104.03 ^{1,2}	0	0	0	0
	9104.04 ^{1,2}	0	0	0	0
	9105.01 ^{1,2}	0	0	0	0
	9105.02 ^{1,2}	0	0	0	0
	9105.04 ^{1,2}	0	0	0	0
	9105.05 ²	0	0	0	0
	9106.01 ^{1,2}	0	0	0	0
	9106.02 ^{1,2}	0	0	0	0
	9106.03 ²	0	0	0	0
	9106.05 ^{1,2}	0	0	0	0
	9106.06 ^{1,2}	0	0	0	0
	9107.05 ²	0	0	0	0
9107.06 ^{1,2}	0	0	0	0	

Table 4.5-1. Alternative 1 Mileage of Routes within Census Tracts

Location/County	Census Tracts	Motorized	Non-Mechanized	Closed	Grand Total
Los Angeles (continued)	9107.07 ²	0	0	0	0
	9107.09	0	0	0	0
	9107.11 ²	0	0	0	0
	9107.12 ²	0	0	0	0
	9107.13 ²	0	0	0	0
	9107.14 ^{1,2}	0	0	0	0
	9107.15 ²	0	0	0	0
	9107.16 ²	0	0	0	0
	9108.04*	0	0	0.4	0.4
	9108.05*	0	0	0	0
	9108.12	0	0	0.4	0.4
	9110.01	0	0	2.1	2.1
	9800.03	0	0	0.1	0.1
	9800.04 ^{1,2}	0	0	0	0
Riverside	469*	46.3	0	30.7	77.0
San Bernardino	100.04	0	0	0	0
	100.09	0	0	0	0
	100.10 ¹	0	0	0	0
	100.11 ¹	0	0	0	0
	100.12	0	0	0	0
	100.13	0	0	0	0
	100.14 ¹	0	0	0	0
	100.15 ¹	0	0	0	0
	100.16 ¹	0	0	0	0
	100.17	0	0	0	0
	100.18 ¹	0	0	0	0
	100.19 ¹	0	0	0	0
	100.20 ¹	0	0	0	0
	100.21 ¹	0	0	0	0
	100.22	0	0	0	0
	100.23	0	0	0	0
	100.24 ¹	0	0	0	0
	100.25 ¹	0	0	0	0
	100.26 ¹	0	0	0	0
	103* ¹	867.6	0	776.6	1,644.2
	104.02	0.1	0	0.3	0.4
	104.09*	160.6	0	196.1	356.7
	104.10	0	0	1.1	1.1
104.11	0	0	0.3	0.3	
104.12	4.6	0	12.5	17.1	
104.13 ¹	0	0	0.3	0.3	

Table 4.5-1. Alternative 1 Mileage of Routes within Census Tracts

Location/County	Census Tracts	Motorized	Non-Mechanized	Closed	Grand Total
San Bernardino (continue)	104.15	18.5	0	101.1	119.6
	104.16 ¹	3.1	0	12.0	15.1
	104.17 ¹	1.0	0	4.0	5.0
	104.19 ¹	0.4	0	6.6	7.1
	104.20	0.1	0	0.3	0.4
	104.21 ¹	0	0	0	0
	104.22	0	0	0.9	0.9
	104.23 ¹	77.7	0	176.9	254.6
	104.24 ¹	214.9	6.3	407.3	628.5
	116	1,313.1	0	1,564.5	2,877.7
	117 ¹	45.6	0	157.3	203.0
	118	0.2	0	12.7	13.0
	119 ¹	127.9	0	171.8	299.6
	120.01	0.1	0	2.9	3.0
	120.02	0.6	0	1.6	2.2
	121.01	6.5	0	26.3	32.8
	121.03	25.3	0	25.8	51.1
	121.04 ¹	292.5	0	818.2	1,110.7
	250	0.2	0	1.8	2.0
	89.01 ¹	501.9	0	702.6	1,204.5
	91.07	0	0	0	0
	91.08 ¹	0	0	0.1	0.1
	91.09	0	0	0	0
	91.10	0	0	0	0
	91.12 ¹	0	0	0	0
	91.14	0	0	0	0
	91.16 ¹	0	0	0	0
	91.17 ¹	30.1	0	108.1	138.2
	91.18	0	0	0	0
	91.19	0	0	0	0
	92.01	0	0	0	0
	93 ¹	0	0	0	0
	94 ¹	0	0	0	0
	95 ¹	0	0	1.5	1.5
	97.07	0	0	0	0
	97.08	80.6	0	140.0	220.6
	97.09 ¹	0	0	0	0
	97.10 ¹	0	0	0	0
	97.11	0	0	0	0
	97.12 ¹	0	0	0	0
97.13	0	0	0	0	

Table 4.5-1. Alternative 1 Mileage of Routes within Census Tracts

Location/County	Census Tracts	Motorized	Non-Mechanized	Closed	Grand Total
San Bernardino (continue)	97.14 ¹	0	0	0	0
	97.15	0	0	0	0
	97.16 ¹	0	0	0.8	0.8
	97.17	0	0	0	0
	98 ¹	0	0	0	0
	9802 ²	0	0	0	0
	99.04 ¹	0	0	0	0
	99.05 ^{1,2}	0	0	0	0
	99.06	0	0	0	0
	99.08 ¹	0	0	0	0
	99.10	0	0	0	0
	99.11	0	0	0	0
	99.12 ¹	0	0	0	0
	99.13 ¹	0	0	0	0
WEMO TOTAL		5,304	10	9,531	14,845

*Tracts transect the planning area boundary.

¹Tract contains low-income environmental justice population.

²Tract contains minority environmental justice population.

Alternative 1 Minimization and Mitigation Measures

Because no adverse impacts were identified for the No Action Alternative, no alternative-specific minimization and mitigation measures were developed to address socioeconomic impacts to include livestock grazing.

4.5.4 Impacts Associated with Alternative 2

Alternative 2 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct impacts to socioeconomics or environmental justice. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider socioeconomics and environmental justice and use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and

- Facilitate BLM's ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may benefit socioeconomics and environmental justice by facilitating adaptive management changes in response to changing on-the-ground conditions. By adopting these decisions, the CDCA Plan would be amended to conform to current policy and regulation.

As a result of the modification of the language limiting the route network to existing routes, new routes could potentially be designated in locations with no existing routes, and could have adverse impacts to localized resources near that route. New routes may be established to provide access for new authorized uses, or to avoid identified impacts to resources. The impacts to socioeconomics and environmental justice of each new route would be evaluated as part of the BLM's consideration of the application for land use authorization. As part of that evaluation, BLM would consider the potential impacts of the new route as required by 43 CFR 8342.1, potential alternatives to provide the necessary access, and minimization and mitigation measures to address any identified impacts to socioeconomics or environmental justice. In the case of routes established to provide access to authorized uses, the duration of the designation of the new route would be the same as authorized land use it is intended to support. Once the term of the authorized land use expires, the route would generally be considered for closure, and the terms and conditions of the authorized land use would require the lessee, permittee, or ROW holder to rehabilitate the route. BLM may also determine at a later date, consistent with 43 CFR 8342.1, that the route provides necessary access for some other reason and could designate the route accordingly, releasing the authorized land user from their requirement to rehabilitate the route. In the case of routes established to address impacts to resources, the new route may be permanent.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The socioeconomic and environmental justice impacts of these decisions under Alternative 2 are as follows:

PA VII: It is anticipated that the overall number of SRP applications will not increase. This means that there should be no measurable increase in the number of OHVs using public land in the area. Additionally, designating the C routes does not authorize individual SRP events to use these routes, and additional analysis will occur as part of the SRP permitting process. Therefore, there should be no direct impacts to socioeconomics or environmental justice.

Under Alternative 2, there would be a seasonal restriction placed upon the use of the currently designated C routes for competitive motorized events managed under a SRP. These routes would be available for use by competitive motorized events during the months of November, December, and January. Restricting the use to these months may reduce socioeconomic activity that could have occurred in the local area during other months.

Since OHV competitive events conducted in other OHV Open Areas would be limited to inside the Open Area boundaries under this alternative, the remaining designated long-distance race corridor, the Johnson Valley to Parker Valley Corridor would be removed under Alternative 2.

Because an event has not been run since the listing of the desert tortoise as threatened in 1989, no direct adverse effects to socioeconomic activity in that area are expected. In addition, other routes and areas within the planning area are not anticipated to receive increased use for recreation as a result of the elimination of this competitive event route. Therefore, this plan amendment decision would not have any effect on socioeconomics or environmental justice in other areas.

PA VIII: Alternative 2 would designate Koehn Lakebed as closed to motorized vehicles. There would be no change to the use of Cuddeback, Coyote, or Chisholm Trail Lakes. Recreational use of the lakebeds is expected to support socioeconomic activity in the local areas near those lakebeds. Therefore, the closure of Koehn Lakebed may reduce socioeconomic activity in that local area. Because Koehn lakebed is currently receiving relatively light use, this impact is expected to be small. This plan amendment decision would likely have no net beneficial or adverse impact on socioeconomics on a regional basis, but it may result in these impacts occurring on a local basis.

PA IX: There would be no change to access to the Rand Mountains-Fremont Valley Management Area under Alternative 2. Because there are currently no known impacts to socioeconomics or environmental justice associated with the area, there would be no impacts to socioeconomic or environmental justice conditions as a result of Alternative 2.

PA X: Alternative 2 would limit stopping and parking to previously disturbed areas within 50 feet from the route centerline, both inside and outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 50 feet. Camping would be allowed adjacent to designated routes in previously disturbed areas, not to exceed 50 feet from the centerline, throughout the WEMO Planning Area. This reduction from the limits in the No Action Alternative would not be expected to have any effect on motorized use of routes for recreation or other authorized uses, and would therefore not have any impact on socioeconomics or environmental justice.

PA XI: Local socioeconomic conditions, including employment rates, addition or loss of industries, military installations, and even single employers can impact the local or regional economies of San Bernardino, Kern, Los Angeles, and Inyo Counties. Grazing is anticipated to continue at or below current stocking rates. These stocking levels are at their lowest point when compared to historic levels, and if the WEMO Plan is fully implemented, are expected to continue to decrease. Therefore grazing continues to have a nominal influence on local economies in the area.

Alternative 2 Route Designation

In general, motorized access has a beneficial impact on socioeconomics by supporting the larger regional transportation network, facilitating local access for businesses, commercial users and residents, and providing recreation access and opportunities. The motorized route network provides increased tourism and low-cost recreational opportunities within the WEMO Planning area. The impacts of use of authorized routes vary widely, and are dependent on the specific characteristics of each authorization and associated access. On a programmatic basis, the socioeconomic impacts of access to authorized uses are generally positive because access facilitates authorized activities that are frequently associated with local jobs. With respect to environmental justice, the impacts from access are minimal since they do not target specific

areas and no open or closed areas are being designated or modified under this project. However, as discussed in Section 4.1.3, the analysis in this Chapter is based on a general assumption that the overall size of the route network is unrelated to the total miles traveled on the network within the planning area. Socioeconomic activity associated with recreation would not be substantively affected by the overall size of the network and, therefore, overall socioeconomic impacts in the planning area would not vary among route network alternatives. Localized effects to these resources would occur depending on specific locations of opened and closed routes, but the regional scale of recreation and associated socioeconomic activity would not change.

Environmental justice minority and low-income populations are located within the WEMO planning area. Environmental justice low-income and minority populations are portrayed in Figure 3.5-1. Additionally, Table 4.5-1 details all of the census tracts within the project area as well as associated route mileage by census tract. As noted in Table 4.5-2, many tracts containing environmental justice populations are not transected by the BLM route network. Of the 58 census tracts within the WEMO planning area that are transected by the route network, 22 census tracts, or 38 percent of the census tracts that are transected by the route network, contain environmental justice populations. This alternative contains the least mileage of open routes and the most mileage of closed routes. A decrease in mileage of open routes would potentially adversely impact environmental justice populations with less job opportunities and access to low-cost recreation, but would expose environmental justice populations to decreased levels of noise and pollution. The limited number of census tracts that contain environmental justice populations and are transected by the route network relative to the total number of census tracts that are transected by the route network, indicate that environmental justice populations would not bear a disproportionately high level of adverse impacts.

Table 4.5-2. Alternative 2 Mileage of Routes within Census Tracts

Location/County	Census Tracts	Motorized	Non-Motorized	Non-Mechanized	Closed	Grand Total
Inyo	8*	346.5	0	1.2	595.8	943.5
Kern	52.01*	84.8	1.5	3.5	338.2	428.0
	52.03* ¹	106.4	0	10.5	799.1	915.9
	531	0	0	0	0.5	0.5
	54.01	0	0	0	0	0
	54.02	0	0	0	0.4	0.4
	54.03	0	0	0	0	0
	54.04	0	0	0	0.0	0.0
	55.01	269.0	26.7	0	911.5	1,207.3
	55.06	3.5	0	0	18.8	22.3
	55.07 ¹	0	0	0	0	0
	55.08 ¹	1.6	0	0	21.3	22.9
	561	0	0	0	0	0
	57	0.1	0	0	1.2	1.3
	58.01	0	0	0	0	0
	58.02 ¹	0	0	0	1.3	1.3
	591	0	0	0	0	0
60.04*	54.6	0	3.3	171.2	229.0	

Table 4.5-2. Alternative 2 Mileage of Routes within Census Tracts

Location/County	Census Tracts	Motorized	Non-Motorized	Non-Mechanized	Closed	Grand Total
Kern (continued)	60.07*	45.4	0	1.1	161.5	208.0
	651	351.9	0	0	1,173.9	1,525.7
Los Angeles	9001.02 ¹	7.4	0	0	31.2	38.6
	9001.03 ¹	0	0	0	0	0
	9001.04 ¹	0	0	0	0	0
	9002.01	0	0	0	1.2	1.2
	9003	0	0	0	0	0
	9005.01 ¹	0	0	0	0	0
	9005.04	0	0	0	0	0
	9005.05 ¹	0	0	0	0	0
	9005.06	0	0	0	0	0
	9005.07 ¹	0	0	0	0	0
	9005.08 ¹	0	0	0	0	0
	9006.02 ¹	0	0	0	0	0
	9006.05 ¹	0	0	0	0	0
	9006.06 ¹	0	0	0	0	0
	9006.07 ^{1,2}	0	0	0	0	0
	9006.08 ¹	0	0	0	0	0
	9006.09 ¹	0	0	0	0	0
	9007.01 ¹	0	0	0	0	0
	9007.03 ¹	0	0	0	0	0
	9007.04 ¹	0	0	0	0	0
	9007.05	0	0	0	0	0
	9008.03 ²	0	0	0	0	0
	9008.04 ¹	0	0	0	0	0
	9008.05	0	0	0	0	0
	9008.06 ^{1,2}	0	0	0	0	0
	9009	0	0	0	0	0
	9010.03 ²	0	0	0	0	0
	9010.04	0	0	0	0	0
	9010.07	0	0	0	0	0
	9010.08	0	0	0	0	0
	9010.09	0	0	0	0	0
	9010.10 ¹	0	0	0	0	0
	9010.11	0	0	0	0	0
	9011.01	0	0	0	0	0
	9011.02	0	0	0	0	0
	9012.05	0	0	0	0	0
9012.09*	0.5	0	0	0	0	0.5
9012.10	0	0	0	0	0	0
9012.13	0	0	0	0	0	0
9100.01 ²	0	0	0	0	0.3	0.3

Table 4.5-2. Alternative 2 Mileage of Routes within Census Tracts

Location/County	Census Tracts	Motorized	Non-Motorized	Non-Mechanized	Closed	Grand Total
Los Angeles (continued)	9100.02	0	0	0	0.5	0.5
	9101.01 ^{1,2}	0	0	0	0	0
	9102.01 ^{1,2}	0	0	0	0	0
	9102.02	0	0	0	0	0
	9102.05	0	0	0	0	0
	9102.06	0	0	0	0	0
	9102.07	0	0	0	0	0
	9102.08	0	0	0	0	0
	9102.09	0	0	0	0.1	0.1
	9102.10	0	0	0	0	0
	9103.01	0	0	0	0	0
	9103.02	0	0	0	0	0
	9104.01	0	0	0	0	0
	9104.02 ^{1,2}	0	0	0	0	0
	9104.03 ^{1,2}	0	0	0	0	0
	9104.04 ^{1,2}	0	0	0	0	0
	9105.01 ^{1,2}	0	0	0	0	0
	9105.02 ^{1,2}	0	0	0	0	0
	9105.04 ^{1,2}	0	0	0	0	0
	9105.05 ²	0	0	0	0	0
	9106.01 ^{1,2}	0	0	0	0	0
	9106.02 ^{1,2}	0	0	0	0	0
	9106.03 ²	0	0	0	0	0
	9106.05 ^{1,2}	0	0	0	0	0
	9106.06 ^{1,2}	0	0	0	0	0
	9107.05 ²	0	0	0	0	0
	9107.06 ^{1,2}	0	0	0	0	0
	9107.07 ²	0	0	0	0	0
	9107.09	0	0	0	0	0
	9107.11 ²	0	0	0	0	0
	9107.12 ²	0	0	0	0	0
	9107.13 ²	0	0	0	0	0
	9107.14 ^{1,2}	0	0	0	0	0
	9107.15 ²	0	0	0	0	0
	9107.16 ²	0	0	0	0	0
	9108.04*	0	0	0	0.4	0.4
	9108.05*	0	0	0	0	0
	9108.12	0	0	0	0.4	0.4
	9110.01	1.0	0	0	1.1	2.1
	9800.03	0.1	0	0	0	0.1
9800.04 ^{1,2}	0	0	0	0	0	

Table 4.5-2. Alternative 2 Mileage of Routes within Census Tracts

Location/County	Census Tracts	Motorized	Non-Motorized	Non-Mechanized	Closed	Grand Total
Riverside	469*	43.2	0	0	33.8	77.1
San Bernardino	100.04	0	0	0	0	0
	100.09	0	0	0	0	0
	100.10 ¹	0	0	0	0	0
	100.11 ¹	0	0	0	0	0
	100.12	0	0	0	0	0
San Bernardino (continued)	100.13	0	0	0	0	0
	100.14 ¹	0	0	0	0	0
	100.15 ¹	0	0	0	0	0
	100.16 ¹	0	0	0	0	0
	100.17	1.2	0	0	0.8	2.0
	100.18 ¹	0	0	0	0	0
	100.19 ¹	0	0	0	0	0
	100.20 ¹	0	0	0	0	0
	100.21 ¹	0	0	0	0	0
	100.22	0	0	0	0	0
	100.23	0	0	0	0	0
	100.24 ¹	4.3	0	0	2.8	7.1
	100.25 ¹	0	0	0	0	0
	100.26 ¹	0	0	0	0	0
	103* ¹	758.7	0	0	893.2	1,651.9
	104.02	0.1	0	0	0.3	0.4
	104.09*	125.4	0	0	235.1	360.5
	104.10	0	0	0	1.1	1.1
	104.11	0	0	0	0.3	0.3
	104.12	0	0	0	0	0
	104.13 ¹	4.6	0	0	12.5	17.1
	104.15	0	0	0	0.3	0.3
	104.16 ¹	14.8	0	0	107.3	122.1
	104.17 ¹	1.1	0	0	14.4	15.5
	104.19 ¹	0.9	0	0	4.2	5.1
	104.20	0	0	0	7.1	7.1
	104.21 ¹	0	0	0	0	0
	104.22	0	0	0	0.9	0.9
	104.23 ¹	66.3	0	0	189.5	255.8
	104.24 ¹	204.8	0	0	423.1	627.9
116	892.9	0	1.0	1,970.2	2,864.0	
117 ¹	40.2	0	0	164.4	204.5	
118	0.0	0	0	19.5	19.6	
119 ¹	111.2	0	0	191.6	302.8	

Table 4.5-2. Alternative 2 Mileage of Routes within Census Tracts

Location/County	Census Tracts	Motorized	Non-Motorized	Non-Mechanized	Closed	Grand Total
San Bernardino (continued)	120.01	0.1	0	0	3.4	3.5
	120.02	0	0	0	2.2	2.2
	121.01	4.2	0	0	28.9	33.1
	121.03	23.8	0	0	29.8	53.7
	121.04 ¹	239.7	0	0	872.3	1,112.0
	250	0.1	0	0	2.0	2.0
	89.01 ¹	329.1	0	12.4	867.0	1,208.5
	91.07	0	0	0	0	0
	91.08 ¹	0	0	0	0.1	0.1
	91.09	0	0	0	0	0
	91.10	0	0	0	0	0
	91.12 ¹	0	0	0	0	0
	91.14	0	0	0	0	0
	91.16 ¹	0	0	0	0	0
	91.17 ¹	27.4	0	0	96.6	124.0
	91.18	0	0	0	0	0
	91.19	0	0	0	0	0
	92.01	0	0	0	0	0
	931	0	0	0	0.1	0.1
	941	0	0	0	0	0
	951	0	0	0	1.6	1.6
	97.07	0	0	0	0	0
	97.08	86.2	0	0	137.7	223.9
	97.09 ¹	0	0	0	0	0
	97.10 ¹	0	0	0	0	0
	97.11	0	0	0	0	0
	97.12 ¹	0	0	0	0	0
	97.13	0	0	0	0	0
	97.14 ¹	0	0	0	0	0
	97.15	0	0	0	0	0
	97.16 ¹	0	0	0	0.8	0.8
	97.17	0	0	0	0	0
	98 ¹	0	0	0	0	0
	9802 ²	0	0	0	0	0
	99.04 ¹	0	0	0	0	0
	99.05 ^{1,2}	0	0	0	0	0
	99.06	0	0	0	0	0
	99.08 ¹	0	0	0	0	0
	99.10	0	0	0	0	0
	99.11	0	0	0	0	0
99.12 ¹	0	0	0	0	0	
99.13 ¹	0	0	0	0	0	

Table 4.5-2. Alternative 2 Mileage of Routes within Census Tracts

Location/County	Census Tracts	Motorized	Non-Motorized	Non-Mechanized	Closed	Grand Total
WEMO TOTAL		4,253	28	33	10,545	14,859

*Tracts transect the planning area boundary.³³

1Tract contains low-income environmental justice population.

2Tract contains minority environmental justice population.

Alternative 2 Minimization and Mitigation Measures

Because no adverse impacts were identified for Alternative 2, no alternative-specific minimization and mitigation measures were developed to address socioeconomic or environmental justice impacts to include livestock grazing.

4.5.5 Impacts Associated with Alternative 3

Alternative 3 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM’s procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. These decisions would be the same under Alternative 3 as for Alternative 2, and therefore effect of these decisions on socioeconomics and environmental justice is the same as discussed for Alternative 2.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of “C” routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The socioeconomic and environmental justice impacts of these decisions under Alternative 3 are as follows:

PA VII: Under Alternative 3, there would be C routes available for competitive motorized events managed under a SRP in three distinct areas: the areas to the northeast of the Spangler Hills Open Area; the Summit Range plus the area east of Highway 395; and the urban interface area between the community of Ridgecrest and the Spangler Hills Open Area. Designation of the routes for motorized events would provide a socioeconomic benefit to businesses in those local areas. In addition, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but may be offset by additional routes in the planning area that are identified as competitive use open routes through the route designation process. Because an event has not been run in this corridor since the listing of the desert tortoise as threatened in 1989, no direct adverse effects to socioeconomic activity in that area are expected. Because the locations of replacement routes are not known the socioeconomic and environmental justice impacts of those routes would be considered through the route designation process.

PA VIII: Under Alternative 3, Koehn Lakebed would be designated as “Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit”. The impacts of the closure of Koehn Lakebed would be the same as discussed for Alternative 2.

Alternative 3 would also designate Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds as open to motorized use. Recreational use of the lakebeds is expected to support socioeconomic activity in the local areas near those lakebeds. Therefore, this decision may have a direct, beneficial impact on local businesses near Cuddeback, Coyote, and Chisholm Tail Lake lakebeds.

PA IX: Under Alternative 3, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. Eliminating the permit requirement is not expected to have any effect on socioeconomics or environmental justice populations.

PA X: Alternative 3 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA, while stopping and parking would be limited to within 50 feet of the centerline within DWMA. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA. This would be a reduction in the limits that are currently authorized outside of DWMA from 300 feet to 100 feet. This reduction is not expected to have any effect on motorized use of routes for recreation or other authorized uses, and would therefore not have any impact on socioeconomics.

PA XI: Local socioeconomic conditions, including employment rates, addition or loss of industries, military installations, and even single employers can impact the local or regional economies of San Bernardino, Kern, Los Angeles, and Inyo Counties. Alternative 3 would discontinue livestock grazing on currently inactive allotments, which include Buckhorn Canyon, Harper Lake, Cronese Lake, Cady Mountain, Johnson Valley, Double Mountain and Oak Creek Allotments. Grazing is anticipated to continue at or below current stocking rates. These stocking levels are at their lowest point when compared to historic levels, and if the WEMO Plan is fully implemented, are expected to continue to decrease. Therefore grazing continues to have a nominal influence on local economies in the area.

Alternative 3 Route Designation

In general, motorized access has a beneficial impact on socioeconomics by supporting the larger regional transportation network, facilitating local access for businesses, commercial users and residents, and providing recreation access and opportunities. However, as discussed in Section 4.1.3, the analysis in this Chapter is based on a general assumption that the overall size of the route network is unrelated to the total miles traveled on the network within the planning area. Socioeconomic activity associated with recreation would not be substantively affected by the overall size of the network and, therefore, overall socioeconomic impacts in the planning area would not vary among route network alternatives. Localized effects to these resources would occur depending on specific locations of opened and closed routes, but the regional scale of recreation and associated socioeconomic activity would not change.

Environmental justice minority and low-income populations are located within the WEMO planning area. Environmental justice low-income and minority populations are portrayed in Figure 3.5-1. Additionally, Table 4.5-3 details all of the census tracts within the project area as well as associated route mileage by census tract. As noted in Table 4.5-3, many tracts containing environmental justice populations are not transected by the BLM route network. Of the 58

census tracts within the WEMO planning area that are transected by the route network, 22 tracts, or 38 percent of the census tracts transected by the route network, contain environmental justice populations. This alternative contains the most mileage of open routes and the least mileage of closed routes. Increased mileage of open routes would potentially benefit environmental justice populations with increased job opportunities and access to low-cost recreation, but would also expose environmental justice populations to elevated levels of noise and pollution. The limited number of census tracts that contain environmental justice populations and are transected by the route network indicate that environmental justice populations would not bear a disproportionately high level of adverse impacts.

Table 4.5-3. Alternative 3 Mileage of Routes within Census Tracts

Location/County	Census Tracts	Motorized	Non-Motorized	Non-Mechanized	Closed	Grand Total
Inyo	8*	851.7	30.1	2.8	72.0	956.5
Kern	52.01*	165.7	0	8.0	254.4	428.0
	52.03* ¹	604.8	0	13.7	297.3	915.9
	53 ¹	0.5	0	0	0	0.5
	54.01	0	0	0	0	0
	54.02	0.4	0	0	0	0.4
	54.03	0	0	0	0	0
	54.04	0.0	0	0	0	0.0
	55.01	883.2	31.1	0	292.9	1,207.3
	55.06	21.6	0	0	0.6	22.3
	55.07 ¹	0	0	0	0	0
	55.08 ¹	21.0	0	0	1.9	22.9
	56 ¹	0	0	0	0	0
	57	1.1	0	0	0.2	1.3
	58.01	0	0	0	0	0
	58.02 ¹	1.3	0	0	0.1	1.3
	591	0	0	0	0	0
	60.04*	164.8	0.4	3.3	60.5	229.0
60.07*	171.8	0	0.6	35.6	208.0	
65 ¹	1,050.8	0	0	475.3	1,526.2	
Los Angeles	9001.02 ¹	37.5	0	0	1.0	38.6
	9001.03 ¹	0	0	0	0	0
	9001.04 ¹	0	0	0	0	0
	9002.01	1.2	0	0	0	1.2
	9003	0	0	0	0	0
	9005.01 ¹	0	0	0	0	0
	9005.04	0	0	0	0	0
	9005.05 ¹	0	0	0	0	0
	9005.06	0	0	0	0	0
	9005.07 ¹	0	0	0	0	0
	9005.08 ¹	0	0	0	0	0
	9006.02 ¹	0	0	0	0	0

Table 4.5-3. Alternative 3 Mileage of Routes within Census Tracts

Location/County	Census Tracts	Motorized	Non-Motorized	Non-Mechanized	Closed	Grand Total
Los Angeles (continued)	9006.05 ¹	0	0	0	0	0
	9006.06 ¹	0	0	0	0	0
	9006.07 ^{1,2}	0	0	0	0	0
	9006.08 ¹	0	0	0	0	0
	9006.09 ¹	0	0	0	0	0
	9007.01 ¹	0	0	0	0	0
	9007.03 ¹	0	0	0	0	0
	9007.04 ¹	0	0	0	0	0
	9007.05	0	0	0	0	0
	9008.03 ²	0	0	0	0	0
	9008.04 ¹	0	0	0	0	0
	9008.05	0	0	0	0	0
	9008.06 ^{1,2}	0	0	0	0	0
	9009	0	0	0	0	0
	9010.03 ²	0	0	0	0	0
	9010.04	0	0	0	0	0
	9010.07	0	0	0	0	0
	9010.08	0	0	0	0	0
	9010.09	0	0	0	0	0
	9010.10 ¹	0	0	0	0	0
	9010.11	0	0	0	0	0
	9011.01	0	0	0	0	0
	9011.02	0	0	0	0	0
	9012.05	0	0	0	0	0
	9012.09*	0.5	0	0	0.0	0.5
	9012.10	0	0	0	0	0
	9012.13	0	0	0	0	0
	9100.012	0.3	0	0	0	0.3
	9100.02	0.4	0	0	0	0.4
	9101.01 ^{1,2}	0	0	0	0	0
	9102.01 ^{1,2}	0	0	0	0	0
	9102.02	0	0	0	0	0
	9102.05	0	0	0	0	0
	9102.06	0	0	0	0	0
	9102.07	0	0	0	0	0
	9102.08	0	0	0	0	0
	9102.09	0.1	0	0	0	0.1
	9102.10	0	0	0	0	0
	9103.01	0	0	0	0	0
	9103.02	0	0	0	0	0
9104.01	0	0	0	0	0	

Table 4.5-3. Alternative 3 Mileage of Routes within Census Tracts

Location/County	Census Tracts	Motorized	Non-Motorized	Non-Mechanized	Closed	Grand Total
Los Angeles (continued)	9104.02 ^{1,2}	0	0	0	0	0
	9104.03 ^{1,2}	0	0	0	0	0
	9104.04 ^{1,2}	0	0	0	0	0
	9105.01 ^{1,2}	0	0	0	0	0
	9105.02 ^{1,2}	0	0	0	0	0
	9105.04 ^{1,2}	0	0	0	0	0
	9105.05 ²	0	0	0	0	0
	9106.01 ^{1,2}	0	0	0	0	0
	9106.02 ^{1,2}	0	0	0	0	0
	9106.03 ²	0	0	0	0	0
	9106.05 ^{1,2}	0	0	0	0	0
	9106.06 ^{1,2}	0	0	0	0	0
	9107.05 ²	0	0	0	0	0
	9107.06 ^{1,2}	0	0	0	0	0
	9107.07 ²	0	0	0	0	0
	9107.09	0	0	0	0	0
	9107.11 ²	0	0	0	0	0
	9107.12 ²	0	0	0	0	0
	9107.13 ²	0	0	0	0	0
	9107.14 ^{1,2}	0	0	0	0	0
	9107.15 ²	0	0	0	0	0
	9107.16 ²	0	0	0	0	0
	9108.04*	0.4	0	0	0	0.4
	9108.05*	0	0	0	0	0
	9108.12	0.4	0	0	0	0.4
	9110.01	2.1	0	0	0	2.1
9800.03	0.1	0	0	0	0.1	
9800.04 ^{1,2}	0	0	0	0	0	
Riverside	469*	74.2	0	0	2.8	77.1
San Bernardino	100.04	0	0	0	0	0
	100.09	0	0	0	0	0
	100.10 ¹	0	0	0	0	0
	100.11 ¹	0	0	0	0	0
	100.12	0	0	0	0	0
	100.13	0	0	0	0	0
	100.14 ¹	0	0	0	0	0
	100.15 ¹	0	0	0	0	0
	100.16 ¹	0	0	0	0	0
	100.17	2.0	0	0	0	2.0
	100.18 ¹	0	0	0	0	0
100.19 ¹	0	0	0	0	0	

Table 4.5-3. Alternative 3 Mileage of Routes within Census Tracts

Location/County	Census Tracts	Motorized	Non-Motorized	Non-Mechanized	Closed	Grand Total
San Bernardino (continued)	100.20 ¹	0	0	0	0	0
	100.21 ¹	0	0	0	0	0
	100.22	0	0	0	0	0
	100.23	0	0	0	0	0
	100.24 ¹	5.5	0	0	1.6	7.1
	100.25 ¹	0	0	0	0	0
	100.26 ¹	0	0	0	0	0
	103* ¹	1,236.6	0	0	415.7	1,652.3
	104.02	0.4	0	0	0.0	0.4
	104.09*	312.4	0	0	48.0	360.5
	104.10	1.0	0	0	0	1.0
	104.11	0.3	0	0	0	0.3
	104.12	0	0	0	0	0
	104.13 ¹	6.0	0	0	11.1	17.1
	104.15	0.3	0	0	0	0.3
	104.16 ¹	119.9	0	0	2.2	122.1
	104.17 ¹	3.4	0	0	12.1	15.5
	104.19 ¹	4.6	0	0	0.5	5.1
	104.20	5.1	0	0	2.0	7.1
	104.21 ¹		0	0	0	0
	104.22	0.9	0	0	0	0.9
	104.23 ¹	253.4	0	0.8	1.5	255.6
	104.24 ¹	580.6	0	0	47.7	628.3
	116	1,725.5	3.2	1.0	1,131.4	2,861.1
	117 ¹	72.4	0	0	131.6	204.0
	118	13.8	0	0	0.5	14.3
	119 ¹	220.0	0	0	82.2	302.2
	120.01	3.5	0	0	0.0	3.5
	120.02	0.1	0	0	2.1	2.2
	121.01	7.5	0	0	25.6	33.1
	121.03	52.0	0	0	1.8	53.7
	121.04 ¹	409.9	0.0	0	702.3	1,112.2
	250	0.4	0	0	1.6	2.0
	89.01 ¹	891.9	17.1	4.7	294.8	1,208.5
	91.07	0	0	0	0	0
	91.08 ¹	0.1	0	0	0	0.1
	91.09	0	0	0	0	0
	91.10	0	0	0	0	0
	91.12 ¹	0	0	0	0	0
	91.14	0	0	0	0	0
91.16 ¹	0	0	0	0	0	

Table 4.5-3. Alternative 3 Mileage of Routes within Census Tracts

Location/County	Census Tracts	Motorized	Non-Motorized	Non-Mechanized	Closed	Grand Total
San Bernardino (continued)	91.17 ¹	61.3	0	0	62.8	124.1
	91.18	0	0	0	0	0
	91.19	0	0	0	0	0
	92.01	0	0	0	0	0
	93 ¹	0.1	0	0	0	0.1
	94 ¹	0	0	0	0	0
	95 ¹	1.6	0	0	0	1.6
	97.07	0	0	0	0	0
	97.08	147.4	0	0	76.5	223.9
	97.09 ¹	0	0	0	0	0
	97.10 ¹	0	0	0	0	0
	97.11	0	0	0	0	0
	97.12 ¹	0	0	0	0	0
	97.13	0	0	0	0	0
	97.14 ¹	0	0	0	0	0
	97.15	0	0	0	0	0
	97.16 ¹	0	0	0	0.8	0.8
	97.17	0	0	0	0	0
	98 ¹	0	0	0	0	0
	9802 ²	0	0	0	0	0
	99.04 ¹	0	0	0	0	0
	99.05 ^{1,2}	0	0	0	0	0
	99.06	0	0	0	0	0
	99.08 ¹	0	0	0	0	0
	99.10	0	0	0	0	0
	99.11	0	0	0	0	0
	99.12 ¹	0	0	0	0	0
99.13 ¹	0	0	0	0	0	
WEMO TOTAL		10,196	82	35	4,551	14,864

*Tracts transect the planning area boundary.

¹Tract contains low-income environmental justice population.

²Tract contains minority environmental justice population.

Alternative 3 Minimization and Mitigation Measures

Because no adverse impacts were identified for Alternative 3, no alternative-specific minimization and mitigation measures were developed to address socioeconomic impacts to include livestock grazing.

4.5.6 Impacts Associated with Alternative 4

Alternative 4 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Except for the designation of TMAs, these decisions would be the same under Alternative 4 as for Alternatives 2 and 3, and therefore effect of these decisions on socioeconomics and environmental justice is the same as discussed for those alternatives.

Under Alternative 4, the boundaries of the nine TMAs included in Alternative 4 are similar to those in Alternatives 2 and 3, with the exception that TMA 7 (Ridgecrest, El Paso, Rands, and Red Mountain sub-regions) would be split into two separate TMAs. This decision would designate the current Coordinated Access Planning Area (CAPA) as a separate TMA. The CAPA area consists of the Ridgecrest and El Paso sub-regions, which would be split from the Rands and Red Mountain sub-regions, thus creating two separate TMAs. This decision would be made to facilitate BLM's ability to manage intense recreation use, public interest, and local agency interest in this area near Ridgecrest, and would therefore have no direct effect on socioeconomics and environmental justice. However, this decision would make it easier for BLM to consider socioeconomic and environmental justice impacts in future route designation decisions in this intensively used area, and thus have an indirect, beneficial effect on socioeconomics and environmental justice.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The socioeconomics and environmental justice impacts of these decisions under Alternative 4 are as follows:

PA VII: Under Alternative 4, the C routes that are to the northeast of the Spangler Hills Open Area above the Randsburg Wash Road and those found within the Summit Range and east of Highway 395 would be available for competitive motorized events managed under a SRP. Designation of the routes for motorized events would provide a socioeconomic benefit to businesses in those local areas. The Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would also be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but the decision would identify a specific route for the speed-controlled connector between the remaining Johnson Valley OHV Area and the Stoddard Valley OHV Open Area, with appropriate mitigation measures. This action would result in an increase in socioeconomic activity in that local area.

PA VIII: Under Alternative 4, Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds would all be designated as open to motorized use. Koehn Lakebed would be designated as "Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit". The impacts of the closure of Koehn Lakebed would be the same as discussed for Alternative 2.

Recreational use of the lakebeds is expected to support socioeconomic activity in the local areas near those lakebeds. Therefore, this decision may have a direct, beneficial impact on local businesses near Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds.

PA IX: Under Alternative 4, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. The impacts of this decision would be the same as those discussed for Alternative 3.

PA X: Alternative 4 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA's, while stopping and parking would be limited to within 50 feet of the centerline within DWMA's. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 100 feet. This reduction is not expected to have any effect on motorized use of routes for recreation or other authorized uses, and would therefore not have any impact on socioeconomics or environmental justice.

PA XI: Local socioeconomic conditions, including employment rates, addition or loss of industries, military installations, and even single employers can impact the local or regional economies of San Bernardino, Kern, Los Angeles, and Inyo Counties. Grazing is anticipated to continue at or below current stocking rates. These stocking levels are at their lowest point when compared to historic levels, and if the WEMO Plan is fully implemented, are expected to continue to decrease. Therefore grazing continues to have a nominal influence on local economies in the area.

Alternative 4 Route Designation

In general, motorized access has a beneficial impact on socioeconomics by supporting the larger regional transportation network, facilitating local access for businesses, commercial users and residents, and providing recreation access and opportunities. However, as discussed in Section 4.1.3, the analysis in this Chapter is based on a general assumption that the overall size of the route network is unrelated to the total miles traveled on the network within the planning area. Socioeconomic activity associated with recreation would not be substantively affected by the overall size of the network and, therefore, overall socioeconomic impacts in the planning area would not vary among route network alternatives. Localized effects to these resources would occur depending on specific locations of opened and closed routes, but the regional scale of recreation and associated socioeconomic activity would not change.

Environmental justice minority and low-income populations are located within the WEMO planning area. Environmental justice low-income and minority populations are portrayed in Figure 3.5-1. Additionally, Table 4.5-4 details all of the census tracts within the project area as well as associated route mileage by census tract. As noted in Table 4.5-4, many tracts containing environmental justice populations are not transected by the BLM route network. Of the 55 census tracts within the WEMO planning area that are transected by the route network, 20 census tracts, or 36 percent of the census tracts that are transected by the route network, contain environmental justice populations. This alternative contains more mileage of open routes and less mileage of closed routes than Alternative 2, but less mileage of open routes and more mileage of closed routes than Alternative 3. Increased mileage of open routes would potentially benefit environmental justice populations with increased job opportunities and access to low-cost recreation, but would also expose environmental justice populations to elevated levels of noise

and pollution. The limited number of census tracts that contain environmental justice populations and are transected by the route network relative to the total number of census tracts that are transected by the route network, indicate that environmental justice populations would not bear a disproportionately high level of adverse impacts.

Table 4.5-4. Alternative 4 Mileage of Routes within Census Tracts

Location/County	Census Tracts	Motorized	Non-Motorized	Non-Mechanized	Closed	Grand Total
Inyo	8*	471.5	2.3	1.6	487.2	962.6
Kern	52.01*	108.1	4.4	0.1	315.0	427.6
	52.03* ¹	260.8	0	1.5	653.9	916.1
	53 ¹	0	0	0	0.3	0.3
	54.01	0	0	0	0	0
	54.02	0	0	0	0.4	0.4
	54.03	0	0	0	0	0
	54.04	0	0	0	0	0
	55.01	363.7	44.9	0	796.0	1,204.7
	55.06	0	0	0	19.9	19.9
	55.07 ¹	0	0	0	0	0
	55.08 ¹	0.0	0	0	21.9	21.9
	56 ¹	0	0	0	0	0
	57	0.6	0	0	0.7	1.2
	58.01	0	0	0	0	0
	58.02 ¹	0	0	0	1.3	1.3
	591	0	0	0	0	0
	60.04*	72.5	0	0	159.5	231.9
	60.07*	9.6	0	4.0	193.1	206.7
	65 ¹	414.6	11.0	0	1,098.8	1,524.3
Los Angeles	9001.02 ¹	0.4	0	0	37.6	38.0
	9001.03 ¹	0	0	0	0	0
	9001.04 ¹	0	0	0	0	0
	9002.01	0.0	0	0	1.2	1.2
	9003	0	0	0	0	0
	9005.01 ¹	0	0	0	0	0
	9005.04	0	0	0	0	0
	9005.05 ¹	0	0	0	0	0
	9005.06	0	0	0	0	0
	9005.07 ¹	0	0	0	0	0
	9005.08 ¹	0	0	0	0	0
	9006.02 ¹	0	0	0	0	0
	9006.05 ¹	0	0	0	0	0
	9006.06 ¹	0	0	0	0	0
	9006.07 ^{1,2}	0	0	0	0	0
	9006.08 ¹	0	0	0	0	0
9006.09 ¹	0	0	0	0	0	

Table 4.5-4. Alternative 4 Mileage of Routes within Census Tracts

Location/County	Census Tracts	Motorized	Non-Motorized	Non-Mechanized	Closed	Grand Total
Los Angeles (continued)	9007.01 ¹	0	0	0	0	0
	9007.03 ¹	0	0	0	0	0
	9007.04 ¹	0	0	0	0	0
	9007.05	0	0	0	0	0
	9008.03 ²	0	0	0	0	0
	9008.04 ¹	0	0	0	0	0
	9008.05	0	0	0	0	0
	9008.06 ^{1,2}	0	0	0	0	0
	9009	0	0	0	0	0
	9010.03 ²	0	0	0	0	0
	9010.04	0	0	0	0	0
	9010.07	0	0	0	0	0
	9010.08	0	0	0	0	0
	9010.09	0	0	0	0	0
	9010.10 ¹	0	0	0	0	0
	9010.11	0	0	0	0	0
	9011.01	0	0	0	0	0
	9011.02	0	0	0	0	0
	9012.05	0	0	0	0	0
	9012.09*	0	0	0	0.5	0.5
	9012.10	0	0	0	0.0	0.0
	9012.13	0	0	0	0	0
	9100.01 ²	0	0	0	0.3	0.3
	9100.02	0	0	0	0.5	0.5
	9101.01 ^{1,2}	0	0	0	0	0
	9102.01 ^{1,2}	0	0	0	0	0
	9102.02	0	0	0	0	0
	9102.05	0	0	0	0	0
	9102.06	0	0	0	0	0
	9102.07	0	0	0	0	0
	9102.08	0	0	0	0	0
	9102.09	0	0	0	0.1	0.1
	9102.10	0	0	0	0	0
	9103.01	0	0	0	0	0
	9103.02	0	0	0	0	0
	9104.01	0	0	0	0	0
	9104.02 ^{1,2}	0	0	0	0	0
	9104.03 ^{1,2}	0	0	0	0	0
	9104.04 ^{1,2}	0	0	0	0	0
	9105.01 ^{1,2}	0	0	0	0	0
9105.02 ^{1,2}	0	0	0	0	0	

Table 4.5-4. Alternative 4 Mileage of Routes within Census Tracts

Location/County	Census Tracts	Motorized	Non-Motorized	Non-Mechanized	Closed	Grand Total
Los Angeles (continued)	9105.04 ^{1,2}	0	0	0	0	0
	9105.05 ²	0	0	0	0	0
	9106.01 ^{1,2}	0	0	0	0	0
	9106.02 ^{1,2}	0	0	0	0	0
	9106.03 ²	0	0	0	0	0
	9106.05 ^{1,2}	0	0	0	0	0
	9106.06 ^{1,2}	0	0	0	0	0
	9107.05 ²	0	0	0	0	0
	9107.06 ^{1,2}	0	0	0	0	0
	9107.07 ²	0	0	0	0	0
	9107.09	0	0	0	0	0
	9107.11 ²	0	0	0	0	0
	9107.12 ²	0	0	0	0	0
	9107.13 ²	0	0	0	0	0
	9107.14 ^{1,2}	0	0	0	0	0
	9107.15 ²	0	0	0	0	0
	9107.16 ²	0	0	0	0	0
	9108.04*	0	0	0	0.4	0.4
	9108.05*	0	0	0	0	0
	9108.12	0	0	0	0.4	0.4
9110.01	0	0	0	2.1	2.1	
9800.03	0	0	0	0.1	0.1	
9800.04 ^{1,2}	0	0	0	0	0	
Riverside	469*	46.3	0	0	30.6	77.0
San Bernardino	100.04	0	0	0	0	0
	100.09	0	0	0	0	0
	100.10 ¹	0	0	0	0	0
	100.11 ¹	0	0	0	0	0
	100.12	0	0	0	0	0
	100.13	0	0	0	0	0
	100.14 ¹	0	0	0	0	0
	100.15 ¹	0	0	0	0	0
	100.16 ¹	0	0	0	0	0
	100.17	0	0	0	2.0	2.0
	100.18 ¹	0	0	0	0	0
	100.19 ¹	0	0	0	0	0
	100.20 ¹	0	0	0	0	0
	100.21 ¹	0	0	0	0	0
	100.22	0	0	0	0	0
	100.23	0	0	0	0	0
100.24 ¹	0	0	0	7.1	7.1	

Table 4.5-4. Alternative 4 Mileage of Routes within Census Tracts

Location/County	Census Tracts	Motorized	Non-Motorized	Non-Mechanized	Closed	Grand Total
San Bernardino (continued)	100.25 ¹	0	0	0	0	0
	100.26 ¹	0	0	0	0	0
	103* ¹	987.6	0	0	656.2	1,643.8
	104.02	0.1	0	0	0.3	0.4
	104.09*	157.3	0	0	199.4	356.7
	104.10	0	0	0	1.1	1.1
	104.11	0	0	0	0.3	0.3
	104.12	0	0	0	0	0
	104.13 ¹	4.6	0	0	12.5	17.1
	104.15	0	0	0	0.3	0.3
	104.16 ¹	15.8	0	0	103.8	119.6
	104.17 ¹	1.4	0	0	13.9	15.3
	104.19 ¹	1.0	0	0	4.0	5.0
	104.20	0	0	0	7.1	7.1
	104.21 ¹	0	0	0	0	0
	104.22	0	0	0	0.9	0.9
	104.23 ¹	76.7	0	3.4	174.0	254.1
	104.24 ¹	212.9	0	0	415.5	628.4
	116	1,343.7	0	1.0	1,514.0	2,858.7
	117 ¹	45.0	0	0	157.9	202.9
	118	0.0	0	0	12.8	12.8
	119 ¹	129.7	0	0	172.0	301.7
	120.01	0.0	0	0	2.9	3.0
	120.02	0.6	0	0	1.6	2.2
	121.01	6.1	0	0	26.7	32.8
	121.03	26.4	0	0	27.2	53.6
	121.04 ¹	342.3	0	0	768.0	1,110.3
	250	0.5	0	0	1.5	2.0
	89.01 ¹	510.9	0	6.1	687.4	1,204.4
	91.07	0	0	0		
	91.08 ¹	0	0	0	0.1	0.1
	91.09	0	0	0	0	0
	91.10	0	0	0	0	0
	91.12 ¹	0	0	0	0	0
	91.14	0	0	0	0	0
	91.16 ¹	0	0	0	0	0
	91.17 ¹	27.7	0	0	110.1	137.8
	91.18	0	0	0	0	0
	91.19	0	0	0	0	0
	92.01	0	0	0	0	0
93 ¹	0.1	0	0	0	0.1	

Table 4.5-4. Alternative 4 Mileage of Routes within Census Tracts

Location/County	Census Tracts	Motorized	Non-Motorized	Non-Mechanized	Closed	Grand Total
San Bernardino (continued)	94 ¹	0	0	0	0	0
	95 ¹	0	0	0	1.5	1.5
	97.07	0	0	0	0	0
	97.08	84.5	0	3.7	134.8	223.0
	97.09 ¹	0	0	0	0	0
	97.10 ¹	0	0	0	0	0
	97.11	0	0	0	0	0
	97.12 ¹	0	0	0	0	0
	97.13	0	0	0	0	0
	97.14 ¹	0	0	0	0	0
	97.15	0	0	0	0	0
	97.16 ¹	0	0	0	0.8	0.8
	97.17	0	0	0	0	0
	98 ¹	0	0	0	0	0
	9802 ²	0	0	0	0	0
	99.04 ¹	0	0	0	0	0
	99.05 ^{1,2}	0	0	0	0	0
	99.06	0	0	0	0	0
	99.08 ¹	0	0	0	0	0
	99.10	0	0	0	0	0
99.11	0	0	0	0	0	
99.12 ¹	0	0	0	0	0	
99.13 ¹	0	0	0	0	0	
WEMO TOTAL		5,723	63	21	9,040	14,846

*Tracts transect the planning area boundary.

¹Tract contains low-income environmental justice population.

²Tract contains minority environmental justice population.

Alternative 4 Minimization and Mitigation Measures

Because no adverse impacts were identified for Alternative 4, no alternative-specific minimization and mitigation measures were developed to address socioeconomic impacts to include livestock grazing.

4.6 Recreation

4.6.1 Introduction

Affected Environment Summary

Section 3.6 describes the recreation setting and opportunities in the planning area. The transportation network in the West Mojave Planning Area supports recreation by providing a means to access recreation destinations, and by providing the locations and facilities in which OHV, hiking, biking, equestrian, and other transportation-based forms of recreation can occur. With its location only 90 minutes from 21 million residents in the metropolitan Los Angeles area, the West Mojave is a primary recreation destination for millions of people interested in outdoor-based activities such as OHV use, hiking, camping, touring, and viewing of scenery. Documented recreation activities throughout the West Mojave encompass a highly diverse range of activities, but most commonly evolve around the use of motor vehicles as a focal or ancillary element of the visitor experience. Beyond the mobility component of the experience, described recreation activities tend to emphasize immersion in the area's natural resources (solitude, expansive vistas, wildlife, vegetation, terrain, and minerals) as opposed to manmade attractions and conveniences such as theme parks, outlet centers, vacation resorts, and convention centers. Outdoor recreation opportunities in the region span the entire range of BLM recreation settings from urban to primitive.

Recreation activities on BLM lands can occur in designated areas and facilities, and as part of authorized events. They can also occur outside of designated areas and events. Popular outdoor recreation activities in the planning area include:

OHV Recreational Touring: OHV touring often occurs on flat terrain, but such touring also takes place in mountainous terrain using jeeps and similar vehicles. Vehicles that allow for multi-terrain travel have a broad range of access needs since they can traverse different types of terrain features.

Motorcycle Events: OHV access is necessary, not only due to the distance that must be traveled to reach the site of a motorcycle speed, challenge, or other competitive event, but also because significant equipment and supplies must be brought to event staging areas. This is true even for dual sport motorcycles, despite their "street legal" status, because a larger OHV may still be necessary to transport related equipment and supplies to motorcycle parks, other staging areas, or trailheads. This is due largely to the distance that such recreationists travel to participate in their activity, and the motorcycle's limited carrying capacity.

Camping and Hiking: Visitors need OHV access to staging areas and trailheads, and must bring supplies to camp in desert areas. Campers generally stay at locations that are fairly remote to obtain the level of solitude that is associated with the camping experience. In the desert, these locations are typically not located along major highways. Hikers use OHVs to reach trailheads and staging areas that are often quite remote.

Equestrian Riding: Equestrians use motorized vehicles to pull their horse trailers, and other equipment and supplies, to staging areas where they unload their horses, saddle up, and otherwise prepare for rides. Without the use of OHVs, equestrians would be unable to reach these staging areas, where watering holes, corrals, and related facilities are commonly present.

Gem Collecting and Rock Hounding: This activity generally occurs in geologic areas that offer the possibility of finding desired gems and rocks. Many of these areas are remote, and a four-wheel-drive OHV is needed to access them. The vehicle is also required to bring the variety of supplies necessary to safely participate in this form of recreation.

Hunting: Hunters require OHV access to reach trailheads and staging areas, which tend to be remote. From here, they can set out to hunt. Hunters use motorized vehicles to carry their supplies and equipment, which may include camping gear and to remove game.

Site Viewing: Often OHV's are driven to different locations to view and appreciate the various natural or man-made features that can be found in the California desert. Some of the more common types of features visited this way include unique geologic features, petroglyph sites, and mining features. For many people that enjoy going to these various sites the recreational activity is seeing the feature over the traveling to the site.

Each of these activities requires transportation access for motorized vehicles, or designation and maintenance of non-motorized and non-mechanized trails for access.

Methodology

The 2005 WEMO EIS analyzed the impacts of the proposed action, including the 5,098 mile route network and OHV use, on recreation. The Court's Summary Judgment and Remedy Orders did not specifically reach conclusions, or provide direction, regarding the sufficiency of the recreation analysis.

For this SEIS for the WMRNP, BLM performed the following:

- Used 2012 Recreation Information Management System (RIMS) data to update the recreation use information in Section 3.6.
- The route designation process for each alternative included evaluation of the location of each route with respect to known recreation uses, and to potential safety hazards. It also included designation of non-motorized and non-mechanized routes, as well as designation of 15 recreation-specific sub-designations.
- Re-evaluated the 2005 WEMO analysis, and supplemented it with additional information from resource specialists, public comments, and changes in conditions within the planning area. This additional information is incorporated into the evaluation in Section 4.6.2 below.

4.6.2 Impacts Common to All Alternatives

The WMRNP includes decisions that could affect both the availability and quality of recreation opportunities within the planning area. In general, WMRNP decisions that increase the size of the transportation network available to recreation users are beneficial for those users, and provide access to greater variety of destinations. In contrast, decisions that decrease the size of the network generally limit recreational experiences and access to destinations, and may be an adverse impact.

In addition to affecting the availability of recreation opportunities, the size of the transportation network also affects the quality of the recreation experience. A large reduction of the size of the available network would generally cause an increase in the number of recreation users in the

areas that remain available. Because solitude in the planning area is a major attraction for many recreationists, increases in the density of users in any given area is generally considered an adverse impact to the recreation experience. In contrast, increases in the size of the network would be considered beneficial, as recreation users would be more widely dispersed.

In addition to the size and configuration of the transportation network, the WMRNP includes establishment of objectives and implementation strategies that can affect the quality of recreation experiences. The selected objectives would be used as the framework for determining the size and configuration of the network, and would thus have an indirect impact on recreation users, as described in the above paragraphs.

The limitations on access route uses and types can also result in adverse or beneficial impacts to recreation users. In the WMRNP, these limitations include specifications for competitive use routes, motorcycles, ATVs, and jeeps/trucks. They may also specify non-motorized uses (e.g. bicycling) and/or non-mechanized uses (hiking and equestrian) only. Limits may also provide for seasonal or authorized use only. These limitations for each alternative were made based on the size of the route, the known users, and to minimize potential resource conflicts and conflicts between users. Similar to the overall size of the network, the limitations on use and type can adversely affect users of one mode of transportation if the number of routes available to them is limited, and can have a beneficial impact on another class of users if the number of routes available to them is increased and routes are interconnected to provide a variety of experiences for specific user groups. In addition, providing routes for specific motorized uses can alleviate use conflicts on routes where multiple modes of travel are an issue and reducing quality of recreation experiences. Also, designating routes to create a transportation network that provides a variety of recreation opportunities and experiences (out and back, round trip, hillclimb, touring, etc.) is beneficial to recreation users.

The implementation strategies considered as part of the WMRNP include measures that would place restrictions on the adopted network that pertain to the allowed mode of transport, types of vehicles, time or season of use, speed, and other parameters associated with use of the network. These restrictions are intended to protect other resources. In general, many recreation users may consider these restrictions as a direct, adverse impact on their experience. However, these restrictions can also be considered beneficial for other users. For instance, speed and noise restrictions may be beneficial for users who prefer to enjoy their experience in quieter, safer environment, as the restrictions would limit the activities of the other users of the same area. These restrictions also have an indirect beneficial effect on the recreation experience by protecting biological, cultural, and scenic resources that attract users to the area in the first place. Although certain users may consider the restrictions to be an adverse impact to their individual experience, the cumulative effect of allowing all users to operate without restrictions could damage resources, resulting in a longer-term impact on the experience for all users.

Another consideration in the designation of routes in the planning area is safety. Encounters with safety hazards associated with abandoned mining features are a well-known risk in the West Mojave. Therefore, designation of a transportation network, and implementation of use restrictions, in consideration of the known locations of these hazards is beneficial for users of these areas.

Chapter 2 discusses the general resource protection and motorized access objectives that were incorporated into the development of the transportation network alternatives. These objectives

were used to inform decisions regarding which linear features would be included in the motorized, non-motorized, and non-mechanized transportation network, and which features would be closed (i.e., designated as transportation linear disturbances), under each alternative. Recreation impacts were considered in the development of alternative goals and objectives, in designation of individual routes, and in defining specific implementation parameters. The goals and objectives for Alternative 2 focus on enhancing sensitive resource values and areas while managing access to de-emphasize casual multiple-use motorized and mechanized touring. In contrast, the goals and objectives for Alternative 3 focus on managing access to emphasize casual multiple-use motorized and mechanized touring.

Recreation impacts were also considered in the designation of individual routes. The effect of the designation of a route on recreation uses in the area was considered on a case-by-case basis by BLM recreation specialists reviewing connections to other routes, vehicle types that use a route, intersections with designated trails, specific recreational destinations that the route provides access to, or association of a route with special recreation permits.

There are no impacts to recreation from the grazing alternatives in PA XI; therefore, there is no further discussion of PA XI in this section.

Resource-Specific Minimization and Mitigation Measures

Resource-specific minimization and mitigation measures that were considered as part of the route designation process for each alternative, and that will be considered for each route during implementation of the WMRNP, were described in Table 2.1-4. For safety issues associated with recreation, these include:

- Remediate abandoned mine land features or other safety hazards;
- Install fencing;
- Install Signs;
- Temporarily close routes while safety issues are addressed;
- Install barriers and maintain or upgrade existing barriers;
- Limit Special Recreation Permitted Use;
- Remove Attractants;
- Monitor the route for signs of increasing impacts to a sensitive area, and
- Determine that no additional minimization and mitigation measure is needed based on site evaluation.

Residual Impacts After Implementation of Mitigation Measures

Residual effects to recreation would continue after application of mitigation measures. Although the mitigation measures would reduce the potential for recreational users to encounter safety hazards, unidentified hazards are likely to continue to exist. Also, mitigation measures implemented to address biological, cultural, and other resource impacts, including route closures and other route limitations, would restrict the range of routes available for recreational use. Although the total miles traveled for recreational use in the planning area would remain the

same, this use would occur within a more limited area, potentially affecting the recreational experience for users who seek recreation in more remote, unpopulated areas.

4.6.3 Impacts Associated with the No Action Alternative

Alternative 1 Plan Amendment

Under the No Action Alternative, none of the proposed plan amendment decisions would be adopted.

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct impacts to recreation. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider recreation and other use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM's ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may benefit recreation by facilitating adaptive management changes in response to changing on-the-ground conditions. By not adopting these decisions under the No Action Alternative, these potential beneficial effects would not be achieved. In addition, by not adopting these decisions, the CDCA Plan would not be amended to conform to current policy or regulation.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. Because these activities do not affect recreation, the No Action alternative would have no direct or indirect impact on recreation.

Alternative 1 Route Designation

The evaluation of impacts common to all alternatives concluded that the size and configuration of the available transportation network, and the management strategies for that network, can have both adverse and beneficial effects on recreation users. The mileage of routes available to the various different types of recreation users in the area under the No Action Alternative is presented in Table 4.6-1.

Under the No Action Alternative, there currently are no routes designated for most specific recreational activities except a small motorcycle network, and therefore relatively few impacts to any specific type of recreation user. Implementation strategies would remain the same as currently specified in the CDCA Plan. Those strategies include several restrictions on motorized vehicle use in order to achieve resource protection. Examples of restrictions include the limitation on stopping, parking and vehicle-based camping in DWMA's to 50 feet of centerline of routes and the requirement under this alternative for visitors to the Rand Mountains to complete an educational program and purchase a permit before they are allowed to use a motorized vehicle on the designated route network within the Rand Mountains. Therefore, adverse impacts from these restrictions would continue for users that consider the current restrictions as adverse to their experience.

Table 4.6-1. Alternative 1 - Miles of Routes which Support Recreation¹

Resource Description	Motorized	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
Miles of Routes Designated for Activity				
ATV/UTV	0	0	0	0
Biking	0	0	0	0
Hiking	0	0	10.7	0
Horseback Riding	0.1	0	0	0
Motorcycling	38.3	0	0	0
OHV	5338.2	0	0	0
Miles of Routes for Access to Activity				
Cabin Site	31.1	0	0	25
Camping	577.8	0	0	248.5
Caving	27	0	0	6.2
Guzzler	66.1	0	0	33
Motorized Staging Area	109.6	0	0	29.4
Overlook	248.8	0	0	71.5
Rockhounding	568.1	0	0	720.7
Target Shooting	129.3	0	0	51.1
Trailhead	26.3	0	0	10.2

¹ The sub-designation mileages are considered preliminary, and are likely to be revised prior to issuing the Final SEIS.

The analysis also concluded that safety hazards, including those associated with abandoned mining features, present an adverse impact to recreation. The mileage of routes located in close proximity to identified abandoned mine land hazards associated with the No Action Alternative is presented in Table 4.6-2.

Table 4.6-2. Alternative 1 - Miles of Routes in Proximity to Safety Hazards

Resource Description	Motorized	Authorized/ Administrative	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Mileage Within 100 Feet of Abandoned Mine or Other Identified Safety Hazard	30.9	0.6	0	0.1	47

Alternative 1 Minimization and Mitigation Measures

Table 2.3-1 describes the network-wide minimization and mitigation measures that are currently specified in the CDCA Plan, WEMO Plan, and/or the Court’s Remedy Order, and which are therefore applicable under Alternative 1, the No Action Alternative. In general, these measures focus on resource protection, and therefore place restrictions on the development of new routes to support recreation. These restrictions include the one percent limit on allowable new ground disturbance in DWMA’s, distance limitations on stopping and parking, and efforts to disguise and rehabilitate closed routes. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific impacts to recreation are considered before authorizing new motorized routes.

4.6.4 Impacts Associated with Alternative 2

Alternative 2 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMA’s) would amend BLM’s procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct impacts to recreation. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider recreation and other use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM’s ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may benefit recreation by facilitating adaptive management changes in response to changing on-the-ground conditions. By adopting these decisions, the CDCA Plan would be amended to conform to current policy and regulation.

As a result of the modification of the language limiting the route network to existing routes, new routes could potentially be designated in locations with no existing routes, and could have adverse impacts to localized resources near that route. New routes may be established to provide access for new authorized uses, or to avoid identified impacts to resources. The recreation impacts of each new route would be evaluated as part of the BLM's consideration of the application for land use authorization. As part of that evaluation, BLM would consider the potential impacts of the new route as required by 43 CFR 8342.1, potential alternatives to provide the necessary access, and minimization and mitigation measures to address any identified impacts to recreation. In the case of routes established to provide access to authorized uses, the duration of the designation of the new route would be the same as authorized land use it is intended to support. Once the term of the authorized land use expires, the route would generally be considered for closure, and the terms and conditions of the authorized land use would require the lessee, permittee, or ROW holder to rehabilitate the route. BLM may also determine at a later date, consistent with 43 CFR 8342.1, that the route provides necessary access for some other reason and could designate the route accordingly, releasing the authorized land user from their requirement to rehabilitate the route. In the case of routes established to address impacts to resources, the new route may be permanent.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The recreation impacts of these decisions under Alternative 2 are as follows:

PA VII: It is anticipated that the overall number of SRP applications will not increase. This means that there should be no measurable increase in the number of OHVs using public land in the area. Additionally, designating the C routes does not authorize individual SRP events to use these routes, and additional analysis will occur as part of the SRP permitting process. Therefore, there should be no direct impacts to recreation.

Under Alternative 2, there would be a seasonal restriction placed upon the use of the currently designated C routes for competitive motorized events managed under a SRP. These routes would be available for use by competitive motorized events during the months of November, December, and January. These routes would continue to be open for casual use touring in the area throughout the year, which would be beneficial for recreation in the area.

Since OHV competitive events conducted in other OHV Open Areas would be limited to inside the Open Area boundaries under this alternative, the remaining designated long-distance race corridor, the Johnson Valley to Parker Valley Corridor would be removed under Alternative 2. The restriction in use of the existing C routes, and the elimination of the Johnson Valley to Parker route, would be a direct, adverse impact to recreation for participants in those events.

PA VIII: Alternative 2 would designate Koehn Lakebed as closed to motorized vehicles. There would be no change to the use of Cuddeback, Coyote, or Chisholm Trail Lakes. The closure of Koehn Lakebed would result in a direct, adverse impact to recreational uses of that lakebed. Because Koehn lakebed is currently receiving relatively light use, this impact is expected to be small.

PA IX: There would be no change to access to the Rand Mountains-Fremont Valley Management Area under Alternative 2. The Rand Mountains-Fremont Valley Management Area would continue to be managed consistent with parameters outlined in 2.2.1.2.4 of the WEMO FEIS, including the use of a permit system for those visitors desiring to use vehicles within the Rand Mountains. Before one can travel into the management area, one must complete a test and then purchase a permit to use the public lands within the area. This would have a negative effect on recreation within the Rand Mountains-Fremont Valley Management Area by impeding recreational access onto the public lands within the area. Additionally, those public land visitors that desire to use vehicles on the public lands may view this as a discriminatory action against their particular form of recreational use. They may also feel that this is an unjust fee placed upon them for use of generally undeveloped public lands.

PA X: Alternative 2 would limit stopping and parking to previously disturbed areas within 50 feet from the route centerline, both inside and outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 50 feet. Camping would be allowed adjacent to designated routes in previously disturbed areas, not to exceed 50 feet from the centerline, throughout the WEMO Planning Area. This reduction from the limits in the No Action Alternative would have a significant effect on recreational use. Based on the assumption that routes are 12 feet wide (Table 4.1-1) the usable space for parking and camping is reduced down to 44 feet from the edge of the road once the 6 feet from center line is subtracted from the allowed 50 feet. The impact would predominately affect those recreational users that camp or use vehicles and trailers to transport their equipment to a remote starting point to continue their recreational activities. These recreational users are frequently driving full size pickups, SUVs, or motorhomes and pulling larger trailers. The average size for a full size pickup is about 20 feet in length, motorhomes and travel trailers range in size from 20 to 40 feet in length, and utility trailers average between 10 to 20 feet in length. Because of the overall sizes of their vehicles when put together it is very difficult for these recreational users to pull off the road and get turned around within the allowed 44 feet. Additionally, recreationists frequently visit in larger groups, and this limitation would not allow for them to assemble as a group safely to the side of a route.

Alternative 2 Route Designation

Section 4.6.2 described the general impacts to recreation that are common to all alternatives. That analysis concluded that the size of the available transportation network, and the management restrictions placed on that network, can have both adverse and beneficial effects on recreation users. The mileage of routes available to the various different types of recreation users in the area under Alternative 2 is presented in Table 4.6-3.

Table 4.6-3. Alternative 2 - Miles of Routes which Support Recreation

Resource Description	Motorized	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
Miles of Routes Designated for Activity				
ATV/UTV	198.3	0	0	3.1
Bicycle	0	0	0	0.1
Hiking	21	0	18.1	10.7
Horseback Riding	1	0	14.2	1.5
Motorcycling	220.8	0	0	3.1
OHV	4290.5	0	0	0
Miles of Routes for Access to Activity				
Cabin Site	21.6	0	0	34.3
Camping	377.9	5.1	1.3	434.4
Caving	21	0	0	12.3
Guzzler	48.8	0	0	50.5
Motorized Staging Area	87	0	0	49.9
Overlook	167.5	0	0	149.6
Rockhounding	453.3	9.3	0	813.8
Target Shooting	93	0	0	86.9
Trailhead	19.8	0	0	15.5

¹ The sub-designation mileages are considered preliminary, and are likely to be revised prior to issuing the Final SEIS.

The analysis also concluded that safety hazards, including those associated with abandoned mining features, present an adverse impact to recreation. The mileage of routes located in close proximity to identified abandoned mine land hazards associated with Alternative 2 is presented in Table 4.6-4.

Table 4.6-4. Alternative 2 - Miles of Routes in Proximity to Safety Hazards

Resource Description	Motorized	Authorized/Administrative	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
Mileage Within 100 Feet of Abandoned Mine or Other Identified Safety Hazard	14.9	0.3	0.4	0.1	53.9

Alternative 2 reduces the miles of available routes of travel for use by the casual public by 1863 miles from Alternative 1. Of these 1863 miles of routes, 1045 miles are closed (designated as transportation linear disturbances), while 818 of the miles are designated for

Authorized/Permitted and Administrative use only. The miles available for use by Non-street legal vehicles (i.e. Quads, UTVs, and Dune buggies) is further reduced by 220 miles, leaving a network available for casual public use on non-street legal vehicles at a total of 3107 miles. Alternative 2 creates a 198 mile network of ATV/UTV routes, while Alternative 1 has 0 miles of routes specified for this type of use. Alternative 2 creates a 221 mile network of motorcycle routes, while Alternative 1 has only 38 miles of designated motorcycle routes, which is an increase of 183 miles designated for motorcycles. Alternative 2 also creates a 18 mile network of hiking routes, while Alternative 1 has only 10 miles designated for such use, which is an increase of 8 miles designated for hiking.

Alternative 2 Minimization and Mitigation Measures

Table 2.3-5 describes the network-wide minimization and mitigation measures that would be applied under Alternative 2. In general, these measures focus on resource protection, and therefore place restrictions on the development of new routes to support recreation. These restrictions include the one percent limit on allowable new ground disturbance in DWMA's, distance limitations on stopping and parking, and efforts to disguise and rehabilitate closed routes. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific impacts to recreation are considered before authorizing new motorized routes.

4.6.5 Impacts Associated with Alternative 3

Alternative 3 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. These decisions would be the same under Alternative 3 as for Alternative 2, and therefore effect of these decisions on recreation is the same as discussed for Alternative 2.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The impacts of these decisions to recreation under Alternative 3 are as follows:

PA VII: Under Alternative 3, there would be C routes available for competitive motorized events managed under a SRP in three distinct areas: the areas to the northeast of the Spangler Hills Open Area; the Summit Range plus the area east of Highway 395; and the urban interface area between the community of Ridgecrest and the Spangler Hills Open Area. The Summit Range and the area east of Highway 395 along with the area to the northeast of the Spangler Hills Open Area have approximately 20-30 miles of routes in each area. These designated C routes were originally identified and approved for use in the Spangler Hills OHV Area Management Plan (1992). The terrain in these areas ranges from rolling hills to steep hills and

sandy drainages. This topographic diversity and open space is extremely desirable to OHV enthusiasts providing technically challenging opportunities no matter what ones skill level maybe. Additionally, these additional miles of trails enhance the ability to lay out long distance OHV competitive events.

The designation of C routes within the urban interface area between the community of Ridgecrest and the Spangler Hills Open Area would provide for connectivity from the community to the Open area. There are two proposed areas that these C routes would connect within the community and those are around the Cerro Coso Community College and the Desert Empire Fairgrounds. Connecting these trails to these two locations would provide the ability for an event to start and/or end within the community. Plus these routes would provide a potential for economic diversity to the local community and local residents to come out and be spectators for events starting from the community. About 10 to 20 miles of routes would be designated as being available for competitive use. The terrain in this urban interface area includes the rising desert floor to sandy hills with sandy drainages.

In addition, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but may be offset by additional routes in the planning area that are identified as competitive use open routes through the route designation process. Any Race staging area for C routes would still be limited to MUC Intensive (Class I) lands, and pit areas would be limited to those areas previously dedicated as Pit areas along the route. The elimination of the Johnson Valley to Parker route would be a direct, adverse impact to recreation for participants in those events. The designation of the Johnson Valley North unit-to-Johnson Valley South unit and the Stoddard Valley-to-Johnson Valley competitive events connectors would result in beneficial impacts to recreational use and partially offset the loss of 98,000 acres that are no longer available for competitive events under SRP as a result of the MCAGACC expansion.

PA VIII: Under Alternative 3, Koehn Lakebed would be designated as “Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit”. Alternative 3 would also designate Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds as open to motorized use. This would result in a direct, adverse impact to recreational uses of Koehn lakebed, but an overall beneficial impact by opening the other three lakebeds to recreational uses.

PA IX: Under Alternative 3, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. The requirement for visitors to obtain a use permit before using a motor vehicle inside the Rand Mountains would be replaced with an intensively managed designated route network. The remaining general management frame work for the Rand Mountain – Fremont Valley Management Area would stay intact as outlined in 2.2.1.2.4 of the WEMO FEIS and the No Action Alternative. Removing the requirement for visitors to obtain a SRP use permit before using a motor vehicle inside the Rand Mountains would have an overall positive effect on recreational access to the area. This action would remove the impediment to the availability of the public lands for recreational access and use based purely on their choice of mode of travel. This would have an overall positive effect on recreational access to the area by expanding the availability of recreational opportunities within the WEMO planning area.

PA X: Alternative 3 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA's, while stopping and parking would be limited to within 50 feet of the centerline within DWMA's. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 100 feet. This would be a reduction from the limits in the No Action Alternative, but would still allow a larger area of disturbance than Alternative 2 (100 feet in Alternative 3 versus 50 feet in Alternative 2). This reduction to the allowed stopping, parking, and camping distance would have a significant effect on recreational use. Based on the assumption that routes are 12 feet wide (Table 4.1-1) the usable space for parking and camping is reduced down to 94 feet from the edge of the road once the 6 feet from center line is subtracted from the allowed 100 feet. The impact would be predominately affect by those recreational users that camp or use vehicles and trailers to transport their equipment to a remote starting point to continue their recreational activities. These recreational users are frequently driving full size pickups, SUVs, or motorhomes and pulling larger trailers. The average size for a full size pickup is about 20 feet in length, motorhomes and travel trailers range in size from 20 to 40 feet in length, and utility trailers average between 10 to 20 feet in length. Because of the overall sizes of their vehicles when put together these recreational users require larger spaces to pull off the road and get turned around within. Additionally, recreationalists frequently visit in larger groups and this limitation would not allow for them to assemble as a group safely to the side of a route.

Alternative 3 Route Designation

Section 4.6.2 described the general impacts to recreation that are common to all alternatives. That analysis concluded that the size of the available transportation network, and the management restrictions placed on that network, can have both adverse and beneficial effects on recreation users. The mileage of routes available to the various different types of recreation users in the area under Alternative 3 is presented in Table 4.6-5.

Table 4.6-5. Alternative 3 - Miles of Routes which Support Recreation¹

Resource Description	Motorized	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
Miles of Routes Designated for Activity				
ATV/UTV	111.3	0	0	2
Biking	2.2	19	0	7.9
Hiking	1.2	0	9.4	2.7
Horseback Riding	1	0	6.6	0.8
Motorcycling	145.3	0	0	0
OHV	10388.2	-	-	-
Miles of Routes for Access to Activity				
Cabin Site	41.3	0	0	14.9
Camping	625.5	6.6	0	199.6
Caving	29.5	0	0	4.1

Table 4.6-5. Alternative 3 - Miles of Routes which Support Recreation¹

Resource Description	Motorized	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
Guzzler	83.9	0	0	15.5
Motorized Staging Area	112.3	0	0	25
Overlook	262.9	0	0	56
Rockhounding	1023.7	11	0	253.6
Target Shooting	144.9	1.3	0	35.5
Trailhead	29.1	0	0	7.8

¹ The sub-designation mileages are considered preliminary, and are likely to be revised prior to issuing the Final SEIS.

The analysis also concluded that safety hazards, including those associated with abandoned mining features, present an adverse impact to recreation. The mileage of routes located in close proximity to identified abandoned mine land hazards associated with Alternative 3 is presented in Table 4.6-6.

Table 4.6-6. Alternative 3 - Miles of Routes in Proximity to Safety Hazards

Resource Description	Motorized	Authorized/ Administrative	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
Mileage Within 100 Feet of Abandoned Mine or Other Identified Safety Hazard	45.6	1.7	0.5	0.4	22.4

Alternative 3 increases the overall miles of designated routes by 5,089 from Alternative 1. Of the overall increase of designated routes from Alternative 1 to Alternative 3, 281 miles of these routes are designated for Authorized and Administrative Use only. This is an increase of 133 miles from Alternative 1. This results in an increase available to the casual public in the amount of 4808 miles. The miles available for use by non-street legal vehicles (ie. Quads, UTVs, and Dune buggies) is increased by 4654 miles from Alternative 1. Alternative 3 creates a 21 mile network of bicycle routes while Alternative 1 has 0 miles of routes specified for this type of use. Alternative 3 creates a 111 mile network of ATV/UTV routes, while Alternative 1 has 0 miles of routes specified for this type of use. Alternative 3 creates a 145 mile network of motorcycle routes, while Alternative 1 has only 38 miles of designated motorcycle routes. This is an increase of 107 miles designated for motorcycles.

The expansion of the route network is particularly large in the Jawbone Subregion. The change reflects the adoption of an enhanced trail system proposed through the area, and reflects the historic use of this area in conjunction with the adjacent OHV Open Area. The area is significantly impacted from the historic use, and the proposed network will be developed in

conjunction with the continuation of an intensive mitigation strategy underway for the Jawbone area.

Alternative 3 Minimization and Mitigation Measures

Table 2.3-8 describes the network-wide minimization and mitigation measures that would be applied under Alternative 3. In general, these measures focus on resource protection, and therefore place restrictions on the development of new routes to support recreation. These restrictions include the one percent limit on allowable new ground disturbance in DWMAs, distance limitations on stopping and parking, and efforts to disguise and rehabilitate closed routes. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific impacts to recreation are considered before authorizing new motorized routes.

Intensively used and sensitive areas would be mitigated by site-specific strategies developed with current and future local non-profits and other partners to further travel management and ACEC resource protection implementation strategies.

4.6.6 Impacts Associated with Alternative 4

Alternative 4 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Except for the designation of TMAs, these decisions would be the same under Alternative 4 as for Alternatives 2 and 3, and therefore effect of these decisions on recreation is the same as discussed for those alternatives.

Under Alternative 4, the boundaries of the nine TMAs included in Alternative 4 are similar to those in Alternatives 2 and 3, with the exception that TMA 7 (Ridgecrest, El Paso, Rands, and Red Mountain sub-regions) would be split into two separate TMAs. This decision would designate the current Coordinated Access Planning Area (CAPA) as a separate TMA. The CAPA area consists of the Ridgecrest and El Paso sub-regions, which would be split from the Rands and Red Mountain sub-regions, thus creating two separate TMAs. This decision would be made to facilitate BLM's ability to manage intense recreation use, public interest, and local agency interest in this area near Ridgecrest, and would therefore have no direct effect on recreation. However, this decision would make it easier for BLM to consider public and local agency interest in future route designation decisions in this intensively used area, and thus have an indirect, beneficial effect on recreation.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The impacts of these decisions to recreation under Alternative 4 are as follows:

PA VII: Under Alternative 4, the C routes that are to the northeast of the Spangler Hills Open Area above the Randsburg Wash Road and those found within the Summit Range and east of Highway 395 would be available for competitive motorized events managed under a SRP. There are approximately 20-30 miles of designated C routes in each of these areas. These designated C routes were originally identified and approved for use in the Spangler Hills OHV Area Management Plan (1992). The terrain in these areas ranges from rolling hills to steep hills and sandy drainages. This topographic diversity and open space is extremely desirable to OHV enthusiasts providing technically challenging opportunities no matter what ones skill level maybe. Additionally, these additional miles of trails enhance the ability to lay out long distance OHV competitive events. The Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would also be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but the decision would identify a specific route for the speed-controlled connector between the remaining Johnson Valley OHV Area and the Stoddard Valley OHV Open Area, with appropriate mitigation measures. This alternative would provide a corridor that enhances organized vehicle riding opportunities within the Open Area.

PA VIII: Under Alternative 4, Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds would all be designated as open to motorized use. Koehn Lakebed would be designated as “Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit”. The impacts of the closure of Koehn Lakebed would be the same as discussed for Alternative 2. The recreation impacts at Cuddeback, Coyote, and Chisholm Trail Lake lakebeds would be the same as those described for Alternative 3, which would also designate these lakebeds as open to motorized vehicles. This would result in a direct, beneficial impact by opening these three lakebeds to recreational uses.

PA IX: Under Alternative 4, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. This would have an overall positive effect on recreational access to the area by expanding the availability of recreational opportunities within the WEMO planning area.

PA X: Alternative 4 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA's, while stopping and parking would be limited to within 50 feet of the centerline within DWMA's. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 100 feet. This reduction to the allowed stopping, parking, and camping distance would have a significant effect on recreational use. Based on the assumption that routes are 12 feet wide (Table 4.1-1) the usable space for parking and camping is reduced down to 94 feet from the edge of the road once the 6 feet from center line is subtracted from the allowed 100 feet. The impact would be predominately affect those recreational users that camp or use vehicles and trailers to transport their equipment to a remote starting point to continue their recreational activities. These recreational users are frequently driving full size pickups, SUVs, or motorhomes and pulling larger trailers. The average size for a full size pickup is about 20 feet in length, motorhomes and travel trailers range in size from 20 to 40 feet in length, and utility trailers average between 10 to 20 feet in length. Because of the overall sizes of their vehicles when put together these recreational users require larger spaces to pull off the road and get turned around within. Additionally, recreationalists frequently visit in

larger groups and this limitation would not allow for them to assemble as a group safely to the side of a route.

Alternative 4 Route Designation

Section 4.6.2 described the general impacts to recreation that are common to all alternatives. That analysis concluded that the size of the available transportation network, and the management restrictions placed on that network, can have both adverse and beneficial effects on recreation users. The mileage of routes available to the various different types of recreation users in the area under Alternative 4 is presented in Table 4.6-7.

Table 4.6-7. Alternative 4 - Miles of Routes which Support Recreation

Resource Description	Motorized	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
Miles of Routes Designated for Activity				
ATV/UTV	137.1	0	0	0
Biking	0	62.5	0	0
Hiking	0	0	23.4	0
Horseback Riding	0	0	0	0
Motorcycling	120.6	0	0	0.3
OHV	5258.8	0	0	0
Miles of Routes for Access to Activity				
Cabin Site	31.1	0	0	25.2
Camping	567.9	16.5	2.4	233.9
Caving	24.6	2.7	0	6
Guzzler	70.2	0	0	28.9
Motorized Staging Area	107.2	0	0	31
Overlook	247.4	0	0	691
Rockhounding	601.5	35.7	3.6	646.7
Target Shooting	129.9	0	0.3	50.2
Trailhead	26.4	0	0	10.1

¹ The sub-designation mileages are considered preliminary, and are likely to be revised prior to issuing the Final SEIS.

The analysis also concluded that safety hazards, including those associated with abandoned mining features, present an adverse impact to recreation. The mileage of routes located in close proximity to identified abandoned mine land hazards associated with Alternative 4 is presented in Table 4.6-8.

Table 4.6-8. Alternative 4 - Miles of Routes in Proximity to Safety Hazards

Resource Description	Motorized	Authorized/ Administrative	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Mileage Within 100 Feet of Abandoned Mine or Other Identified Safety Hazard	22.8	0.8	0.3	0.1	45.5

Alternative 4 increases the overall miles of designated routes by 444 from Alternative 1. Of the overall increase of designated routes from Alternative 1 to Alternative 4, 238 miles of these routes are designated for Authorized and Administrative Use only. This is an increase of 90 miles from Alternative 1. This results in an increase available to the casual public in the amount of 354 miles. The miles available for use by non-street legal vehicles (ie. Quads, UTVs, and Dune buggies) is increased by 354 miles from Alternative 1. This is because Alternative 1 has 0 miles of routes designated for Street Legal Use only. Alternative 4 creates a 62 mile network of bicycle routes, while Alternative 1 has 0 miles of routes specified for this type of use. Alternative 4 creates a 137 mile network of ATV/UTV routes, while Alternative 1 has 0 miles of routes specified for this type of use. Alternative 4 creates a 120 mile network of motorcycle routes, while Alternative 1 has only 38 miles of designated motorcycle routes. This is an increase of 82 miles designated for motorcycles. Alternative 4 creates a 23 mile network of hiking routes while Alternative 1 has only 10 miles designated for such use. This is an increase of 13 miles designated for hiking.

Alternative 4 Minimization and Mitigation Measures

Table 2.3-8 describes the network-wide minimization and mitigation measures that would be applied under Alternative 4. In general, these measures focus on resource protection, and therefore place restrictions on the development of new routes to support recreation. These restrictions include the one percent limit on allowable new ground disturbance in DWMA's, distance limitations on stopping and parking, and efforts to disguise and rehabilitate closed routes. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific impacts to recreation are considered before authorizing new motorized routes.

Intensively used and sensitive areas would be mitigated by site-specific strategies developed with current and future local non-profits and other partners to further travel management and ACEC resource protection implementation strategies.

4.7 Livestock Grazing

4.7.1 Introduction

Affected Environment Summary

Section 3.7 describes the livestock grazing that occurs in the West Mojave Planning Area. There are currently 27 grazing allotments (areas designated as suitable for grazing of domestic livestock in the CDCA Plan, as amended) on BLM land within the planning area, eight of which are vacant and inactive as shown on Table 3.7-1. The CDCA Plan identified 31 grazing allotments within the West Mojave Planning Area. As a result of the 2006 WEMO plan amendment and the 2012 Appropriations Act as shown in Table 3.7-2, seven of these of these allotments have been relinquished, or are currently not available for grazing, including the Pilot Knob Allotment.

Methodology

The 2005 WEMO EIS analyzed the impacts of the proposed action on grazing in the planning area. The document also evaluated changes in grazing to accomplish the purpose and need of the 2006 WEMO Plan Amendment, including the impact of grazing on biological resources. The Court's Summary Judgment Order did not address the impact of the route network or OHV use on grazing allotments. However, it did conclude that the EIS did not adequately evaluate the impact of grazing on soil resources, riparian areas, and UPAs. The Remedy Order indicated that, "On remand, the BLM will consider a host of factors, including grazing issues, in its alternatives analysis." The Remedy Order required that the WEMO Plan provisions for relinquishing grazing allotments remain in effect. In addition, BLM's decisions on grazing allotments that were made subsequent to the WEMO Plan, and that were based on separate Environmental Assessments, remain in effect through the EIS revisions. These decisions are to be reconsidered within six months following the Record of Decision for this SEIS.

For this SEIS for the WMRNP, BLM performed the following:

- The status of each of the grazing allotments in the planning area was updated, and this information is provided in Section 3.7. This information shows that many of the allotments have been relinquished. Those which have been renewed have been subject to additional NEPA analysis through Environmental Assessments.
- The route designation process for each alternative included evaluation of the location of each route with respect to grazing allotments and range improvements.
- The 2005 WEMO analysis was re-evaluated, and supplemented with additional information from resource specialists, public comments, and changes in conditions within the planning area. This additional information is incorporated into the evaluation in Section 4.7.2 below.
- The impacts of cumulative impacts of grazing, in combination with OHVs and other land uses, are addressed in Section 4.14. This includes an evaluation of grazing impacts on all resources, not just soil, riparian areas, and UPA resources.

4.7.2 Impacts Common to All Alternatives

This analysis addresses the impacts to livestock grazing activities from grazing alternatives and OHV management and use under the Travel Management Alternatives. A further discussion of impacts to grazing activities from other actions can be found in Section 4.14 Cumulative Impacts Analysis.

Under all alternatives, as a result of the adoption and implementation of the 2006 WEMO Plan, grazing is discontinued on three ephemeral sheep allotments, one ephemeral cattle operation, and the boundaries have been modified on four additional ephemeral sheep allotments. One cattle allotment has been voluntarily relinquished and its forage reallocated under the 2006 WEMO Plan. Utilization thresholds have also been reduced from 40% to as low as 25% on select key species allotment wide. There are two other grazing operational prescriptions contained in the 2006 WEMO Plan that are now in effect. These prescriptions eliminate authorization of the ephemeral portion of the perennial/ephemeral authorizations, and no longer provide for temporary non-renewable use authorizations, regardless of production. The 2006 WEMO grazing prescriptions also require exclusion from portions of select allotments when ephemeral production is less than 230 lbs/acre (non-DWMA) and 350 lbs/acre (DWMA) during those seasons. Finally, since the WEMO Plan, two other allotments are no longer available for grazing as a result of legislation. The direct impacts of these losses are the lost grazing opportunities for the individual grazers and reduction in available forage for livestock grazing.

The designated transportation network supports livestock grazing by providing access to the allotments, access to range improvements and developed springs, and means for transport of livestock into, out of, and between allotments. In general, a more extensive route network within an allotment would be considered to be beneficial to grazing, as it would give the lessee the largest range of options for accessing the allotment and transporting livestock and materials. A more restricted network within an allotment could be considered to be adverse, since it could potentially require a lessee to travel greater distances to conduct operations.

As shown in Tables 2.3-4 and 2.3-7, all routes that passed within 30 feet of a range improvement were determined to be necessary to support the operations of the grazing lessee, and were designated as motorized. Allowable uses and other limitations on these routes were determined on a case-by-case basis, depending on the presence of other resources in the area. While the specified limitations may occasionally limit the rancher's access to any given range improvement, these limitations are not expected to disrupt their operations, and so are not considered to be an adverse impact.

Chapter 2 discusses the general resource protection and motorized access objectives that were incorporated into the development of the transportation network alternatives. These objectives were used to inform decisions regarding which linear features would be included in the motorized, non-motorized, and non-mechanized transportation network, and which features would be closed (i.e., designated as transportation linear disturbances), under each alternative. In that analysis, livestock grazing impacts were considered as a criterion in determining which routes would remain open and which would be closed under the various alternatives. All routes that passed within 30 feet of a range improvement were determined to be necessary to support the operations of the grazing lessee, and were designated as motorized under all alternatives.

Details on the livestock grazing program summary (by alternative) are presented in Table 4.7-1.

Table 4.7-1. Livestock Grazing Program Summary by Alternative

Alternative	Grazing Acreage Re-Allocated (Lost)	Grazing Acreage Remaining
1: No Action	0	1,261,526
2: Conservation	191,673	1,069,853
3: Access	301,219	960,307
4: Community	67,056	1,194,470

Resource-Specific Minimization and Mitigation Measures

Resource-specific minimization and mitigation measures that were considered as part of the route designation process for each alternative, and that will be considered for each route during implementation of the WMRNP, were described in Table 2.1-4. For potential impacts to grazing allotments, these include:

- Install gates;
- Install fencing;
- Install Signs;
- Install barriers and maintain existing barriers;
- Construct or Install Educational information such as signs;
- Install tortoise friendly cattle guards; and
- Determination that no additional minimization and mitigation measure is needed based on site evaluation.

Residual Impacts After Implementation of Mitigation Measures

Only minor residual effects to grazing would be expected after application of mitigation measures. Motorized use of routes within grazing allotments, or near range improvements, are expected to have little or no impact on grazing operations. The route networks under each alternative were designed to ensure continued access to the allotments and range improvements by the operators, and the installation of gates, fencing, or signs is not expected to adversely impact their operations.

4.7.3 Impacts Associated with the No Action Alternative

Alternative 1 Plan Amendment

Under the No Action Alternative, none of the proposed plan amendment decisions would be adopted.

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM’s procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these

decisions would not result in direct impacts to grazing. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider grazing and use other factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM's ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may benefit grazing by facilitating adaptive management changes in response to changing on-the-ground conditions. By not adopting these decisions under the No Action Alternative, these potential beneficial effects would not be achieved. In addition, by not adopting these decisions, the CDCA Plan would not be amended to conform to current policy or regulation.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. Because these activities do not currently impact livestock grazing, the No Action alternative would have no direct or indirect impact on livestock grazing.

PA XI: Under this alternative, the livestock grazing program in the WEMO Planning area would include 25 active and inactive allotments within the WEMO Planning Area (see 2005 WEMO FEIS pages 2-126 to 2-128). The grazing program and practices would be as described in the 2006 WEMO Plan.

Grazing would continue on Ord, Cantil Common and Shadow Mountain active allotments without further changes. Grazing could occur on vacant inactive allotments, subject to NEPA analysis and consultations upon receipt of an application to graze, and, if grazing is approved, would be subject to the terms and conditions of the 2006 West Mojave Plan. This would include the Buckhorn Canyon, Harper Lake, Cronese Lake and Johnson Valley inactive allotments.

Alternative 1 Route Designation

The evaluation of impacts common to all alternatives concluded that the size of the available transportation network within an allotment can have beneficial or adverse impacts to the grazing operations of a lessee. Similarly, closure of routes that provide access to range improvements would present an adverse impact, if it occurred. The mileage of routes within active grazing allotments and the number of routes providing access to range improvements under the No Action Alternative are presented in Table 4.7-2.

Table 4.7-2. Alternative 1 - Acreage and Mileage of Routes in Proximity to Range Improvements

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Acreage and Mileage Within Active Grazing Allotments	1955.6	26.8	2883.5	93746	0	0.3	4301.1
Mileage of Routes Passing Within 30 Feet of Range Improvement	4.5	0	NA	NA	0	0	6.8

Alternative 1 Minimization and Mitigation Measures

Because no adverse impacts were identified for the No Action Alternative, no alternative-specific minimization and mitigation measures were developed to address impacts to livestock grazing.

4.7.4 Impacts Associated with Alternative 2

Alternative 2 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM’s procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct impacts to grazing. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider grazing and other use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM’s ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may benefit grazing by facilitating adaptive management changes in response to changing on-the-ground conditions. By adopting these decisions, the CDCA Plan would be amended to conform to current policy and regulation.

As a result of the modification of the language limiting the route network to existing routes, new routes could potentially be designated in locations with no existing routes, and could have adverse impacts to localized resources near that route. New routes may be established to provide access for new authorized uses, or to avoid identified impacts to resources. The impacts to grazing of each new route would be evaluated as part of the BLM's consideration of the application for land use authorization. As part of that evaluation, BLM would consider the potential impacts of the new route as required by 43 CFR 8342.1, potential alternatives to provide the necessary access, and minimization and mitigation measures to address any identified impacts to grazing. In the case of routes established to provide access to authorized uses, the duration of the designation of the new route would be the same as authorized land use it is intended to support. Once the term of the authorized land use expires, the route would generally be considered for closure, and the terms and conditions of the authorized land use would require the lessee, permittee, or ROW holder to rehabilitate the route. BLM may also determine at a later date, consistent with 43 CFR 8342.1 that the route provides necessary access for some other reason and could designate the route accordingly, releasing the authorized land user from their requirement to rehabilitate the route. In the case of routes established to address impacts to resources, the new route may be permanent.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The impacts to grazing of these decisions under Alternative 2 are as follows:

PA VII: It is anticipated that the overall number of SRP applications will not increase. This means that there should be no measurable increase in the number of OHVs using public land in the area. Additionally, designating the C routes does not authorize individual SRP events to use these routes, and additional analysis will occur as part of the SRP permitting process.

The proposed C Routes are within the currently permitted Cantil Common and Spangler Hills ephemeral sheep grazing allotments. Sheep grazing is authorized in the spring months when sufficient annual forage is present due to winter rains. Competitive events may authorize large numbers of vehicles traveling at a high rate of speed, which has the potential to increase OHV / livestock impacts within the allotments. Designating C routes in Alternative 2 would not impact any grazing allotments, as the seasonal restriction would limit competitive use to months outside of the potential season of use for ephemeral sheep grazing.

Since OHV competitive events conducted in other OHV Open Areas would be limited to inside the Open Area boundaries under this alternative, the remaining designated long-distance race corridor, the Johnson Valley to Parker Valley Corridor would be removed under Alternative 2. This decision is not expected to have any beneficial or adverse impacts to grazing. An event has not been run in this corridor since the listing of the desert tortoise as threatened in 1989; therefore, other routes and areas within the planning area are not anticipated to receive increased use for recreation as a result of the elimination of this competitive event route. Therefore, this plan amendment decision would not have any effect on grazing by increasing the recreational use of routes in other areas.

PA VIII: Alternative 2 would designate Koehn Lakebed as closed to motorized vehicles. There would be no change to the use of Cuddeback, Coyote, or Chisholm Trail Lakes. These lakebeds are not associated with grazing allotments or access to range improvements. Therefore, the closure of motorized access on Koehn lakebed would not have any impact on grazing. Because Koehn lakebed is currently receiving relatively light use, the amount of displaced use to other routes would be low. Therefore, this plan amendment decision is not expected to have an indirect, adverse impact on grazing by increasing the recreational use of routes in other areas.

PA IX: There would be no change to access to the Rand Mountains-Fremont Valley Management Area under Alternative 2. Because access in this area does not currently impact livestock grazing, Alternative 2 would have no direct or indirect impact on livestock grazing.

PA X: Alternative 2 would limit stopping and parking to previously disturbed areas within 50 feet from the route centerline, both inside and outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 50 feet. Camping would be allowed adjacent to designated routes in previously disturbed areas, not to exceed 50 feet from the centerline, throughout the WEMO Planning Area. This reduction from the limits in the No Action Alternative is not expected to have any effect on motorized use of routes to support grazing operations, and would therefore not have any impact on grazing.

PA XI: Under this alternative, the livestock grazing program in the WEMO Planning area would include 23 active and inactive allotments within the WEMO Planning Area (see 2005 WEMO FEIS pages 2-126 to 2-128). Alternative 2 would discontinue livestock grazing in 191,673¹ acres, consistent with 43 CFR 4130.2(a), that are within DWMA's and CHUs and reallocate all of the approximately 4,224 Animal Unit Months (AUM, an expression of livestock stocking commitment based on forage) from livestock forage to wildlife use and ecosystem functions.

The cattle grazing operation on the Ord Mountain Allotment would be negatively impacted such that this grazing operation would no longer be considered economically viable. In addition to the loss of 86% of public land acres under this alternative and additional 10,880 acres have been lost to the expansion of the Marine Corps Air Ground Combat Center (MCAGCC) at 29 Palms.

The loss of 6,726 acres in the Fremont-Kramer DWMA and CHU on the Cantil Common Allotment may represent an inconvenience for the lessee but due to the large size of this allotment, substitute pasture would be available to the lessee that traditional used those loss acres.

Although use of 601 acres would be lost in the Shadow Mountain Allotment, this represents less than 1% of the allotment, and therefore would represent a minor additional hardship on the lessee.

Since the Harper Lake, Cronese Lake and Johnson Valley Allotments are vacant and inactive, there would no direct impact to any grazing operations from this loss. There would be an indirect impact to the livestock industry due to the lost opportunity for any future or additional grazing that could have occurred on these inactive allotments.

¹ This total does not include 10,880 acres lost as a result of the expansion of the 29 Palms Marine Base (MCAGACC).

Alternative 2 Route Designation

Section 4.7.2 described the general impacts to livestock grazing that are common to all alternatives. That analysis concluded that the size of the available transportation network within an allotment can have beneficial or adverse impacts to the operations of a lessee. Similarly, closure of routes that provide access to range improvements would present an adverse impact, if it occurred. The mileage of routes within grazing allotments, and the number of routes providing access to range improvements under Alternative 2, is presented in Table 4.7-3.

Table 4.7-3. Alternative 2 - Acreage and Mileage of Routes in Proximity to Range Improvements

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Acreage and Mileage Within Active Grazing Allotments	1442	176.6	2354.3	18448	14.2	26.2	4676.5
Mileage of Routes Passing Within 30 Feet of Range Improvement	4.2	0.7	NA	NA	0	0	6.4

Alternative 2 Minimization and Mitigation Measures

Because no adverse impacts were identified for Alternative 2, no alternative-specific minimization and mitigation measures were developed to address impacts to grazing allotments.

4.7.5 Impacts Associated with Alternative 3

Alternative 3 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM’s procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. These decisions would be the same under Alternative 3 as for Alternative 2, and therefore effect of these decisions on grazing is the same as discussed for Alternative 2.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of “C” routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping,

parking, and camping distances, and changes to the livestock grazing program. The impacts of these decisions to grazing under Alternative 3 are as follows:

PA VII: Under Alternative 3, there would be C routes available for competitive motorized events managed under a SRP in three distinct areas: the areas to the northeast of the Spangler Hills Open Area; the Summit Range plus the area east of Highway 395; and the urban interface area between the community of Ridgecrest and the Spangler Hills Open Area. Designating C routes in Alternative 3 would impact both the Cantil Common and Spangler Hills Allotment. There is no seasonal restriction, and therefore collisions might occur. In addition, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but may be offset by additional routes in the planning area that are identified as competitive use open routes through the route designation process. Because the locations of replacement routes are not known the impacts of those routes to grazing would be considered through the route designation process.

PA VIII: Under Alternative 3, Koehn Lakebed would be designated as “Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit”. Alternative 3 would also designate Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds as open to motorized use. These lakebeds are not associated with grazing allotments or access to range improvements, and therefore the change in access on the lakebeds would not have any beneficial or adverse impact on grazing.

PA IX: Under Alternative 3, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. There are no grazing allotments present in this area. Therefore, eliminating the permit requirement would not have any impact on grazing.

PA X: Alternative 3 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA, while stopping and parking would be limited to within 50 feet of the centerline within DWMA. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA. This would be a reduction in the limits that are currently authorized outside of DWMA from 300 feet to 100 feet. This would be a reduction from the limits in the No Action Alternative, but would still allow a larger area of disturbance than Alternative 2 (100 feet in Alternative 3 versus 50 feet in Alternative 2). This reduction is not expected to have any effect on motorized use of routes to support grazing operations, and would therefore not have any impact on grazing.

PA XI: Under this alternative, the livestock grazing program in the WEMO Planning area would include 18 active and inactive allotments within the WEMO Planning Area (see 2005 WEMO FEIS pages 2-126 to 2-128). Alternative 3 would discontinue livestock grazing on currently inactive allotments, which include the Buckhorn Canyon, Harper lake, Cronese Lake, Cady Mountain, Johnson Valley, Double Mountain and Oak Creek Allotments, totaling 301,219 acres, consistent with 43 CFR 4130.2(a). There would be a reallocation of approximately 3,164 AUMs from livestock forage to wildlife use and ecosystem functions in these allotments.

This alternative would make grazing unavailable on seven currently vacant, inactive allotments within the WEMO Planning Area. There would no direct impact to any grazing operations from this loss because these allotments are vacant. There would be an indirect impact to the livestock industry due to the lost opportunity for any future or additional grazing that could have occurred on these inactive allotments.

Alternative 3 Route Designation

Section 4.7.2 described the general impacts to livestock grazing that are common to all alternatives. That analysis concluded that the size of the available transportation network within an allotment can have beneficial or adverse impacts to the operations of a lessee. Similarly, closure of routes that provide access to range improvements would present an adverse impact, if it occurred. The mileage of routes within grazing allotments, and the number of routes providing access to range improvements under Alternative 3, is presented in Table 4.7-4.

Table 4.7-4. Alternative 3 - Acreage and Mileage of Routes in Proximity to Range Improvements

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Acreage and Mileage Within Active Grazing Allotments	4372.2	70.9	6462.7	105056	49.6	22.4	1899
Mileage of Routes Passing Within 30 Feet of Range Improvement	11.1	0	NA	NA	0	0	0.8

Alternative 3 Minimization and Mitigation Measures

Because no adverse impacts were identified for Alternative 3, no alternative-specific minimization and mitigation measures were developed to address impacts to grazing allotments.

4.7.6 Impacts Associated with Alternative 4

Alternative 4 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM’s procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Except for the designation of TMAs, these decisions would be the same under Alternative 4 as for Alternatives 2 and 3, and therefore effect of these decisions on grazing is the same as discussed for those alternatives.

Under Alternative 4, the boundaries of the nine TMAs included in Alternative 4 are similar to those in Alternatives 2 and 3, with the exception that TMA 7 (Ridgecrest, El Paso, Rands, and Red Mountain sub-regions) would be split into two separate TMAs. This decision would designate the current Coordinated Access Planning Area (CAPA) as a separate TMA. The CAPA area consists of the Ridgecrest and El Paso sub-regions, which would be split from the Rands and Red Mountain sub-regions, thus creating two separate TMAs. This decision would be made to facilitate BLM’s ability to manage intense recreation use, public interest, and local

agency interest in this area near Ridgecrest, and would therefore have no direct effect on grazing. However, this decision would make it easier for BLM to consider grazing impacts in future route designation decisions in this intensively used area, and thus have an indirect, beneficial effect on grazing.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of “C” routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The impacts of these decisions to grazing under Alternative 4 are as follows:

PA VII: Under Alternative 4, the C routes that are to the northeast of the Spangler Hills Open Area above the Randsburg Wash Road and those found within the Summit Range and east of Highway 395 would be available for competitive motorized events managed under a SRP. Designating these C Routes in Alternative 4 would impact both the Cantil Common and Spangler Hills Allotment. There is no seasonal restriction, and therefore collisions might occur. The Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would also be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but the decision would identify a specific route for the speed-controlled connector between the remaining Johnson Valley OHV Area and the Stoddard Valley OHV Open Area, with appropriate mitigation measures.

PA VIII: Under Alternative 4, Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds would all be designated as open to motorized use. These lakebeds are not associated with grazing allotments or access to range improvements, and therefore the change in access on the lakebeds would not have any beneficial or adverse impact on grazing. Koehn Lakebed would be designated as “Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit”. The impacts of the closure of Koehn Lakebed would be the same as discussed for Alternative 2.

PA IX: Under Alternative 4, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. The impacts of this decision would be the same as those discussed for Alternative 3.

PA X: Alternative 4 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA, while stopping and parking would be limited to within 50 feet of the centerline within DWMA. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA. This would be a reduction in the limits that are currently authorized outside of DWMA from 300 feet to 100 feet. This reduction is not expected to have any effect on motorized use of routes to support grazing operations, and would therefore not have any impact on grazing.

PA XI: Under this alternative, the livestock grazing program in the WEMO Planning area would include 23 active and inactive allotments within the WEMO Planning Area (see 2005 WEMO FEIS pages 2-126 to 2-128). Alternative 4 would discontinue livestock grazing on currently inactive allotments in DWMA and CHU, which includes a small portion of the Johnson Valley and the Harper Lake and Cronese Lake Allotments in their entirety, totaling 67,056 acres,

consistent with 43 CFR 4130.2(a). There would be a relocation of 1,100 AUMs from livestock forage to wildlife use and ecosystem functions.

Livestock grazing would be discontinued on three vacant, inactive allotments within DWMA and CHU in the WEMO Planning Area. There would no direct impact to any grazing operations from this loss because these allotments are vacant. There would be an indirect impact to the livestock industry due to the lost opportunity for any future or additional grazing that could have occurred on these inactive allotments.

Alternative 4 Route Designation

Section 4.7.2 described the general impacts to livestock grazing that are common to all alternatives. That analysis concluded that the size of the available transportation network within an allotment can have beneficial or adverse impacts to the operations of a grazing lessee. Similarly, closure of routes that provide access to range improvements would present an adverse impact, if it occurred. The mileage of routes within grazing allotments, and the number of routes providing access to range improvements under Alternative 4, is presented in Table 4.7-5.

Table 4.7-5. Alternative 4 - Acreage and Mileage of Routes in Proximity to Range Improvements

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Acreage Within Active Grazing Allotments	2209.8	41.1	3274	46572	50.2	5.8	4051.3
Mileage of Routes Passing Within 30 Feet of Range Improvement	3.8	0	NA	NA	0	0	7.5

Alternative 4 Minimization and Mitigation Measures

Because no adverse impacts were identified for Alternative 4, no alternative-specific minimization and mitigation measures were developed to address impacts to grazing allotments.

4.8 Energy Production, Utility Corridors, and Other Land Uses

4.8.1 Introduction

Affected Environment Summary

Section 3.8 describes the land uses in the planning area. Land uses authorized on public lands include a wide variety of industrial and commercial development, examples of which are pipelines, roads, transmission lines, commercial filming, small and large scale industrial sites, power facilities, mines, and communication sites.

Methodology

The 2005 WEMO EIS analyzed the impacts of the proposed action, including the 5,098 mile route network and OHV use, on access needs for other authorized land uses including mining, communications towers, transmission lines, and energy production. The Court's Summary Judgment and Remedy Orders did not specifically reach conclusions, or provide direction, regarding the sufficiency of this analysis.

For this SEIS for the WMRNP, BLM performed the following:

- The route designation process for each alternative included evaluation of potential user conflicts between authorized users and casual or recreational use.
- Re-evaluated the 2005 WEMO analysis, and supplemented it with additional information from resource specialists, public comments, and changes in conditions within the planning area. This additional information is incorporated into the evaluation in Section 4.8.2 below.

4.8.2 Impacts Common to All Alternatives

The designated transportation network supports commercial land uses by providing access to support construction, maintenance, and operations. As shown in Tables 2.3-4 and 2.3-7, all motorized routes that have authorized access for a specific user were determined to be necessary to the operations of that user. The NEPA analysis that is the basis for minimization and mitigation measures, and appropriate consultation requirements is determined upon receipt of commercial proposals. Commercial users are encouraged, and may be required, to utilize access routes that are already available for use by the public, when the commercial use would not conflict with public use. Commercial users are required to compensate for (offset) loss of listed species habitat and to minimize impacts to sensitive resource values during any route upgrade or construction, and during maintenance and use, even if the routes are already within the open route network.

Allowable uses, design requirements, and other parameters on commercial routes are determined on a case-by-case basis, depending on the minimum requirements of the commercial user, the presence, sensitivity, and potential direct and indirect effects to other resources in the area, and the feasibility of avoidance strategies. The access route(s) and limitations that are specific to the operator, right-of-way holder, permittee or lessee are specified within the terms and conditions of the applicable plan of operations, grant, permit, or lease, if approved. Required design and minimization and mitigation measures are provided at the time of authorization. Generally

paving or hardening of routes is not required as a term of authorization unless they receive very frequent use or are used by large, heavy trucks. Upon authorization, routes that are already open to the public remain designated motorized-open. Routes that are not available to the public become designated as motorized-limited.

Due to the location of the West Mojave as a major connector between Southern California and other parts of California and Nevada, major commercial routes that have been authorized since the early 1930s now provide some of the primary OHV routes in the desert for other users. Commercial engineering and construction expertise has resulted in relatively well-maintained routes across long distances in the West Mojave. Routes associated with commercial uses generally include a standard reclamation measure that would include the access route, upon cessation of commercial operations. The extent of route reclamation is determined upon completion of commercial activities.

The route designations as proposed in all of the alternatives would have no effect on land acquisitions and disposals, as these actions would continue as identified in approved land use plans. When land is acquired, existing routes that service authorized land users would be added to the route network, with appropriate review of measures to minimize impacts to sensitive resources. The need for modifications or new designated routes would also be evaluated at the time of acquisition.

The alternatives would not affect valid existing rights of approved land use authorizations granted by the U.S. Government to specific parties. Authorized use of public lands is through the issuance of plans of operation, right-of-way grants, leases and permits. The route designation process does not affect existing authorized users, as they already have the permitted right of access that is subject to certain conditions to minimize damage to resources. As stated previously, all routes that have authorized access for a specific user were determined to be necessary to the operations of that user, and were designated as motorized. There are no anticipated impacts to existing authorized users of designated utility corridors.

Future authorized users would be directly affected, as their proposed use of public lands would be permitted through separate and independent analysis and decisions containing specific provisions for the protection of resources and minimization of impacts. These provisions generally provide for the use of the designated route system, where it is available, to minimize impact to BLM managed resource values. Future users may also be indirectly affected due to variable costs of doing business under the alternatives based on ease of access on an already designated route system. These costs are anticipated to be higher where there is not a designated route to a potential permit site, since construction of new routes result in greater impacts to one or more sensitive resources and therefore requires more design and/or mitigation to avoid or minimize impacts.

No substantial direct impacts to access to minerals (locatable, leasable or salable mineral construction-materials) or mineral development would result from the alternatives. There is no significant difference between any of the alternatives regarding vehicular access for mineral exploration. For all alternatives, vehicular access is available to at least the general area of existing mineral interest.

In areas with no designated routes, operators can obtain authorization for vehicular access through exploration (the exception is special circumstances such as wilderness). For example, access to mining claims and mineral deposits can be provided under an approved Plan of

Operations or Notice (43 CFR 3809.11), or to deposits of construction materials such as sand and gravel under a Free Use Permit or Contract for the Sale of Mineral Materials (43 CFR 3602). For all types of mineral development as with other commercial uses, higher costs are anticipated where no designated route exists to a site as a result of higher potential impacts and minimization requirements.

Chapter 2 discusses the general resource protection and motorized access objectives that were incorporated into the development of the transportation network alternatives. These objectives were used to inform decisions regarding which linear features would be included in the motorized, non-motorized, and non-mechanized transportation network, and which features would be closed (i.e., designated as transportation linear disturbances), under each alternative. In that analysis, existing authorizations for access to authorized land uses was considered in determining which routes would remain open for other uses and which would be closed under the various alternatives. Routes that are currently authorized for authorized land uses would be designated as motorized-limited or motorized-open. Motorized-limited routes may include seasonal or other restrictions for the purposes of future authorizations and renewals, but these restrictions are generally already included in the current authorizations as part of their terms and conditions. Therefore the impacts to commercial uses from the route designations are generally nominal.

Impacts from individual commercial uses vary widely. Impacts may be limited to minimal impacts to vegetation, or may result in substantial impacts to sensitive resources from major developments and associated access. Major authorizations often result, directly through the commercial uses, or indirectly through public use of the improved access, in substantial impacts to sensitive resources. The increased level of OHV access to the desert historically has been facilitated by railroads, energy development and transmission, and mining. This continues to be the case, on a more modest scale. The public use of authorized routes may, for example, may substantially increase compaction of soils and increase potential for dust from higher-levels of OHV use and faster rates of speed. The impacts of individual commercial authorizations and associated routes are analyzed in the specific NEPA documents pertaining to each access route or authorization. The associated impacts from these commercial authorizations in general are analyzed in each of the affected resource sections in this document.

There are no impacts to energy production, utility corridors, and/or other land uses from the grazing alternatives in PA XI; therefore, there is no further discussion of PA XI in this section.

Resource-Specific Minimization and Mitigation Measures

Resource-specific minimization and mitigation measures that were considered as part of the route designation process for each alternative, and that will be considered for each route during implementation of the WMRNP, were described in Table 2.1-4. For potential conflicts resulting from multiple users, these include:

- Modify access to a less impacting designation;
- Limit the route to lower intensity use or prohibit Special Recreation Permitted use;
- Minimize overlapping uses by separating in time or space, or through a permitting mechanism;
- Add or identify alternative non-motorized or non-mechanized trail access;

- Construct or Install Educational information such as signs;
- Install step-over;
- Monitor the route for signs of increasing impacts to a sensitive resource; and
- Determine that no additional minimization and mitigation measure is needed based on site evaluation.

Residual Impacts After Implementation of Mitigation Measures

Only minor residual effects to other land uses would be expected after application of mitigation measures. Motorized use of routes associated with other land uses is expected to have little or no impact on the authorized users of those routes. The route networks under each alternative were designed to ensure continued access to these areas by the authorized users, and the potential mitigation measures are not expected to adversely impact their operations.

4.8.3 Impacts Associated with the No Action Alternative

Alternative 1 Plan Amendment

Under the No Action Alternative, none of the proposed plan amendment decisions would be adopted.

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct impacts to other authorized land uses. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider authorized land uses and other use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM's ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may benefit other authorized land uses by facilitating adaptive management changes in response to changing on-the-ground conditions. By not adopting these decisions under the No Action Alternative, these potential beneficial effects would not be achieved. In addition, by not adopting these decisions, the CDCA Plan would not be amended to conform to current policy or regulation.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access

to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. Because these activities do not affect other land uses, the No Action alternative would have no direct or indirect impact on other land uses.

Alternative 1 Route Designation

The evaluation of impacts common to all alternatives concluded that none of the alternatives would have an effect on existing authorized users because they already have a permitted right of access that would not be affected by the WMRNP. Therefore, the mileage of motorized routes available to the authorized users is the same under all alternatives.

Access for future applicants would be considered as part of the overall evaluation of their application. In these evaluations, BLM would develop access alternatives and consider all resource impacts as required by 43 CFR 8342.1. This process may result in authorization of an access route that is longer, or more costly to construct and maintain, than would be desired by the applicant, and may therefore be considered to be an adverse impact to the applicant. However, the locations and extent of these impacts is speculative, and cannot be quantified at this time.

Alternative 1 Minimization and Mitigation Measures

Because no adverse impacts were identified for the No Action Alternative, no alternative-specific minimization and mitigation measures were developed to address impacts to energy, mineral, or other land uses.

4.8.4 Impacts Associated with Alternative 2

Alternative 2 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct impacts to other authorized land uses. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider other authorized land uses and other factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM's ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may benefit other authorized land uses by facilitating adaptive management changes in response to changing on-

the-ground conditions. By adopting these decisions, the CDCA Plan would be amended to conform to current policy and regulation.

As a result of the modification of the language limiting the route network to existing routes, new routes could potentially be designated in locations with no existing routes, and could have adverse impacts to localized resources near that route. New routes may be established to provide access for new authorized uses, or to avoid identified impacts to resources. The impacts to other authorized land uses of each new route would be evaluated as part of the BLM's consideration of the application for land use authorization. As part of that evaluation, BLM would consider the potential impacts of the new route as required by 43 CFR 8342.1, potential alternatives to provide the necessary access, and minimization and mitigation measures to address any identified impacts to other authorized land uses. In the case of routes established to provide access to authorized uses, the duration of the designation of the new route would be the same as authorized land use it is intended to support. Once the term of the authorized land use expires, the route would generally be considered for closure, and the terms and conditions of the authorized land use would require the lessee, permittee, or ROW holder to rehabilitate the route. BLM may also determine at a later date, consistent with 43 CFR 8342.1, that the route provides necessary access for some other reason and could designate the route accordingly, releasing the authorized land user from their requirement to rehabilitate the route. In the case of routes established to address impacts to resources, the new route may be permanent.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The impacts of these decisions to other authorized land uses under Alternative 2 are as follows:

PA VII: It is anticipated that the overall number of SRP applications will not increase. This means that there should be no measurable increase in the number of OHVs using public land in the area. Additionally, designating the C routes does not authorize individual SRP events to use these routes, and additional analysis will occur as part of the SRP permitting process. Therefore, there should be no direct impacts to other authorized land uses.

Under Alternative 2, there would be a seasonal restriction placed upon the use of the currently designated C routes for competitive motorized events managed under a SRP. These routes would be available for use by competitive motorized events during the months of November, December, and January. Restricting the use to these months would not result in any impacts to other authorized users.

Since OHV competitive events conducted in other OHV Open Areas would be limited to inside the Open Area boundaries under this alternative, the remaining designated long-distance race corridor, the Johnson Valley to Parker Valley Corridor would be removed under Alternative 2. Elimination of the Johnson Valley to Parker route would not result in any impacts to other authorized users. An event has not been run in this corridor since the listing of the desert tortoise as threatened in 1989; therefore, other routes and areas within the planning area are not anticipated to receive increased use for recreation as a result of the elimination of this

competitive event route. Therefore, this plan amendment decision would not have any effect on other authorized land uses by increasing the recreational use of routes in other areas.

PA VIII: Alternative 2 would designate Koehn Lakebed as closed to motorized vehicles. There would be no change to the use of Cuddeback, Coyote, or Chisholm Trail Lakes. These lakebeds are not associated with access to other authorized land uses. Therefore, the closure of motorized access on Koehn Lakebed would not have any impact on other authorized land uses. Because Koehn lakebed is currently receiving relatively light use, the amount of displaced use to other routes would be low. Therefore, this plan amendment decision is not expected to have an indirect, adverse impact on other authorized land uses by increasing the recreational use of routes in other areas.

PA IX: There would be no change to access to the Rand Mountains-Fremont Valley Management Area under Alternative 2. Because access in this area does not affect other land uses, Alternative 2 would have no direct or indirect impact on other land uses.

PA X: Alternative 2 would limit stopping and parking to previously disturbed areas within 50 feet from the route centerline, both inside and outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 50 feet. Camping would be allowed adjacent to designated routes in previously disturbed areas, not to exceed 50 feet from the centerline, throughout the WEMO Planning Area. This reduction from the limits in the No Action Alternative is not expected to have any effect on motorized use of routes to support other authorized land uses, and would therefore not have any impact on land uses.

Alternative 2 Route Designation

Section 4.8.2 described the general impacts to energy, mineral, and other land uses that are common to all alternatives. That analysis concluded that none of the alternatives would have an effect on existing authorized users because they already have a permitted right of access that would not be affected by the WMRNP. Therefore, the mileage of motorized routes available to the authorized users is the same under all alternatives.

Access for future applicants would be considered as part of the overall evaluation of their application. In these evaluations, BLM would develop access alternatives and consider all resource impacts as required by 43 CFR 8342.1. This process may result in authorization of an access route that is longer, or more costly to construct and maintain, than would be desired by the applicant, and may therefore be considered to be an adverse impact to the applicant. However, the locations and extent of these impacts is speculative, and cannot be quantified at this time.

Alternative 2 Minimization and Mitigation Measures

Because no adverse impacts were identified for Alternative 2, no alternative-specific minimization and mitigation measures were developed to address impacts to energy, mineral, or other land users.

4.8.5 Impacts Associated with Alternative 3

Alternative 3 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. These decisions would be the same under Alternative 3 as for Alternative 2, and therefore effect of these decisions on other authorized land uses is the same as discussed for Alternative 2.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The impacts of these decisions on other authorized land uses under Alternative 3 are as follows:

PA VII: Under Alternative 3, there would be C routes available for competitive motorized events managed under a SRP in three distinct areas: the areas to the northeast of the Spangler Hills Open Area; the Summit Range plus the area east of Highway 395; and the urban interface area between the community of Ridgecrest and the Spangler Hills Open Area. The use of routes for competitive events is not expected to impact other authorized land uses. In addition, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but may be offset by additional routes in the planning area that are identified as competitive use open routes through the route designation process. Because the locations of replacement routes are not known the impacts to other authorized land uses of those routes would be considered through the route designation process.

PA VIII: Under Alternative 3, Koehn Lakebed would be designated as "Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit". Alternative 3 would also designate Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds as open to motorized use. These lakebeds are not associated with access to other authorized land uses, and therefore modification of motorized access on these lakebeds would not have any beneficial or adverse impact on those land uses.

PA IX: Under Alternative 3, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. Elimination of the permit requirement for recreational users is not expected to result in a substantial increase in use of the route, and would therefore have no effect on authorized users of the route.

PA X: Alternative 3 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA's, while stopping and parking would be limited to within 50 feet of the centerline within DWMA's. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 100 feet. This would be a reduction from the limits in the No Action Alternative, but would still allow a larger area of disturbance

than Alternative 2 (100 feet in Alternative 3 versus 50 feet in Alternative 2). This reduction is not expected to have any effect on motorized use of routes to support other authorized land uses, and would therefore not have any impact on land uses.

Alternative 3 Route Designation

Section 4.8.2 described the general impacts to energy, mineral, and other land uses that are common to all alternatives. That analysis concluded that none of the alternatives would have an effect on existing authorized users because they already have a permitted right of access that would not be affected by the WMRNP. Therefore, the mileage of motorized routes available to the authorized users is the same under all alternatives.

Access for future applicants would be considered as part of the overall evaluation of their application. In these evaluations, BLM would develop access alternatives and consider all resource impacts as required by 43 CFR 8342.1. This process may result in authorization of an access route that is longer, or more costly to construct and maintain, than would be desired by the applicant, and may therefore be considered to be an adverse impact to the applicant. However, the locations and extent of these impacts is speculative, and cannot be quantified at this time.

Alternative 3 Minimization and Mitigation Measures

Because no adverse impacts were identified for Alternative 3, no alternative-specific minimization and mitigation measures were developed to address impacts to energy, mineral, or other land users.

4.8.6 Impacts Associated with Alternative 4

Alternative 4 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Except for the designation of TMAs, these decisions would be the same under Alternative 4 as for Alternatives 2 and 3, and therefore effect of these decisions on other authorized land uses is the same as discussed for those alternatives.

Under Alternative 4, the boundaries of the nine TMAs included in Alternative 4 are similar to those in Alternatives 2 and 3, with the exception that TMA 7 (Ridgecrest, El Paso, Rands, and Red Mountain sub-regions) would be split into two separate TMAs. This decision would designate the current Coordinated Access Planning Area (CAPA) as a separate TMA. The CAPA area consists of the Ridgecrest and El Paso sub-regions, which would be split from the Rands and Red Mountain sub-regions, thus creating two separate TMAs. This decision would be made to facilitate BLM's ability to manage intense recreation use, public interest, and local agency interest in this area near Ridgecrest, and would therefore have no direct effect on other authorized land uses. However, this decision would make it easier for BLM to consider impacts to other authorized land uses in future route designation decisions in this intensively used area, and thus have an indirect, beneficial effect on these other land uses.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of “C” routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The impacts of these decisions on other authorized land uses under Alternative 4 are as follows:

PA VII: Under Alternative 4, the C routes that are to the northeast of the Spangler Hills Open Area above the Randsburg Wash Road and those found within the Summit Range and east of Highway 395 would be available for competitive motorized events managed under a SRP. The Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would also be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but the decision would identify a specific route for the speed-controlled connector between the remaining Johnson Valley OHV Area and the Stoddard Valley OHV Open Area, with appropriate mitigation measures. The use of these routes would not result in any impacts to other authorized users.

PA VIII: Under Alternative 4, Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds would all be designated as open to motorized use. These lakebeds are not associated with access to other authorized land uses, and therefore modification of motorized access on these lakebeds would not have any beneficial or adverse impact on those land uses. Koehn Lakebed would be designated as “Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit”. The impacts of the closure of Koehn Lakebed would be the same as discussed for Alternative 2.

PA IX: Under Alternative 4, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. The impacts of this decision would be the same as those discussed for Alternative 3.

PA X: Alternative 4 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA, while stopping and parking would be limited to within 50 feet of the centerline within DWMA. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA. This would be a reduction in the limits that are currently authorized outside of DWMA from 300 feet to 100 feet. This reduction is not expected to have any effect on motorized use of routes to support other authorized land uses, and would therefore not have any impact on land uses.

Alternative 4 Route Designation

Section 4.8.2 described the general impacts to energy, mineral, and other land uses that are common to all alternatives. That analysis concluded that none of the alternatives would have an effect on existing authorized users because they already have a permitted right of access that would not be affected by the WMRNP. Therefore, the mileage of motorized routes available to the authorized users is the same under all alternatives.

Access for future applicants would be considered as part of the overall evaluation of their application. In these evaluations, BLM would develop access alternatives and consider all resource impacts as required by 43 CFR 8342.1. This process may result in authorization of an access route that is longer, or more costly to construct and maintain, than would be desired by

the applicant, and may therefore be considered to be an adverse impact to the applicant. However, the locations and extent of these impacts is speculative, and cannot be quantified at this time.

Alternative 4 Minimization and Mitigation Measures

Because no adverse impacts were identified for Alternative 4, no alternative-specific minimization and mitigation measures were developed to address impacts to energy, mineral, or other land users.

4.9 Cultural Resources

4.9.1 Introduction

Affected Environment Summary

Section 3.9 describes the cultural resources in the West Mojave planning area. The area contains a wide range of cultural resources including habitation sites, temporary camps, rock shelters, caves, milling stations, lithic scatters, chipping circles, quarries, ceramic scatters, cemeteries, cremation features, rock alignments, geoglyphs, petroglyphs, pictographs, trails, roasting pits, cairns, isolated artifacts, mines, homesteads, historic campsites, historic roads, historic railroads, and historic trash scatters.

Sites in the planning area have been identified and managed in several ways. The baseline of the knowledge and understanding about cultural resources within the CDCA Planning Area comes from studies completed between 1969 and 1980 in support of the Plan. During the CDCA planning phase, approximately 179,200 acres were systematically inventoried using a variety of methods from stratified random sample surveys to intensive purposive surveys. As of January 1, 1980, there were an estimated 14,229 recorded cultural resources within the CDCA, which includes the WEMO Planning Area as well as the 16 million acres south of WEMO that are within the CDCA.

Although historic properties within the WEMO planning area are listed on the NRHP or CRHR, most cultural resources have not been evaluated for their significance or eligibility for listing in any formal roster of significant sites. The BLM field offices maintain paper records of all sites within their jurisdiction, as well as a statewide GIS geodatabase of sites and surveys in accordance with BLM policy for cultural resource record management. Some of the significant known cultural resources are also managed by BLM as Areas of Critical Environmental Concern (ACECs), with 17 ACECs within the planning area identified as being significant for their cultural resource values. The planning area is also the location of portions of the Old Spanish National Historic Trail and the Walker Pass National Historic Landmark, both designated by Congress. Many significant paleontological localities are found within the planning area.

Travel Management Area (TMA) boundaries are used below to quantitatively analyze impacts to cultural resources. These boundaries do not necessarily reflect meaningful cultural, historical, or tribal boundaries. The TMA unit of analysis allows for future review of cultural resources where management actions are proposed. It further protects the sensitive location of known cultural resources, as the analysis of differences between subregions within each TMA provides too detailed a discussion of the resources present. Where appropriate, qualitative discussions of observed anomalies and differences between TMAs are noted, particularly where current management practices that have resulted in more identification efforts may be skewing the number of reported resources.

Methodology

The 2005 WEMO EIS analyzed the cultural resource impacts associated with the 5,098 mile route network evaluated in that EIS. The 2005 WEMO EIS discussed that the route network was compared to known cultural sites and was adjusted to avoid them. The analysis concluded that designation of routes on or near cultural resources, and continued use of existing routes inside, near, or in the vicinity of cultural resources, could adversely impact those resources. The

analysis went on to conclude that the effect of BLM routes of travel on cultural resources could not be fully determined, because information needed to assess the effect was incomplete.

For this SEIS for the WMRNP, BLM performed the following:

- BLM developed an initial agreement with the California State Historic Preservation Office (SHPO) to update its knowledge of the existing environment of the planning area. The agreement called for field visit and site monitoring by the archaeologists of major sites in each subregion of the West Mojave, including all sites listed on the NRHP. The BLM has now determined that a Programmatic Agreement (PA) pursuant to 36 CFR 800.14 is the appropriate mechanism to address NHPA Section 106. The PA under development in consultation with SHPO, ACHP, tribal and interested parties to address current limits in information, including the development of a predictive model, level of additional inventory, additional consultations, and other measures to identify areas of higher sensitivity that may be affected by the transportation network. The PA and supporting treatment plans will include specific mitigation measures to address adverse impacts to cultural resources.
- BLM conducted field monitoring of 87 eligible and listed cultural resources within the planning area.
- BLM engaged two cultural resource field teams to conduct inventory to provide data for the analysis and for the predictive model, at substantial BLM expense.
- The route designation process for each alternative included evaluation of the location of each route with respect to known cultural resources was mapped in GIS.
- BLM conducted GIS-based route evaluation and quantified the miles of motorized routes that could potentially impact known cultural resources and the number of resources potentially impacted by motorized routes across four alternative route networks, ranging from 4,293 to 10,428 miles in size.
- BLM re-evaluated the 2005 WEMO analysis, and supplemented it with additional information from resource specialists and public comments. This additional information is incorporated into the evaluation in Section 4.9.2 below.

4.9.2 Impacts Common to All Alternatives

Impacts Common to All Alternatives - Route Designation

The route designation process has the potential to both impact and protect significant cultural resources, depending upon how cultural resources are considered in the criteria used to designate routes. A study of impacts to cultural resources in the California Desert, which was done in concert with preparation of the CDCA Plan, identified the combined effects of vehicle routes and activities in and on archaeological sites. It concluded that vandalism and looting, inadvertent and intentional, resulting from increased levels of access as the greatest impact and greatest threat to cultural resources in the California Desert (Lyneis et al. 1980). This study referenced similar studies in other states that reached the same conclusions. Since the CDCA inventory work of the 1970s and 1980s, the BLM has conducted 124 additional cultural resource inventories between 1989 and 2014 in response to OHV activity throughout the WEMO area. These inventories cover approximately 24,320 acres of the planning area.

Motorized vehicle routes across or near archaeological sites affect those sites in various ways, depending upon the nature of the archaeological materials, the nature of the soils at the site and in the immediate vicinity, and the topography of the immediate area. Softer soils, and especially “midden” soils, are easily displaced by vehicle tires along with artifacts or other cultural materials that may be within or just below the surface of the route. Artifacts and the soil matrix in which they exist may be displaced both horizontally and vertically as vehicle tires move through the soil. Artifacts such as projectile points, flakes, beads, pottery and other thin items of stone, bone, shell, etc. may be broken or crushed by the weight of vehicles passing over them. Under some conditions, larger stone objects such as manos and metates may be cracked and broken by vehicles. Routes through historic sites may also displace or damage artifacts in the road or immediately adjacent to the route.

Subsurface features such as hearths or burials may be exposed either directly by vehicle use on the road, or indirectly by erosion channels created by vehicle use. Erosion of routes may indirectly affect sites that are off the route by increasing erosion in downstream areas. Vehicles passing each other or going wide to avoid ruts may gradually widen a route so that it cuts deeper into the portions of sites along the sides of routes. Effects may occur from the actions, both deliberate and inadvertent, of the occupants or operators of the vehicles, such as collection of artifacts or erosion as a result of the use of the route. Similar effects can also occur to cultural resources that fall within the corridor along routes in which stopping, parking, and camping are allowed, and the corridors along routes in which spectators are allowed to view the events.

In addition to impacts from use of the routes, BLM actions on the routes have the potential to impact cultural resources. Maintenance activities on routes that are designated as motorized have the potential to impact resources as a result of ground disturbance during maintenance activities. Similarly, rehabilitation and reclamation of routes that are designated as closed (transportation linear disturbances) involve ground disturbance. Implementation activities that may affect cultural resources include construction of fences or culverts, and placement of signs and kiosks.

Finally, use of motorized routes in areas of importance identified by tribes can indirectly impact the visual characteristics of the area, as well as introduce noise and dust sources that detract from culturally important values. In general, a greater mileage of routes within identified tribal areas would be considered an adverse impact to those values, while closure of routes in those areas would be considered beneficial. In some cases, a limited number of routes within these areas may be needed to provide continued access for Tribal members; in such cases, closures would be considered beneficial except to the point where they eliminate tribal access. These routes and areas of importance will be identified through the on-going tribal consultation process.

Chapter 2 discusses the general resource protection and motorized access objectives that were incorporated into the development of the transportation network alternatives. These objectives were used to inform decisions regarding which linear features would be included in the motorized, non-motorized, and non-mechanized transportation network, and which features would be closed (i.e., designated as transportation linear disturbances), under each alternative. Cultural resource impacts were considered in the development of alternative goals and objectives, in designation of individual routes, and in defining specific implementation parameters. The goals and objectives for Alternative 2 focus on enhancing sensitive resource values and areas, and managing access to de-emphasize casual multiple-use motorized and mechanized touring. In contrast, the goals and objectives for Alternative 3 focus on meeting the

diverse transportation, access, and recreational needs of the public, and managing access to emphasize casual multiple-use motorized and mechanized touring.

Cultural resource impacts were considered by evaluating individual route locations with respect to previously identified cultural resources and tribal areas currently mapped in a WEMO specific cultural resources Geographic Information Systems (GIS) geodatabase. GIS mapped route locations were analyzed with respect to resource locations, areas within 50 feet to 300 feet of identified resources, or within a tribal area. All routes were analyzed, regardless of proposed designation, and included consideration of stopping and parking distances from routes. Therefore, minimization of cultural resource impacts was a factor both in development of the alternative route networks and in the specific limitations placed on routes in those networks. These minimization and mitigation measures differ among the alternatives, and are therefore discussed in more detail in Sections 4.14.3, 4.14.4, 4.14.5, and 4.14.6 below.

The BLM has determined that off-highway travel is impacting known sites and is likely to be occurring in sites yet to be identified. Effects to historic and prehistoric resources observed during the 2013 monitoring program and in previous OHV specific inventories were determined to be associated with authorized and unauthorized travel. These effects include travel through properties located adjacent to routes; camping and the construction of fire ring features within historic and prehistoric resources; looting; “scrapping” of historic materials at sites accessible by road; and increased erosion and loss of vegetation as a result of vehicle use. The BLM anticipates that effects to historic properties resulting from the adoption and implementation of the WMRNP are likely to be similar and repetitive across the entire plan area, reflecting the impacts identified above.

NEPA and NHPA

In the Summary Judgment Order, the court found that the analysis of effects on cultural resources within the planning area had not been fully determined. In the 2005 FEIS, the BLM explained that route designation would be reviewed under the Section 106 process, and a programmatic approach to Section 106 was then being discussed with the California State Office of Historic Preservation. The Section 106 process was not concluded before the ROD for the 2006 WEMO amendment was approved. The court determined that the FEIS was adequate to the extent the effect BLM routes of travel on public land cultural resources had been fully determined. To the extent the effect of travel on cultural resources had not been fully determined, the FEIS was inadequate.

BLM acknowledges that the current WMRNP will adversely affect cultural resources and believes it has enough information to date to define the effects of the plan on cultural resources on a programmatic land use planning basis. However, BLM is developing a PA that will specify how individual effects, once they are identified, will be addressed. The level of identification necessary to identify individual effects is being determined in consultation with SHPO and the ACHP. The level of identification will take into account the results of cultural resource sensitivity modelling efforts described above, field information being collected by BLM cultural resource crews currently in the field and derived from existing cultural resource inventories and records, BLM cultural resource and travel management policy, and a systematic interpretation of a hierarchy of routes in the WEMO plan area. This hierarchy of routes may include newly designated open routes, existing rights-of-way, previously designated routes, and closed routes.

This phased approach, developed through consultation with consulting parties, once agreed upon by these three agencies, will be presented in the PA.

By regulation agencies are authorized to use a phased approach where alternatives under consideration consist of large land areas, (43 CFR 800.4(b)(2)). An agency official may defer final identification and evaluation of historic properties if specifically provided for in a Programmatic Agreement (PA) (among other things) executed pursuant to 43 CFR 800.14(b). *Id.* A PA may be used when effects on historic properties are similar and repetitive, regional in scope, when effects on historic properties cannot be fully determined prior to approval of an undertaking, or in other situations. *Id.*

The use of a PA under Section 106 addresses the identification and data considerations reflected in 36 CFR 800.4(b) and 40 CFR 1502.22. The use of a phased approach to identify and evaluate historic properties within the WEMO Planning Area will involve a combination of class inventories coupled with other identification efforts, both known and to be determined (as indicated above). The details of the phased approach to identification and evaluation of cultural resources for the planning area are currently being negotiated through consultation and development of the PA.

BLM policy for travel management and cultural resources indicates that historical property inventory requirements will vary depending on the quality of existing information, the extent of potential change of OHV use, the expected density and nature of historic properties, and the potential effects of OHV use designation. See BLM Instruction Memorandum (IM) 2012-067, *Clarification of Cultural Resource Considerations for Off-Highway Vehicle Designations and Travel Management*. “Designations of new routes or areas, or new localities where concentrated OHV use may occur have the potential to cause effects to historic properties. Historic properties in the APE must be identified and any potential adverse effects must be resolved prior to designation. Appropriate inventory of the APE and tribal consultation should be conducted prior to authorizing use of new locations proposed as staging areas or similar areas of concentrated OHV use. For those areas with limited cultural resource information, a phased inventory approach, developed in consultation with the SHPO, may be appropriate in order to allow continued use of an existing route network or to retain an open area, if those areas have not previously been inventoried. For instance, a Class II inventory, or development and field testing of a cultural resources probability model, followed by Class III inventory in high potential areas and for specific development projects should be considered for larger planning areas for which limited information is currently available.” *Id.*

“Known sites and sensitive resource areas may be protected through rerouting, reconstruction, new construction, limitations on vehicle type and time or season of travel, or closure. If the BLM determines that a designation has the potential to adversely affect a known historic property, it will consult with the SHPO, Indian tribes, and other interested parties on measures to avoid, minimize or mitigate the adverse effect according to the BLM PA and applicable State protocol or 36 CFR Part 800 regulations.” *Id.*

Likewise, BLM IM 2012-067 provides guidance for closure of routes or areas. “Proposed designations that: (1) impose new limitations on an existing route; (2) close an open route or area; or (3) keep an area closed will not typically have an effect on historic resources in the APE, but have the potential to cause effects if the decision results in a shift, concentration, or expansion of travel onto other existing routes or into areas that are likely to have historic

properties. Where there is a reasonable expectation that a proposed designation will shift, concentrate or expand travel into areas where historic properties are likely to be adversely affected, Class II or Class III inventory focused on areas where adverse effects are likely to occur is recommended prior to designation.” Id.

Under 40 CFR 1502.22, when an agency evaluates a reasonably foreseeable significant adverse environmental effect and there is incomplete or unavailable information, the agency is required to make clear the information is lacking. If the cost of obtaining the information is not exorbitant, the agency is directed to secure and include the information in the environmental document. Id. If the information cannot be obtained because the overall cost of obtaining it is exorbitant or the means to obtain it are not known, the agency must include a statement that 1) the information is incomplete or unavailable, 2) the relevance of the incomplete or unavailable information to evaluate the reasonably foreseeable significant adverse effects on the environment, 3) a summary of the existing credible scientific evidence which is relevant to evaluating the reasonably foreseeable significant adverse effects on the environment, and 4) the agency’s evaluation of impact based upon theoretical approaches or research methods are generally accepted in the scientific community. Id.

Section 106 does not require a complete Class III inventory of historic properties in any given resource area. Section 106 requires an agency make a reasonable and good faith effort to carry out appropriate identification efforts. 36 CFR 800.4. These efforts may include background research, consultation, oral history interviews, sample field investigation and field survey, the taking into consideration past planning, research and studies, the nature and magnitude of the undertaking, the nature and extent of the potential effect, and the likely nature and location of historic properties within the area of potential effect. Id. The reasonable and good faith effort is determined through consultation with the ACHP and SHPO.

This Section 106 approach resolves the identification and data deficiencies concerns for 36 CFR 800.4(b) and 43 CFR 8342.1 by using a phased approach to identification of historic properties that involves more than a Class I Inventory but less than a Class III Inventory. The details of the phased approach of identification of cultural resources for the WEMO plan area are being negotiated through consultation and development of the PA under 36 CFR 800.4(b)(2). This process is fully compliant with the requirements of NHPA, NEPA and is consistent with more recent BLM policy guidance for TMPs. As indicated in *NEPA and NHPA, A Handbook for Integrating NEPA and Section 106, CEQ and ACHP, March 2013*, the Council on Environmental Quality (CEQ) and the ACHP encourage coordination of the requirements of NEPA and the NHPA. Both laws authorize the use of alternative procedures, include information gathering, the evaluation of potential effects of the proposed action on historic properties, consideration of strategies that may avoid or minimize the potential for adverse effects, and require the process to be completed prior to a Federal decision.

Important distinctions exist however between the NEPA and NHPA Section 106 reviews in terms of the types, scope, and geographical area of environmental review procedures, the nature of public engagement and tribal consultation, level and specificity of information requirements, procedures for developing alternatives, documentation, and timing.

- Both NEPA and Section 106 require agencies to identify cultural or historic properties; Section 106 specifically requires an agency make a reasonable and good faith effort to identify cultural or historic properties. For this planning project, this effort includes the

additional field surveys, ongoing modelling of cultural areas, and a PA, taken into consideration along with existing information.

- The NEPA scope of the affected environment is broader in this document since it includes cultural and tribal values beyond historic properties and sites.
- NEPA informational needs vary and are reflective of the type and nature of decisions to be made. The broad planning decisions to be made in this document are evaluated programmatically; Section 106 informational needs are tailored to the scope of the action, and as such, would apply to the broad areas in this planning project (e.g., ACECs, riparian areas, grazing availability, areas with concentrations of minority populations, etc). Plan level impact will be addressed, but not necessarily resolved prior to approval of the ROD for the plan amendment decision.
- The project activity-level decisions (specific route designations and strategies based on Travel Management Areas through Travel Management Plans) are considered in the context of information for the particular area affected by each route and its stopping, parking, and camping zone. Coordination of the planning and implementation processes allows for consideration of information gathered through each process into the range of alternatives, and accommodates potential changes to those alternatives as the processes proceed. Project level impact will not be addressed until project level decisions are reached.
- The NEPA process requires analysis of all reasonable alternatives and identification of a preferred alternative at the Draft EIS stage, with limited exceptions. The Section 106 process does not require identification and evaluation of historic properties for all NEPA alternatives, rather the Section 106 process allows for identification and evaluation of historic properties as the alternatives are refined.
- Section 106 may require additional identification of historic resources as part of an effort to develop and evaluate alternatives to the proposed undertaking to avoid or mitigate adverse effects. For this planning effort, the BLM has established a schedule and specifications for a model to include surveys to identify potential historic properties and identify specific geographic areas where such surveys should occur.
- A Section 106 PA is a flexible tool that fits within the adaptive management dynamic of travel management and establishes a process for concluding future consultation and considering effects to historic properties.

The BLM will resolve adverse effects to historic properties through measures that are memorialized in the signed Section 106 PA and the NEPA ROD. The NEPA document includes the monitoring, compliance, and tracking mechanisms for these measures.

The use of a PA fully comports with the information and evaluation requirements of the NHPA and NEPA and is consistent with more recent BLM policy guidance for travel management planning. The BLM will complete the PA prior to the Record of Decision for the land use plan amendment; however, complete identification of historic properties, assessment of effects, and resolution of effects will not be completed prior to the WMRNP Record of Decision. Route and area specific effects will be addressed by the BLM in accordance with the process identified in the PA.

Impacts Common to All Alternatives – Livestock Grazing

The decision to authorize grazing and the associated issuance of a grazing permit within a specific allotment do not have the potential to impact cultural resources. However, the implementation of a grazing permit, including the release of livestock into an allotment and the construction of range improvement features to facilitate grazing, may impact cultural resources. Impacts to cultural resources from livestock grazing are analyzed on a case-by-case, permit-by-permit basis. The BLM California utilizes the Supplement (See Chapter 1.7) in addressing livestock grazing authorizations.

Impacts from livestock grazing vary depending on the intensity of use of a specific location. The behavioral patterns of livestock indicate tendencies to trail along linear features, such as fencelines, to rub on permanent features, such as rock outcrops, and to congregate near necessary resources, such as watering locations and supplemental mineral sites. Previous research conducted by BLM archaeologists (Halford 1999) focusing on impacts to cultural resources identified patterns expected from grazing activities. These may include disturbance to the horizontal distribution of artifacts on the ground surface and vertical migration of materials below the ground surface. In both instances, the specific patterning and arrangement of cultural materials, a critical component of identifying the patterns of behavior in prehistoric and historic humans, may be obscured, erroneously rearranged, or removed all together. The vertical migration of materials may move artifacts across stratigraphic units and cause the mixing of deposits; thus the stratigraphic integrity of separate occupational periods may be compromised. Trodden, artifacts can undergo several types of damage, including breakage, microchipping and abrasion (Nielson 1991:483-484). Cumulative grazing activity where cultural resources are located can cause impacts to spatial, chronological and functional information, creating the potential for erroneous temporal, spatial and functional interpretations. This may ultimately result in diminished integrity of a site, which may adversely affect its potential to meet National Register criteria.

To address impacts to cultural resources from grazing decisions, the BLM California Supplement institutes a cultural resource site monitoring protocol and standard protective measures to be implemented in the event a cultural resources is being impacted by grazing activities. These standard protective measures include:

- Fencing or enclosure of livestock from the cultural resource sufficient to ensure long-term protection, according to the following specifications:
 - the area within the enclosure must be inventoried to locate and record all cultural resources; and
 - the enclosure (i.e.) fence must not divide a cultural resource so that a portion is outside of the fence; and
 - the cultural resource specialist will determine the appropriate buffer to be provided between the cultural resource and its enclosing fence.
- Relocation of livestock management facilities / improvements at a distance from cultural resources sufficient to ensure their protection from concentrated grazing use.

- Removal of natural attractants of livestock to a cultural resource when such removal, in the judgment of the cultural resource specialist, will create no disturbance to the cultural resource (e.g. removing vegetation that is providing shade).
- Removal of the area(s) containing cultural resources from the allotment.
- Livestock herding away from cultural resource sites.
- Use salting and/or dust bags or dippers placement as a tool to move concentrations of cattle away from cultural sites.
- Locating sheep bedding grounds away from known cultural resource sites.
- Other protective measures established in consultation with and accepted by SHPO.

Resource-Specific Minimization and Mitigation Measures

Specific mitigation measures will be applied and implemented based on the Cultural Resources Programmatic Agreement for WEMO, and the associated Management Plans developed in consultation with OHP, ACHP, tribal and agency partners. Measures identified by BLM, which may be included within the Management Plans, include but are not limited to:

- Modify access to a less impacting designation;
- Install access type restrictor;
- Re-align route to avoid environmentally sensitive area;
- Restrict stopping/parking/camping;
- Install barriers and maintain or upgrade existing barriers;
- Prohibit Special Recreation Permit use;
- Remove Attractants;
- Construct and/or Install Educational information such as signs or kiosks;
- Install step-overs;
- Narrow route for cultural concerns;
- Fencing or enclosure of a cultural resource;
- Monitor the route for signs of increasing impacts to a sensitive area;
- Determine that no additional minimization and mitigation measure is needed based on feature or site evaluation pursuant to 36 CFR 60; and
- Determine that no additional minimization and mitigation measure is needed based on field identification (i.e ground truthing of GIS data indicates no resource is present, no resources are impacted or existing minimization and mitigation is adequate).

Residual Impacts After Implementation of Mitigation Measures

Residual effects to cultural resource could continue after application of mitigation measures. Although impacts would be reduced from those that would have existed without mitigation

measures, motorized vehicles and livestock may still enter undisturbed areas and adversely impact unidentified resources.

4.9.3 Impacts Associated with the No Action Alternative

Alternative 1 Plan Amendment

Under the No Action Alternative, none of the proposed plan amendment decisions would be adopted.

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct impacts to cultural resources. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider cultural resources and use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM's ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may benefit cultural resources by facilitating adaptive management changes in response to changing on-the-ground conditions. By not adopting these decisions under the No Action Alternative, these potential beneficial effects would not be achieved. In addition, by not adopting these decisions, the CDCA Plan would not be amended to conform to current policy or regulation.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program.

Changes to motorized vehicle use in the locations specified in these decisions under the action alternatives do have the potential to affect cultural resources, if such resources exist in those locations. Competitive event routes that have not been subject to cultural resource inventories require Section 106 review prior to the authorization of use. Cultural resource inventories have not been completed for the proposed C routes north of the Navy Road. Resource values recorded in the immediate vicinity of these routes include the historic Trona Railroad Camp, lithic quarries and habitation complexes associated with the prehistoric use of Searles Lake. As yet unidentified cultural resources may be within or adjacent to the routes and may be impacted by the increased use of the routes by vehicles and spectators as described in the impacts common to

all alternatives. Impacts may still occur to cultural resources as a result of motor vehicle use in these areas on remaining available routes, despite adopted measures, including fencing, oversight, and measures to increase public information prior to use of routes in the Rand-Fremont area.

Under the No Action Alternative, livestock grazing would continue under the terms and conditions contained in the Final Grazing Decisions issued for active grazing allotments within the West Mojave Planning Area. Table 4.9-1 provides the total number of resources per allotment that may be impacted by livestock grazing.

**Table 4.9-1: Alternative 1 - Cultural Resources
within Grazing Allotments**

Allotment	Total Sites
Antelope Valley	14
Bissell	46
Boron Sheep	111
Buckhorn Canyon	25
Cady Mountain	299
Cantil Common	812
Cronese Lake	250
Darwin	3
Double Mountain	0
Gravel Hills	130
Hansen Common	232
Harper Lake	42
Johnson Valley	71
Kelso Peak	0
Lacey-Cactus-McCloud	282
Lava Mountain	65
Monolith Cantil	21
Oak Creek	7
Olancho Common	57
Ord Mountain	65
Pilot Knob	25
Rattlesnake Canyon	7
Round Mountain	52
Rudnick Common	461
Shadow Mountains	227
Spangler Hills	136
Stoddard Mountain	718
Superior Valley	135
Tunawee	408

**Table 4.9-1: Alternative 1 - Cultural Resources
 within Grazing Allotments**

Allotment	Total Sites
Valley Well	1
Walker Pass Common	169
Warren	12

The relinquishment of the Lava Mountain and Walker Pass Common Allotments would eliminate potential impacts from livestock grazing to 65 and 169 previously identified cultural resources, respectively.

The Lava Mountain Allotment is completely within the Grass Valley Wilderness Area. Cultural resources within the wilderness area are protected from surface disturbance from proposed development, off-highway vehicle use, and other activities permissible on public lands that have potential to impact cultural resources. The relinquishment of this allotment provides additional protection from impacts to the approximately 56 prehistoric resources, one historic resource, and 8 resources of unknown temporal designation.

The Walker Pass Common Allotment is located along the base of the Sierra Nevada Mountains, and includes portions of the, Kiavah, Owens Peak and Sacatar Trail Wilderness Areas. It also includes the Walker Pass National Historic Landmark. Cultural resources within this allotment include approximately 88 prehistoric resources, 47 historic resources, 19 multiple component resources, and 15 resources of unknown temporal designation.

Alternative 1 Route Designation

The evaluation of impacts common to all alternatives concluded that motorized vehicles can have direct adverse impacts to cultural resources, as well as indirect impacts to visual, noise, and other values important in tribal areas. Direct impacts to physical resources would likely only occur due to actual contact with motorized vehicles, or by ground disturbance associated with vehicle use, route maintenance, or route reclamation. Therefore, the level of direct impacts tends to be associated with proximity to the resource. The mileage of routes in close proximity to identified cultural resources under the No Action Alternative is presented in Table 4.9-2, and the number of currently known sites which may be affected by routes is presented in Table 4.9-3. Indirect impacts in tribal areas are less closely associated with distance between the route and locations of physical resources, but are proportional to the density of motorized routes within each tribal area.

Table 4.9-2. Alternative 1 - Miles of Routes in Proximity to Cultural Resources

Resource Description	Motorized	Authorized/ Administrative	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Within a Known Site	372.6	6.2	0	0	360.9
Within 0-50 Feet of a Site	107.8	0.4	0	0	131.4
Within 50-100 Feet of a Site	88.3	0.5	0	0	117.7

Table 4.9-2. Alternative 1 - Miles of Routes in Proximity to Cultural Resources

Resource Description	Motorized	Authorized/ Administrative	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Within 100-300 Feet of a Site	362.2	4.1	0	0	697.4

Table 4.9-3. Alternative 1 – Number of Properties in Proximity to Routes

Resource Description	TMA	Motorized	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
Known Sites Intersected by a Route	1	69	0	0	75
	2	142	0	0	209
	3	59	0	0	70
	4	75	0	0	135
	5	128	0	0	131
	6	45	0	0	58
	7	126	0	0	263
	8	55	0	0	69
Known Sites Within 0-50 Feet of a Route	1	92	0	0	94
	2	192	0	0	262
	3	80	0	0	91
	4	104	0	0	190
	5	167	0	0	173
	6	63	0	0	82
	7	169	0	0	344
	8	83	0	0	93
Known Sites Within 50-100 Feet of a Route	1	75	0	0	69
	2	165	0	0	227
	3	46	0	0	44
	4	91	0	0	164
Known Sites Within 50-100 Feet of a Route (continued)	5	139	0	0	129
	6	56	0	0	53
	7	144	0	0	335
	8	55	0	0	56
Known Sites Within 100-300 Feet of a Route	1	127	0	0	112
	2	238	0	0	317
	3	98	0	0	86
	4	142	0	0	245
	5	203	0	0	221
	6	83	0	0	86
	7	240	0	0	495

Table 4.9-3. Alternative 1 – Number of Properties in Proximity to Routes

Resource Description	TMA	Motorized	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
	8	88	0	0	118
Known Sites Within DWMA and within 0- 50 Feet of a Route	1	0	0	0	0
	2	0	0	0	0
	3	11	0	0	8
	4	0	0	0	1
	5	144	0	0	140
	6	51	0	0	42
	7	51	0	0	91
	8	48	0	0	43

The No Action Alternative currently allows for stopping and parking within 300 feet of a route outside of DWMA. In TMAs 2, 5, and 7, this distance is especially notable for the high number of resources potentially impacted within 300 feet of motorized routes, and in TMAs 4, 6 and 8 for the comparably lower numbers.

TMA 2 includes approximately 1,137 previously recorded sites as noted in Table 4.9-3, 595 of which occur within 300 feet of a motorized route. This high density is due in part to current management of the area, which has resulted in more intensive cultural resource inventory occurring within major transmission and highway corridors, the Los Angeles Aqueducts rights-of-way, the Haiwee and Coso Geothermal Areas, and the mineral operations on Searles Lake. This TMA also includes one National Register Listed District, two ACECs designated for cultural resource values, and the values associated with the Coso Rock Art District and Coso Mountain obsidian sources located on China Lake Naval Air Weapons Station. The number of sites previously recorded and the limited amount of inventory completed in this area outside of major rights-of-way indicate this TMA has a high potential for as yet recorded sites.

TMA 5 includes approximately 1,212 previously recorded sites, 509 which occur within 300 feet of a motorized route. This area includes two National Register Listed Districts, and three ACECs designated for cultural resource values. This TMA also includes several intensively inventoried areas because of major transmission and highway corridors, and renewable energy development areas. Portions of this TMA are within the Superior-Cronese and the Fremont-Kramer Desert Wildlife Management Areas (DWMAs), and likewise the majority of sites in proximity to routes are located within the DWMAs. While the number of sites within 300 feet of routes is proportionally higher than other TMAs, the stopping and parking distance from the centerline of a route in DWMA is 50 feet. Therefore, the total number of previously recorded sites within 50 feet of routes in the DWMA portions of this TMA is approximately 144.

TMA 7 includes approximately 1,217 previously recorded sites, 553 of which occur within 300 feet of a motorized route. This high density is due in part to intensive cultural resource inventory associated with the recreation restoration and improvement efforts in the Rand Mountains, El Paso Mountains, and Ridgecrest areas, highway and transmission corridors, small-scale mining operations, and Abandoned Mine Lands remediation activities. The TMA also includes three

National Register Listed Districts and five ACECs designated for cultural resource values. The Fremont-Kramer and Superior-Cronese (DWMA) are located within portions of this TMA. For the DWMA portions, only 51 previously records sites are located within 50 feet of a motorized route. The majority of sites identified within this TMA are located outside of the DWMA and are still within the 300 foot corridor of motorized routes.

TMA 4, 6, and 8 each contain the highest number of previously recorded resources (n=1745, 1469, and 1361, respectively), but analysis indicates the least amount of sites within 300 feet of routes (n = 337, 202, and 226, respectively). This is due in part to discrepancies in mapping of the on-the-ground routes, including existing rights-of-ways in TMA 4 and the highly developed portions of TMA 4 and TMA 8 near the urban communities of Lancaster and Victorville. The Dove Springs, Jawbone Canyon, Johnson Valley, El Mirage, and Stoddard Valley OHV open areas also occur within these TMAs. Cultural resources have been identified within these areas, but are not directly associated with specifically mapped routes as part of the WEMO analysis. The Fremont-Kramer, Superior-Cronese, and the Ord-Rodman DWMA are located within portions of these TMAs. Sites within the DWMA are further protected by the 50 feet of centerline rule for stopping and parking.

While numbers of sites within 300 feet of closed routes (transportation linear disturbances) are also notably high in several TMAs, the management decisions for transportation linear disturbances are more likely to protect cultural resource values, either through hard closures or signing.

Alternative 1 Minimization and Mitigation Measures

Table 2.3-1 describes the network-wide minimization and mitigation measures that are currently specified in the CDCA Plan, WEMO Plan, and/or the Court's Remedy Order, and which are therefore applicable under Alternative 1, the No Action Alternative. Whether they were applied during the route designation process or are mitigation measures, these measures act to reduce impacts to cultural resources. Measures such as limiting new ground disturbance in DWMA, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines in DWMA would reduce the potential for damage to unidentified cultural resources adjacent to routes, as compared to pre-2006 conditions before these limitations were enacted. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific cultural resource impacts are considered before authorizing new motorized routes.

4.9.4 Impacts Associated with Alternative 2

Alternative 2 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct impacts to cultural resources. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider cultural resource and use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM's ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may benefit cultural resources by facilitating adaptive management changes in response to changing on-the-ground conditions. By adopting these decisions, the CDCA Plan would be amended to conform to current policy and regulation.

As a result of the modification of the language limiting the route network to existing routes, new routes could potentially be designated in locations with no existing routes, and could have adverse impacts to localized resources near that route. New routes may be established to provide access for new authorized uses, or to avoid identified impacts to resources. The cultural resource impacts of each new route would be evaluated as part of the BLM's consideration of the application for land use authorization. As part of that evaluation, BLM would consider the potential impacts of the new route as required by 43 CFR 8342.1, potential alternatives to provide the necessary access, and minimization and mitigation measures to address any identified impacts to cultural resources. In the case of routes established to provide access to authorized uses, the duration of the designation of the new route would be the same as authorized land use it is intended to support. Once the term of the authorized land use expires, the route would generally be considered for closure, and the terms and conditions of the authorized land use would require the lessee, permittee, or ROW holder to rehabilitate the route. BLM may also determine at a later date, consistent with 43 CFR 8342.1, that the route provides necessary access for some other reason and could designate the route accordingly, releasing the authorized land user from their requirement to rehabilitate the route. In the case of routes established to address impacts to resources, the new route may be permanent.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The cultural resources impacts of these decisions under Alternative 2 are as follows:

PA VII: Competitive events may authorize large numbers of vehicles using a particular route and encourage the use of areas adjacent to routes by spectators. Cultural resources that occur within routes or immediately adjacent to routes may be subject to impacts in various ways, depending on the nature of the cultural resources present, the nature of the soils at the site and in the immediate vicinity, and the topography of the immediate area.

It is anticipated that the overall number of SRP applications will not increase. This means that there should be no measurable increase in the number of OHVs using public land in the area. Additionally, designating the C routes does not authorize individual SRP events to use these

routes, and additional analysis will occur as part of the SRP permitting process. Therefore, there should be no direct impacts to cultural resources. Under Alternative 2, there would be a seasonal restriction placed upon the use of the currently designated C routes for competitive motorized events managed under a SRP. These routes would be available for use by competitive motorized events during the months of November, December, and January. Competitive event routes that have not been subject to cultural resource inventories will require Section 106 review prior to the authorization of use. Cultural resource inventories have not been completed for the routes north of the Navy Road. Resource values recorded in the immediate vicinity of these routes include the NRHP listed historic Trona Railroad Camp, lithic quarries and habitation complexes associated with the prehistoric use of Searles Lake. As yet unidentified cultural resources may be within or adjacent to the routes and may be impacted by the increased use of the routes by vehicles and spectators as described in the impacts common to all alternatives.

Since OHV competitive events conducted in other OHV Open Areas would be limited to inside the Open Area boundaries under this alternative, the remaining designated long-distance race corridor, the Johnson Valley to Parker Valley Corridor would be removed under Alternative 2. The elimination of the Johnson Valley to Parker event may reduce impacts to cultural resources in that area. An event has not been run in this corridor since the listing of the desert tortoise as threatened in 1989; therefore, other routes and areas within the planning area are not anticipated to receive increased use for recreation as a result of the elimination of this competitive event route. Therefore, this plan amendment is not anticipated to have an adverse impact on cultural resources.

PA VIII: Alternative 2 would designate Koehn Lakebed as closed to motorized vehicles. There would be no change to the use of Cuddeback, Coyote, or Chisholm Trail Lakes. The lakebeds may be associated with known or unknown cultural resources. Therefore, the closure of Koehn lakebed could have a minor direct, beneficial effect on cultural resources associated with the lakebed. The use of this lakebed is not substantial, and the users of Koehn lakebed are not expected to substantially increase use of other routes and areas within the planning area for recreation. Use of the other three lakebeds is not anticipated to change under this alternative. Therefore, this plan amendment is not anticipated to have an adverse impact on cultural resources.

PA IX: There would be no change to access to the Rand Mountains-Fremont Valley Management Area under Alternative 2. Maintaining the current permit program as described in WEMO 2006 will have no change in the anticipated impacts to cultural resources from currently authorized OHV travel routes, as described under the No Action alternative.

PA X: Alternative 2 would limit stopping and parking to previously disturbed areas within 50 feet from the route centerline, both inside and outside of DWMAs. This would be a reduction in the limits that are currently authorized outside of DWMAs from 300 feet to 50 feet. Camping would be allowed adjacent to designated routes in previously disturbed areas, not to exceed 50 feet from the centerline, throughout the WEMO Planning Area. This reduction from the limits in the No Action Alternative would reduce the potential for motorized vehicle use to impact cultural resources in those areas. The effect of these actions would be a net beneficial impact on cultural resources.

PA XI: Under Alternative 2, livestock grazing levels would continue to be managed to the level currently allowable in WEMO for all allotments outside of DWMAs. For allotments within

DWMA, all livestock grazing would be discontinued in five grazing allotments, consistent with 43 CFR 4130.2 (a). This includes portions of the Ord Mountain, Cantil Common, Shadow Mountain Allotments, a small portion of the Johnson Valley Allotment and the entire Harper Lake and Cronese Lake Allotments.

Table 4.9-4 provides a summary of total sites by allotment, with specific summary of the total number of sites within allotments where elimination of grazing within DWMA is proposed.

Table 4.9-4: Alternative 2 – Sites within Allotments and within areas proposed for grazing changes

Allotment	Sites Within Areas where Grazing Discontinued	Total Sites
Antelope Valley		14
Bissell		46
Boron Sheep		111
Buckhorn Canyon		25
Cady Mountain		299
Cantil Common	30	812
Cronese Lake	250	250
Double Mountain		0
Hansen Common		232
Harper Lake	42	42
Johnson Valley		71
Kelso Peak		0
Lacey-Cactus-McCloud		282
Monolith Cantil		21
Oak Creek		7
Olancha Common		57
Ord Mountain	65	65
Pilot Knob		25
Rattlesnake Canyon		7
Round Mountain		52
Rudnick Common		461
Shadow Mountains	102	227
Spangler Hills		136
Stoddard Mountain		718
Tunawee		408
Valley Well		1
Warren		12

The discontinuation of grazing within DWMA will eliminate the potential for impacts to a large number of cultural resources. In Ord Mountain, Cronese Lake, and Harper Lake allotments, all

previously sites identified in these areas will be protected from impacts associated with livestock grazing. This will include values associated with Cronese Basin, Rodman Mountains, and Black Mountains. Discontinuing grazing in Shadow Mountain, Cantil Common, and Buckhorn Canyon will eliminate impacts to approximately 139 additional cultural resources.

Alternative 2 Route Designation

Section 4.9.2 described the general impacts to cultural resources that are common to all alternatives. That analysis concluded that motorized vehicles can have direct adverse impacts to cultural resources, as well as indirect impacts to visual, noise, and other values important in tribal areas. Direct impacts to physical resources would likely only occur due to actual contact with motorized vehicles, or by ground disturbance associated with vehicle use, route maintenance, or route reclamation. Therefore, the level of direct impacts tends to be associated with proximity to the resource. The mileage of routes in close proximity to identified cultural resources under Alternative 2 is presented in Table 4.9-5, and the number of sites which may be affected by routes is presented in Table 4.9-6. Indirect impacts in tribal areas are less closely associated with distance between the route and locations of physical resources, but are proportional to the density of motorized routes within each tribal area.

Table 4.9-5. Alternative 2 - Miles of Routes in Proximity to Cultural Resources

Resource Description	Motorized	Authorized/ Administrative	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Within a Known Site	217.8	55	10	0.2	458.3
Within 0-50 Feet of a Site	75.9	22.9	0.7	0.4	137.6
Within 50-100 Feet of a Site	77	9.6	0.3	0.5	119.2
Within 100-300 Feet of a Site	271.7	42.1	3	4.5	745.1

Table 4.9-6. Alternative 2 – Number of Sites in Proximity to Routes

Resource Description	TMA	Motorized	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Known Sites Intersected by a Route	1	65	0	0	78
	2	139	4	1	208
	3	53	0	0	77
	4	65	1	2	149
	5	110	0	0	140
	6	50	0	0	54
	7	107	9	9	268
	8	42	0	0	80

Table 4.9-6. Alternative 2 – Number of Sites in Proximity to Routes

Resource Description	TMA	Motorized	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
Known Sites Within 0-50 Feet of a Route	1	90	0	0	95
	2	181	2	1	259
	3	72	0	0	100
	4	95	1	4	201
	5	148	0	0	179
	6	68	0	0	78
	7	146	10	13	355
	8	67	0	0	103
Known Sites Within 50-100 Feet of a Route	1	72	0	0	70
	2	156	0	0	214
	3	41	0	0	48
	4	75	0	0	175
	5	124	0	0	134
	6	59	0	0	50
	7	120	6	19	336
	8	45	0	0	63
Known Sites Within 100-300 Feet of a Route	1	123	0	1	117
	2	246	0	0	309
	3	98	0	0	93
	4	129	0	9	259
	5	181	0	0	237
	6	86	0	0	78
	7	210	12	27	499
	8	65	0	0	128
Known Sites Within DWMA and within 0- 50 Feet of a Route	1	0	0	0	0
	2	0	0	0	0
	3	11	0	0	8
	4	1	0	0	1
	5	129	0	0	146
	6	52	0	0	42
	7	46	1	1	98
	8	35	0	0	51

The limitation of stopping and parking to 50 feet throughout the planning area greatly reduces the number of sites potentially impacted by routes. This decreases the total mileage of routes in proximity to cultural resources from 940 miles in the No Action Alternative to 370 miles in Alternative 2. Because the focus of this alternative is resource protection, the notable differences between TMAs is in the density of sites within 50 feet of closed routes (transportation linear

disturbances) to those within 50 feet of motorized routes. The major differences for this alternative occur in TMAs 2, 4, and 7.

Approximately 1137 cultural resources are previously recorded in TMA 2. Of these, 181 sites fall within 50 feet of a designated motorized route, while 259 sites fall within 50 of a transportation linear disturbance routes. This TMA includes one National Register Listed District, two ACECs designated for cultural resource values, and numerous resources associated with and in proximity to the Coso Mountain obsidian sources and the Coso Rock Art National Register District and Landmark located on China Lake Naval Air Weapons Station. Routes of travel in this area, both motorized and transportation linear disturbances, are primarily associated with existing rights-of-way for transmission corridors, highways, historic railroad grades and the Los Angeles Aqueduct. With the exception of major connectivity routes, many routes in this area were designated transportation linear disturbances based on their proximity to cultural resources. The number of sites previously recorded and the limited amount of inventory completed in this area outside of major rights-of-way indicate this TMA has a high potential for as yet recorded sites.

TMA 4 includes 1,745 previously recorded resources. A total of 95 are located within 50 feet of motorized routes while 201 are located within 50 feet of a transportation linear disturbance. This TMA includes the Jawbone-Butterbredt ACEC, which was designated in part for cultural resource and Native American values, and is currently one of the most intensively utilized portions of the Ridgecrest Field Office for OHV recreation. Cultural resource inventory in this area of the TMA has focused on OHV routes and unauthorized incursions. Many of the transportation linear disturbances identified within this portion of the TMA were previously identified as such because of their proximity to cultural resources.

TMA 7 includes 1,217 previously recorded sites, 146 of which are located within 50 feet of motorized routes and 355 of which are located within 50 feet of transportation linear disturbances. This TMA includes portions of the Fremont-Kramer and Superior-Cronese DWMAs, where stopping and parking are currently limited to 50 feet of motorized routes. The high density of sites is due in part to intensive cultural resource inventory associated with the recreation restoration and improvement efforts in the Rand Mountains, El Paso Mountains, and Ridgecrest areas, highway and transmission corridors, small-scale mining operations, and Abandoned Mine Lands remediation activities. The TMA also includes three National Register Listed Districts and five ACECs designated for cultural resource values.

Alternative 2 Minimization and Mitigation Measures

Table 2.3-5 describes the network-wide minimization and mitigation measures that would be applied under Alternative 2. Many of these measures would act to reduce impacts to cultural resources. Measures such as limiting new ground disturbance in DWMAs, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines would reduce the potential for damage to unidentified cultural resources adjacent to routes. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific cultural resource impacts are considered before authorizing new motorized routes. Specific mitigation measures will be applied and implemented based on the Cultural Resources Programmatic Agreement for WEMO, and the associated Treatment Plans developed in consultation with OHP, ACHP, agency and tribal partners.

4.9.5 Impacts Associated with Alternative 3

Alternative 3 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. These decisions would be the same under Alternative 3 as for Alternative 2, and therefore effect of these decisions on cultural resources is the same as discussed for Alternative 2.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The cultural resource impacts of these decisions under Alternative 3 are as follows:

PA VII: Under Alternative 3, there would be C routes available for competitive motorized events managed under a SRP in three distinct areas: the areas to the northeast of the Spangler Hills Open Area; the Summit Range plus the area east of Highway 395; and the urban interface area between the community of Ridgecrest and the Spangler Hills Open Area. Competitive event routes that have not been subject to cultural resource inventories will require Section 106 review prior to the authorization of use. Cultural resource inventories have not been completed for the specific routes north of the Navy Road and South of the Spangler Open Area, or for routes which connect the city of Ridgecrest with the Spangler Open Area. Resource values recorded in the immediate vicinity of these routes include historic mining sites, prehistoric lithic quarries, lithic scatters, rock shelters, and habitation complexes. The routes south of the Spangler Open Area are located near the Bedrock Springs Area of Critical Environmental Concern, which has been designated for significant cultural resource values. These resources have been determined eligible for listing on the National Register of Historic Places. As yet unidentified cultural resources may be within or adjacent to the routes and may be impacted by the increased use of the routes by vehicles and spectators as described in the impacts common to all alternatives. Mitigation measures are being included to address the identification and evaluation of these routes in the context of the Programmatic Agreement. In addition, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but may be offset by additional routes in the planning area that are identified as competitive use open routes through the route designation process. Because the locations of replacement routes are not known the cultural resource impacts of those routes would be considered through the route designation process.

PA VIII: Under Alternative 3, Koehn Lakebed would be designated as "Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit". The impacts of the closure of Koehn Lakebed would be the same as discussed for Alternative 2.

Alternative 3 would also designate Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds as open to motorized use. The lakebeds may be associated with known or unknown cultural

resources. Therefore, this decision could have a direct, beneficial effect on cultural resources associated with the Koehn lakebed, which would be closed, but an adverse impact on cultural resources on the other three lakebeds.

PA IX: Under Alternative 3, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. Removing the permit requirement as described in WEMO 2006 will have no change in the anticipated impacts to cultural resources from the currently authorized OHV travel routes. Change in the use designation of a route as a result of the removal of the permit will require additional Section 106 cultural resource review.

PA X: Alternative 3 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA's, while stopping and parking would be limited to within 50 feet of the centerline within DWMA's. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 100 feet. This would be a reduction from the limits in the No Action Alternative, but would still allow a larger area of disturbance than Alternative 2 (100 feet in Alternative 3 versus 50 feet in Alternative 2). This reduction would reduce the potential for motorized vehicle use to impact cultural resources in those areas. The effect of this plan amendment decision would be a net beneficial impact on cultural resources located adjacent to the routes that are designated as available for motorized use outside of DWMA's.

PA XI: Under Alternative 3, livestock grazing would continue under the terms and conditions contained in the Final Grazing Decisions issued for active grazing allotments within the West Mojave Planning Area.

Table 4.9-7 provides a summary of total sites by allotment, with specific summary of the total number of sites within allotments where changes to grazing allotments are proposed.

Table 4.9-7: Alternative 3 – Sites within Allotments and within areas proposed for grazing changes

Allotment	Sites Within Areas where Grazing Discontinued	Total Sites
Antelope Valley		14
Bissell		46
Boron Sheep		111
Buckhorn Canyon	7	25
Cady Mountain	299	299
Cantil Common		812
Cronese Lake	250	250
Double Mountain	0	0
Hansen Common		232
Harper Lake	42	42
Johnson Valley	71	71
Kelso Peak		0
Lacey-Cactus-McCloud		282

Table 4.9-7: Alternative 3 – Sites within Allotments and within areas proposed for grazing changes

Allotment	Sites Within Areas where Grazing Discontinued	Total Sites
Monolith Cantil		21
Oak Creek	7	7
Olancha Common		57
Ord Mountain		65
Pilot Knob		25
Rattlesnake Canyon		7
Round Mountain		52
Rudnick Common		461
Shadow Mountains		227
Spangler Hills		136
Stoddard Mountain		718
Tunawee		408
Valley Well		1
Warren		12

The discontinuation of grazing from inactive allotments within DWMA's will eliminate the potential for future impacts associated with livestock grazing to 676 cultural resources sites in seven inactive allotments. This will include values associated with Cronese Basin and Black Mountains.

Alternative 3 Route Designation

Section 4.9.2 described the general impacts to cultural resources that are common to all alternatives. That analysis concluded that motorized vehicles can have direct adverse impacts to cultural resources, as well as indirect impacts to visual, noise, and other values important in tribal areas. Direct impacts to physical resources would likely only occur due to actual contact with motorized vehicles, or by ground disturbance associated with vehicle use, route maintenance, or route reclamation. Therefore, the level of direct impacts tends to be associated with proximity to the resource. The mileage of routes in close proximity to identified cultural resources under Alternative 3 is presented in Table 4.9-8, and the number of sites which may be affected by routes is presented in Table 4.9-9. Indirect impacts in tribal areas are less closely associated with distance between the route and locations of physical resources, but are proportional to the density of motorized routes within each tribal area.

Table 4.9-8. Alternative 3 - Miles of Routes in Proximity to Cultural Resources

Resource Description	Motorized	Authorized/ Administrative	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Within a Known Site	372.8	40.9	36.4	0.1	291.7
Within 0-50 Feet of a Site	139.4	12.8	6.5	0.1	79.1
Within 50-100 Feet of a Site	145.5	8.7	1.3	0.3	51.5
Within 100-300 Feet of a Site	729.1	27.7	4	2.5	3034.9

Table 4.9-9. Alternative 3 – Number of Sites in Proximity to Routes

Resource Description	TMA	Motorized	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
Known Sites Intersected by a Route	1	90	0	0	44
	2	226	27	1	86
	3	91	0	1	29
	4	119	2	3	99
	5	143	2	0	111
	6	67	0	0	36
	7	218	15	0	183
	8	69	0	0	45
Known Sites Within 0-50 Feet of a Route	1	126	0	0	52
	2	309	30	1	112
	3	119	0	1	37
Known Sites Within 0-50 Feet of a Route (continued)	4	185	3	5	134
	5	193	2	0	137
	6	95	0	0	50
	7	306	17	1	231
	8	101	0	0	62
Known Sites Within 50-100 Feet of a Route	1	99	0	0	36
	2	285	7	0	67
	3	65	0	0	19
	4	156	3	7	105
	5	163	1	0	91
	6	73	0	0	37
	7	285	8	2	195
	8	66	0	0	37

Table 4.9-9. Alternative 3 – Number of Sites in Proximity to Routes

Resource Description	TMA	Motorized	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
Known Sites Within 100-300 Feet of a Route	1	161	0	0	50
	2	413	7	1	72
	3	141	0	1	27
	4	294	4	10	158
	5	260	1	0	145
	6	113	0	0	52
	7	441	16	3	265
	8	110	0	0	76
Known Sites Within DWMA and within 50 Feet of a Route	1	0	0	0	0
	2	0	0	0	0
	3	11	0	0	6
	4	1	0	0	
	5	166	2	0	110
	6	62	0	0	30
	7	65	4	0	79
	8	49	0	0	38

Alternative 3 designations emphasize increased access throughout the planning area. The reduction of stopping and parking from 300 feet to 100 feet from route centerlines in areas outside of DWMA decreases the total mileage of routes in proximity to cultural resources from 940 miles in the No Action Alternative to 719 miles in Alternative 3. Notable differences in site densities in this alternative occur in TMA 2 and TMA 7.

TMA 2 includes approximately 1,137 previously identified resources; 594 of those sites occur within 100 feet of a motorized route. This TMA includes one National Register Listed District, two ACECs designated for cultural resource values, and numerous resources associated with and in proximity to the Coso Mountain obsidian sources and the Coso Rock Art National Register District and Landmark located on China Lake Naval Air Weapons Station. Under this alternative, several long-range linear routes, including the First and Second Los Angeles, the grade of the Southern Pacific Railroad, the Midland Trail, and the access routes associated with transmission corridors would be accessible to motorized use.

TMA 7 includes 1,217 previously identified resources, 591 of which are located within 100 feet of a motorized route. This TMA includes portions of the Fremont-Kramer and Superior-Cronese DWMA, where 65 sites fall within 50 feet of a motorized route. The majority of sites occur in areas where intensive cultural resource inventory has occurred in association with recreation restoration and improvement efforts in the Rand Mountains, El Paso Mountains, and Ridgecrest areas, highway and transmission corridors, small-scale mining operations, and Abandoned Mine Lands remediation activities. The TMA also includes three National Register Listed Districts and five ACECs designated for cultural resource values.

Alternative 3 Minimization and Mitigation Measures

Table 2.3-8 describes the network-wide minimization and mitigation measures that would be applied under Alternative 3. Many of these measures would act to reduce impacts to cultural resources. Measures such as limiting new ground disturbance in DWMA's, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines in DWMA's and 100 feet from route centerlines outside of DWMA's would reduce the potential for damage to unidentified cultural resources adjacent to routes. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific cultural resource impacts are considered before authorizing new motorized routes. Specific mitigation measures will be applied and implemented based on the Cultural Resources Programmatic Agreement for WEMO, and the associated Treatment Plans developed in consultation with OHP, ACHP, agency and tribal partners.

4.9.6 Impacts Associated with Alternative 4

Alternative 4 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Except for the designation of TMAs, these decisions would be the same under Alternative 4 as for Alternatives 2 and 3, and therefore effect of these decisions on cultural resources is the same as discussed for those alternatives.

Under Alternative 4, the boundaries of the nine TMAs included in Alternative 4 are similar to those in Alternatives 2 and 3, with the exception that TMA 7 (Ridgecrest, El Paso, Rands, and Red Mountain sub-regions) would be split into two separate TMAs. This decision would designate the current Coordinated Access Planning Area (CAPA) as a separate TMA. The CAPA area consists of the Ridgecrest and El Paso sub-regions, which would be split from the Rands and Red Mountain sub-regions, thus creating two separate TMAs. This decision would be made to facilitate BLM's ability to manage intense recreation use, public interest, and local agency interest in this area near Ridgecrest, and would therefore have no direct effect on cultural resources. However, this decision would make it easier for BLM to consider cultural resource impacts in future route designation decisions in this intensively used area, and thus have an indirect, beneficial effect on cultural resources.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The impacts of these decisions on cultural resources under Alternative 4 are as follows:

PA VII: Under Alternative 4, the C routes that are to the northeast of the Spangler Hills Open Area above the Randsburg Wash Road and those found within the Summit Range and east of Highway 395 would be available for competitive motorized events managed under a SRP.

Competitive event routes that have not been subject to cultural resource inventories will require Section 106 review prior to the authorization of use. Cultural resource inventories have not been completed for the specific routes north of the Navy Road or South of the Spangler Open Area. Resource values recorded in the immediate vicinity of these routes include historic mining sites, prehistoric lithic quarries, lithic scatters, rock shelters, and habitation complexes. The routes south of the Spangler Open Area are located near the Bedrock Springs Area of Critical Environmental Concern, which has been designated for significant cultural resource values. These resources have been determined eligible for listing on the National Register of Historic Places. As yet unidentified cultural resources may be within or adjacent to the routes and may be impacted by the increased use of the routes by vehicles and spectators as described in the impacts common to all alternatives. Mitigation measures are being included to address the identification and evaluation of these routes in the context of the Programmatic Agreement. The Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would also be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but the decision would identify a specific route for the speed-controlled connector between the remaining Johnson Valley OHV Area and the Stoddard Valley OHV Open Area, with appropriate mitigation measures.

PA VIII: Under Alternative 4, Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds would all be designated as open to motorized use. Koehn Lakebed would be designated as “Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit”. The impacts of the closure of Koehn Lakebed would be the same as discussed for Alternative 2. The cultural resource impacts at Cuddeback, Coyote, and Chisholm Trail Lake lakebeds would be the same as those described for Alternative 3, which would also designate these lakebeds as open to motorized vehicles. The lakebeds may be associated with known or unknown cultural resources. Therefore, this decision could have a direct, adverse impact on cultural resources on Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds.

PA IX: Under Alternative 4, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. Removing the permit requirement as described in WEMO 2006 will have no change in the anticipated impacts to cultural resources from the currently authorized OHV travel routes. Change in the use designation of a route as a result of the removal of the permit will require additional Section 106 cultural resource review.

PA X: Alternative 4 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA, while stopping and parking would be limited to within 50 feet of the centerline within DWMA. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA. This would be a reduction in the limits that are currently authorized outside of DWMA from 300 feet to 100 feet. This reduction would reduce the potential for motorized vehicle use to impact cultural resources in those areas. The effect of this plan amendment decision would be a net beneficial impact on cultural resources located adjacent to the routes that are designated as available for motorized use outside of DWMA.

PA XI: Under Alternative 4, livestock grazing outside of DWMA would continue under the terms and conditions in the Final Grazing Decisions issued for active grazing allotments with WEMO. For areas within DWMA, livestock grazing would discontinue in DWMA on allotments that are currently inactive or vacant, or that become vacant in the future. Land would no longer be available for livestock grazing in three grazing allotments, consistent with 43 CFR 4130.2 (a), including Harper Lake, Cronese Lake, and a small portion of the Johnson Valley Allotments.

Table 4.9-10 presents the sites within allotments and within areas proposed for grazing changes under Alternative 4.

Table 4.9-10: Alternative 4 – Sites within Allotments and within areas proposed for grazing changes

Allotment	Sites Within Areas where Grazing Discontinued	Total Sites
Antelope Valley		14
Bissell		46
Boron Sheep		111
Buckhorn Canyon		25
Cady Mountain		299
Cantil Common		812
Cronese Lake	250	250
Double Mountain		0
Hansen Common		232
Harper Lake	42	42
Johnson Valley		71
Kelso Peak		0
Lacey-Cactus-McCloud		282
Monolith Cantil		21
Oak Creek		7
Olancha Common		57
Ord Mountain		65
Pilot Knob		25
Rattlesnake Canyon		7
Round Mountain		52
Rudnick Common		461
Shadow Mountains		227
Spangler Hills		136
Stoddard Mountain		718
Tunawee		408
Valley Well		1
Warren		12

The discontinuation of grazing from inactive allotments within DWMA's will eliminate the potential for impacts to a large number of cultural resources. In Cronese Lake and Harper Lake allotments, all previously sites identified in these areas will be protected from impacts associated with livestock grazing. This will include values associated with Cronese Basin and Black Mountains.

Alternative 4 Route Designation

Section 4.9.2 described the general impacts to cultural resources that are common to all alternatives. That analysis concluded that motorized vehicles can have direct adverse impacts to cultural resources, as well as indirect impacts to visual, noise, and other values important in tribal areas. Direct impacts to physical resources would likely only occur due to actual contact with motorized vehicles, or by ground disturbance associated with vehicle use, route maintenance, or route reclamation. Therefore, the level of direct impacts tends to be associated with proximity to the resource. The mileage of routes in close proximity to identified cultural resources under Alternative 4 is presented in Table 4.9-11, and the number of sites which may be affected by routes is presented in Table 4.9-12. Indirect impacts in tribal areas are less closely associated with distance between the route and locations of physical resources, but are proportional to the density of motorized routes within each tribal area.

Table 4.9-11. Alternative 4 - Miles of Routes in Proximity to Cultural Resources

Resource Description	Motorized	Authorized/ Administrative	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Within a Known Site	424.6	6.8	1.3	0.1	307.8
Within 0-50 Feet of a Site	120.6	0.7	1	0.1	117.1
Within 50-100 Feet of a Site	98	0.9	1.3	0.1	106.4
Within 100-300 Feet of a Site	396.9	7.8	9.2	1.4	649.6

Table 4.9-12. Alternative 4 – Number of Sites in Proximity to Routes

Resource Description	TMA	Motorized	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
Known Sites Intersected by a Route	1	74	0	0	67
	2	146	6	1	199
	3	60	0	2	68
	4	86	1	0	129
	5	141	0	0	108
	6	45	0	0	58
	7	126	14	0	253
	8	55	0	0	68
Known Sites Within 0-50 Feet of a Route	1	101	0	0	82
	2	148	9	1	250
	3	79	0	2	91
	4	118	2	0	178
	5	190	0	0	137
	6	63	0	0	82
	7	171	17	0	335
	8	85	0	0	88

Table 4.9-12. Alternative 4 – Number of Sites in Proximity to Routes

Resource Description	TMA	Motorized	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
Known Sites Within 50-100 Feet of a Route	1	79	0	0	63
	2	171	12	1	209
	3	49	0	2	43
	4	108	2	0	152
	5	162	0	0	91
	6	56	0	0	53
	7	143	17	1	328
	8	52	0	0	56
Known Sites Within 100-300 Feet of a Route	1	133	0	0	101
	2	251	14	1	296
	3	102	0	5	84
	4	167	2	0	231
	5	230	0	0	172
	6	83	0	0	85
	7	243	27	2	480
	8	85	0	0	116
Known Sites Within DWMA and within 50 Feet of a Route	1	0	0	0	0
	2	0	0	0	0
	3	11	0	0	8
	4	0	0	0	1
	5	165	0	0	108
	6	51	0	0	42
	7	53	1	0	90
	8	4	0	0	43

Alternative 4 increases the total mileage of routes in proximity to cultural resources from 940 in the No Action Alternative to 1,015 miles. The total number of sites within 300 feet of a motorized route is notable in TMAs 1, 2, 3, 5, and 7, where greater than 1/3 of all sites within those TMAs may be impacted under the No Action alternative but would no longer be within the stopping and parking zone under Alternative 4. The sites within TMAs 3, 5 and 7 that are located within one of the several DWMA's in those regions will be allotted protection by the 50 foot limitation for stopping and parking.

The impact to cultural resources from the proposal to split TMA 7 into two separate travel management areas is shown in Table 4.9-13. A total of 821 previously recorded sites would fall within TMA 7, which includes the Red Mountain and Rands subregions. A total of 441 previously identified sites would be located within the new TMA 9, which would include the El Paso and Ridgecrest subregions.

Table 4.9-13. Alternative 4 – Number of Sites in Proximity to Routes in TMA 7 and TMA 9

Resource Description	TMA	Motorized	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
Known Sites Intersected by a Route	7 DWMA	40	0	0	70
	7 Non DWMA	39	5	0	113
	9	76	14	0	118
Known Sites Within 0-50 Feet of a Route	7 DWMA	53	1	0	90
	7 Non DWMA	59	6	0	157
	9	92	17	0	139
Known Sites Within 50-100 Feet of a Route	7 DWMA	40	1	0	82
	7 Non DWMA	45	4	0	156
	9	77	17	0	134
Known Sites Within 100-300 Feet of a Route	7 DWMA	66	1	0	108
	7 Non DWMA	89	8	0	241
	9	116	27	0	181

Portions of TMA 7 fall within the Fremont-Kramer and Superior-Cronese DWMA. Stopping and parking would continue to be limited to 50 feet of centerline in the DWMA. A total of 59 sites located in TMA 7 are within DWMA. The remaining portions of TMA 7 include 193 previously recorded sites within 300 feet of centerline of a motorized route. The new TMA 7 would include two National Register Listed Districts and three ACECs designated for cultural resource values. A total of 285 sites out of the 441 sites located in TMA 9 are within 300 feet of centerline of motorized routes. The new TMA 9 would include one National Register Listed District and two ACECs designated for cultural resource values.

Alternative 4 Minimization and Mitigation Measures

Table 2.3-8 describes the network-wide minimization and mitigation measures that would be applied under Alternative 4. Many of these measures would act to reduce impacts to cultural resources. Measures such as limiting new ground disturbance in DWMA, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines in DWMA and 100 feet from route centerlines outside of DWMA would reduce the potential for damage to unidentified cultural resources adjacent to routes. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific cultural resource impacts are considered before authorizing new motorized routes. Specific mitigation measures will be applied and implemented based on the Cultural Resources Programmatic Agreement for WEMO, and the associated Treatment Plans developed in consultation with OHP, ACHP, agency and tribal partners.

4.10 Visual Resources

4.10.1 Introduction

Affected Environment Summary

Section 3.10 describes the visual resources within the planning area. The West Mojave Planning area is highly fragmented. It includes relatively undisturbed areas outside of designated wilderness areas that are a major attraction for recreation users and tourists for whom scenic values and visual open space are important. However, portions of the planning area have also experienced a high degree of human modification due to urban development, its associated infrastructure and uses, and energy development. Management direction aimed at preserving sensitive viewsheds competes with other land use allocation decisions and management activities for urban development, infrastructure needs, energy development, recreation uses, and other surface-use activities.

Methodology

The 2005 WEMO EIS included a general discussion of the effects of OHV use on visual resources. The Court's Summary Judgment and Remedy Order did not specifically reach conclusions, or provide direction, regarding the sufficiency of this analysis.

For this SEIS for the WMRNP, BLM performed the following:

- Since the 2005 WEMO EIS, BLM had completed Visual Resource Inventories throughout the planning area. This information is presented in Section 3.10.
- The route designation process for each alternative included evaluation of the location of each route with respect to lands in Visual Resource Inventory (VRI) Classes I through IV.
- Conducted the evaluation, and quantified the miles of motorized routes and closed routes within each VRI class across four alternative route networks, ranging from 4,293 to 10,428 miles in size.
- Re-evaluated the 2005 WEMO analysis, and supplemented it with additional information from resource specialists, public comments, and changes in conditions within the planning area. This additional information is incorporated into the evaluation in Section 4.10.2 below.

4.10.2 Impacts Common to All Alternatives

In general, motorized routes present a contrast, in terms of color and form, with the surrounding landscape, and are therefore considered to be an adverse impact to visual resource values. Similarly, the presence of motorized vehicles on those routes, and dust clouds generated by moving vehicles, can attract the attention of a casual viewer, and may therefore be an adverse impact. Closure and reclamation of routes would eliminate the presence of vehicles and dust clouds in the short-term. In the longer term, closure and reclamation would reduce the impacts of the routes themselves as they begin to re-vegetate and disappear due to non-use. In general, management prescriptions such as closing routes in areas with erodible soils, and limiting the

stopping and parking distances from routes, are beneficial to visual resources by limiting the amount of vegetation removal and soil disturbance, both of which create visual contrast.

The level of impact depends not only on the number and mileage of routes and their use levels, but also on the VRM Class Objectives of the area. In Class III and IV areas, routes and vehicles may not be dominant, or even noticeable, and while the impact would still be considered adverse, it would be limited in magnitude. In Class I and II areas, where the objectives are to avoid attracting the attention of a casual viewer, the magnitude of the impact becomes more severe.

Although motorized vehicle access is considered to be an adverse impact to the resource, it is also necessary, in many areas, to provide access for viewers to enjoy the visual resources in the region. Therefore, the level of impact can be subjective, depending on the viewer. Hikers would likely prefer a vista with no visible transportation linear features at all. Bikers and horseback riders may desire that non-motorized or non-mechanized routes be designated to provide them access, but would still prefer areas with no motorized routes. Motorized users may prefer an area specifically designated for their preferred mode of transport. Therefore, it is not so simple to conclude that a greater number of routes is equivalent to more visual resource impacts. Generally, routes with higher maintenance and use classes result in more substantial impacts to visual resources.

Chapter 2 discusses the general resource protection and motorized access objectives that were incorporated into the development of the transportation network alternatives. These objectives were used to inform decisions regarding which linear features would be included in the motorized, non-motorized, and non-mechanized transportation network, and which features would be closed (i.e., designated as transportation linear disturbances), under each alternative. In that analysis, visual resource impacts were not specifically considered as a criterion in determining which routes would remain open and which would be closed under the various alternatives.

There are no impacts to visual resources from the grazing alternatives in PA XI; therefore, there is no further discussion of PA XI in this section.

Resource-Specific Minimization and Mitigation Measures

Resource-specific minimization and mitigation measures that were considered as part of the route designation process for each alternative, and that will be considered for each route during implementation of the WMRNP, were described in Table 2.1-4. For visual resources, these include:

- Modify access to a less impacting designation;
- Restrict stopping/parking/camping;
- Install barriers and maintain or upgrade existing barriers;
- Install/Utilize features to reduce visual impact;
- Remove Attractants; and
- Determine that no additional minimization and mitigation measure is needed based on site evaluation.

Residual Impacts After Implementation of Mitigation Measures

Residual effects to visual resources would continue after application of mitigation measures. Although closure of routes and active route rehabilitation efforts would result in gradual reduction of visual impacts, these reductions would occur over the long-term, and adverse impacts would remain in the short-term.

4.10.3 Impacts Associated with the No Action Alternative

Alternative 1 Plan Amendment

Under the No Action Alternative, none of the proposed plan amendment decisions would be adopted.

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct impacts to visual resources. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider visual resources and use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM's ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may benefit visual resources by facilitating adaptive management changes in response to changing on-the-ground conditions. By not adopting these decisions under the No Action Alternative, these potential beneficial effects would not be achieved. In addition, by not adopting these decisions, the CDCA Plan would not be amended to conform to current policy or regulation.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. Because these activities do not affect visual resources, the No Action alternative would have no direct or indirect impact on visual resources.

Alternative 1 Route Designation

The evaluation of impacts common to all alternatives concluded that the size of the available transportation network, and the management restrictions placed on that network, can have both

adverse and beneficial effects on visual resources. Although the presence of more routes, especially in Class I and II areas, is considered to be adverse to visual resource values, the presence of these routes is also needed to provide access to the observers. In addition, the closure of routes results in a nominal reduction of adverse impacts to visual resources. In the short term, because most routes remain on the ground, there is not a measurable difference in impacts between alternatives. In the longer term, some closed routes are actively rehabilitated, generally are disguised to line of sight from open routes. The mileage of routes within each Visual Resource Class in the planning area under the No Action Alternative is presented in Table 4.10-1.

Table 4.10-1. Alternative 1 - Miles of Routes in Visual Resource Classes

Resource Description	Motorized	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
VRI Class I	18.9	0	6.3	101.4
VRI Class II	792.5	0	3.3	1653
VRI Class III	1772.4	0	0	3257.8
VRI Class IV	2699.6	0	0	4203.1

Mileage not accounted for did not have a class assigned

Alternative 1 Minimization and Mitigation Measures

Table 2.3-1 describes the network-wide minimization and mitigation measures that are currently specified in the CDCA Plan, WEMO Plan, and/or the Court’s Remedy Order, and which are therefore applicable under Alternative 1, the No Action Alternative. Whether they were applied during the route designation process or are mitigation measures, these measures act to reduce impacts to visual resources. Measures such as limiting new ground disturbance in DWMA’s, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines in DWMA’s and 300 feet outside of DWMA’s would reduce soil compaction or disturbance in currently undisturbed areas, thus minimizing the potential for new visual resource impacts, as compared to pre-2006 conditions before these limitations were enacted. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific visual resource impacts are considered before authorizing new motorized routes.

4.10.4 Impacts Associated with Alternative 2

Alternative 2 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM’s procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct impacts to visual resources. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider visual resources and use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM's ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may benefit visual resources by facilitating adaptive management changes in response to changing on-the-ground conditions. By adopting these decisions, the CDCA Plan would be amended to conform to current policy and regulation.

As a result of the modification of the language limiting the route network to existing routes, new routes could potentially be designated in locations with no existing routes, and could have adverse impacts to localized resources near that route. New routes may be established to provide access for new authorized uses, or to avoid identified impacts to resources. The impacts to visual resources from each new route would be evaluated as part of the BLM's consideration of the application for land use authorization. As part of that evaluation, BLM would consider the potential impacts of the new route as required by 43 CFR 8342.1, potential alternatives to provide the necessary access, and minimization and mitigation measures to address any identified impacts to visual resources. In the case of routes established to provide access to authorized uses, the duration of the designation of the new route would be the same as authorized land use it is intended to support. Once the term of the authorized land use expires, the route would generally be considered for closure, and the terms and conditions of the authorized land use would require the lessee, permittee, or ROW holder to rehabilitate the route. BLM may also determine at a later date, consistent with 43 CFR 8342.1, that the route provides necessary access for some other reason and could designate the route accordingly, releasing the authorized land user from their requirement to rehabilitate the route. In the case of routes established to address impacts to resources, the new route may be permanent.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The visual resource impacts of these decisions under Alternative 2 are as follows:

PA VII: It is anticipated that the overall number of SRP applications will not increase. This means that there should be no measurable increase in the number of OHVs using public land in the area. Additionally, designating the C routes does not authorize individual SRP events to use these routes, and additional analysis will occur as part of the SRP permitting process. Therefore, there should be no direct impacts to visual resources.

Under Alternative 2, there would be a seasonal restriction placed upon the use of the currently designated C routes for competitive motorized events managed under a SRP. These routes would be available for use by competitive motorized events during the months of November,

December, and January. The visual resource inventory class northeast of the Spangler Hills Open Area is predominately VRI Class III and IV. There are two small pockets of Class II that the C routes pass through to the north of the Navy Road. These two small areas measure approximately 11 and 142 acres, respectively. The seasonal limitations on C routes may reduce their use for motorized events, and thus have localized beneficial impacts on visual resources near those routes.

Since OHV competitive events conducted in other OHV Open Areas would be limited to inside the Open Area boundaries under this alternative, the remaining designated long-distance race corridor, the Johnson Valley to Parker Valley Corridor would be removed under Alternative 2. An event has not been run in this corridor since the listing of the desert tortoise as threatened in 1989; therefore, other routes and areas within the planning area are not anticipated to receive increased use for recreation as a result of the elimination of this competitive event route. Therefore, this plan amendment decision would not have any effect on visual resources by increasing the recreational use of routes in other areas.

PA VIII: Alternative 2 would designate Koehn Lakebed as closed to motorized vehicles. There would be no change to the use of Cuddeback, Coyote, or Chisholm Trail Lakes. Although the presence of more routes and vehicles is considered to be adverse to visual resource values, the presence of these routes is also needed to provide access to the observers. Therefore, the closure of Koehn Lakebed associated with this decision would have a beneficial impact in reducing motorized use of the lakebed, but could also have an adverse impact in limiting the ability of the public to access the visual vista available from the lakebeds. Because Koehn lakebed is currently receiving relatively light use, the amount of displaced use to other routes would be low. Therefore, this plan amendment decision is not expected to have an indirect, adverse impact on visual resources by increasing the recreational use of routes in other areas.

PA IX: There would be no change to access to the Rand Mountains-Fremont Valley Management Area under Alternative 2. Because access in this area does not affect visual resources, Alternative 2 would have no direct or indirect impact on visual resources.

PA X: Alternative 2 would limit stopping and parking to previously disturbed areas within 50 feet from the route centerline, both inside and outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 50 feet. Camping would be allowed adjacent to designated routes in previously disturbed areas, not to exceed 50 feet from the centerline, throughout the WEMO Planning Area. This reduction from the limits in the No Action Alternative would reduce the potential for motorized vehicle use to create additional disturbance, and would allow previously disturbed areas to re-vegetate. The effect of these actions would be a net beneficial impact on visual resources.

Alternative 2 Route Designation

Section 4.10.2 described the general impacts to visual resources that are common to all alternatives. That analysis concluded that the size of the available transportation network, and the management restrictions placed on that network, can have both adverse and beneficial effects on visual resources. Although the presence of more routes, especially in Class I and II, is considered to be adverse to visual resource values, the presence of these routes is also needed to provide access to the observers. The mileage of routes within each Visual Resource Class in the planning area under Alternative 2 is presented in Table 4.10-2.

Table 4.10-2. Alternative 2 - Miles of Routes in Visual Resource Classes

Resource Description	Motorized	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
VRI Class I	17.7	0	0	108.7
VRI Class II	643.1	4.4	14.2	1793
VRI Class III	1428.4	23.7	2	3558.8
VRI Class IV	2145.5	0.1	8.7	4754.1

Mileage not accounted for did not have a class assigned

Alternative 2 Minimization and Mitigation Measures

Table 2.3-5 describes the network-wide minimization and mitigation measures that would be applied under Alternative 2. Many of these measures would act to reduce impacts to visual resources. Measures such as limiting new ground disturbance in DWMA's, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines would reduce soil compaction or disturbance in currently undisturbed areas, thus minimizing the potential for visual resource impacts. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific visual resource impacts are considered before authorizing new motorized routes.

4.10.5 Impacts Associated with Alternative 3

Alternative 3 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. These decisions would be the same under Alternative 3 as for Alternative 2, and therefore effect of these decisions on visual resources is the same as discussed for Alternative 2.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The visual resource impacts of these decisions under Alternative 3 are as follows:

PA VII: Under Alternative 3, there would be C routes available for competitive motorized events managed under a SRP in three distinct areas: the areas to the northeast of the Spangler Hills Open Area; the Summit Range plus the area east of Highway 395; and the urban interface area between the community of Ridgecrest and the Spangler Hills Open Area. The visual resource inventory class northeast of the Spangler Hills Open Area is predominately VRI Class III and IV. There are two small pockets of Class II that the C routes pass through to the north of the Navy Road. These two small areas measure approximately 11 and 142 acres, respectively.

In addition, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but may be offset by additional routes in the planning area that are identified as competitive use open routes through the route designation process. Because the locations of replacement routes are not known the visual resource impacts of those routes would be considered through the route designation process.

PA VIII: Under Alternative 3, Koehn Lakebed would be designated as “Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit”. The impacts of the closure of Koehn Lakebed would be the same as discussed for Alternative 2.

Alternative 3 would also designate Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds as open to motorized use. Although the presence of more routes and vehicles is considered to be adverse to visual resource values, the presence of these routes is also needed to provide access to the observers. Therefore, the modification of access to the lakebeds associated with this decision would have an adverse impact in increasing motorized use of vehicles on the lakebeds, but could also have a beneficial impact in increasing the ability of the public to access the visual vista available from the lakebeds.

PA IX: Under Alternative 3, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. Eliminating the permit requirement would not result in designation of additional routes or an increase in soil disturbance. This decision may result in an increase in recreational use of the existing routes, but this increase is expected to be minor. Therefore, this decision is not expected to have any effect on visual resources.

PA X: Alternative 3 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA's, while stopping and parking would be limited to within 50 feet of the centerline within DWMA's. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 100 feet. This would be a reduction from the limits in the No Action Alternative, but would still allow a larger area of disturbance than Alternative 2 (100 feet in Alternative 3 versus 50 feet in Alternative 2). This reduction would reduce the potential for motorized vehicle use to create additional disturbance, and would allow previously disturbed areas to re-vegetate. The effect of these actions would be a net beneficial impact on visual resources.

Alternative 3 Route Designation

Section 4.10.2 described the general impacts to visual resources that are common to all alternatives. That analysis concluded that the size of the available transportation network, and the management restrictions placed on that network, can have both adverse and beneficial effects on visual resources. Although the presence of more routes, especially in Class I and II, is considered to be adverse to visual resource values, the presence of these routes is also needed to provide access to the observers. The mileage of routes within each Visual Resource Class in the planning area under Alternative 3 is presented in Table 4.10-3.

Table 4.10-3. Alternative 3 - Miles of Routes in Visual Resource Classes

Resource Description	Motorized	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
VRI Class I	18.3	0	0	110.7
VRI Class II	1898.3	13.7	22.6	539
VRI Class III	3573.8	61	1.8	1453.4
VRI Class IV	4804.1	7.9	1.7	2181.2

Mileage not accounted for did not have a class assigned

Alternative 3 Minimization and Mitigation Measures

Table 2.3-8 describes the network-wide minimization and mitigation measures that would be applied under Alternative 3. Many of these measures would act to reduce impacts to visual resources. Measures such as limiting new ground disturbance in DWMAs, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines in DWMAs and 100 feet from route centerlines outside of DWMAs would reduce soil compaction or disturbance in currently undisturbed areas, thus minimizing the potential for visual resource impacts. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific visual resource impacts are considered before authorizing new motorized routes.

4.10.6 Impacts Associated with Alternative 4

Alternative 4 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM’s procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Except for the designation of TMAs, these decisions would be the same under Alternative 4 as for Alternatives 2 and 3, and therefore effect of these decisions on visual resources is the same as discussed for those alternatives.

Under Alternative 4, the boundaries of the nine TMAs included in Alternative 4 are similar to those in Alternatives 2 and 3, with the exception that TMA 7 (Ridgecrest, El Paso, Rands, and Red Mountain sub-regions) would be split into two separate TMAs. This decision would designate the current Coordinated Access Planning Area (CAPA) as a separate TMA. The CAPA area consists of the Ridgecrest and El Paso sub-regions, which would be split from the Rands and Red Mountain sub-regions, thus creating two separate TMAs. This decision would be made to facilitate BLM’s ability to manage intense recreation use, public interest, and local agency interest in this area near Ridgecrest, and would therefore have no direct effect on visual resources. However, this decision would make it easier for BLM to consider visual resource impacts in future route designation decisions in this intensively used area, and thus have an indirect, beneficial effect on visual resources.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of “C” routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The visual resource impacts of these decisions under Alternative 4 are as follows:

PA VII: Under Alternative 4, the C routes that are to the northeast of the Spangler Hills Open Area above the Randsburg Wash Road and those found within the Summit Range and east of Highway 395 would be available for competitive motorized events managed under a SRP. The Visual resource inventory class for this area is predominately VRI Class III and IV. There are two small pockets of Class II that the C routes pass through to the north of the Navy Road. These two small areas measure at approximately 11 and 142 acres respectively. The Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would also be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but the decision would identify a specific route for the speed-controlled connector between the remaining Johnson Valley OHV Area and the Stoddard Valley OHV Open Area, with appropriate mitigation measures.

PA VIII: Under Alternative 4, Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds would all be designated as open to motorized use. Although the presence of more routes and vehicles is considered to be adverse to visual resource values, the presence of these routes is also needed to provide access to the observers. Therefore, the modification of access to the lakebeds associated with this decision would have an adverse impact in increasing motorized use of vehicles on the lakebeds, but could also have a beneficial impact in increasing the ability of the public to access the visual vista available from the lakebeds. Koehn Lakebed would be designated as “Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit”. The impacts of the closure of Koehn Lakebed would be the same as discussed for Alternative 2.

PA IX: Under Alternative 4, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. The impacts of this decision would be the same as those discussed for Alternative 3.

PA X: Alternative 4 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA's, while stopping and parking would be limited to within 50 feet of the centerline within DWMA's. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 100 feet. This reduction would reduce the potential for motorized vehicle use to create additional disturbance, and would allow previously disturbed areas to re-vegetate. The effect of these actions would be a net beneficial impact on visual resources.

Alternative 4 Route Designation

Section 4.10.2 described the general impacts to visual resources that are common to all alternatives. That analysis concluded that the size of the available transportation network, and the management restrictions placed on that network, can have both adverse and beneficial effects on visual resources. Although the presence of more routes, especially in Class I and II, is

considered to be adverse to visual resource values, the presence of these routes is also needed to provide access to the observers. The mileage of routes within each Visual Resource Class in the planning area under Alternative 4 is presented in Table 4.10-4.

Table 4.10-4. Alternative 4 - Miles of Routes in Visual Resource Classes

Resource Description	Motorized	Non-Motorized	Non-Mechanized	Closed (Transportation Linear Disturbance)
VRI Class I	19.9	0	0	106.6
VRI Class II	976.1	30.9	7.1	1445.8
VRI Class III	1846.4	21.3	6.8	3157.2
VRI Class IV	2846.8	4.3	6.4	4023.5

Mileage not accounted for did not have a class assigned

Alternative 4 Minimization and Mitigation Measures

Table 2.3-8 describes the network-wide minimization and mitigation measures that would be applied under Alternative 4. Many of these measures would act to reduce impacts to visual resources. Measures such as limiting new ground disturbance in DWMAs, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines in DWMAs and 100 feet from route centerlines outside of DWMAs would reduce soil compaction or disturbance in currently undisturbed areas, thus minimizing the potential for visual resource impacts. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific visual resource impacts are considered before authorizing new motorized routes.

4.11 Special Designations and Other Inventoried Areas

4.11.1 Introduction

Affected Environment Summary

Section 3.11 describes the specially designated areas within the planning area, which include wilderness, Wilderness Study Areas (WSAs), Areas of Critical Environmental Concern (ACECs), and Desert Wildlife Management Areas (DWMAs). These areas are managed to protect specific resources and values that were associated with their designation. Resources associated with designation of ACECs in the West Mojave include wildlife, vegetation, archaeological, paleontological, scenic, geologic, riparian, and tribal values.

This section also includes lands inventoried for wilderness characteristics. These lands are described in Chapter 3, subsection 3.11. Lands inventoried for wilderness characteristics are not assigned special designations, and do not have special management prescriptions unless they fall within ACECs or other special designations such as wildlife management areas. Lands inventoried for wilderness characteristics are generally large blocks of public land with at least 5,000 acres, or are adjacent to existing wilderness or WSAs; are generally affected primarily by the forces of nature; and may provide opportunities for solitude and primitive and unconfined recreation.

Methodology

The 2005 WEMO EIS analyzed the impacts of the 5,098 mile route network evaluated in that EIS with respect to existing areas with special designations, and to newly proposed special designation areas evaluated as part of the 2006 WEMO Plan. The analysis included a discussion of the effects of the proposed motorized vehicle network on vegetation, wildlife, cultural resources, and other values for which the special designation areas were established, but did not specifically evaluate the transportation network within each area. The Court's Summary Judgment and Remedy Order did not specifically reach conclusions, or provide direction, regarding the sufficiency of the discussion. The Court did make a general finding that the range of route network alternatives evaluated was inadequate.

For this SEIS for the WMRNP, BLM performed the following:

- The route designation process for each alternative included evaluation of the location of each route with respect to ACECs, DWMAs, wilderness, WSAs, and lands inventoried for wilderness characteristics. As discussed in Sections 3.4, 3.9, and other sections, BLM also evaluated the transportation network with respect to the biological, cultural, and other resources for which those areas were designated.
- Conducted route evaluation and quantified the miles of motorized routes that could potentially impact special designation areas across four alternative route networks, ranging from 4,293 to 10,428 miles in size.
- Re-evaluated the 2005 WEMO analysis, and supplemented it with additional information from resource specialists, public comments, changes in conditions within the planning area, and changes in the applicable regulatory framework for special designation areas and lands inventoried for wilderness characteristics. This additional information is incorporated into the evaluation in Section 4.11.2 below.

4.11.2 Impacts Common to All Alternatives

The specially designated areas are established to protect biological, cultural, scenic, and other resources, and the impact of motorized vehicle use and route designation on the management objectives of those areas is similar to that discussed for each of the specific resources. The presence and use of motorized routes and of non-mechanized and non-motorized trails are generally considered to have an adverse impact to these resources; closure of routes and trails, or conversion of routes to trails, is considered to be beneficial. However, the management of motorized vehicles and designation of routes in these areas is already prescribed by legislation, policy, and the CDCA Plan, as amended; and has been previously accomplished through ACEC-specific activity plans. These designations were incorporated into the designations of the 2006 WEMO Plan. For instance, all routes in federally designated wilderness areas were closed to vehicle use with the designation of the areas as wilderness by signing of the California Desert Protection Act in 1994. Therefore, none of the alternatives include the designation of any motorized routes of travel within wilderness for casual public use.

The designation of routes, implementation strategies, and the process for future consideration of routes within ACECs were established by the decisions in the West Mojave Plan, and these would remain the same under the No Action Alternative. Additional management parameters for ACECs may be established under the other alternatives, based on the decisions of the WMRNP.

The decisions being made as part of the WMRNP would serve several purposes with respect to specially designated areas, as follows:

- The existing route designations, management prescriptions, and specific implementation strategies within the ACECs would be incorporated or updated in the resulting CDCA plan amendment. Changes within ACECs must conform to the goals for the adopted ACEC Plans.
- Existing route designations in certain specially designated areas may be changed to conform to the overall goals and objectives selected as part of the WMRNP. For instance, under Alternative 2, the route designation process used to establish the alternative route networks generally specified closure of routes that intersect with wilderness areas and in route proliferation areas within DWMA's.
- Existing routes within WSAs may be designated as motorized primitive trails if they were already designated open under the No Action Alternative, or the trail may be redesignated for non-mechanized or non-motorized use, or closed. Current policy does not provide for reconsideration of an existing route in WSA if it has been previously closed.

Chapter 2 discusses the general resource protection and motorized access objectives that were incorporated into the development of the transportation network alternatives. These objectives were used to inform decisions regarding which linear features would be included in the motorized, non-motorized, and non-mechanized transportation network, and which features would be closed (i.e., designated as transportation linear disturbances), under each alternative. Impacts to specially designated areas were considered in the development of alternative goals and objectives, in designation of individual routes, and in defining specific implementation parameters.

Biological, cultural, and visual, and other sensitive resource impacts were considered in the development of the goals and objectives for the various alternatives. The goals and objectives

for Alternative 2 focus on enhancing sensitive resource values and areas, and managing access to de-emphasize casual multiple-use motorized and mechanized touring. In contrast, the goals and objectives for Alternative 3 focus on meeting the diverse transportation, access, and recreational needs of the public, and managing access to emphasize casual multiple-use motorized and mechanized touring.

Impacts to the resources and management objectives for the specially designated areas were also considered by evaluating individual route locations with respect to identified biological, cultural, and other resources. Vegetation and wildlife impacts were considered by evaluating route locations with respect to DWMA (for desert tortoise), ACECs, Designated Critical Habitat, the Mohave Ground Squirrel Core Areas, nest locations (for golden eagles), wildlife corridors, and other identified habitat features. The potential for cultural resource impacts was considered by evaluating route locations with respect to resource locations, with areas that intersect or are within 50 feet, 100 feet, or 300 feet of identified resources, or within a tribal area. The potential for riparian, spring and other water impacts was considered by evaluating route locations with respect to proximity of these resources. Routes in these locations were considered for minimization and mitigation measures, including potential route closure. Many ACECs include features that are recognized for their historic travel and use characteristics and their current recreational value given their unique assets, including scenic and geologic features and the other sensitive resource values. Some of the ACECs include recreational assets, including campgrounds, other facilities, maintained routes, along with OHV Open areas which were also factored into route designations.

In addition, the WMRNP alternatives include consideration of stopping and parking distances from routes in order to minimize disturbance of resources in those areas. Therefore, minimization of biological and cultural resource impacts was a factor both in development of the alternative route networks, and in the specific limitations placed on routes in those networks. These minimization and mitigation measures differ among the alternatives, and are therefore discussed in more detail in the Biological and Cultural Resources subsections 4.8, 4.9, and 4.14.

Livestock grazing has historically been present in the Ord-Rodman DWMA ACEC for at least 50 years, and was present at the time of ACEC designation in 2006. At the time of designation, grazing use did not adversely affect the basis for which this area met relevance and importance criteria for ACEC designation, and a strategy to manage the presence of livestock for the reasonably foreseeable future has been included in the WEMO Plan as a component of the ACEC Plan. In addition to the Ord-Rodman DWMA ACEC there are several other ACECs, both cultural and biological co-located within West Mojave grazing allotments. In most cases, relevant and important resources have been protected from the impacts of grazing in key locations (e.g., fencing, exclosures, cattle guards, etc.) consistent with the ACEC Management Plans for each area.

The direct impacts to designated wilderness areas within West Mojave grazing allotments from grazing would be the same as what occurred prior to the passage of the CDPA. Based on low livestock numbers and limited seasonal use due to the lack of water the effects of grazing are not considered substantial enough to adversely affect the wilderness character of the designated lands.

The reduction in the utilization thresholds on perennial forage to 25% during the growing season would be beneficial to the naturalness of the affected wilderness areas by protecting the natural

composition of vegetation communities. Due to the lack of developed or perennial water sources these wilderness areas are primarily grazed in the winter/spring and typically with light stocking rates. There are currently very few range improvements in designated wilderness; however the development of future range improvements or the hauling of water in close proximity to wilderness boundaries would increase the number and duration of livestock grazing in wilderness areas. Since range improvements are driven by available water sources, it is reasonably foreseeable that at least one wilderness area may be impacted due to the location of suitable perennial water adjacent to its boundary. This may result in a nominal increased impact to naturalness and the opportunity for solitude when cattle are present. Impacts to wilderness from the development of a new range improvement would be documented and analyzed in the project specific EA that would be prepared prior to the development of any proposed project.

In the Ord Mountain Allotment the stipulation that requires a threshold of 230 lb/acre ephemeral forage production or greater to authorize grazing in portions of the DWMA would also be beneficial to the naturalness of the portions of the affected designated wilderness that overlap DWMA. The threshold would help protect native vegetation and consequently native wildlife by helping to prevent excessive use in dry years. During years when the threshold is not met, cattle would be substantially removed from the entire Newberry Mountains Wilderness areas from March 15th to June 15th. Wilderness visitors would have greater opportunity to experience an area without evidence of man during this time period.

For allotments that have been relinquished, the wilderness areas would benefit due to the increases in naturalness discussed above. The naturalness of the areas would no longer be impacted by the presence of a non-native species (cattle). The opportunity to experience an area without evidence of man would not be impacted by the presence of cattle. The wilderness character and the opportunity for solitude would not be affected by the sights and sounds associated with range improvement maintenance including occasional motorized equipment use in wilderness. In addition, there would not be any future potential to graze cattle in the area and range improvements could be removed to improve the areas' naturalness and provide a greater opportunity to experience an area without evidence of man. These beneficial impacts are not considered substantial, because the impacts of grazing did not substantially adversely affect the wilderness qualities at the time of area designations.

Resource-Specific Minimization and Mitigation Measures

Resource-specific minimization and mitigation measures that were considered as part of the route designation process for each alternative, and that will be considered for each route during implementation of the WMRNP, were described in Table 2.1-4.

For ACECs, potential minimization and mitigation measures include:

- Modify access to a less impacting designation;
- Limit the route to lower intensity use or prohibit Special Recreation Permitted use;
- Install access type restrictor;
- Re-align route to avoid designated area;
- Restrict stopping/parking/camping;
- Add/Upgrade parking/camping area;

- Install barriers and maintain or upgrade existing barriers;
- Add or modify non-motorized trail access;
- Remove Attractants;
- Construct or Install Educational information such as signs and kiosks;
- Install fencing;
- Narrow route;
- Monitor the route for signs of increasing impacts to a sensitive resource; and
- Determine that no additional minimization and mitigation measure is needed based on site evaluation.

For wilderness study areas, potential minimization and mitigation measures include:

- Modify access to a less impacting designation;
- Modify access to a less impacting designation;
- Limit the route to lower intensity use or prohibit Special Recreation Permitted use;
- Install access type restrictor;
- Restrict stopping/parking/camping;
- Install barriers and maintain or upgrade existing barriers;
- Remove Attractants;
- Monitor the route for signs of increasing impacts to a sensitive resource; and
- Determine that no additional minimization and mitigation measure is needed based on site evaluation.

For lands inventoried for wilderness characteristics, potential minimization and mitigation measures include:

- Remove Attractants;
- Modify access to a less impacting designation;
- Prohibit Special Recreation Permit Use;
- Install Signs;
- Install barriers;
- Maintain existing barriers;
- Install step-overs;
- Monitor the route for signs of increasing impacts to a sensitive resource, and
- Determine that no additional minimization and mitigation measure is needed.

Residual Impacts After Implementation of Mitigation Measures

Residual effects to Special Designation areas would continue after application of mitigation measures, both with continued motorized vehicle use, and following closure of routes. Although impacts would be reduced from those that would have existed without mitigation measures, continued motorized vehicle use within ACECs, DWMA, WSAs, and lands inventoried for wilderness characteristics could still impact wildlife, vegetation, and other resources for which these special designations were made. Impacts would continue to occur due to direct strikes to wildlife by motorized vehicles, motorized vehicle noise, and disturbance of soil and vegetation. Closure of routes in those areas may not result in recovery in the short-term, unless active rehabilitation efforts are taken.

4.11.3 Impacts Associated with the No Action Alternative

Alternative 1 Plan Amendment

Under the No Action Alternative, none of the proposed plan amendment decisions would be adopted.

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct impacts to Special Designation areas. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider Special Designations and use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM's ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may benefit Special Designation areas by facilitating adaptive management changes in response to changing on-the-ground conditions. By not adopting these decisions under the No Action Alternative, these potential beneficial effects would not be achieved. In addition, by not adopting these decisions, the CDCA Plan would not be amended to conform to current policy or regulation.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The West Rand ACEC and part of the Fremont-Kramer DWMA fall within the boundaries of the Rand

Mountain-Fremont Valley Management Area. But requiring or not requiring all vehicle operators to complete an educational orientation program before they can purchase a permit and operate a vehicle within the area does not change the proposed designated route system. Therefore this action would not have any direct impact on these designation boundaries.

Livestock grazing has historically been present in the Ord-Rodman DWMA ACEC for at least 50 years, and was present at the time of ACEC designation in 2006. At the time of designation, grazing use did not adversely affect the basis for which this area met relevance and importance criteria for ACEC designation, and a strategy to manage the presence of livestock for the reasonably foreseeable future has been included in the WEMO Plan as a component of the ACEC Plan. In addition to the Ord-Rodman DWMA ACEC there are several other ACECs, both cultural and biological co-located within West Mojave grazing allotments. In most cases, relevant and important resources have been protected from the impacts of grazing in key locations (e.g., fencing, exclosures, cattle guards, etc.) consistent with the ACEC Management Plans for each area.

The direct impacts to designated wilderness areas within West Mojave grazing allotments from grazing would be the same as what occurred prior to the passage of the CDPA. Based on low livestock numbers and limited seasonal use due to the lack of water the effects of grazing are not considered substantial enough to adversely affect the wilderness character of the designated lands.

The reduction in the utilization thresholds on perennial forage to 25% during the growing season would be beneficial to the naturalness of the affected wilderness areas by protecting the natural composition of vegetation communities. Due to the lack of developed or perennial water sources these wilderness areas are primarily grazed in the winter/spring and typically with light stocking rates. There are currently very few range improvements in designated wilderness; however the development of future range improvements or the hauling of water in close proximity to wilderness boundaries would increase the number and duration of livestock grazing in wilderness areas. Since range improvements are driven by available water sources, it is reasonably foreseeable that at least one wilderness area may be impacted due to the location of suitable perennial water adjacent to its boundary. This may result in a nominal increased impact to naturalness and the opportunity for solitude when cattle are present. Impacts to wilderness from the development of a new range improvement would be documented and analyzed in the project specific EA that would be prepared prior to the development of any proposed project.

In the Ord Mountain Allotment the stipulation that requires a threshold of 230 lb/acre ephemeral forage production or greater to authorize grazing in portions of the DWMA would also be beneficial to the naturalness of the portions of the affected designated wilderness that overlap DWMA. The threshold would help protect native vegetation and consequently native wildlife by helping to prevent excessive use in dry years. During years when the threshold is not met, cattle would be substantially removed from the entire Newberry Mountains Wilderness areas from March 15th to June 15th. Wilderness visitors would have greater opportunity to experience an area without evidence of man during this time period.

For allotments that have been relinquished, the wilderness areas would benefit due to the increases in naturalness discussed above. The naturalness of the areas would no longer be impacted by the presence of a non-native species (cattle). The opportunity to experience an area without evidence of man would not be impacted by the presence of cattle. The wilderness

character and the opportunity for solitude would not be affected by the sights and sounds associated with range improvement maintenance including occasional motorized equipment use in wilderness. In addition, there would not be any future potential to graze cattle in the area and range improvements could be removed to improve the areas' naturalness and provide a greater opportunity to experience an area without evidence of man. These beneficial impacts are not considered substantial, because the impacts of grazing did not substantially adversely affect the wilderness qualities at the time of area designations.

Alternative 1 Route Designation

The evaluation of impacts common to all alternatives concluded that motorized vehicles can have adverse impacts on biological, cultural, and scenic resources for which the special designation areas were established. The impacts to the specific resources would be the same as discussed in the subsections for those resources. By impacting the resources themselves, motorized vehicle use would potentially conflict with the management objectives established for these areas, including objectives established in activity plans, guidance, or legislation. The level of impact would generally be proportional to the mileage of motorized routes within each area. The acreage and mileage of routes associated with the different types of Special Designation areas and lands inventoried for wilderness characteristics under the No Action Alternative is presented in Table 4.11-1. The acreage and mileage of routes within specific ACECs under the No Action Alternative is presented in Table 4.11-2.

Table 4.11-1. Alternative 1 – Acreage and Mileage of Routes in Special Designation Areas

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Areas of Critical Environmental Concern	814.2	30.4	1228.5	31932	0	0.3	2233.2
Desert Wildlife Management Areas	2231.1	45	3310.7	20187	0	0	3084.4
Wilderness Areas	0	0	0	0	0	7.3	421.1
Wilderness Study Areas	67.2	0.1	97.9	2523	0	10.7	117.3
Lands Inventoried for Wilderness Characteristics	243.1	0	353.6	198901	0	0.3	156.5

Table 4.11-2. Alternative 1 – Acreage and Mileage of Routes in ACECs and DWMAs

Area	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
ACEC							
Afton Canyon Natural Area	15.5	0	22.5	800	0	0	32.5
Amboy Crater National Natural Landmark	0	0	0	35	0	0	0.5
Barstow Woolly Sunflower	46.2	0.7	68.2	377	0	0	61.7
Bedrock Springs	2.2	0	3.2	118	0	0	1.9
Bendire’s Thrasher Conservation Area	14.6	2.5	24.9	1099	0	0	38.5
Big Morongo Canyon	7.6	0	11.1	482	0	0	22.4
Black Mountain Cultural	88.5	0.9	130	496	0	0	55.9
Calico Early Man Site	6.1	0	8.9	93	0	0	3.2
Carbonate Endemic Plants Research Natural Area	2.6	11.7	20.8	1039	0	0	11.6
Christmas Canyon	0.2	0	0.3	21	0	0	7.5
Coolgardie Mesa Lane Mountain Milkvetch	23.6	1.6	36.7	55	0	0	71.2
Cronese Lakes	11.4	0	16.6	185	0	0	13.3
Desert Tortoise Research Natural Area	0.6	0	0.9	37	0	0	126.2
Fossil Falls	1.8	0	2.6	331	0	0	8.1
Great Falls Basin	5.3	0	7.7	366	0	0	9.7
Harper Dry Lake	0	0	0	11	0	0	1.8
Jawbone/Butterbreedt	283.6	6.4	421.8	14729	0	0	1320.9
Juniper Flats Cultural Area	10.2	0.4	15.4	730	0	0	12.3
Kelso Creek Monkeyflower	8.7	0	12.7	419	0	0	8
Last Chance Canyon	25.1	0	36.5	1082	0	0	65.4
Manix Paleontological Area	12	0	17.5	719	0	0	4.1
Middle Knob	30	0	43.6	1320	0	0.3	28.6
Mohave Monkeyflower	64.4	3.8	99.2	1792	0	0	115.1
Mojave Fishhook Cactus	0.5	0	0.7	37	0	0	3.1
Mojave Fringe-Toed Lizard	19.4	0	28.2	922	0	0	32.5
Parish’s Phacelia	0	0.6	0.9	7	0	0	2.8
Pisgah Crater	58	0	84.4	2730	0	0	8.8

Table 4.11-2. Alternative 1 – Acreage and Mileage of Routes in ACECs and DWMAs

Area	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Rainbow Basin Natural Area	0.5	1.8	3.3	90	0	0	12.1
Red Mountain Spring	1.5	0	2.2	0	0	0	4.6
Rodman Mountains Cultural Area	3.6	0	5.2	156	0	0	13.9
Rose Springs	1.8	0	2.6	104	0	0	7.4
Sand Canyon	3.7	0	5.4	209	0	0	5.5
Short Canyon	1.3	0	1.9	27	0	0	1.1
Soggy Dry Lake Creosote Rings	0	0	0	23	0	0	4.4
Trona Pinnacles	13.6	0	19.8	517	0	0	15.5
Upper Johnson Valley Yucca Rings	0	0	0	0	0	0	0
Western Rand Mountains	60.5	0	88	810	0	0	110.3
West Paradise Lane Mountain Milkvetch	0	0	0	0	0	0	0.7
Whitewater Canyon	0	0	0	0	0	0	1.5
DWMA s							
Fremont-Kramer	937.7	5.8	1372.4	8152	0	0	1448.7
Ord-Rodman	290.2	19.9	451.1	2887	0	0	568
Pinto Mountains	126.4	4	189.7	1416	0	0	74.5
Superior-Cronese	874.1	15.3	1293.7	7732	0	0	993.2

Alternative 1 Minimization and Mitigation Measures

This alternative is further mitigated by continuing the ongoing and future partnerships between the BLM and the local non-profits and agencies to further intensive travel management, land management, and ACEC resource protection activities within the Jawbone and Western Rand Mountains ACECs and the Fremont-Kramer DWMA through such efforts as increased signing and monitoring patrols, field maintenance, facility maintenance, implementation of resource-site protection measures, and habitat restoration.

Table 2.3-1 describes the network-wide minimization and mitigation measures that are currently specified in the CDCA Plan, WEMO Plan, and/or the Court’s Remedy Order, and which are therefore applicable under Alternative 1, the No Action Alternative. Whether they were applied during the route designation process or are mitigation measures, these measures act to reduce impacts to biological, cultural, and other resources for which these areas were specially designated. Measures also reduce impacts to lands that have been inventoried for wilderness characteristics. Measures such as limiting new ground disturbance in DWMA, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines in DWMA and 300 feet outside of DWMA limit soil compaction or disturbance in currently

undisturbed areas, thus reducing the potential for new impacts to biological, cultural, scenic, and other resources for which special designations were made, as compared to pre-2006 conditions before these limitations were enacted. Requirements for plan amendment and NEPA reviews of future route network changes would ensure that specific biological, cultural, and other resource impacts are considered before authorizing new motorized routes, but may also slow response to changing conditions on the ground.

4.11.4 Impacts Associated with Alternative 2

Alternative 2 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct impacts to Special Designation areas. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider Special Designation areas and use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM's ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may benefit Special Designation areas by facilitating adaptive management changes in response to changing on-the-ground conditions. By adopting these decisions, the CDCA Plan would be amended to conform to current policy and regulation.

As a result of the modification of the language limiting the route network to existing routes, new routes could potentially be designated in locations with no existing routes, and could have adverse impacts to localized resources near that route. New routes may be established to provide access for new authorized uses, or to avoid identified impacts to resources. The impacts to Special Designation areas of each new route would be evaluated as part of the BLM's consideration of the application for land use authorization. As part of that evaluation, BLM would consider the potential impacts of the new route as required by 43 CFR 8342.1, potential alternatives to provide the necessary access, and minimization and mitigation measures to address any identified impacts to Special Designation areas. In the case of routes established to provide access to authorized uses, the duration of the designation of the new route would be the same as authorized land use it is intended to support. Once the term of the authorized land use expires, the route would generally be considered for closure, and the terms and conditions of the authorized land use would require the lessee, permittee, or ROW holder to rehabilitate the route. BLM may also determine at a later date, consistent with 43 CFR 8342.1, that the route provides necessary access for some other reason and could designate the route accordingly, releasing the

authorized land user from their requirement to rehabilitate the route. In the case of routes established to address impacts to resources, the new route may be permanent.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of “C” routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The Special Designation area impacts of these decisions under Alternative 2 are as follows:

PA VII: It is anticipated that the overall number of SRP applications will not increase. This means that there should be no measurable increase in the number of OHVs using public land in the area. Additionally, designating the C routes does not authorize individual SRP events to use these routes, and additional analysis will occur as part of the SRP permitting process. Therefore, there should be no direct impacts to Special Designation areas.

Under Alternative 2, there would be a seasonal restriction placed upon the use of the currently designated C routes for competitive motorized events managed under a SRP. These routes would be available for use by competitive motorized events during the months of November, December, and January. Because the proposed C routes northeast of the Spangler Hills Open Area are not associated with any special designations, this decision would not result in any impacts to Special Designation areas.

Since OHV competitive events conducted in other OHV Open Areas would be limited to inside the Open Area boundaries under this alternative, the remaining designated long-distance race corridor, the Johnson Valley to Parker Valley Corridor would be removed under Alternative 2. The elimination of the Johnson Valley to Parker event may reduce impacts to special designations in that area. An event has not been run in this corridor since the listing of the desert tortoise as threatened in 1989; therefore, other routes and areas within the planning area are not anticipated to receive increased use for recreation as a result of the elimination of this competitive event route. Therefore, this plan amendment decision would not have any effect on Special Designation areas by increasing the recreational use of routes in other areas.

PA VIII: Alternative 2 would designate Koehn Lakebed as closed to motorized vehicles. There would be no change to the use of Cuddeback, Coyote, or Chisholm Trail Lakes. In general, these lakebeds are not Special Designation areas. Therefore, this decision would not have any direct effect on Special Designation areas associated with the lakebeds. Because Koehn lakebed is currently receiving relatively light use, the amount of displaced use to other routes would be low. Therefore, this plan amendment decision is not expected to have an indirect, adverse impact on Special Designation areas by increasing the recreational use of routes in other areas.

PA IX: There would be no change to access to the Rand Mountains-Fremont Valley Management Area under Alternative 2. The West Rand ACEC and part of the Fremont-Kramer DWMA fall within the boundaries of the Rand Mountain-Fremont Valley Management Area. But requiring or not requiring all vehicle operators to complete an educational orientation program before they can purchase a permit and operate a vehicle within the area does not change the proposed designated route system. Therefore Alternative 2 would not have any direct impact on these designation boundaries.

PA X: Alternative 2 would limit stopping and parking to previously disturbed areas within 50 feet from the route centerline, both inside and outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 50 feet. Camping would be allowed adjacent to designated routes in previously disturbed areas, not to exceed 50 feet from the centerline, throughout the WEMO Planning Area. This reduction from the limits in the No Action Alternative would result in allowing previously disturbed areas to become re-vegetated over time, thus gradually reducing vegetation, wildlife, and other impacts in those areas. This decision would also reduce the potential for motorized vehicle use to impact resources in those areas. The effect of these actions would be a net beneficial impact on Special Designation areas and lands inventoried for wilderness characteristics.

PA XI: Under this alternative, livestock grazing would be discontinued in most of the Ord Mountain Allotment which would include the Newberry Mountains and Rodman Mountain Wilderness Areas. Because livestock grazing would no longer occur the wilderness area would benefit due to the increases in naturalness. Wilderness visitors would have greater opportunity to experience an area without evidence of man during this time period. Under this alternative, future livestock grazing would not be authorized on the Harper Lake Allotment. Therefore, the Black Mountain Wilderness Area would benefit due to the increased naturalness of the area.

For allotments that have been relinquished, the wilderness areas would benefit due to the increases in naturalness discussed above. The naturalness of the areas would no longer be impacted by the presence of a non-native species (cattle). The opportunity to experience an area without evidence of man would not be impacted by the presence of cattle. The wilderness character and the opportunity for solitude would not be affected by the sights and sounds associated with range improvement maintenance including occasional motorized equipment use in wilderness. In addition, there would not be any future potential to graze cattle in the area and range improvements could be removed to improve the areas' naturalness and provide a greater opportunity to experience an area without evidence of man. These beneficial impacts are not considered substantial, because the impacts of grazing did not substantially adversely affect the wilderness qualities at the time of area designations.

Alternative 2 Route Designation

Section 4.11.2 described the general impacts to specially-designated areas that are common to all alternatives. That analysis concluded that motorized vehicles can have adverse impacts on biological, cultural, and scenic resources for which the special designation areas were established. The impacts to the specific resources would be the same as discussed in the subsections for those resources. By impacting the resources themselves, motorized vehicle use would potentially conflict with the management objectives established for these areas, including objectives established in activity plans, guidance, or legislation. The level of impacts would generally be proportional to the mileage of motorized routes within each area. The acreage and mileage of routes associated with the different types of Special Designation areas and lands inventoried for wilderness characteristics under Alternative 2 is presented in Table 4.11-3. The acreage and mileage of routes within specific ACECs under Alternative 2 is presented in Table 4.11-4.

Table 4.11-3. Alternative 2 - Acreage and Mileage of Routes in Special Designation Areas

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Areas of Critical Environmental Concern	481.8	98.5	844.1	6873	0	20.1	2405.3
Desert Wildlife Management Areas	1683.8	56.6	2531.5	19828	0	1.3	3593.9
Wilderness Areas	0	0.5	0.73	0	0.1	8.1	426.7
Wilderness Study Areas	34.1	0.6	50.5	424	0	0.5	149.9
Lands Inventoried for Wilderness Characteristics	189	1.3	276.8	44234	0	6.7	201.3

Table 4.11-4. Alternative 2 – Acreage and Mileage of Routes in ACECs and DWMAs

Area	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
ACEC							
Afton Canyon	10	0	14.5	108	0	0	38.4
Amboy Crater National Natural Landmark	0.5	0	0.7	6	0	0	0
Barstow Woolly Sunflower	0	0	0	0	0	0	110.8
Bedrock Springs	2.2	0	3.2	22	0	0	1.9
Bendire’s Thrasher Conservation Area	14.9	0.2	22	182	0	0	40.2
Big Morongo Canyon	6.8	0	9.9	83	0	0	23.2
Black Mountain	45.3	0.1	66	496	0	0	99.9
Calico Early Man Site	5.8	0	8.4	37	0	0	3.5
Carbonate Endemic Plants Research Natural Area	13.3	1	20.8	184	0	0	11.8

Table 4.11-4. Alternative 2 – Acreage and Mileage of Routes in ACECs and DWMA

Area	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Christmas Canyon	0.2	0	0.3	2	0	6.5	1
Coolgardie Mesa	4.6	0.1	6.8	55	0	0	91.7
Cronese Basin	2.8	0	4.1	31	0	0	22.1
Desert Tortoise Research Natural Area	4.2	0	6.1	37	0	0	125.3
Fossil Falls	1.0	5.2	9	61	0	0	3.7
Great Falls Basin	4.9	0	7.1	59	0	0.1	10
Harper Dry Lake	0	0	0	0	0	0.4	1.4
Jawbone/ Butterbreddt	156	51.5	301.8	2419	0	13.1	1388.3
Juniper Flats	11.3	0.3	16.9	137	0	0	11.4
Kelso Creek Monkeyflower	6.5	0	9.5	74	0	0	10.2
Last Chance Canyon	19.7	0	28.7	199	0	0	70.8
Manix	12	0	17.5	126	0	0	3.7
Middle Knob	21.3	0	31	235	0	0.4	37.2
Mohave Monkeyflower	53	1.1	78.7	586	0	0	129
Mojave Fishhook Cactus	0.5	0	0.7	6	0	0	3.2
Mojave Fringe- Toed Lizard	16.8	0	24.4	175	0	0	34.3
Parish's Phacelia	0.6	0	0.9	7	0	0	3
Pisgah Crater	46.0	0.2	67.2	489	0	0	20.7
Rainbow Basin	5.0	0.1	7.4	60	0	0	12.6
Red Mountain Spring	0	0	0	0	0	0	6.1
Rodman Mountains Cultural Area	3.6	0	5.2	38	0	0	13.9
Rose Springs	1.3	1	3.3	15	0	0	6.9
Sand Canyon	1.4	2.4	5.5	39	0	0	5.4
Short Canyon	0.5	0	0.7	5	0	0	2
Soggy Dry Lake Creosote Rings	0	0	0	2	0	0	4.4
Trona Pinnacles	8.3	0	12.1	89	0	0	20.7
Upper Johnson Valley Yucca Rings	0	0	0	0	0	0	0

Table 4.11-4. Alternative 2 – Acreage and Mileage of Routes in ACECs and DWMA

Area	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Western Rand Mountains	34.2	35.3	101.1	806	0	0	98.5
West Paradise	0	0	0	0	0	0	0.7
Whitewater Canyon	0	0	0	0	0	0	1.2
DWMA							
Fremont-Kramer	633.2	44.4	985.6	7792	0	1.3	1706.6
Ord-Rodman	254.9	5.5	378.8	2884	0	0	612.3
Pinto Mountains	119.3	0.1	173.7	1416	0	0	90
Superior-Cronese	676.3	6.6	993.3	7736	0	0	1185

In Alternative 2, the majority of differences observed in the total mileage of routes within ACECs reflect more accurate mapping of the routes present within ACECs. The decrease in motorized route mileage between Alternative 2 and the No Action Alternative for most ACECs represents the overall goals and objectives of the Alternative to minimize the route network for resource protection.

In Rose Spring ACEC, the increase in route mileage reflects a complete mapping of the currently approved rights-of-way for the Los Angeles Aqueduct and the transmission lines emanating from the power station at Haiwee Reservoirs. The designation of these routes allows for connectivity on existing maintained and well-used routes.

The increase in route mileage in Fossil Falls ACEC reflects a more accurate mapping of the existing access routes for two major transmission lines that traverse the ACEC. The motorized routes also correspond to the BLM managed interpretive trail and campground.

Alternative 2 Minimization and Mitigation Measures

This alternative is further mitigated by continuing the ongoing and future partnerships between the BLM and the local non-profits and agencies to further intensive travel management, land management, and ACEC resource protection activities within the Jawbone and Western Rand Mountains ACECs and the Fremont-Kramer DWMA through such efforts as increased signing and monitoring patrols, field maintenance, facility maintenance, implementation of resource-site protection measures, and habitat restoration.

Table 2.3-5 describes the network-wide minimization and mitigation measures that would be applied under Alternative 2. Many of these measures would act to reduce impacts to biological, cultural, and other resources for which these areas were specially designated. Measures such as limiting new ground disturbance in DWMA, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines would reduce soil compaction or disturbance in currently undisturbed areas, thus minimizing the potential for impacts to biological, cultural, scenic, and other resources for which special designations were made.

Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific biological, cultural, and other resource impacts are considered before authorizing new motorized routes.

4.11.5 Impacts Associated with Alternative 3

Alternative 3 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. These decisions would be the same under Alternative 3 as for Alternative 2, and therefore effect of these decisions on Special Designation areas is the same as discussed for Alternative 2.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The impacts of these decisions on Special Designation areas under Alternative 3 are as follows:

PA VII: Under Alternative 3, there would be C routes available for competitive motorized events managed under a SRP in three distinct areas: the areas to the northeast of the Spangler Hills Open Area; the Summit Range plus the area east of Highway 395; and the urban interface area between the community of Ridgecrest and the Spangler Hills Open Area. The designation of two competitive event corridors that are adjacent to or overlap the Ord-Rodman DWMA could result in additional impacts to the DWMA based on increased levels of use in the DWMA. These impacts include associated increased levels of dust and erosion and increased potential for DT strikes. Competitive events in the area would include permit-specific measures associated with the SRP, as well as measures identified by the USFWS. In addition, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but may be offset by additional routes in the planning area that are identified as competitive use open routes through the route designation process. Because the locations of replacement routes are not known, impacts of those routes to Special Designation areas would be considered through the route designation process.

PA VIII: Under Alternative 3, Koehn Lakebed would be designated as "Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit". The impacts of the closure of Koehn Lakebed would be the same as discussed for Alternative 2.

Alternative 3 would also designate Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds as open to motorized use. In general, these lakebeds are not Special Designation areas. Therefore, this decision would not have any direct effect on Special Designation areas associated with the lakebeds.

PA IX: Under Alternative 3, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. The West Rand ACEC and part of the Fremont-Kramer DWMA fall within the boundaries of the Rand Mountains-Fremont Valley Management Area. Not requiring a visitor to complete an educational orientation program before visiting an area may result in an indirect impact if the visitor is unaware of the special resources within the particular area. These impacts may be overcome through other educational mediums and materials such as kiosks and brochures.

PA X: Alternative 3 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA's, while stopping and parking would be limited to within 50 feet of the centerline within DWMA's. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 100 feet. This would be a reduction from the limits in the No Action Alternative, but would still allow a larger area of disturbance than Alternative 2 (100 feet in Alternative 3 versus 50 feet in Alternative 2). This reduction would result in allowing previously disturbed areas to become re-vegetated over time, thus gradually reducing vegetation, wildlife, and other impacts in those areas. This decision would also reduce the potential for motorized vehicle use to impact resources in those areas. The effect of these actions would be a net beneficial impact on Special Designation areas and lands inventoried for wilderness characteristics.

PA XI: Alternative 3 would discontinue livestock grazing on currently inactive allotments, which include Buckhorn Canyon, Harper Lake, Cronese Lake, Cady Mountain, Johnson Valley, Double Mountain and Oak Creek Allotments. For these allotments, the Black Mountain Wilderness Area and the Cady Mountain WSA would benefit due to the increases in naturalness. The naturalness of the areas would no longer be impacted by the presence of a non-native species (cattle). The opportunity to experience an area without evidence of man would not be impacted by the presence of cattle. The wilderness character and the opportunity for solitude would not be affected by the sights and sounds associated with range improvement maintenance including occasional motorized equipment use in wilderness. In addition, there would not be any future potential to graze cattle in the area and range improvements could be removed to improve the areas' naturalness and provide a greater opportunity to experience an area without evidence of man. These beneficial impacts are not considered substantial, because the impacts of grazing did not substantially adversely affect the wilderness qualities at the time of area designations.

Alternative 3 Route Designation

Section 4.11.2 described the general impacts to specially-designated areas and lands inventoried for wilderness characteristics that are common to all alternatives. That analysis concluded that motorized vehicles can have adverse impacts on biological, cultural, and scenic resources for which the special designation areas were established. The impacts to the specific resources would be the same as discussed in the subsections for those resources. By impacting the resources themselves, motorized vehicle use would potentially conflict with the management objectives established for these areas, including objectives established in activity plans, guidance, or legislation. The level of impacts would generally be proportional to the mileage of motorized routes within each area. The acreage and mileage of routes associated with the different types of Special Designation areas and lands inventoried for wilderness characteristics

under Alternative 3 is presented in Table 4.11-5. The acreage and mileage of routes within specific ACECs under Alternative 3 is presented in Table 4.11-6.

Table 4.11-5. Alternative 3 - Acreage and Mileage of Routes in Special Designation Areas

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Areas of Critical Environmental Concern	1542	22.7	2275.9	45728	1.8	17.6	1453.8
Desert Wildlife Management Areas	2975.5	119.2	4501.4	34362	6.1	0	2293.8
Wilderness Areas	0	1	1.45	0	0	8.9	428.9
Wilderness Study Areas	61.8	3.8	95.4	1500	0	0	120
Lands Inventoried for Wilderness Characteristics	353.1	7.7	524.8	178928	3.8	0.4	44.5

Table 4.11-6. Alternative 3 – Acreage and Mileage of Routes in ACECs and DWMAs

Area	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
ACEC							
Afton Canyon	13.9	0	20.2	254	0	0	34.4
Amboy Crater National Natural Landmark	0	0.5	0.7	11	0	0	0
Barstow Woolly Sunflower	0	0	0	3	0	0	110.6
Bedrock Springs	41	0	6	86	0	0	0
Bendires Thrasher Conservation Area	24.4	2.2	38.7	610	0	0	28.7
Big Morongo Canyon	5.4	0	7.9	129	0	0	24.6
Black Mountain	84.1	0	122.3	922	0	0	61.2
Calico Early Man Site	6.3	0	9.2	43	0	0	3.1
Carbonate Endemic Plants Research Natural Area	24	0	34.9	546	0	0	2.2
Christmas Canyon	7.7	0	11.2	142	0	0	0
Coolgardie Mesa	24.5	0	35.6	279	0	0	71.8
Cronese Basin	9.7	0	14.1	193	0	0	15.2

Table 4.11-6. Alternative 3 – Acreage and Mileage of Routes in ACECs and DWMA

Area	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Desert Tortoise Research Natural Area	4.2	0	6.1	37	0	0	125.3
Fossil Falls	9.6	0	14	174	0.4	0	0
Great Falls Basin	7.6	0	11.1	158	0.4	0	6.9
Harper Dry Lake	0	0	0	0	0	0.4	1.4
Jawbone/ Butterbrett	930.5	0.9	1354.8	33307	0	16.4	681.1
Juniper Flats	8.8	2.8	16.9	951	0	0	11.4
Kelso Creek Monkeyflower	14.7	0	21.4	427	0	0	2
Last Chance Canyon	50.2	0	73	933	0	0	40.3
Manix	15.5	0	22.5	289	0	0	0.3
Middle Knob	51.2	0	74.5	1082	0.4	0.4	6.9
Mohave Monkeyflower	69.4	8.7	113.6	1109	0	0	104.9
Mojave Fishhook Cactus	0.6	0	0.9	14	0	0	3.1
Mojave Fringe- Toed Lizard	42.3	0	61.5	772	0	0	8.8
Parish's Phacelia	0.6	0	0.9	7	0	0	3
Pisgah Crater	62.4	0.7	91.8	1240	0	0	3.8
Rainbow Basin	5.2	0	7.6	61	0	0	12.5
Red Mountain Spring	1.5	0	2.2	15	0	0	4.6
Rodman Mountains Cultural Area	3.6	0	5.2	74	0	0	13.8
Rose Springs	7.1	0	10.3	120	1.4	0	0.7
Sand Canyon	4.2	0	6.1	80	0	0	5
Short Canyon	1	0	1.5	19	0	0	1.5
Soggy Dry Lake Creosote Rings	4.3	0	6.3	81	0	0	0
Trona Pinnacles	24.3	0	35.3	498	0	0	4.8
Upper Johnson Valley Yucca Rings	0	0	0	0	0	0	0
Western Rand Mountains	83.2	6.9	131.1	1048	0	0	77.9
West Paradise	0	0	0	0	0	0	0.7
Whitewater Canyon	0	0	0	0	0	0	1.2

Table 4.11-6. Alternative 3 – Acreage and Mileage of Routes in ACECs and DWMA

Area	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
DWMA							
Fremont-Kramer	1205.2	16.3	1776.7	13771	5.6	0	1158.7
Ord-Rodman	400.2	37.6	636.8	4900	0	0	434.6
Pinto Mountains	200.4	3.8	297	2371	0	0	5.3
Superior-Cronese	1132	61.5	1736	13320	0.5	0	673.7

In Alternative 3, the majority of differences observed in the total mileage of routes within ACECs reflect more accurate mapping of the routes present within ACECs. The increase in motorized route mileage between Alternative 3 and the No Action Alternative for most ACECs represents the overall goals and objectives of the Alternative to provide a more access-based route network. For example, Bedrock Spring, Christmas Canyon, Rose Spring, and Trona Pinnacles, routes that provide connectivity through the ACECs were identified and designated for motorized route.

The Jawbone ACEC motorized routes as identified in Alternative 3 reflect a thorough mapping of all routes within the ACEC. This includes major rights-of way associated with the First and Second Los Angeles Aqueducts, several major transmission lines, access routes to private lands, access routes to renewable energy developments, and the previously designated 1985-1987 routes that did not accurately appear in the original WEMO plan. The revised network, per this alternative, was reviewed against the goals and objectives of the ACEC Plan, and is consistent with those goals. These goals include protection and enhancement of wildlife habitat and Native American values, while allowing appropriate land uses. Since the ACEC includes two OHV Open Areas, additional mitigation and minimization measures have been adopted and implemented in this ACEC to minimize impacts.

The Last Chance Canyon ACEC and West Rands ACEC likewise reflect the total available routes within the ACEC that allow for maximum access and that were previously mapped inaccurately. The routes also provide connectivity through the ACECs and TMAs where they exist.

Alternative 3 Minimization and Mitigation Measures

This alternative is further mitigated by continuing the ongoing and future partnerships between the BLM and the local non-profits and agencies to further intensive travel management, land management, and ACEC resource protection activities within the Jawbone and Western Rand Mountains ACECs and the Fremont-Kramer DWMA through such efforts as increased signing and monitoring patrols, field maintenance, facility maintenance, implementation of resource-site protection measures, and habitat restoration.

Table 2.3-8 describes the network-wide minimization and mitigation measures that would be applied under Alternative 3. Many of these measures would act to reduce impacts to biological, cultural, and other resources for which these areas were specially designated. Measures such as

limiting new ground disturbance in DWMA's, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines in DWMA's and 100 feet from route centerlines outside of DWMA's would reduce soil compaction or disturbance in currently undisturbed areas, thus minimizing the potential for impacts to biological, cultural, scenic, and other resources for which special designations were made. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific biological, cultural, and other resource impacts are considered before authorizing new motorized routes.

4.11.6 Impacts Associated with Alternative 4

Alternative 4 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Except for the designation of TMAs, these decisions would be the same under Alternative 4 as for Alternatives 2 and 3, and therefore effect of these decisions on Special Designation areas is the same as discussed for those alternatives.

Under Alternative 4, the boundaries of the nine TMAs included in Alternative 4 are similar to those in Alternatives 2 and 3, with the exception that TMA 7 (Ridgecrest, El Paso, Rands, and Red Mountain sub-regions) would be split into two separate TMAs. This decision would designate the current Coordinated Access Planning Area (CAPA) as a separate TMA. The CAPA area consists of the Ridgecrest and El Paso sub-regions, which would be split from the Rands and Red Mountain sub-regions, thus creating two separate TMAs. This decision would be made to facilitate BLM's ability to manage intense recreation use, public interest, and local agency interest in this area near Ridgecrest, and would therefore have no direct effect on Special Designation areas. However, this decision would make it easier for BLM to consider impacts to Special Designation areas in future route designation decisions in this intensively used area, and thus have an indirect, beneficial effect on these areas.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The impacts of these decisions on Special Designation areas under Alternative 4 are as follows:

PA VII: Under Alternative 4, the C routes that are to the northeast of the Spangler Hills Open Area above the Randsburg Wash Road and those found within the Summit Range and east of Highway 395 would be available for competitive motorized events managed under a SRP. Because the proposed C routes northeast of the Spangler Hills Open Area are not associated with any special designations, this decision would not result in any impacts to special designation areas. The Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would also be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but the decision would identify a specific route for the speed-

controlled connector between the remaining Johnson Valley OHV Area and the Stoddard Valley OHV Open Area, with appropriate mitigation measures.

PA VIII: Under Alternative 4, Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds would all be designated as open to motorized use. In general, these lakebeds are not Special Designation areas. Therefore, this decision would not have any direct effect on Special Designation areas associated with the lakebeds. Koehn Lakebed would be designated as “Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit”. The impacts of the closure of Koehn Lakebed would be the same as discussed for Alternative 2.

PA IX: Under Alternative 4, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. The impacts of this decision would be the same as those discussed for Alternative 3.

PA X: Alternative 4 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA, while stopping and parking would be limited to within 50 feet of the centerline within DWMA. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA. This would be a reduction in the limits that are currently authorized outside of DWMA from 300 feet to 100 feet. This reduction would result in allowing previously disturbed areas to become re-vegetated over time, thus gradually reducing vegetation, wildlife, and other impacts in those areas. This decision would also reduce the potential for motorized vehicle use to impact resources in those areas. The effect of these actions would be a net beneficial impact on Special Designation areas and lands inventoried for wilderness characteristics.

PA XI: Under this alternative, grazing would be discontinued on Harper Lake, Cronese Lake, and a small portion of the Johnson Valley Allotments. For the Harper Lake Allotment, the Black Mountain Wilderness Area would benefit due to the increases in naturalness. The naturalness of the areas would no longer be impacted by the presence of a non-native species (cattle). The opportunity to experience an area without evidence of man would not be impacted by the presence of cattle. The wilderness character and the opportunity for solitude would not be affected by the sights and sounds associated with range improvement maintenance including occasional motorized equipment use in wilderness. In addition, there would not be any future potential to graze cattle in the area and range improvements could be removed to improve the areas’ naturalness and provide a greater opportunity to experience an area without evidence of man. These beneficial impacts are not considered substantial, because the impacts of grazing did not substantially adversely affect the wilderness qualities at the time of area designations.

Alternative 4 Route Designation

Section 4.11.2 described the general impacts to specially-designated areas and lands inventoried for wilderness characteristics that are common to all alternatives. That analysis concluded that motorized vehicles can have adverse impacts on biological, cultural, and scenic resources for which the special designation areas were established. The impacts to the specific resources would be the same as discussed in the subsections for those resources. By impacting the resources themselves, motorized vehicle use would potentially conflict with the management objectives established for these areas, including objectives established in activity plans, guidance, or legislation. The level of impacts would generally be proportional to the mileage of motorized routes within each area. The acreage and mileage of routes associated with the

different types of Special Designation areas and lands inventoried for wilderness characteristics under Alternative 4 is presented in Table 4.11-7. The acreage and mileage of routes within specific ACECs under Alternative 4 is presented in Table 4.11-8.

Table 4.11-7. Alternative 4 - Acreage and Mileage of Routes in Special Designation Areas

Resource Description	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Areas of Critical Environmental Concern	1313.3	61	1374.3	18348	5	2.5	2069.9
Desert Wildlife Management Areas	2326.2	90.3	3514.9	27798	0	5.5	2923.5
Wilderness Areas	0	2.9	4.22	0	6	0	410.9
Wilderness Study Areas	63	2.3	95	1533	0	0	119.4
Lands Inventoried for Wilderness Characteristics	253	1.8	370.6	101179	0	3.1	143.1

Table 4.11-8. Alternative 4 – Acreage and Mileage of Routes in ACECs and DWMAs

Area	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
ACEC							
Afton Canyon	14.5	2.6	24.9	336	0	0	31.3
Amboy Crater National Natural Landmark	0.5	0	0.7	11	0	0	0
Barstow Woolly Sunflower	46.6	0.7	68.8	570	0	0	61.5
Bedrock Springs	2.2	0	3.2	43	0	0	1.9
Bendires Thrasher Conservation Area	18.2	3.2	31.1	502	0	0	34.2
Big Morongo Canyon	6.8	0	9.9	164	0	0	23.2
Black Mountain	90	0	130.9	995	0	0	55.3
Calico Early Man Site	6.1	0	8.9	42	0	0	3.2
Carbonate Endemic Plants Research Natural Area	1.0	11.7	18.5	331	0	0	13.4
Christmas Canyon	0.2	0	0.3	4	0	0	7.5
Coolgardie Mesa	23.6	1.6	36.7	290	0	0	71.2
Cronese Basin	11.0	0.5	16.7	238	0	0	13.2

Table 4.11-8. Alternative 4 – Acreage and Mileage of Routes in ACECs and DWMAs

Area	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Desert Tortoise Research Natural Area	1.1	0	1.6	16	0	0	126.7
Fossil Falls	3.7	0	5.4	71	0	0	6.2
Great Falls Basin	5.3	0	7.7	127	0	0	9.7
Harper Dry Lake	0.4	0	0.6	0	0	0	1.4
Jawbone/Butterbredt	393.5	6.4	581.7	8855	0	1.5	1209.5
Juniper Flats	9.4	0.4	14.3	222	0	0	13.2
Kelso Creek Monkeyflower	9.6	0	14	211	0	0	7
Last Chance Canyon	22.5	0.7	33.7	456	4.2	0	63.1
Manix	12.7	0	18.5	254	0	0	3
Middle Knob	31.2	0	45.4	657	0	0	28.8
Mohave Monkeyflower	66.7	3.8	102.5	1062	0	0	112.8
Mojave Fishhook Cactus	0.5	0	0.7	12	0	0	3.1
Mojave Fringe-Toed Lizard	17.9	0	26	313	0	0	32.5
Parish's Phacelia	2.3	0.6	4.2	35	0	0	0.5
Pisgah Crater	58.4	0	84.9	1175	0	0	8.5
Rainbow Basin	0.5	10.6	16.1	126	0	0	6.6
Red Mountain Spring	1.2	0	1.7	10	0	0.6	4.4
Rodman Mountains Cultural Area	3.6	0	5.2	74	0	0	13.9
Rose Springs	3.1	0	4.5	40	0	0	6
Sand Canyon	3.7	0	5.4	73	0	0	5.5
Short Canyon	0.7	0	1	14	0.8	0	0.9
Soggy Dry Lake Creosote Rings	0	0	0	6	0	0	4.4
Trona Pinnacles	14.6	0	21.2	314	0	0	14.4
Upper Johnson Valley Yucca Rings	0	0	0	0	0	0	0
Western Rand Mountains	42	18.2	87.6	699	0	0	0.7
West Paradise	0	0	0	0	0	0	110.2
Whitewater Canyon	0	0	0	0	0	0	1.2

Table 4.11-8. Alternative 4 – Acreage and Mileage of Routes in ACECs and DWMA

Area	Motorized	Authorized/ Administrative	Direct Route Acreage	Stopping/ Parking/ Camping Acreage	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
DWMA							
Fremont-Kramer	928.3	24.1	1385.3	11027	0	5.5	1432.9
Ord-Rodman	316	18.7	486.6	3833	0	0	543.1
Pinto Mountains	126.4	8.1	195.6	1606	0	0	74.6
Superior-Cronese	956.3	39.4	1448.3	11332	0	0	872.9

Alternative 4 Minimization and Mitigation Measures

This alternative is further mitigated by continuing the ongoing and future partnerships between the BLM and the local non-profits and agencies to further intensive travel management, land management, and ACEC resource protection activities within the Jawbone and Western Rand Mountains ACECs and the Fremont-Kramer DWMA through such efforts as increased signing and monitoring patrols, field maintenance, facility maintenance, implementation of resource-site protection measures, and habitat restoration.

Table 2.3-8 describes the network-wide minimization and mitigation measures that would be applied under Alternative 4. Many of these measures would act to reduce impacts to biological, cultural, and other resources for which these areas were specially designated. Measures such as limiting new ground disturbance in DWMA, disguising closed routes, and implementing stopping and parking limits of 50 feet from route centerlines in DWMA and 100 feet from route centerlines outside of DWMA would reduce soil compaction or disturbance in currently undisturbed areas, thus minimizing the potential for impacts to biological, cultural, scenic, and other resources for which special designations were made. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific biological, cultural, and other resource impacts are considered before authorizing new motorized routes.

4.12 Noise

4.12.1 Introduction

Affected Environment Summary

Section 3.12 describes the existing conditions with respect to noise in the planning area. Generally, transportation-related noise sources, including road traffic, railroads, and aircraft, characterize the ambient noise environment of the planning area (SCAG 2003). Ambient noise levels associated with traffic and railroads are expected to be limited to areas near major transportation arteries, and are likely not applicable to most of the planning area. Most of the public land in the planning area is relatively far from these noise sources, and would be expected to exhibit ambient noise levels that are more characteristic of rural areas. Military and commercial aircraft also incrementally contribute to existing ambient noise in the planning area, and these noises would occur in both developed and rural areas of the planning area.

Methodology

The 2005 WEMO EIS analyzed the effect of noise, including OHV and motorized vehicle noise, on wildlife. The 2005 WEMO EIS concluded that closure of routes under the WEMO plan would reduce OHV and motorized vehicle noise, and thus decrease noise impacts to wildlife. The EIS did not provide an analysis of noise impacts to sensitive receptors or residents. The Court's Summary Judgment and Remedy Order did not specifically reach conclusions, or provide direction, regarding the sufficiency of the noise impact analysis.

For this SEIS for the WMRNP, BLM performed the following:

- The route designation process for each alternative included evaluation of the location of each route with respect to receptors and residences that could be sensitive to OHV noise.
- Conducted route evaluation and quantified the miles of motorized routes that could potentially impact sensitive receptors and residents, across four alternative route networks, ranging from 4,293 to 10,428 miles in size.
- Re-evaluated the 2005 WEMO analysis, and supplemented it with additional information from resource specialists, public comments, and changes in conditions within the planning area. This additional information is incorporated into the evaluation in Section 4.12.2 below.

4.12.2 Impacts Common to All Alternatives

With respect to the transportation network in the WEMO Planning Area, the types of noises from use of routes on public lands are generally intermittent noises created by the passage of single vehicles or vehicles in small groups on an irregular and infrequent basis. In developed areas or areas near major highways that have higher ambient noise levels, the additional noise created by these vehicles is expected to have little or no adverse impact. However, in remote areas with low ambient noise levels, the additional noise may have an adverse impact on wildlife or sensitive receptors. This can especially be the case where routes used for organized activities create greater use levels, and therefore greater noise impacts, even if these impacts are only intermittent.

Some land uses are considered more sensitive to ambient noise levels than others due to the types of activities typically involved. Residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, natural areas, parks, and outdoor recreation areas are generally more sensitive to noise than are commercial and industrial land uses. Consequently, the noise standards for sensitive land uses are more stringent than those for less sensitive uses, such as commercial and industrial (SCAG 2003).

Certain human activities and sensitive land uses (e.g., residences, schools, and hospitals) generally require lower noise levels. A noise level of L_{dn} 55 to 60 dB on the exterior is the upper limit for speech communication to occur inside a typical home. In addition, social surveys and case studies have shown that complaints and community annoyance in residential areas begin to occur at L_{dn} 55 dB (SCAG 2003).

In general, the surrounding land uses dictate what noise levels would be considered acceptable or unacceptable. Lower ambient noise levels are generally expected in rural or suburban areas, such as the areas used for motorized vehicle recreation on public lands. Therefore, the difference between ambient noise and noise associated with motorized vehicle use is expected to be higher in those areas. Although fewer sensitive human receptors are expected in those areas than in developed areas, the impacts on those receptors would be higher.

Several studies have documented the potential impacts of noise on wildlife, including studies on species that are found within the planning area. A Federal Highway Administration (FHWA) literature review in 2011 summarized the effects of noise on a variety of species as part of an analysis of highway traffic noise impacts. That study summarized the sensitivity of various taxa to noise as follows:

- Mammals – sensitive to noise levels as low as 20dB.
- Birds – sensitive to noise levels down to 0 to 10dB.
- Reptiles – sensitive to noise levels at 40 to 50dB.
- Amphibians – sensitive to noise levels ranging from 10 to 60dB.

Wildlife reactions to noise can include alert reactions, physiological indicators of stress, and hearing loss. In some species, such as birds, noise sources can mask their songs, which are used to communicate pair bond formation, territorial defense, danger, and advertisement of food sources. In mammals, noise generally causes individuals to avoid areas, thus causing modifications in occupied habitat.

The 1994 Desert Tortoise Recovery Plan (USFWS 1994) listed the following potential noise impacts, without any data to support the conclusions. Noise impacts may cause disruption of communication and damage to the auditory system, which may affect an individual's ability to effectively communicate and respond in appropriate ways. In several places, the Recovery Plan referred to "noise pollution" or listed noise as one of the potential impacts, but provided no specific data. The 2011 Recovery Plan indicated that no additional data on noise impacts had been developed. In his threats analysis, Dr. Boorman (2002) reiterated the information given in the 1994 Recovery Plan, which is recited above, plus the following observations. A study conducted by Bowles et al. (1999) showed very little behavioral or physiological effect on tortoises of loud noises that simulated jet over flights and sonic booms. They also demonstrated that tortoise hearing is fairly sensitive (mean = 34 dB SPL) and was most sensitive to sounds

between 125 and 750 Hz, well within the range of the fundamental frequency of most of their vocalizations. The authors concluded that tortoises probably could tolerate occasional exposure to sonic boom level sounds (140 dB SPL), but some may suffer permanent hearing loss from repeated longterm exposure to loud sounds such as from OHVs and construction blasts. Boarman (2002) also indicated noise or vibration might affect tortoises that live alongside railroads, but found there were no studies to document the impact. He concluded, it is not known if train noise negatively affects the behavior, audition, or reproductive success of these tortoises.

In general, impacts on wildlife in rural areas, including areas of public lands used for motorized recreation, would be expected to be higher than in developed areas. This is because ambient noise levels are lower in rural areas, and therefore the difference between ambient noise and motorized vehicle noise is greater.

Chapter 2 discusses the general resource protection and motorized access objectives that were incorporated into the development of the transportation network alternatives. These objectives were used to inform decisions regarding which linear features would be included in the motorized, non-motorized, and non-mechanized transportation network, and which features would be closed (i.e., designated as transportation linear disturbances), under each alternative. In that analysis, noise impacts, in the form of proximity of OHV use to sensitive receptors, were considered as a criterion in determining which routes would remain open and which would be closed under the various alternatives.

There are no impacts to noise from the grazing alternatives in PA XI; therefore, there is no further discussion of PA XI in this section.

Resource-Specific Minimization and Mitigation Measures

Resource-specific minimization and mitigation measures that were considered as part of the route designation process for each alternative, and that will be considered for each route during implementation of the WMRNP, were described in Table 2.1-4. For impacts resulting from noise, these include:

- Modify access to a less impacting or more controlled designation;
- Limit the route to lower intensity use or prohibit Special Recreation Permitted use;
- Construct and/or Install Educational information such as signs;
- Install speed bumps or similar mechanisms to slow traffic through an area, and
- Determine that no additional minimization and mitigation measure is needed based on area or site evaluation.

Residual Impacts After Implementation of Mitigation Measures

Residual noise impacts to wildlife and to sensitive receptors would continue after application of mitigation measures. Over time as fewer older motorcycles are being used, noise impacts can be expected to decrease because of the current motorcycle noise standards. Although impacts would be reduced, motorized vehicles use would still occur within wildlife habitat, and could impact wildlife individuals due to noise effects. Motorized vehicle use would also still occur in close proximity to sensitive receptors.

4.12.3 Impacts Associated with the No Action Alternative

Alternative 1 Plan Amendment

Under the No Action Alternative, none of the proposed plan amendment decisions would be adopted.

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct noise impacts to sensitive receptors or residents. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider noise impacts and use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM's ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may reduce noise impacts to sensitive receptors by facilitating adaptive management changes in response to changing on-the-ground conditions. By not adopting these decisions under the No Action Alternative, these potential beneficial effects would not be achieved. In addition, by not adopting these decisions, the CDCA Plan would not be amended to conform to current policy or regulation.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. However, no current noise impacts are known along the current designated "C" routes or the designated Rand-Fremont routes system, therefore no noise impacts to sensitive receptors are anticipated as a result of the No Action alternative.

Alternative 1 Route Designation

The evaluation of impacts common to all alternatives concluded that noise from motorized vehicles can have adverse impacts on sensitive human receptors and on wildlife resources. The level of impact would depend on the context, specifically the ambient noise levels associated with other noise sources at each location. The level of impact would also be directly proportional to the proximity of the noise source to receptors. The mileage of routes associated with wildlife receptors under the No Action Alternative was presented above in Tables 4.4-14

and 4.4-15. The mileage of routes associated with sensitive human receptors under the No Action Alternative is presented in Table 4.12-1.

Table 4.12-1. Alternative 1 - Miles of Routes in Proximity to Sensitive Receptors and Residents for Noise Impacts

Resource Description	Motorized	Authorized/ Administrative	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Miles of Route Within 1 Mile of Sensitive Receptor	23.2	0	0	0	106.6
Miles of Route Within 300 feet of Residences	126.3	4.8	0	0	419.8

Alternative 1 Minimization and Mitigation Measures

Table 2.3-1 describes the network-wide minimization and mitigation measures that are currently specified in the CDCA Plan, WEMO Plan, and/or the Court’s Remedy Order, and which are therefore applicable under Alternative 1, the No Action Alternative. Whether they were applied during the route designation process or are mitigation measures, these measures would act to reduce the proximity of noise sources to sensitive receptors. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific noise impacts, including impacts to wildlife and noise in close proximity to sensitive human receptors, are considered before authorizing new motorized routes.

4.12.4 Impacts Associated with Alternative 2

Alternative 2 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM’s procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct noise impacts. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider noise impacts and use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM’s ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may reduce noise impacts by facilitating adaptive management changes in response to changing on-the-ground

conditions. By adopting these decisions, the CDCA Plan would be amended to conform to current policy and regulation.

As a result of the modification of the language limiting the route network to existing routes, new routes could potentially be designated in locations with no existing routes, and could have adverse impacts to localized resources near that route. New routes may be established to provide access for new authorized uses, or to avoid identified impacts to resources. The noise impacts of each new route would be evaluated as part of the BLM's consideration of the application for land use authorization. As part of that evaluation, BLM would consider the potential impacts of the new route as required by 43 CFR 8342.1, potential alternatives to provide the necessary access, and minimization and mitigation measures to address any identified noise impacts to sensitive receptors or wildlife. In the case of routes established to provide access to authorized uses, the duration of the designation of the new route would be the same as authorized land use it is intended to support. Once the term of the authorized land use expires, the route would generally be considered for closure, and the terms and conditions of the authorized land use would require the lessee, permittee, or ROW holder to rehabilitate the route. BLM may also determine at a later date, consistent with 43 CFR 8342.1, that the route provides necessary access for some other reason and could designate the route accordingly, releasing the authorized land user from their requirement to rehabilitate the route. In the case of routes established to address impacts to resources, the new route may be permanent.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The noise impacts of these decisions under Alternative 2 are as follows:

PA VII: Competitive events may authorize large numbers of vehicles traveling at a high rate of speed, which has the potential to increase noise levels in the local area. While these levels may be substantial, they will also be localized and short in duration. It is anticipated that the overall number of SRP applications will not increase, just that several applicants may request to use the C routes in addition to the adjacent Open Area for courses. This means that there should be no measurable increase in the number of OHVs using public land in the area, and there would be no direct noise impacts.

Under Alternative 2, there would be a seasonal restriction placed upon the use of the currently designated C routes for competitive motorized events managed under a SRP. These routes would be available for use by competitive motorized events during the months of November, December, and January. Because there are no sensitive receptors associated with the C routes northeast of the Spangler Hills Open Area, this decision would not result in any noise impacts. Seasonal restrictions would reduce potential noise impacts to wildlife, including desert tortoise and Mohave ground squirrel, during months when these species are active.

Since OHV competitive events conducted in other OHV Open Areas would be limited to inside the Open Area boundaries under this alternative, the remaining designated long-distance race corridor, the Johnson Valley to Parker Valley Corridor would be removed under Alternative 2. An event has not been run in this corridor since the listing of the desert tortoise as threatened in

1989; therefore, other routes and areas within the planning area are not anticipated to receive increased use for recreation as a result of the elimination of this competitive event route. Therefore, this plan amendment decision would not have any noise impacts by increasing the recreational use of routes in other areas.

PA VIII: Alternative 2 would designate Koehn Lakebed as closed to motorized vehicles. There would be no change to the use of Cuddeback, Coyote, or Chisholm Trail Lakes. The dry lakebeds are not located near any potential sensitive receptors, so use of them would not result in adverse noise impacts. Because Koehn lakebed is currently receiving relatively light use, the amount of displaced use to other routes would be low. Therefore, this plan amendment decision is not expected to have an indirect, adverse noise impact on sensitive receptors or wildlife by increasing the recreational use of routes in other areas.

PA IX: There would be no change to access to the Rand Mountains-Fremont Valley Management Area under Alternative 2. No current noise impacts are known along the designated Rand-Fremont routes system, therefore no noise impacts to sensitive receptors are anticipated as a result of Alternative 2.

PA X: Alternative 2 would limit stopping and parking to previously disturbed areas within 50 feet from the route centerline, both inside and outside of DWMAs. This would be a reduction in the limits that are currently authorized outside of DWMAs from 300 feet to 50 feet. Camping would be allowed adjacent to designated routes in previously disturbed areas, not to exceed 50 feet from the centerline, throughout the WEMO Planning Area. This reduction from the limits in the No Action Alternative may have a slight beneficial effect to noise impacts on wildlife by limiting the incursion of motorized vehicles outside of the designated routes.

Alternative 2 Route Designation

Section 4.12.2 described the general impacts associated with noise that are common to all alternatives. That analysis concluded that noise from motorized vehicles can have adverse impacts on sensitive human receptors and on wildlife resources. The level of impact would depend on the context, specifically the ambient noise levels associated with other noise sources at each location. The level of impact would also be directly proportional to the proximity of the noise source to the receptors. The mileage of routes associated with wildlife receptors under Alternative 2 was presented above in Tables 4.4-17 and 4.4-18. The mileage of routes associated with sensitive human receptors under Alternative 2 is presented in Table 4.12-2.

Table 4.12-2. Alternative 2 - Miles of Routes in Proximity to Sensitive Receptors and Residents for Noise Impacts

Resource Description	Motorized	Authorized/ Administrative	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Miles of Route Within 1 Mile of Sensitive Receptor	19.2	0.1	8.5	0	105.2
Miles of Route Within 300 feet of Residences	80.0	5.8	1.9	0	474.8

Alternative 2 Minimization and Mitigation Measures

Table 2.3-5 describes the network-wide minimization and mitigation measures that would be applied under Alternative 2. Many of these measures would act to reduce the proximity of noise sources to sensitive receptors or residences. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific noise impacts, including impacts to wildlife and noise in close proximity to sensitive human receptors, are considered before authorizing new motorized routes.

4.12.5 Impacts Associated with Alternative 3

Alternative 3 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM’s procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. These decisions would be the same under Alternative 3 as for Alternative 2, and therefore effect of these decisions on noise impacts is the same as discussed for Alternative 2.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of “C” routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The noise impacts of these decisions under Alternative 3 are as follows:

PA VII: Under Alternative 3, there would be C routes available for competitive motorized events managed under a SRP in three distinct areas: the areas to the northeast of the Spangler Hills Open Area; the Summit Range plus the area east of Highway 395; and the urban interface area between the community of Ridgecrest and the Spangler Hills Open Area. The proposed C routes that originate from the city of Ridgecrest pass within a ¼ mile of sensitive receptors such as the Cerro Coso Community college, but are not within 300 feet of any private residences. In addition, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but may be offset by additional routes in the planning area that are identified as competitive use open routes through the route designation process. Because the locations of replacement routes are not known the noise impacts of those routes would be considered through the route designation process.

PA VIII: Under Alternative 3, Koehn Lakebed would be designated as “Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit”. The impacts of the closure of Koehn Lakebed would be the same as discussed for Alternative 2.

Alternative 3 would also designate Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds as open to motorized use. In general, the lakebeds are not associated with wildlife or sensitive receptors, so modification of access would not have adverse or beneficial noise impacts.

PA IX: Under Alternative 3, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. Eliminating the permit requirement would not result in designation of additional routes. This decision may result in an increase in recreational use of the existing routes, but this increase is expected to be minor. Therefore, this decision is not expected to have any noise impacts to sensitive receptors or wildlife.

PA X: Alternative 3 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA's, while stopping and parking would be limited to within 50 feet of the centerline within DWMA's. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 100 feet. This would be a reduction from the limits in the No Action Alternative, but would still allow a larger area of disturbance than Alternative 2 (100 feet in Alternative 3 versus 50 feet in Alternative 2). This reduction may have a slight beneficial effect to noise impacts on wildlife by limiting the incursion of motorized vehicles outside of the designated routes.

Alternative 3 Route Designation

Section 4.12.2 described the general impacts associated with noise that are common to all alternatives. That analysis concluded that noise from motorized vehicles can have adverse impacts on sensitive human receptors and on wildlife resources. The level of impact would depend on the context, specifically the ambient noise levels associated with other noise sources at each location. The level of impact would also be directly proportional to the proximity of the noise source to the receptors. The mileage of routes associated with wildlife receptors under Alternative 3 was presented above in Tables 4.4-20 and 4.4-21. The mileage of routes associated with sensitive human receptors under Alternative 3 is presented in Table 4.12-3.

Table 4.12-3. Alternative 3 - Miles of Routes in Proximity to Sensitive Receptors and Residents for Noise Impacts

Resource Description	Motorized	Authorized/ Administrative	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Miles of Route Within 1 Mile of Sensitive Receptor	77.2	0	7.3	0	47.1
Miles of Route Within 300 feet of Residences	455	12.6	4.5	0	90.8

Alternative 3 Minimization and Mitigation Measures

Table 2.3-8 describes the network-wide minimization and mitigation measures that would be applied under Alternative 3. Many of these measures would act to reduce the proximity of noise sources to sensitive receptors or residences. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific noise impacts, including impacts to wildlife and noise in close proximity to sensitive human receptors, are considered before authorizing new motorized routes.

4.12.6 Impacts Associated with Alternative 4

Alternative 4 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Except for the designation of TMAs, these decisions would be the same under Alternative 4 as for Alternatives 2 and 3, and therefore effect of these decisions on noise impacts is the same as discussed for those alternatives.

Under Alternative 4, the boundaries of the nine TMAs included in Alternative 4 are similar to those in Alternatives 2 and 3, with the exception that TMA 7 (Ridgecrest, El Paso, Rands, and Red Mountain sub-regions) would be split into two separate TMAs. This decision would designate the current Coordinated Access Planning Area (CAPA) as a separate TMA. The CAPA area consists of the Ridgecrest and El Paso sub-regions, which would be split from the Rands and Red Mountain sub-regions, thus creating two separate TMAs. This decision would be made to facilitate BLM's ability to manage intense recreation use, public interest, and local agency interest in this area near Ridgecrest, and would therefore have no direct effect on noise impacts to sensitive receptors or wildlife. However, this decision would make it easier for BLM to consider noise impacts in future route designation decisions in this intensively used area, and thus have an indirect, beneficial effect on noise impacts.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The noise impacts of these decisions under Alternative 4 are as follows:

PA VII: Under Alternative 4, the C routes that are to the northeast of the Spangler Hills Open Area above the Randsburg Wash Road and those found within the Summit Range and east of Highway 395 would be available for competitive motorized events managed under a SRP. These proposed C routes are not associated with sensitive receptors, so would not result in noise impacts. The Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would also be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but the decision would identify a specific route for the speed-controlled connector between the remaining Johnson Valley OHV Area and the Stoddard Valley OHV Open Area, with appropriate mitigation measures.

PA VIII: Under Alternative 4, Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds would all be designated as open to motorized use. In general, the lakebeds are not associated with wildlife or sensitive receptors, so modification of access would not have adverse or beneficial noise impacts. Koehn Lakebed would be designated as "Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit". The impacts of the closure of Koehn Lakebed would be the same as discussed for Alternative 2.

PA IX: Under Alternative 4, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. The impacts of this decision would be the same as those discussed for Alternative 3.

PA X: Alternative 4 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA's, while stopping and parking would be limited to within 50 feet of the centerline within DWMA's. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 100 feet. This reduction may have a slight beneficial effect to noise impacts on wildlife by limiting the incursion of motorized vehicles outside of the designated routes.

Alternative 4 Route Designation

Section 4.12.2 described the general impacts associated with noise that are common to all alternatives. That analysis concluded that noise from motorized vehicles can have adverse impacts on sensitive human receptors and on wildlife resources. The level of impact would depend on the context, specifically the ambient noise levels associated with other noise sources at each location. The level of impact would also be directly proportional to the proximity of the noise source to the receptors. The mileage of routes associated with wildlife receptors under Alternative 4 was presented above in Tables 4.4-23 and 4.4-24. The mileage of routes associated with sensitive human receptors under Alternative 4 is presented in Table 4.12-4.

Table 4.12-4. Alternative 4 - Miles of Routes in Proximity to Sensitive Receptors and Residents for Noise Impacts

Resource Description	Motorized	Authorized/ Administrative	Non- Motorized	Non- Mechanized	Closed (Transportation Linear Disturbance)
Miles of Route Within 1 Mile of Sensitive Receptor	25.9	0.8	2.4	0	100.8
Miles of Route Within 300 feet of Residences	126.4	6.1	0.3	0.3	411.2

Alternative 4 Minimization and Mitigation Measures

Table 2.3-8 describes the network-wide minimization and mitigation measures that would be applied under Alternative 4. Many of these measures would act to reduce the proximity of noise sources to sensitive receptors or residences. Requirements for plan amendment and NEPA reviews of future major route network changes would ensure that specific noise impacts, including impacts to wildlife and noise in close proximity to sensitive human receptors, are considered before authorizing new motorized routes.

4.13 Travel and Transportation Management

4.13.1 Introduction

Affected Environment Summary

Section 3.13 describes the current travel and transportation characteristics within the planning area. The transportation network in the WEMO Planning area supports the needs of residents and visitors for accessing housing, employment locations, and recreation, as well as supporting the transport of raw materials, food, fuels, and commercial products. The Motorized Vehicle Access (MVA) Element of the CDCA Plan established overarching goals and objectives to support these needs, including providing for constrained motorized vehicle access in a manner that balances the needs of all desert users, private landowners, and other public agencies, and continuing to recognize ways of access and opportunities for commercial development on public lands. To accomplish these objectives, it is necessary that the travel and transportation network provide access to all private lands and authorized users within the planning area, as well as connect seamlessly with the travel and transportation networks on neighboring jurisdictional lands. Neighboring jurisdictions in the region include adjacent BLM-managed lands outside of the West Mojave; Interstate Highways and U.S. Routes; state, county; and city routes; military installations; and lands managed by the USDA Forest Service, National Park Service, and other federal, state, and local land management agencies.

Methodology

The 5,098 mile route network evaluated in the 2005 WEMO EIS was developed to include consideration of access to mining claims, private lands, and other authorized land uses. The Court's Summary Judgment and Remedy Order did not specifically reach conclusions, or provide direction, regarding the sufficiency of this analysis.

For this SEIS for the WMRNP, BLM performed the following:

- The route designation process for each alternative included evaluation of the need for the route to provide continuity to transportation networks in adjacent jurisdictions, and access to private lands and authorized land uses.
- Re-evaluated the 2005 WEMO analysis, and supplemented it with additional information from resource specialists, public comments, and changes in conditions within the planning area. This additional information is incorporated into the evaluation in Section 4.13.2 below.

4.13.2 Impacts Common to All Alternatives

Impacts of the WMRNP with respect to travel and transportation management are directly related to the degree to which the network provides access to private lands and authorized users, and connects to the system in adjacent jurisdictions. Any network decision that eliminates motorized access to private land or authorized users, or that substantially increases the distance that must be traveled over the current distance, would be considered an adverse impact to those landowners and authorized users. Similarly, network decisions that fail to maintain connections to adjacent jurisdictions would be an adverse impact not only to users of those routes, but to the

adjacent jurisdictional lands. This is because a failure to maintain connections is likely to lead to route proliferation on the adjacent jurisdictional lands.

Chapter 2 discusses the general resource protection and motorized access objectives that were incorporated into the development of the transportation network alternatives. These objectives were used to inform decisions regarding which linear features would be included in the motorized, non-motorized, and non-mechanized transportation network, and which features would be closed (i.e., designated as transportation linear disturbances), under each alternative. The goals and objectives for both Alternatives 2 and 3 include emphasizing through access on public lands to establish a comprehensive network, and this objective was considered in development of the route network for each alternative. Because this objective is common to all alternatives, there are no differences among the route alternatives with respect to completeness of the transportation network, and no adverse impact to travel and transportation management. Therefore, no alternative-specific minimization and mitigation measures were developed to address travel and transportation management impacts.

There are no impacts to travel and transportation management from the grazing alternatives in PA XI; therefore, there is no further discussion of PA XI in this section.

Resource-Specific Minimization and Mitigation Measures

Resource-specific minimization and mitigation measures that were considered as part of the route designation process for each alternative, and that will be considered for each route during implementation of the WMRNP, were described in Table 2.1-4. For potential conflicts resulting from multiple users, these include:

- Modify access to a less impacting designation;
- Limit the route to lower intensity use or prohibit Special Recreation Permitted use;
- Minimize overlapping uses by separating in time or space, or through a permitting mechanism;
- Add or identify alternative non-motorized or non-mechanized trail access;
- Construct or Install Educational information such as signs;
- Install step-over;
- Monitor the route for signs of increasing impacts to a sensitive resource; and
- Determine that no additional minimization and mitigation measure is needed based on site evaluation.

Residual Impacts After Implementation of Mitigation Measures

Because no adverse impacts to travel and transportation management were identified, there would be no residual impacts after mitigation measures were implemented. The route networks under each alternative were designed to ensure continuity between the route network and adjacent jurisdictions, and to ensure continued access to private land. The potential mitigation measures are not expected to adversely impact the overall connectivity of the network.

4.13.3 Impacts Associated with the No Action Alternative

Alternative 1 Plan Amendment

Under the No Action Alternative, none of the proposed plan amendment decisions would be adopted.

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct impacts to access to private land or adjacent jurisdictions, or other features of the travel and transportation network. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider access to private land or adjacent jurisdictions and other use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM's ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may benefit travel and transportation management by facilitating adaptive management changes in response to changing on-the-ground conditions. By not adopting these decisions under the No Action Alternative, these potential beneficial effects would not be achieved. In addition, by not adopting these decisions, the CDCA Plan would not be amended to conform to current policy or regulation.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. However, there are no currently known impacts to travel and transportation management associated with those activities and areas, therefore no impacts to travel and transportation management are anticipated as a result of the No Action alternative.

Alternative 1 Route Designation

The No Action Alternative would adopt the authorized travel network as it currently exists, and would also maintain the current goals and objectives, consistent with applicable guidance and policies, which are used to consider new route authorizations in the future. Generally, commercial, recreational, and private landowner access needs are served by the current route network, and it provides connectivity with adjacent jurisdictions and networks. Mechanisms are in place to address future needs for commercial and private landowner access without plan

amendment, and to deal with localized safety and resource issues. Future recreational access would be addressed through plan amendment, and changes would be more cumbersome to enact. A strategy is in place for the management of the current network. It includes signing, enforcement, monitoring, and maintenance plan components, which are posted at http://www.blm.gov/ca/st/en/fo/cdd/wemo_court_mandates.html. Key factors in assessing the adequacy of a transportation and travel network are connectivity, safety, and user information.

4.13.4 Impacts Associated with Alternative 2

Alternative 2 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Therefore, these decisions would not result in direct impacts to travel and transportation management. These decisions would only define the route designation process or framework under which future on-the-ground actions are considered.

In general, the purposes of these decisions are to:

- Resolve inconsistencies between planning language and route designations;
- Clarify the manner in which future route network modifications consider travel and transportation management and other use factors specified in 43 CFR 8342.1;
- Facilitate communication of limitations of route use to the public, and
- Facilitate BLM's ability to enforce route use limitations.

These amendments are expected to have no adverse effect on resources, and may benefit travel and transportation management by facilitating adaptive management changes in response to changing on-the-ground conditions. By adopting these decisions, the CDCA Plan would be amended to conform to current policy and regulation.

As a result of the modification of the language limiting the route network to existing routes, new routes could potentially be designated in locations with no existing routes, and could have adverse impacts to localized resources near that route. New routes may be established to provide access for new authorized uses, or to avoid identified impacts to resources. The impacts to travel and transportation management of each new route would be evaluated as part of the BLM's consideration of the application for land use authorization. As part of that evaluation, BLM would consider the potential impacts of the new route as required by 43 CFR 8342.1, potential alternatives to provide the necessary access, and minimization and mitigation measures to address any identified impacts to travel and transportation management. In the case of routes established to provide access to authorized uses, the duration of the designation of the new route would be the same as authorized land use it is intended to support. Once the term of the authorized land use expires, the route would generally be considered for closure, and the terms and conditions of the authorized land use would require the lessee, permittee, or ROW holder to rehabilitate the route. BLM may also determine at a later date, consistent with 43 CFR 8342.1, that the route provides necessary access for some other reason and could designate the route

accordingly, releasing the authorized land user from their requirement to rehabilitate the route. In the case of routes established to address impacts to resources, the new route may be permanent.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of “C” routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The travel and transportation management impacts of these decisions under Alternative 2 are as follows:

PA VII: It is anticipated that the overall number of SRP applications will not increase. This means that there should be no measurable increase in the number of OHVs using public land in the area. Additionally, designating the C routes does not authorize individual SRP events to use these routes, and additional analysis will occur as part of the SRP permitting process. Therefore, there should be no direct impacts to travel and transportation management.

Under Alternative 2, there would be a seasonal restriction placed upon the use of the currently designated C routes for competitive motorized events managed under a SRP. These routes would be available for use by competitive motorized events during the months of November, December, and January. The designations of competitive C routes would not expand or interfere with the Travel and Transportation network. The proposed routes are already being considered for inclusion in the system that would be available for casual use by the general public. The amendment would only make them available for use under a SRP for a motorized competitive event.

Since OHV competitive events conducted in other OHV Open Areas would be limited to inside the Open Area boundaries under this alternative, the remaining designated long-distance race corridor, the Johnson Valley to Parker Valley Corridor would be removed under Alternative 2. An event has not been run in this corridor since the listing of the desert tortoise as threatened in 1989; therefore, other routes and areas within the planning area are not anticipated to receive increased use for recreation as a result of the elimination of this competitive event route. Therefore, this plan amendment decision would not have any effect on travel and transportation management by increasing the recreational use of routes in other areas.

PA VIII: Alternative 2 would designate Koehn Lakebed as closed to motorized vehicles. There would be no change to the use of Cuddeback, Coyote, or Chisholm Trail Lakes. Although the route network providing access to the Koehn lakebed would still be complete, the closure of the lakebeds may result in closure of through routes, thus increasing the distance of travel for motorized users traveling from one side of the lakebed to the other. Therefore, this decision could have a direct, adverse impact on the travel and transportation network in that area, in close proximity to the lakebed. However, because Koehn lakebed is currently receiving relatively light use, that impact is expected to be small.

PA IX: There would be no change to access to the Rand Mountains-Fremont Valley Management Area under Alternative 2. There are no currently known impacts to travel and transportation management associated with the area, therefore no impacts to travel and transportation management are anticipated as a result of Alternative 2.

PA X: Alternative 2 would limit stopping and parking to previously disturbed areas within 50 feet from the route centerline, both inside and outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 50 feet. Camping would be allowed adjacent to designated routes in previously disturbed areas, not to exceed 50 feet from the centerline, throughout the WEMO Planning Area. This reduction from the limits in the No Action Alternative is not expected to have any effect on motorized use of routes to access private landowners, authorized land uses, or adjacent jurisdictions, and would therefore not have any impact on the travel and transportation network.

Alternative 2 Route Designation

The route network in Alternative 2 was designed to ensure connectivity to adjoining networks, and to ensure access to private land and authorized users throughout the WEMO Planning area. However, because Alternative 2 was designed to maximize resource protection, resulting in closure of a larger number of routes, the means of access to adjoining networks, private land, or authorized land uses may require a longer route of travel by the user to bypass sensitive areas. Similarly, the various alternatives differ in their goals and objectives which would be used to evaluate future route authorizations, and in their minimization and mitigation measures. Under Alternative 2, application of the goals, objectives, and minimization and mitigation measures may result in longer routes of travel, time of day or seasonal restrictions, or other restrictions which users may find to be adverse impacts. Nothing in the goals, objectives, or minimization and mitigation measures would result in BLM choosing to not authorize some means of access to any future private land owner or authorized user. As a result, any adverse impact is expected to be minor.

4.13.5 Impacts Associated with Alternative 3

Alternative 3 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. These decisions would be the same under Alternative 3 as for Alternative 2, and therefore effect of these decisions on travel and transportation management is the same as discussed for Alternative 2.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The impacts of these decisions to travel and transportation management under Alternative 3 are as follows:

PA VII: Under Alternative 3, there would be C routes available for competitive motorized events managed under a SRP in three distinct areas: the areas to the northeast of the Spangler Hills Open Area; the Summit Range plus the area east of Highway 395; and the urban interface area between the community of Ridgecrest and the Spangler Hills Open Area. These actions

would not result in any adverse impact on access to private landowners, authorized land uses, or adjacent jurisdictions. In addition, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but may be offset by additional routes in the planning area that are identified as competitive use open routes through the route designation process. Because the locations of replacement routes are not known the travel and transportation impacts of those routes would be considered through the route designation process.

PA VIII: Under Alternative 3, Koehn Lakebed would be designated as “Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit”. Alternative 3 would also designate Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds as open to motorized use. Although the route network providing access to Koehn lakebed would still be complete, the closure of the lakebeds may result in closure of through routes, thus increasing the distance of travel for motorized users traveling from one side of the lakebed to the other. Therefore, this decision could have a direct, adverse impact on the travel and transportation network in close proximity to Koehn lakebed. Conversely, allowing motorized use on Cuddeback, Coyote, and Chisholm Trail Lake lakebeds would likely increase access to private landowners, authorized land uses, and adjacent jurisdictions near those areas. Therefore, the amendment would have a direct, beneficial impact in those areas.

PA IX: Under Alternative 3, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. Eliminating the permit requirement may result in an increase in recreational use of the existing routes, but this increase is expected to be minor. Therefore, this decision is not expected to have any effect on access private landowners, authorized land uses, or adjacent jurisdictions.

PA X: Alternative 3 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA's, while stopping and parking would be limited to within 50 feet of the centerline within DWMA's. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 100 feet. This would be a reduction from the limits in the No Action Alternative, but would still allow a larger area of disturbance than Alternative 2 (100 feet in Alternative 3 versus 50 feet in Alternative 2). This reduction is not expected to have any effect on motorized use of routes to access private landowners, authorized land uses, or adjacent jurisdictions, and would therefore not have any impact on the travel and transportation network.

Alternative 3 Route Designation

The route network in Alternative 3 was designed to maximize access for recreational users, including ensuring connectivity to adjoining networks, and access to private land and authorized users throughout the WEMO Planning area. Because Alternative 3 was designed to maximize access, the route network results in closure of few routes relative to the other alternatives. Similarly, the various alternatives differ in their goals and objectives which would be used to evaluate future route authorizations, and in their minimization and mitigation measures. Under Alternative 3, application of the goals, objectives, and minimization and mitigation measures would likely result in more direct routes, and fewer time of day or seasonal restrictions than the

other alternatives. As a result, Alternative 3 would have the fewest adverse impacts to travel and transportation management.

4.13.6 Impacts Associated with Alternative 4

Alternative 4 Plan Amendment

Of the decisions being considered in the WMRNP, five of the decisions (Modification of Language Limiting Route Network to Existing Routes; Incorporation of the TTM Process; Updating OHV Area Designations; Identification of Plan Amendment Triggers; and Designation of TMAs) would amend BLM's procedures for managing travel and transportation management in the planning area, and would not authorize any on-the-ground actions. Except for the designation of TMAs, these decisions would be the same under Alternative 4 as for Alternatives 2 and 3, and therefore effect of these decisions on motorized use of routes to access private landowners, authorized land uses, or adjacent jurisdictions is the same as discussed for those alternatives.

Under Alternative 4, the boundaries of the nine TMAs included in Alternative 4 are similar to those in Alternatives 2 and 3, with the exception that TMA 7 (Ridgecrest, El Paso, Rands, and Red Mountain sub-regions) would be split into two separate TMAs. This decision would designate the current Coordinated Access Planning Area (CAPA) as a separate TMA. The CAPA area consists of the Ridgecrest and El Paso sub-regions, which would be split from the Rands and Red Mountain sub-regions, thus creating two separate TMAs. This decision would be made to facilitate BLM's ability to manage intense recreation use, public interest, and local agency interest in this area near Ridgecrest, and would therefore have no direct effect on travel and transportation management. Because this decision is intended to improve BLM's management of the transportation network in this intensively used area, it would have an indirect, beneficial effect on travel and transportation management.

Five of the Plan Amendment decisions being considered in the WMRNP would modify on-the-ground authorization of livestock grazing and motorized vehicle use. These include designation of "C" routes, the Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-Johnson Valley South Unit Competitive Event Connectors, changes to designations on dry lakes, access to the Rand Mountains-Fremont Valley Management Area, changes in allowable stopping, parking, and camping distances, and changes to the livestock grazing program. The impacts of these decisions to travel and transportation management under Alternative 4 are as follows:

PA VII: Under Alternative 4, the C routes that are to the northeast of the Spangler Hills Open Area above the Randsburg Wash Road and those found within the Summit Range and east of Highway 395 would be available for competitive motorized events managed under a SRP. The Stoddard Valley-to-Johnson Valley and Johnson Valley North Unit-to-South Unit Competitive Event Connectors would also be available. The Johnson Valley to Parker Valley Race Corridor would be removed, but the decision would identify a specific route for the speed-controlled connector between the remaining Johnson Valley OHV Area and the Stoddard Valley OHV Open Area, with appropriate mitigation measures. These actions would not result in any adverse impact on access to private landowners, authorized land uses, or adjacent jurisdictions.

PA VIII: Under Alternative 4, Cuddeback, Coyote, and Chisholm Trail Lake Lakebeds would all be designated as open to motorized use. Allowing motorized use on these lakebeds would likely increase access to private landowners, authorized land uses, and adjacent jurisdictions near

those areas. Therefore, this decision would have a direct, beneficial impact on the travel and transportation network. Koehn Lakebed would be designated as “Closed to Motor Vehicle Access, except by Authorization, including Special Recreation Permit”. The impacts of the closure of Koehn Lakebed would be the same as discussed for Alternative 2.

PA IX: Under Alternative 4, the visitor use permit program established for motor vehicle access to the Rand Mountains would be eliminated. The impacts of this decision would be the same as those discussed for Alternative 3.

PA X: Alternative 4 would limit camping to previously disturbed areas within 50 feet from the route centerline inside DWMA's, while stopping and parking would be limited to within 50 feet of the centerline within DWMA's. Stopping, parking, and camping would be limited to 100 feet from the route centerline outside of DWMA's. This would be a reduction in the limits that are currently authorized outside of DWMA's from 300 feet to 100 feet. This reduction is not expected to have any effect on motorized use of routes to access private landowners, authorized land uses, or adjacent jurisdictions, and would therefore not have any impact on the travel and transportation network.

Alternative 4 Route Designation

The route network in Alternative 4 was designed to ensure connectivity to adjoining networks, and to ensure access to private land and authorized users throughout the WEMO Planning area. In addition, it was developed to specifically address concerns raised by stakeholders regarding maintenance of access on specific routes. As a result, Alternative 4 would not have any adverse impacts to travel and transportation management.

4.14 Cumulative Impact Analysis

The cumulative impact assessment in the SEIS analyzes how the environmental conditions within the WEMO Planning area may be affected by the WMRNP in combination with other activities that are likely to take place.

NEPA identifies three types of potential impacts: direct, indirect, and cumulative. A cumulative impact is 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 which agency (federal or non-federal) or person undertakes such other actions (40 CFR Section 1508.7). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” 40 CFR Section 1508.7.

4.14.1 Methodology

Under NEPA, the approach for analyzing cumulative effects involves establishing a geographic scope and timeframe for the each cumulative effects issue (H-1790-1 – National Environmental Policy Act Handbook (BLM), section 6.8.3). “The geographic scope is generally based on the natural boundaries of the resource affected, rather than jurisdictional boundaries” and may be different for each cumulative effect issue (H-1790-1, section 6.8.3.2). “Timeframes, like geographic scope, can vary by resource” (H-1790-1, section 6.8.3.3). Once the geographic and temporal scopes have been established, “[t]he cumulative effects analysis considers past, present, and reasonably foreseeable future actions that would affect the resource of concern within the geographic scope and the timeframe of the analysis.” The analysis must include other federal actions, and non-federal (including private) actions. (40 CFR 1508.7).

Under NEPA, past actions must be considered to provide context for the cumulative effects analysis (40 CFR 1508.7). Past actions can usually be described by their aggregate effect without listing or analyzing the effects of individual past actions (CEQ, *Guidance on the Consideration of Past Actions in Cumulative Effects Analysis*, June 24, 2005). The past actions in the WEMO Planning area have contributed to the existing baseline, and are thus described in Chapter 3, Affected Environment. In some circumstances, past actions need to be described in detail when they bear some relation to the proposed action (H-1790-1, section 6.8.3.4). Where necessary, those actions are described throughout this section. For example, Table 4.14-2 includes past and present energy projects, i.e., existing projects and projects currently approved for construction.

4.14.2 Cumulative Scenario

Table 4.14-1 describes the geographic area of interest and impacts considered for each of the resource areas evaluated in Chapter 4 of this SEIS.

Renewable Energy and Other BLM-Approved Projects

Developers have proposed a large number of projects on BLM-administered, State, and private land in the WEMO Planning area, including renewable, residential, commercial, industrial, and other. Many of these projects are small or would be located in already developed areas so would have limited if any potential to combine with the WMRNP alternatives. Projects that would have the potential to combine with the WMRNP alternatives were included in the list. While this list includes many renewable projects, they are competing for utility Power Purchase Agreements,

which will allow utilities to meet State-required Renewable Portfolio Standards. Not all of the proposed projects will complete the environmental review process, and not all projects will be funded and constructed for one or more reasons, such as those listed below:

- Not all developers will develop the detailed information necessary to meet BLM, State, and Federal standards or have the time or funds to complete the plan of development or comply with the environmental review requirements.
- As part of approval by the appropriate Lead Agency under NEPA and/or CEQA (e.g., BLM, Energy Commission, or local jurisdiction or USFWS if ESA-listed species would be affected), applicants must comply with all existing laws, regulations, or the prescriptions required by the regulatory authorities incorporated into the Lead Agency's license, permit, ESA section 7 consultation, or ROW grant. The large size of these projects may result in permitting challenges related to endangered species, mitigation measures or requirements, and other issues.
- After project approval, construction financing must be obtained (if it has not been obtained earlier in the process). The availability of financing will be dependent on the status of competing projects, the laws and regulations related to renewable project investment, and the time required for obtaining permits for individual projects.
- The inability to secure or a delay in securing a Power Purchase Agreement may result in a delay in financing.

While a large number of projects may be planned, and so are considered to be possible for future development, not all of them are expected to actually be built due to construction funding constraints, schedule, and/or delays. Given the uncertain and challenging economic circumstances facing federal and state economies as well as private developers, it is not assured that future funding and other necessary support will be sufficiently available for all of the proposed projects to be realized within the anticipated schedules. However, based on the potential demand for new renewable sources previously described, the cumulative project scenario includes all projects identified as reasonably foreseeable as of the publication of the Supplemental DEIS. Table 4.14-2 identifies the existing and reasonably foreseeable future projects in the WEMO Planning area that could contribute to cumulative impacts of the same type as the WMRNP alternatives.

Table. 4.14-1. Cumulative Scenario

Resource or BLM Program	Cumulative Analysis Impact Area	Elements to Consider	Projects Potentially Contributing to Cumulative Impacts
Air Quality	GBVAB, MDAB, and SSAB	District-specific significance thresholds	All projects in Table 4.14-2
Climate Change	WEMO Planning area	Emissions of greenhouse gases	All projects in Table 4.14-2
Geology, Soil, and Water Resources	WEMO Planning area	Soil erosion, direct and indirect impacts to riparian areas	All projects in Table 4.14-2
Biological Resources	WEMO Planning area	Direct and indirect impacts to special-status species and habitat, sensitive communities and invasive plants	BLM Resource and ACEC Management Plans, other Federal (DoD and National Park Service) management plans, State and local management plans, and projects listed in Table 4.14-2
Socioeconomics	WEMO Planning area and 2-hour commute distance from the area	Effects on social character of communities; economic effects on users of routes.	All projects in Table 4.14-2
Recreation	WEMO Planning area lands available for recreation.	Motorized vehicle access, air quality, noise, visual resources	All projects in Table 4.14-2
Livestock Grazing	Grazing allotments within WEMO Planning area.	Cumulative loss of grazing opportunities and limitations on access to range improvements.	BLM Resource and ACEC Management Plans, and projects listed in Table 4.14-2 which are within or in close proximity to grazing allotments.
Energy Production, Utility Corridors, and Other Land Uses	WEMO Planning area	Access to BLM-authorized land uses, including energy production, designated utility corridors, mining, grazing, and communications sites.	BLM Resource and ACEC Management Plans, and projects listed in Table 4.14-2 which are within or in close proximity to other authorized land uses.
Cultural Resources	WEMO Planning area	Cultural resources, traditional use areas, and cultural landscapes	BLM Resource and ACEC Management Plans, other Federal (DoD and National Park Service) management plans, State and local management plans, and projects listed in Table 4.14-2

Table. 4.14-1. Cumulative Scenario

Resource or BLM Program	Cumulative Analysis Impact Area	Elements to Consider	Projects Potentially Contributing to Cumulative Impacts
Visual Resources	Viewshed of WEMO Planning area locations from which the Planning area can be seen	Additive or synergistic visual contrast	BLM Resource and ACEC Management Plans, other Federal (DoD and National Park Service) management plans, State and local management plans, and projects listed in Table 4.14-2
Special Designations	Within Special Designation areas (ACECs, Wilderness, lands inventoried for wilderness characteristics) inside the WEMO Planning area	Impacts to protected resources.	BLM Resource and ACEC Management Plans, and projects within the boundaries of Special Designation areas.
Noise	Within approximately 0.5 mile of motorized routes within the WEMO Planning Area	Combined noise levels at sensitive receptors and residences	Noise sources within 0.5 miles of motorized routes.

Table 4.14-2. Existing and Reasonably Foreseeable Projects

Project Name; Agency ID	Location	Ownership	Status	Acres	Project Description
Desert Renewable Energy Conservation Plan (DRECP); CEC, BLM, CDFW, and USFWS	California desert land in parts of Imperial, Inyo, Kern, Los Angeles, Riverside, San Bernardino, and San Diego counties, and including all of WEMO	Multiple land owners, including federal, State, County, and private	Pending, Draft EIS released in September, 2014	9.1 million acres in WEMO.	BLM Land Use Plan Amendment, USFWS Habitat Conservation Plan, and CDFW Natural Communities Conservation Plan, which identifies renewable energy development areas to facilitate development in those areas, and conservation lands and parameters to offset development. May include development limits within and outside of DWMA, in addition to 1% disturbance caps already in place, as well as other development and resource-specific parameters.
Abengoa Mojave Solar (CACA 52096)	Harper Dry Lake, 25 miles northwest of Barstow	Abengoa Solar	Existing Project: Under construction; estimated complete in 2014.	1,765	A 250 MW solar thermal parabolic trough project using wet cooling (National Renewable Energy Laboratory, 2013; U.S. Department of Energy, 2013).
XpressWest High Speed Rail Project (CACA 48497 and NVN 82673)	Victorville to Las Vegas along I-15	DesertXpress Enterprises, LLC	Authorized Project: Authorized July 2011 (Federal Railroad Administration [FRA]) and October 2011 (BLM).	1,300-acre ROW	This project formerly was known as the “DesertXpress High Speed Passenger Rail Project.” The FRA preferred alternative, Segment 3B (modified), would be constructed on the northwest side of I-15 in the Project Area, and a Maintenance of Way facility is located in the town of Baker. (FRA, 2011a, 2011b; BLM, 2011). For additional information about the project and its environmental effects, see the Record of Decision and Final EIS, each of which is available on the BLM’s website: http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/Barstow/pubs.Par.2523.File.dat/DXE%20ROD%20FINAL%20updated%2010-28-11.pdf

Table 4.14-2. Existing and Reasonably Foreseeable Projects

Project Name; Agency ID	Location	Ownership	Status	Acres	Project Description
Calnev Pipeline Expansion Project (CACA 49138/CAD 080000.26)	Colton to Las Vegas along I-15	Calnev Pipe Line, LLC	Pending Project: Draft EIS/EIR published March 2012	Portion of the 1,820.4 acres within the WEMO Planning Area	A 233-mile, 16-inch-diameter refined petroleum products pipeline on the northwest side of I-15 in the Project area, including a new pumping station near the town of Baker. (BLM and San Bernardino County, 2012a)
Communications sites	Within WEMO Planning area	Various communications companies	Existing/Proposed projects	Not Known	There are several existing and proposed communications sites in the Project area consisting of towers with communications equipment.
Mining Claims	Within WEMO Planning area	Various mining claimants	Claims Filed: none have submitted plans of operation	Not Known	Location dates vary from September of 2012 to May 2012.
Johnson Valley Military Expansion (CACA 50194)	South of I-40	United States Department of the Navy	Final EIS published June 2012	98,000	Approved Expansion of Twentynine Palms Marine Corps Air Ground Combat and Airspace Establishment under P.L.

BLM Resource and ACEC Management Plans

CDCA Plan and WEMO Plan

The CDCA Plan of 1980 addressed public-land resources and resource uses within 12 million acres of public land in southern California. The CDCA Plan has been amended several times since 1980. In 2006, the BLM approved a comprehensive amendment covering the WEMO area of the CDCA. The West Mojave Plan Amendment (WEMO Plan) was evaluated in a Final EIS that was approved by BLM in a Record of Decision (ROD) in 2006. The WEMO Plan approved in 2006 is a federal land use plan amendment that presents (1) a comprehensive strategy to conserve and protect the desert tortoise, the Mohave ground squirrel (MGS) and over 100 other sensitive plants and animals and the natural communities of which they are a part. The 2006 WEMO Plan also adopted an off-highway vehicle (OHV) travel management network and general strategy in support of this biological objective. The WEMO Plan was developed as a collaborative effort involving federal, state, and local agencies and non-governmental stakeholders, collectively designated as the “West Mojave Supergroup”.

Desert Renewable Energy Conservation Plan (DRECP)

The WEMO Planning area is included within the geographic scope of another ongoing BLM planning effort known as the Desert Renewable Energy Conservation Plan (DRECP) for current and future renewable energy facilities. The DRECP addresses the suitability of lands within the CDCA for renewable energy development and resource protection and, as a result, may ultimately affect travel management issues such as access needs and opportunities. The WMRNP SEIS incorporates affected environment data from DRECP as appropriate, and considers the effects of the actions taken under DRECP on travel management in the Planning Area, to the extent they are reasonably foreseeable, given the parallel timing of the DRECP Plan. The draft DRECP Plan was released in September 2014; however, it is likely that the ROD for the DRECP will be released after the ROD for the WMRNP, given the broader scope of the DRECP.

Northern and Eastern Mojave (NEMO) CDCA Plan Amendment

The NEMO planning area comprises the northern and eastern portion of the CDCA, to the north and east of WEMO. The NEMO planning area lies to the northeast of the western Mojave Desert, in the area that generally lies between Death Valley National Park and the Mojave National Preserve. The NEMO Plan amendment to the CDCA Plan were implemented in a ROD was signed in December 2002. With respect to travel management, the NEMO ROD designated all routes within the NEMO area as “open”, “limited”, or “closed”. The NEMO Plan also eliminated the portion of the Barstow to Las Vegas Race Course within the NEMO planning area.

Northern and Eastern Colorado (NECO) CDCA Plan Amendment

The NECO planning area comprises the southern portion of the CDCA, to the south of WEMO. The NECO Plan amendment, like the NEMO Plan amendment, was signed by BLM in December 2002. With respect to travel management, the NECO ROD designated all routes within the NECO area as “open”, “limited”, or “closed”. It also designated open and closed wash zones for vehicular travel. The NECO Plan also did not eliminate the portion of the

Johnson Valley-Parker route within the NECO area because it lay entirely outside of DWEMAs and had no other particular species sensitivity issues.

ACEC Management Plans

Thirty-one Areas of Critical Environmental Concern (ACECs) wholly or partially within the WEMO Planning area were established by the BLM through the CDCA Plan and amendments prior to 2005. Of these, the Darwin Falls ACEC was later incorporated into Death Valley National Park. The 2006 WEMO Plan made numerous changes to the system of land designations for protection of resources in the WEMO Planning area. Many of these overlapped with each other. The 2006 WEMO Plan established four Desert Wildlife Management Areas (DWEMAs), totaling 1,523,936 acres for the protection of the desert tortoise, and four conservation areas totaling 1,726,712 acres for protection of other species. In addition, the WEMO Plan made modifications to MUC classifications, boundaries, and management objectives to the existing ACECs, and acted as an amended management plan for 25 of these ACECs to incorporate provisions to conserve protected species. Finally, the WEMO Plan established 10 new ACECs within the planning area. The ACECs and DWEMAs are discussed in Section 3.11.

Other Agency-Approved Projects and Management Plans

The WEMO Planning area is bordered on all sides by other jurisdictions. These include federal land managed by the BLM, USDA Forest Service, National Park Service, Department of Defense (DoD); state lands managed by the CDFW (formerly California Department of Fish and Game, or CDFG), State Lands Commission, and California Department of Water Resources; City lands where BLM manages small isolated parcels, and private lands and roads subject to state, County, or municipal jurisdiction. Travel management in these adjacent areas is managed through various management plans, general plans, and regulations, as follows:

- Adjacent BLM land is subject to the CDCA Plan or other applicable Land Use or Travel Management Plans;
- Adjacent National Forest Land is subject to applicable Forest, Land, and/or Travel Management Plans;
- Adjacent DoD land is subject to Installation Management Plans and, for the land area to be included within the expansion area for Twentynine Palms Marine Air Ground Combat Center, by the travel-related decisions in the February, 2013 Record of Decision;
- Adjacent State-, County- or City-owned land is subject to agency or jurisdiction-specific regulations and requirements for travel on those lands; and
- Adjacent routes on private land that are designated as part of a County or city network are subject to the applicable General Plan for that County or city;

Cumulative impact issues to be considered with respect to these adjacent route networks include maintaining continuity of access across jurisdictional boundaries; maintaining access (where appropriate) to private lands, approved facilities, and recreational opportunities located outside of the WEMO Planning area; and managing unauthorized use, including trespass onto adjacent jurisdictions.

National Forest Plans

The National Forests which border the WEMO Planning area include the San Bernardino National Forest, Angeles National Forest, Inyo National Forest, and Sequoia National Forest. Both the San Bernardino National Forest Management Plan and Angeles National Forest Land Management Plan RODs were signed in April, 2006. These plans included a variety of program strategies, some of which focused on travel management. National forest lands generally provide specific designated access routes to and through each forest onto adjacent public and private lands, consistent with forest land designations and overall recreation management goals.

The San Bernardino National Forest (SBNF) identified lands along the boundary of the two agencies as a major focal point for travel management, and BLM is working with the local SBNF office to identify appropriate public access strategies and achieve shared goals along shared boundaries and watersheds. The Inyo National Forest Land and Resource Management Plan was signed in 1988, and is currently being revised. The 1988 plan provided definition of management requirements for OHV use in certain areas of the Forest. The Inyo National Forest also prepared a Travel Management Plan in August 2009 which made changes to routes included within the National Forest Transportation System (NFTS).

The Sequoia National Forest Land and Resource Management Plan was signed in 1988, and is also currently being revised. The Forest released a Final EIS for their Motorized Travel Management Plan in 2009.

National Park/Preserve Plans

The National Parks and National Preserves which border the WEMO Planning area include Sequoia, Joshua Tree, and Death Valley National Parks and the Mojave National Preserve. The Sequoia National Park General Management Plan was finalized on September 14, 2007. The Death Valley National Park General Management Plan and Mojave National Preserve General Management Plan were both authorized in April, 2002. The Joshua Tree General Management Plan is currently being developed. These federal lands generally provide specific designated access routes to and through the Park onto adjacent public and private lands, consistent with Park goals.

Department of Defense Plans

The DoD installations that border the WEMO Planning area include Fort Irwin, Twentynine Palms Marine Air Ground Combat Center, Edwards Air Force Base, and Naval Air Weapons Station China Lake. Each of these installations operates under an Installation Management Plan which address motorized vehicle access and management. BLM coordinates closely with the installations to ensure maintenance of access, as well as to address use of BLM routes for unauthorized access to the installations. The February, 2013 Expansion Plan for Twentynine Palms includes continuing to allow limited motorized vehicle access, as it currently occurs on land managed by BLM for a portion of the expansion area.

The 29 Palms expansion is significant both for recreation and the desert tortoise. The loss of acreage for OHV use is anticipated to result in the displacement of recreation to other areas. It also directly impacts more than one hundred thousand acres of desert tortoise habitat and an unknown number of desert tortoises, which will need to be translocated or otherwise managed in a training area.

Inyo County

In 2011, the Inyo Planning Commission approved two conditional use permits, two tentative parcel maps, an amendment to the General Plan, two zone reclassifications, two variances, and two reclamation plans. The Renewable Energy General Plan Amendment (REGPA) approved an update to the General Plan to address renewable solar and wind energy development in Inyo County. The Sierra Club and Center for Biological Diversity sued the County claiming that an EIR would be required for the amendment. Due to budget constraints and the low threshold in CEQA for the requirement of an EIR, Inyo County rescinded the Renewable Energy General Plan Amendment in 2011. In June 2014, the County published a Draft General Plan Amendment to address solar energy development. This decision establishes Solar Energy Development Areas (SEDAs) throughout the County, and applies megawatt and acreage caps within these areas.

The County is also participating in the Owens Lakebed Master Plan that will provide a framework for future Lakebed development

According to the California Department of Finance, Inyo County's population is projected to grow from 18,528 in 2010 to 22,009 in 2040 (DOF 2013). As noted in the Inyo County Housing Element (Inyo County Planning Department 2009), the majority of this growth is expected to occur in the unincorporated areas of the County. The County seeks to concentrate this new growth within and contiguous to existing communities such as Bishop, Big Pine, Independence, and Lone Pine (Inyo County Planning Department 2013a). Inyo County hopes to acquire several sites currently owned by Los Angeles Department of Water and Power to facilitate the development of affordable housing (Inyo County Planning Department 2009, 2013b). The largest employers in the County are within the service sector, retail trade, and public administration (Inyo County Planning Department 2009). The County expects growth in tourism-related employment and wants to market Inyo County as a tourist destination (Inyo County Planning Department 2013c). Additional areas of growth and economic development are projected to occur in agriculture, renewable energy projects, and natural resources extraction (Inyo County Planning Department 2013d).

In addition to the large renewable energy facilities proposed in Inyo County, the Fort Independence Indian Community of Paiute Indians proposes to develop a combination Class II and Class III Gaming Complex and associated full service hotel structure within the western portion of the 360-acre Fort Independence Indian reservation along U.S. Highway 395. The complex would also include a conference center, multipurpose event center, and related facilities (Inyo County Planning Department 2014c).

Kern County

The Kern County General Plan has goals that include residential goals such as promoting higher-density residential development and promoting mixed-densities within developments. The county's commercial and industrial goals include ensuring adequate and geographically balanced supply of land for a range of commercial and industrial uses and pursuing a strong economy through logical placement and distribution of commercial and industrial development.

Kern County's population is projected to grow from 841,146 in 2010 to over 1.6 million in 2040 (California DOF 2013), with the majority of growth projected in the Greater Bakersfield area (Center for Rural Entrepreneurship 2011). The Tehachapi Mountain Communities have a

projected growth of 50-60% by 2040, while western Kern may see modest growth of 5-10% (Center for Rural Entrepreneurship 2011). From 2011 to 2040, increases are projected for most employment sectors, with a doubling of professional services and health and education employment. Construction employment, however, is projected to decrease from current levels (California DOT 2011).

Los Angeles

Los Angeles County is in the process of updating the Antelope Valley Area Plan. The goals identified in the Land Use Element of this plan include a land use pattern that maintains and enhances the rural character of the unincorporated Antelope Valley and directs the majority of future growth to the cities of Lancaster and Palmdale. It also has a goal to follow a land use pattern that protects environmental resources and promotes efficient use of existing infrastructure. Development planned in the Antelope Valley Area includes the High Desert Corridor, a limited-access highway linking Interstate 5, State Route 14, and Interstate 15 through Los Angeles and San Bernardino Counties; utility-scale renewable energy production; and the Palmdale Regional Airport.

According to the California Department of Finance, Los Angeles County's population is projected to grow from 9,824,906 in 2010 to 11,243,022 in 2040 (DOF 2013). As noted in the Los Angeles County General Plan, the largest growth sectors countywide in terms of jobs are professional, scientific and technical services, health services, and retail trade. Specific industries that have the most potential to contribute to the economy include: entertainment, fashion, aerospace and analytical instruments, trade, education and knowledge creation, publishing and printing, metal manufacturing, biomedical, and tourism (Los Angeles County 2013a). The General Plan outlines several "Opportunity Areas" which are organized into the following types: transit centers, neighborhood centers, corridors, industrial flex districts, and rural town centers. In addition, Los Angeles County has created several "planning areas" which divides the unincorporated areas of Los Angeles County into eleven sections based on geographical location, and similarities in land use and economy.

San Bernardino County

The County of San Bernardino General Plan divides the County into three planning regions, based on geographic location — Valley, Mountains, and Desert — and outlines policies drafted specifically for each of these regions (CSBLUSD 2007a).

Much of the WEMO Planning area overlaps the Desert planning region of San Bernardino County. The development goals for the San Bernardino Desert Region are to maintain land use patterns that enhance rural environment and preserve the quality of life of the residents. The San Bernardino 2012 General Plan Annual Report notes that recent housing development has been concentrated in the high desert region including Barstow and Victorville but the county expects upcoming housing projects to be concentrated in the inland valley region.

According to the California Department of Finance, San Bernardino County's population is projected to grow from 2,038,523 in 2010 to 2,988,648 in 2040 (DOF 2013). As stated in the County of San Bernardino General Plan, most of this growth is expected to occur in the western portion of the County. The majority of economic development in San Bernardino County is expected to occur in construction and maintenance occupations, as there is a lot of building activity taking place. Several renewable energy projects have been proposed for San Bernardino

County. As of December 26, 2013, there were seven projects under review, ten that had been approved but not yet constructed, and six that had been constructed (CSBLUSD 2013).

In terms of land use, Resource Conservation comprises the majority (55.98%) of designated land uses in the County while Residential Land Use comprises the second largest land use designation (37.92%) (CSBLUSD 2007a: 11-26).

4.14.3 Cumulative Impact Analysis

A cumulative impact is 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 which agency (federal or non-federal) or person undertakes such other actions (40 CFR 1508.7). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” (40 CFR 1508.7). The Council on Environmental Quality (CEQ) recommends that agencies “look for present effects of past actions that are, in the judgment of the agency, relevant and useful because they have a significant cause-and-effect relationship with the direct and indirect effects of the proposal for agency action and its alternatives” (36 CFR 220.4(f)).

The 2006 WEMO EIS presented a cumulative impact analysis of the WEMO Plan’s proposed actions and alternatives, including the addition of new conservation areas and the evaluated route network, in combination with the past, present, and reasonably foreseeable projects within the WEMO Planning area. The current cumulative analysis for this SEIS tiers from that presented in the WEMO Plan, with the following modifications:

- The list of past, present, and reasonably foreseeable projects has been updated to the current date;
- The affected resource information against which the direct, indirect, and cumulative impacts are evaluated has been updated based on the requirements of the Court’s Summary Judgment and Remedy Order, and to include updated resource information; and
- The alternatives being evaluated include variations of the TTM goals and objectives and the route networks, as discussed throughout Chapter 2 of this SEIS.
- The WEMO Plan’s growth inducing impacts are no longer anticipated, because they were predicated on other jurisdictions adopting the Habitat Conservation Plan (HCP) measures proposed in the plan. Although growth inducing impacts are the result of other factors, they are still anticipated in the high desert.

Air Quality

Local air districts have State air quality jurisdiction over all public lands, including transportation routes and grazing allotments located in the WEMO planning area, and have been delegated authority to implement the Clean Air Act from the EPA. These include the Mojave Desert Air Quality Management District (MDAQMD) in San Bernardino County, Antelope Valley Air Quality Management District (AVAQMD) in Los Angeles County, Eastern Kern Air Pollution Control District (EKAPCD) in Kern County, and Great Basin Unified Air Pollution Control District (GBUAPCD) in Inyo County.

The discussion of existing air quality in Section 3.2.4 summarizes the attainment status and air emission sources which affect the WEMO planning area. This includes sources within the planning area, as well as sources outside of the planning area which can contribute to air quality conditions within the planning area. That discussion constitutes an analysis of cumulative impacts from current projects, as it is based on ongoing monitoring programs in locations which can be affected by these sources. All local air districts have analyzed impacts from existing sources for PM₁₀, and prepared a State Implementation Plans (SIP) for their respective jurisdictional areas which both identify existing sources of emissions and also control measures to manage existing emissions and reduce new emissions (MDAQMD, 1995).

BLM asked the MDAQMD to work with the other air districts and compile the results from the 46 ambient air monitoring stations. The results of this study were reported to BLM in the West Mojave Plan Air Quality Evaluation Report dated April, 2103 (MDAQMD 2013). The Air Quality Evaluation Report provided detailed information on the locations and operations of the 46 monitoring stations throughout the planning area. Monitoring data included VOCs, oxides of nitrogen (NO_x), carbon monoxide (CO), respirable particulate matter (PM₁₀), fine respirable particulate matter (PM_{2.5}), oxides of sulfur (SO_x), and hazardous and toxic compounds (HAPs and TACs). The emissions monitored at the stations include emissions from three categories of sources: stationary sources (such as industrial activity, power generation, and military bases), mobile sources (including on-road vehicles, off-road vehicles, airplanes, and trains), and area sources (small widespread sources such as solvents, fires, and consumer products).

Emissions from OHVs were separately inventoried as a subcategory of the mobile sources. Emissions from OHV Open Areas were indirectly inventoried as area sources, as an element within the subcategories of unpaved road dust and fugitive windblown dust. The monitoring locations include a mix of sites near population centers (neighborhood scale monitors) and in rural areas (regional scale monitors). The neighborhood scale monitors are intended to characterize conditions that may affect nearby populations and for tracking the progress towards attainment of the ambient air pollutant standards. The regional scale monitors evaluate emissions within broad geographic regions and track background levels of ambient air pollutants. The monitoring network meets all federal, state, and local air monitoring requirements, including monitoring impacts to ambient air quality resulting from OHVs and OHV Open Areas.

The total emissions inventory in the planning area, combined using data from each of the five air quality districts, was presented in Table 3.2-3. Figure 3.2-4 presented the relative contributions of the various sources to the emissions inventory. Figure 3.2-4 showed that mobile sources (including OHVs) are the largest source of ozone precursor (VOC and NO_x) emissions, but are a minor component of SO_x, PM₁₀, and PM_{2.5} emissions. VOC emissions from OHVs are high relative to other sources because their engines do not have catalytic controls, and therefore release unburned fuel in their exhaust. As such, OHV emissions are a significant contributor to VOC emissions, which are a precursor to a regional pollutant (ozone). The report concluded that OHV Open Areas are not a significant contributor to either total unpaved road dust or fugitive windblown dust subcategories, and are thus not a significant contributor to regional PM₁₀ emissions. This is because the disturbed area in the OHV Open Areas is small relative to the total mileage of maintained and unmaintained unpaved roads and tracks, as well as tens of millions of acres of land disturbed for other uses, much of which is from outside of the planning area.

Over the last 50 years, urbanization and development have resulted in significant increases in air emissions in Southern California, and eventually the designation of regional air basins as being in non-attainment of CAA standards for criteria pollutants, including particulates. In the last ten years, the air emissions in the region are slowly improving, and many of the programs and projects analyzed in the cumulative scenario are anticipated to contribute to long-term improvement of air quality in Southern California air basins. Implementation of WEMO and other Plan Species Conservation Measures, including habitat disturbance caps, area withdrawals, and habitat rehabilitation programs, are anticipated to reduce emissions of particulate matter from public lands that result from wind erosion of unvegetated surface disturbance areas. Reductions from these plan strategies would primarily occur on BLM lands away from population centers. On the other hand, long term projected population growth in and around current core population centers such as the Antelope Valley, the Victor Valley area and Barstow, including the projects listed in Table 14.4-2, will result in cumulative increase in air emissions. Air emissions from wind-blown dust is a major problem in the West Mojave desert from sources outside the air basin. While these emissions are exacerbated by local conditions, they are the result of activities upwind in central and southern California.

Agricultural activity within the air basin is a small contributor to PM_{10} , within the miscellaneous category of SIP emissions, and livestock grazing operations are a small portion of the agricultural activity contributions. No measures were identified in the SIP specific to existing livestock grazing activities, and renewals of leases were exempted from conformity determinations consistent with the SIP, due to their nominal (less than 15 tons/year) contributions to air quality in the Mojave Desert planning area (BLM, 1997). These results are consistent with all other air district SIPs in the WEMO Planning Area. Under cumulative effects there would not be an increase in grazing activities over those historic levels, and regional exceedances of PM_{10} standards have decreased approximately 10% (EPA, 2003) due to voluntary and SIP measures to decrease emissions from substantial sources. Therefore, there would be no substantial affect to air quality under cumulative analysis.

Direct emissions from motorized vehicles are a substantial contributing factor to particulates emissions. The majority of these emissions are the result of use of Interstate Highways and other major federal, State, and County roads through the region, and urban use in the Victor Valley area. Emissions from motor vehicle use on public lands are a relatively small portion of the direct impacts from motor vehicles. Erosion is the primary source of PM_{10} emissions off of public lands. The total mileage of motorized routes and the amount of adjacent disturbed areas available for stopping and parking is not expected to affect the total mileage traveled by OHVs, and overall level of erosion from the use of the network.

Overall, the relative contribution of the travel management strategies proposed under each of the alternatives to air emissions would not substantially vary in the reasonably foreseeable future. Under all alternatives rehabilitation is proposed to continue to be pursued as a key implementation strategy. Travelled network miles would be unchanged; the net change in air emission impacts attributed to route closures and route use would be minimal. Considered together with other programs and projects and with the strategies to enhance habitat in the WEMO Plan, the cumulative effects of the alternative plan amendment decisions, network frameworks, route designations, and other implementation strategies are anticipated to be corresponding declines in overall PM_{10} concentrations in a number of areas.

Global Climate Change

The alternatives being evaluated as part of the WMRNP would not result in any increase or decrease in the total amount of direct motorized GHG emissions in the planning area. The proposed CDCA plan amendment decisions associated with the alternatives would not lead to a change in the motorized vehicle use or miles traveled in the planning area, and would therefore not result in any increase or decrease in direct or indirect GHG emissions from motorized vehicles. Therefore, the alternatives evaluated as part of the WMRNP would not contribute to an incremental change in cumulative global climate change impacts. The amount of methane produced by all livestock authorized by BLM per annum would be nominal, and would not equate to the methane production from a small dairy operation that occurs in a single day. Considered together with other programs and projects, including renewable energy projects in the region, and with the strategies to enhance habitat in the WEMO Plan, the cumulative effects to global climate change are nominal.

Geology and Soils

In Limited Access Areas within the WEMO Planning Area, motorized vehicle use of unpaved routes are a substantial contributing factor to overall planning area soil compaction, mechanical displacement, or removal of vegetation or crusts that stabilize surficial soils and result in decreased water infiltration rates and soil moisture content, increased potential for wind and water erosion, dust deposition downwind of routes, and change soil chemistry. Motorized vehicle use of unpaved routes can also increase potential exposure Valley Fever (*Coccidioidomycosis*), a disease caused by the inhalation of the fungal spores which inhabit soils in the southwestern United States, as a result of inhalation of dusts generated by the passing of motorized vehicles or through exposure to materials mobilized through wind erosion.

Long-term repeated use motorized routes, trails, hill-climbs and livestock watering and holding facilities results in some areas that are often intensely compacted. The amount of compaction depends on vehicle characteristics, amount of activity, soil type, and soil moisture content. Motorized vehicle activity on wet soils tends to result in greater compaction than on dry soils. Some cohesion-less sands, such as sand dunes, are very resistant to compaction whether wet or dry.

Overall travelled network miles are not anticipated to change under the various alternatives. However, any substantial change in the intensity of motorized vehicle use on routes or from other activities has the potential to have direct effects on soil resources, as well as resulting in indirect effects on air quality, water quality, stormwater flow, vegetation, and human health. Increased motorized vehicle use in places that have previously been subjected to light, intermittent motorized vehicle use, could result in either compaction or de-compaction, depending on the characteristics of the soil, the slope, the type of motorized vehicle, and the manner in which the vehicle is used.

Continued motorized vehicle and livestock use in already compacted areas may not lead to substantial additional compaction, but it would ensure that natural recovery does not begin to occur. Continued moderate to heavy motorized vehicle use on loose soils would lead to ongoing mechanical displacement and loss of soil through erosion, which are direct, adverse impacts to soil resources. Indirect impacts on air quality, water quality, stormwater flow, vegetation, and human health would be adverse, and would continue until the affected soils were allowed to

recover. Reductions in motorized vehicle, livestock, or other intensive use in areas currently experiencing intense use would lead, over time, to restoration of original soil conditions, which would be a beneficial effect.

Grazing animals can apply compressional and shear forces to the soil. The crust response to these disturbances is highly variable. Moisture and burial are two important factors relating to the degree of impact. With coarse textured sandy soils, moist crusts are better able to withstand disturbances than dry soils (Belnap 2003 and BLM 2001). Many of the biological crust species are not mobile and cannot survive burial. However, as Belnap (2002 and 2005 and BLM 2001) noted, the hot desert crusts are simple crusts that are highly mobile and quick to recover from disturbance. The large, filamentous cyanobacteria can move 5mm per day if it is wet (Belnap 2003 and BLM 2001). Although rain and moist soils occur at the start of the grazing season, grazing in the later part of the spring can reduce the cover of biological crusts because the soils are dry. These simple crusts would likely recover within days once the rain returns because the crusts are simple to nonexistent, site recovery, outside of congregation areas should be such that the impact would not be substantial (BLM -TR 1730-2 2001).

Closure of routes to motorized vehicles, particularly routes experiencing moderate to intensive use, and elimination of grazing allotments with intensively used areas, would allow soils to gradually recover, and therefore have a beneficial impact on soil resources. Rehabilitation of other intensively disturbed areas, such as historic mining sites, can also allow soil recovery. Active restoration, including de-compaction by raking or other mechanical means, can speed this process.

Authorization of new land-uses, particularly for large facilities, new access routes, and development of additional livestock watering and holding facilities or other intensive use sites, contribute to cumulative impacts from soils--compaction, mechanical displacement, removal of vegetation or crusts that stabilize surficial soils and resulting decreased water infiltration rates and soil moisture content, increased potential for wind and water erosion, dust deposition downwind of routes, and changes to soil chemistry. Large facility authorizations include measures to mediate potential impacts from wind and water erosion, and off-site dust deposition. Upon termination, other soil impacts are addressed through specific site rehabilitation strategies.

Overall, soil standards are being met on public land in the Limited Access Areas where routes are being designated based on the Rangeland Health (43 CFR 4180) assessments that have been conducted throughout the planning area. While these assessments are limited to grazing allotments, they cover a wide diversity of the geologic substrates, soils, and plant communities in the planning area. These assessments demonstrate that soil impacts are linked to the intensity of disturbance as well as underlying geology, soil types, and local conditions. Intensely disturbed areas within Limited Access Areas, such as the areas at or associated with livestock watering facilities or holding corrals and communication sites (very small), OHV Open lakebeds (moderately sized), and construction sites on public lands (small to very large), contribute to localized adverse impacts. Given the relative lack of disturbances in areas closed to motorized access, soil standards are being met on these public lands, and localized adverse impacts are small. Open OHV areas, particularly those that are not underlain by coarse, sandy soils, contribute substantially to the overall adverse soil impacts in the planning area due to the intense level of motorized use over relatively small areas. In addition, support areas such as staging areas, pit areas, viewing areas, and parking for event participants and viewers are compacted.

The significance of the impacts on soil resources differs depending on whether impacts occur in close proximity to sensitive resources, location relative to sensitive populations, and the intensity of use. Compaction and erosion that adversely affects vegetation would be more or less significant depending on the presence or absence of sensitive plant species, unusual plant assemblages, or riparian areas. Increased introduction of sediment due to water erosion would be more or less significant depending on the proximity to surface water bodies or aquatic resources. Increases in PM₁₀ emissions due to wind erosion can have regional effects, and would not be limited to the local area. Potential human exposure to Valley Fever as a result of mechanical displacement of infected soils could be increased if people gathered in close proximity to routes, such as during organized OHV events in OHV Open Areas.

The designation of specific routes as part of the transportation network under the WMRNP alternatives would affect the overall mileage of routes on which motorized vehicle use is allowed, as well as identifying specific locations for motorized vehicle use and routes closed and designated as transportation linear disturbances. These designations also result in different intensities of use on the alternative network, based on the overall motorized use being constant between alternatives.

Of the four alternatives evaluated in this SEIS, Alternative 3 would result in the largest route network and therefore would contribute to adverse cumulative impacts to geology, soils, and water over a greater previously disturbed area by maintaining more open motorized routes, including routes within close proximity to riparian areas and in areas prone to soil erosion. Some routes in the network would experience more intensive use while others would experience less intensive use. Minimization and mitigation measures would reduce, but not eliminate, impacts from routes in proximity to riparian areas and from stopping, parking and camping adjacent to routes. Overall, the intensity of use on the network routes under Alternative 3 would be substantially reduced due to the overall mileage available. Alternative 2, by closing the largest mileage of routes and applying the most restrictive minimization and mitigation measures, would result in a decrease in the areas disturbed and therefore soil impacts, including to routes within close proximity to riparian areas and in areas prone to soil erosion. In areas where motorized routes exist, the contribution of Alternative 2 to cumulative geology, soils, and water impacts would still be adverse. Intensity of use on the remaining Alternative 2 network is anticipated to increase, particular adjacent to communities and on the routes to OHV areas and other accessible popular areas and locations.

Under all alternatives, livestock grazing on West Mojave allotments would continue to have a localized, negative affect on soils associated with congregation areas such as watering sites, and corrals through soil compaction caused by the concentration of livestock in a localized area. Soil compaction results in accelerated erosion by allowing for rapid run-off of water because of the lack of infiltration, and impedes seed germination. These types of impacts do not occur or occur to a much lesser degree over the vast majority of soils on these allotments. These allotments would continue to achieve the soils standard concerning infiltration and permeability rates that are appropriate to soil type, climate and landform.

Any change in the total amount of motorized vehicle use, development of additional livestock watering and holding facilities, elimination of allotments, or other major surface disturbances and rehabilitation projects as a result of other Plans or proposals has the potential to have direct effects on soil resources, as well as resulting in indirect effects on air quality, water quality, stormwater flow, vegetation, and human health.

Under all alternatives travelled network miles from motor vehicles is anticipated to continue at the same levels, regardless of the network adopted. Due to a larger network, more areas prone to high erosion would be available for public use under Alternative 3; due to the higher intensity of use, more wind erosion and associated soil impacts may be anticipated from Alternative 2, particularly close to communities and popular OHV areas. Overall, the relative contribution of the travel management strategies proposed under Alternative 3 are anticipated to be somewhat higher than for the other alternatives. Rehabilitation is proposed to continue to be pursued as a key implementation strategy under all alternatives. Considered together with other programs and projects and with the strategies to restore disturbed areas in the WEMO Plan, the cumulative effects on soils of the alternative plan amendment decisions, network frameworks, route designations, and other implementation strategies are anticipated to be nominal.

Water and Water Quality

Urbanization and development in the high desert have resulted in depletion of surface and groundwater in the high desert over the last century. Recently, depletion of some of the aquifers in the high desert appears to be accelerating, while other aquifers, away from developed areas appear to be stabilizing. Agricultural land uses have been declining in part in response to drought and water supply issues, but urban development continues to occur, including adjacent to waters. There is also some level of “de-watering” associated with providing drinking water to livestock along with the wildlife usage from springs with finite sources. Spring waters may be affected by various anthropogenic sources and natural events, such as minor earthquakes.

Water quality impacts associated with urban development and agricultural, including livestock, use are primarily associated with increases in sediment released to surface water bodies by stormwater erosion. There also occurs a substantial amount of naturally occurring sediment in desert ephemeral waters as a result of ongoing geologic processes. In general, increased stormwater erosion is an indirect effect of soil resource impacts discussed in Section 4.3.1.

The compaction of soils associated with development and agricultural use can lead to increased stormwater runoff rates which, in turn, can increase erosion potential. In addition, development and livestock use can de-compact soils or otherwise remove vegetation, crusts, or other stabilizing features that protect soil from erosion or mediate erosional effects. These effects are exacerbated when the disturbance occurs directly in, or adjacent to, flowing streams or ephemeral desert washes.

Native wildlife and livestock use at undeveloped springs and creeks can also result in the release of fecal coliform into natural water sources. Most developed water sources have been fenced and the water piped to a trough to protect the sources from livestock impacts to soils, vegetation and limit the release of fecal coliform. However, the sampling of chemical constituents is typically not occurring during the PFC process, so the direct impacts from livestock grazing is not known. Unidentified levels of fecal coliform contamination is probable, both from wildlife and from livestock. Most of the developed spring sources are protected from substantial levels of contamination from livestock by fencing or natural/man-made features where water is then piped to a trough. Overall, impacts to water quality from livestock grazing at protected spring sources is considered nominal because spring sources are protected from direct access by livestock.

Pipelines crossing through the desert carrying significant amounts of oil and gas to and from Southern California and points north and east. Loss of minor amounts of fuel during testing and

replacement activities, and more significant amounts during pipeline breakages, can have adverse impacts on waters in the region. Significant pipeline breakages can occur, particularly in association with development activities and earthquakes. More nominal leakage occurs in conjunction with erosion of pipeline integrity. Sophisticated testing techniques now limit the extent of leakage from normal wear and tear.

Motorized vehicle use results in similar increases in sediment load resulting from compaction and erosion, which again, are exacerbated when the disturbance occurs directly in, or adjacent to, streams and ephemeral washes, as well as when the use occurs in areas that already are experiencing naturally or anthropogenic increased erosion potential.

Motorized vehicle use on the transportation network also requires the use of petroleum fuels which, if released, can impact surface water or groundwater quality. Motorized vehicles generally carry very limited volumes of these fuels, so the threat to water quality is minor. Fueling is generally done at commercial service stations, which have precautions in place to avoid fuel releases. In some cases, such as organized events, fueling of OHVs can be done from small containers or tanks carried by trucks. In these cases, the types of precautions available at commercial fueling stations would not be in place, but siting away from waters and areas with high erosion potential mediates potential impacts, and the volume of fuel handled is still expected to be limited.

Due to a larger network, more routes prone to high erosion and sedimentation would be available for public use under Alternative 3; due to the higher intensity of use close to communities and popular OHV areas, more routes prone to high erosion and sedimentation will be available for public use under Alternative 2. In general, wash routes. Overall, the relative impacts of the travel management strategies proposed under Alternative 3 are anticipated to be somewhat higher than for the other alternatives based on the number of routes in the vicinity of riparian areas. Protection and rehabilitation strategies are proposed as a key implementation strategy under all alternatives, with emphasis on sensitive areas, including areas potentially affected by sensitive water resources.

Implementation of strategies, including the WEMO Plan Conservation Measures and ACEC measures, on the other hand, may mediate erosion potential in sensitive areas with high slopes and adjacent to streams and ephemeral washes, both as a result of closure and rehabilitation activities, as well as specified riparian and spring enhancement projects. Other major projects may create the potential for sedimentation from stormwater runoff. DRECP, in directing development projects to some areas and away from others, is anticipated to exacerbate increased erosional potential in areas already experiencing development pressures. Associated stormwater plans associated with such development projects are approved by the regional water quality control board under authority of the Clean Water Act, and mediate and localize such effects.

Basic water quality monitoring is being conducted as part of the BLM's Proper Functioning condition (PFC) assessments process (TR 1736-16) at spring sources located on West Mojave allotments to monitor water quality and function. Through the PFC assessments process, natural water sources available to livestock have been evaluated for all threats to water quality and riparian values, including anthropogenic and natural threats,. The appropriate management action(s) would be implemented based on the source(s) of the threat and other specifics of the situation; these management actions may include, but are not limited to, fencing, placement of additional troughs, limitations on the use of the access route, and re-design of the facility.

A program-wide water quality monitoring strategy is also under development for West Mojave allotments. Best Management Practices (BMP) for water quality is being developed for public lands in California, including the California Desert District (CDD) and would be adopted upon approval. Regional Rangeland Health Standards, which include a standard for water quality, have not yet been approved by the Secretary of Interior for the CDD which include the allotments being analyzed in this document.

The BLM is currently consulting with the Lahontan Regional Water Quality Board to develop a Management Agency Agreement (MAA) for non-point sources on public lands to address water quality issues. Upon agreement by both agencies, relevant portions of the Management Agency Agreement would be incorporated into activities directed by the BLM, including the grazing leases, to address any remaining water quality issues or conflicts.

Considered together with other programs and projects and with the strategies to restore disturbed areas in the WEMO Plan, the cumulative effects on waters of the alternative plan amendment decisions, network frameworks, route designations, minimization strategies, and other implementation strategies are anticipated to be nominal. Significant dewatering of the aquifers and regional water quality impacts on a cumulative level are similar under all alternatives.

General Cumulative Impacts to Biological Resources

Cumulatively, impacts to biological resources may result from anthropogenic factors that directly or indirectly adversely affect habitat or result in direct loss of individuals, or from natural factors, including drought events, fire, predation and disease. Multiple factors may work together to accentuate adverse impacts to particularly vulnerable species. Major sources of habitat disturbance in the region include urban development, large linear infrastructure projects such as for highways, railways, and utilities, major renewable energy and mining projects, regional landfills, wildfire, and livestock grazing. These threats are discussed in detail in Appendix J of the 2006 WEMO FEIS.

Cumulatively, major factors which include enhancements for biological resources include lands being withdrawn from the land laws, ACECs and the strategies in ACEC Plans, the Fort Irwin lands that have been set aside for threatened and endangered species habitat since the approval of the 2006 WEMO Plan, and the DRECP strategies under development. In addition, wilderness lands are a reservoir of undisturbed habitat and properly functioning conditions.

Major land acquisition and disposal activities initiated prior to 2006 WEMO have resulted in the transfer of lands with major effects to biological resources management, including major expansions to the Fort Irwin Army Training Center, a BLM Land Tenure Adjustment Program for DWMA and MGS habitat, major acquisitions of DWMA habitat by the State of California, large regional landfill exchanges and expansions, and a major exchange and donation program for Wilderness and other sensitive lands in the high desert.

Since WEMO, the expansion of the Twenty-nine Palms Marine Base and the Kern County Parks acquisitions are also underway. These cumulative projects are in addition to the other WEMO adopted strategies, which are summarized herein.

Direct mortality and loss of individuals also results from habitat disturbing projects and wildfire. The acquisition projects for military use and landfills may result in additional take of individuals. Landfills also attract predators which are another source of mortality to desert tortoise.

Habitat loss due to further development outside of ACEC, DWMA, and MGS conservation areas would reduce populations of many common species, and increase the relative abundance of other species that thrive in disturbed areas. Some development is also allowed within these conservation areas, but to a more limited degree than outside the conservation areas. Most conservation areas for listed and sensitive species either have adopted disturbance caps under WEMO, or are considering them; therefore listed and sensitive species are adequately conserved, and therefore the cumulative impact would not be significant or adverse. Enhancements and mitigation offsets provided when listed habitat is disturbed also minimize adverse effects from projects to these sensitive species. The more common species would also thrive in conservation areas, and generally are present in abundance outside the WEMO Planning area.

In arid rangelands high stocking rates and low carrying capacity can result in native plant community shifts that favor unpalatable woody plants and the eventual loss of herbaceous native plant species and an increase in the density of non-native annual plant species. This loss includes special status plant species and riparian vegetation, both obligate and facultative. For most of the planning area, stocking rates have decreased, for some allotments substantially. Most riparian areas within grazing allotments have been fenced or grazing occurs outside the growing season. In addition, the WEMO Plan adopted a mechanism to eliminate grazing should carrying capacity not reach certain minimum thresholds, to assure adequate forage for both wildlife and grazing animals.

The DRECP currently includes proposals to reallocate forage from livestock to wildlife and watershed in various areas within WEMO. The reallocation of the forage to wildlife will assure the long-term availability of those lands to wildlife species.

Most of the planning area would not be affected by projects and would remain undisturbed for the reasonably foreseeable future. Major projects, such as large mines and renewable energy facilities may have localized impacts to sensitive resources. However, the acreage to those is small compared to the overall size of the planning area. The growth projections for urban development are focused adjacent to existing areas with greater disturbances and less public land, generally located outside of sensitive habitat areas. Many areas without water, utilities, or easy access would remain undeveloped, even from rural residences.

Riparian Habitat

Riparian habitat and springs can be particularly vulnerable to impacts as a result of disturbance or dewatering. As discussed in previous sections, these effects include erosion and resulting sedimentation, loss of plant cover, water quality impacts, dewatering, as well as impacts to riparian-obligate wildlife and vegetation. If sensitive areas are not fenced out or otherwise modified for avoidance, activities such as upstream mining, direct use of water sources by water-rights holders, vehicle use, and cattle (as well as wildlife) grazing activities may (1) dewater riparian areas, (2) result in damaged, trampled and destroyed vegetation, (3) result in utilization of the riparian vegetation, and (4) impact water quality. These impacts result in a decrease in vigor or complete elimination of vegetation from the riparian habitat associated with spring sources, where otherwise vegetation would be robust and often unique to the wetter microclimate. Smaller spring sources are also impacted by livestock and wildlife hoof action that typically creates divots known as “punching” in wet soils, can increase erosion, and can create poor water quality conditions.

The small riparian areas that are currently rated as non-functional or functioning at risk with a downward trend identified through the on-going PFC assessment process must over-time achieve the Rangeland Health Standard of Properly Function Condition. BLM's riparian objective is to improve the conditions of these important, but limited riparian resources in the desert. Typical mitigation measures used to accomplish this objective include fencing, rerouting or avoidance, adding additional troughs, re-routing pipelines systems and placing shut-off devices (floats) within the water delivery system.

Selected riparian areas have been identified through project-specific and the on-going PFC assessment process for avoidance, fencing and other enhancements to maintain or improve riparian habitat conditions. Fencing has already been constructed to protect riparian habitat on most of the West Mojave allotments. Impacts described above still occur at livestock troughs but do not degrade the actual spring sources and the associated riparian habitat within the enclosure. A few areas have also been artificially enhanced to improve them as wetland and riparian sources for obligate species.

Another measure instituted to avoid or minimize impacts to springs is the prohibition of salt and/or mineral blocks within one-quarter mile of these springs, which would draw livestock towards the spring. Any riparian area, developed or undeveloped that exhibits a downward trend in condition would be targeted for mitigation such as fencing, based on on-going impacts or the potential for future impacts.

Upland Vegetation

The utilization by livestock, horses and other wildlife of upland vegetation for forage affects the vegetation in a number of ways. Key forage plant species for livestock consumption are palatable species that may be utilized frequently, when available, as forage. Grazing utilization measures the proportion of degree of the current years forage production that is consumed or destroyed by livestock (ITR-Utilization Studies 1996). Utilization of key species during the critical growing period, typically spring may prevent formation of a seed-head and dissemination of seed. If this occurs year after year to the same population of forage species, a negative impact to recruitment occurs. If high levels of utilization occurs to a given population of forage species, those plant have less leaf area to absorb sunlight, produces lower levels of carbohydrates, and expends a considerable amount of energy on re-growth. This type of scenario results in poor plant vigor, lower abundance, and poor age-class distribution. As previously mentioned, forage utilization, plant vigor, abundance and age-class distribution of key species are generally more intensely impacted around water sources or high-use facilities due to constant soil compaction from trampling and continual cropping of vegetation from cattle and horses. Impacts to resource conditions next to water developments are expected, and the area impacted will vary in size. These types of negative impacts have occurred in portion of West Mojave allotments where the Native Species Standard is not being achieved.

Areas that have been affected by other habitat disturbing factors are more vulnerable to impacts from livestock and vehicles. In particular, wildfire may result in closure of areas for multiple years to allow vegetative reproduction and return of native communities. Under cumulative effects, those areas identified as not achieving the Native Species Standard may be subject to a livestock grazing deferment in the spring and fall grazing during the critical growing periods. BLM anticipates slow, but positive progress towards improvement of degraded native plant communities as a result of this corrective management action and reverse the downward trend in

rangeland health. This deferment from grazing during the critical growing period for native species is anticipated to favor recruitment, vigor and enhance species diversity in native plant communities previously degraded by past grazing practices in portions of the allotment. Desert tortoises prefer certain native annual forbs over non-native annual forbs (Jennings 1997). BLM has not inventoried for these annual native species so their abundance on West Mojave allotments is unknown, however under all alternatives native annual forbs located in the “deferment areas” would have the opportunity to germinate, grow and disseminate seed.

The additional changes in grazing practice as described in the 2006 WEMO Plan are anticipated to make positive progress toward achievement of the Native Species Standard by reducing the utilization thresholds from 40% to as low as 25% on select key species allotment wide which would allow for greater leaf area to absorb sunlight. This improves plant vigor and production, and reduces the contribution of grazing to vegetation impacts. There are two other grazing operational prescriptions contained in the 2006 WEMO Plan that would not authorize ephemeral portion of the perennial/ephemeral authorization and would not authorize temporary non-renewable use, regardless of production. These provisions would further reduce use of forage species on the allotments in more productive years, providing for very high recruitment and increased vigor.

The 2006 WEMO grazing prescription that requires exclusion from portions of select allotments when ephemeral production is less than 230 lbs./acre has a beneficial impact to the vegetation that is excluded from grazing during those seasons. This would minimize impacts to reproduction and plant growth during these poorer production years. However, already stressed vegetation in portions of the allotment where grazing would be allowed may suffer from slightly higher levels of utilization, which in turn can mean lower or no reproduction and poorer plant vigor during those growing seasons, unless stocking rates are appropriately adjusted.

Natural climate fluctuations can also have a significant effect on desert vegetation, but not all desert natives are consistently affected by these fluctuations. Beatley (1980) concluded that most of the living plants in the Mojave Desert in 1963 were still present when she remeasured her plots in 1975. An additional 20-30% of the plants measured in 1975 were new, and total cover had increased as a result of high rainfall in the late 1960s. Beatley concluded that the size and cover of woody perennial plants in the Mojave Desert are strongly correlated with precipitation.

The period between 1975, when Beatley last measured the plots, and 2000 had several climatic extremes. The period of 1977-1984 was one of the wettest periods of the 20th century, and extreme droughts occurred in 1989-1991 (Hunter, 1994), 1996, and 1999. Many shrubs died during these years, making droughts a major mechanism for change in Mojave Desert ecosystems. Despite the droughts, the increase in biomass between 1963 and 2000 is striking. Associations dominated by creosote bush (*Larrea tridentata*) had large increases in the sizes of individual plants as well as increases in total cover. Some blackbrush assemblages, in contrast, lost total cover, probably as a result of the droughts, reflecting the significant differences in drought tolerance between various native species of the desert. Some non-native species such as brome (*bromus madritensis*, ssp. *Rubens*) can be extremely hardy during drought periods, and during those periods readily outcompete native species (Monitoring Of Ecosystem Dynamics In The Mojave Desert: The Beatley Permanent Plots, USGS Fact Sheet 040-01, Webb, Robert H, et al.).

Special Status Plants

The WEMO Plan resulted in cumulative impacts, both positive and negative, to most of the sensitive plant species addressed in the Plan. The beneficial cumulative impacts include the establishment of large, unfragmented habitat blocks, strategies to block up public lands in those areas, measures to reduce tortoise mortality, measures to minimize disturbance impacts to conserved lands and measures addressing unique components of diversity, such as endemic species, disjuncts and habitat specialists.

Most special status plants are locally distributed in distinct areas, although new populations are occasionally identified. Generally projects are designed to avoid concentrations of these species. Mining projects have, in the past, adversely affected listed and sensitive species. Usually, the most sensitive areas are withdrawn or otherwise protected from these types of use. Based on BLM records, cattle grazing activities have not been identified as adversely affecting BLM special status plant species that are located within allotments, like the Mojave monkey flower, or Unusual Plant Assemblages (UPA). Areas identified for protection of special status plants do not authorize grazing, unless their distribution makes fencing impracticable. Cattle generally do not prefer to graze the Mojave monkeyflower or many of the other BLM special status plant species because they often occur in unique habitats, such as rocky, mountainous habitats, so the potential for grazing this species is low; however livestock could potentially utilize and trample BLM special status plant species. Again, this potential is low because livestock are not concentrated where special status plant species populations exist.

Common Wildlife

Most wildlife species are mobile and can avoid being hit by vehicles or trampled by cattle. Some wildlife are generally taken in association with major construction projects or during prescribed burns and wildfire. Impacts to common wildlife from livestock grazing are typically indirect. Livestock may impact wildlife indirectly by modifying habitat on which wildlife depend. Livestock can modify habitat by disrupting soils and damaging vegetation. Soils are impacted through hoof shearing and by soil compaction. Vegetation can be removed if trampled or overgrazed. Impacts identified above typically occur near salt licks and watering holes where livestock congregate. Soil compaction typically occurs along cattle trails, however this compaction is very localized and limited and the impact to common animals is generally negligible. BLM's enforcement of land health standards on this allotment will serve to ensure that adverse impacts to common wildlife are avoided.

Sensitive Wildlife Species

Direct cumulative impacts are not anticipated to occur to most sensitive wildlife; impacts primarily occur to wildlife habitat, as discussed above. The vast majorities of the sensitive wildlife species are mobile and can avoid being injured or taken, unless they occupy very specialized habitats. Although cattle degrade habitat, most impacts are localized. Therefore, grazing is not anticipated to directly impact sensitive wildlife species.

Desert bighorn sheep occupy specific areas during lambing, and at that time can be very sensitive to disturbance and noise. This factor is a consideration in siting of projects, and cumulative impacts are generally the result of casual uses or military overflights. Desert bighorn sheep do not typically occupy the same habitat as livestock, although they may share common watering holes. Ephemeral sheep operations are not authorized in allotments that contain occupied habitat

for Bighorn sheep. Cattle and horses generally inhabit alluvial fans and washes and extend into higher elevations on gentle, less rocky slopes than those preferred by bighorn sheep. Bighorn sheep and cattle primarily interact at water sources (Wehausen and Hansen, 1986). A potential impact of this interaction could be the spread of diseases from cattle to bighorn sheep. The extent of this potential to spread disease and how it impacts the bighorn sheep population as a whole is unknown, due to small sample sizes in studies and the presence of other factors impacting the sheep populations.

The impacts of cattle grazing on bighorn sheep in the West Mojave allotments are considered minimal. If suitable habitat exists on an allotment, Bighorn sheep have been observed grazing, bedding and watering with cattle. These observations indicate some level of compatibility. Many of the perennial water sources located on these allotments, both manmade and natural, are not utilized by Bighorn sheep because of the location on the landscape. The water sources utilized by Bighorn sheep and on occasion with cattle present are typically in mountainous areas that allow for escape cover.

The Mojave fringe-toed lizard occupies a special habitat niche that includes sand transport ecosystems in specified locations in the planning area, and therefore is a less mobile wildlife species, although there is evidence of movement between blowsand patches. Cumulative impacts are primarily the result of substantial habitat fragmentation particularly along the Mojave River, which constitutes approximately one-fourth of the occupied habitat and is primarily in private ownership. Other areas with potential habitat have been surveyed and several include occupied habitat sites. The WEMO Plan included strategies to protect habitat in 3 key areas that are known habitat for the species. Studies that are in progress at this time will provide additional information on species density and movement over time, and to what extent the species is impacted by motor vehicle travel.

Desert Tortoise

The 2006 WEMO Plan concluded that the newly established conservation areas established would cumulatively add to the existing conservation areas (1.15 million acres), resulting in greater protection of desert tortoise habitat. For the primary communities of this habitat, creosote bush scrub and saltbush scrub, the increased area in habitat conservation is 23-34 percent, just from the WEMO Plan, not including the subsequent habitat protection program on Fort Irwin lands. Most of the other species that are more localized in distribution similarly benefitted from the WEMO strategies, withdrawals, and disturbance caps.

The WEMO Plan's establishment of additional tortoise DWMA's is consistent with the approach taken elsewhere in the listed range of the desert tortoise, and together these strategies further enhance DT species habitat and recovery potential. WEMO implemented the tortoise Recovery Plan's recommendation that up to four tortoise DWMA's be established in the West Mojave Recovery Unit, and is consistent with the establishment of a total of 11 tortoise DWMA's between the BLM's NEMO and NECO plans and that local government plans adopted in southern Utah and Clark County, Nevada. As a result, from a regional perspective, the WEMO Plan's tortoise conservation strategy was consistent with all applicable federal and local government plans.

To minimize impacts to the desert tortoise and its habitat, livestock grazing is deferred in portions of an allotment until after the critical growing period (March 1 to June 15) for both

perennial and annual native species if the biomass production on annual vegetation is less than 230 lbs./acre under the WEMO Plan. If the annual ephemeral biomass is less than 230 lbs./acre cattle is excluded from portions (exclusion area) of an allotment while allowing graze to continue in other portions of an allotment. This management action is intended to benefit habitat quality for the desert tortoise over time by allowing for sufficient quality and quantity of forage species and thermal cover during the peak tortoise activity periods.

The exclusion of grazing from portions of a perennial allotment could increase grazing pressure in those portions of the allotment where grazing would continue. The impacts to desert tortoise habitat in areas where grazing would continue may have increased grazing pressure. This would be a direct correlation to stocking rates. If stocking rates are low then impacts would be nominal, however if stocking rates are increased, impacts to desert tortoise habitat could be substantial.

Deferment of grazing use during the critical growing period for native vegetation (habitat) in areas with degraded habitat quality, deferment in areas not achieving the native species standard, and limiting utilization levels allotment-wide are positive cumulative actions for improving desert tortoise habitat quality.

Grazing does not impede the movement, dispersal or gene flow of desert tortoise because neither livestock nor fencing represents a physical barrier to movement, and there is sufficient habitat inside and outside of allotments. However, livestock congregation areas (water sources, corrals) would not be conducive to tortoise burrowing, nesting, or over-wintering due to soil compaction at those sites. These sites are very localized and only represent a relative few acres out of the total acres of an allotment's critical and non-critical habitat within allotment boundaries. Desert tortoises have been documented occupying rock shelters in the lower elevations of mountainous terrain. These areas are generally too rocky for livestock presence.

Most project and other land-use authorizations, as well as grazing leases stipulate that the permittee or lessee and employees are required to report to BLM the sighting of any injured and dead desert tortoise. These reports are followed up by an investigation on the cause of injury or mortality. This requirement assists BLM and FWS in making a determination of direct impacts to the species and when reinitiation of formal consultation is required. In the course of annual rangeland monitoring, and project and allotment compliance checks, the monitoring for incidental take is conducted concurrently.

The November 2007 amendment to the January 9, 2006 Biological Opinion (1-8-03-F-58) contains an Incidental Take Statement (ITS) specifically calculated for livestock grazing operations in the West Mojave allotments. Since the issuance of the 2007 amendment there has been no documented or reported case of incidental take associated with livestock grazing.

The continuation of livestock grazing within some conservation areas would result in a cumulative effect to sensitive biological resources consisting of riparian habitat, upland vegetation and wildlife habitats, and similar effects outside of conservation areas. In both upland and riparian habitats, livestock grazing utilizes native vegetation, both herbaceous and woody as forage.

The allocation of lands for different uses in the WEMO Plan should not be considered as the final determination of land use for the planning area. It is rather a dynamic process of utilizing the best available science and land use planning to achieve conservation of species and

communities identified to be in jeopardy. Technologies of the future can and are expected to alter provisions of the Plan to improve upon the implementation of its objectives.

Natural Communities

In the context of the entire Mojave Desert, the WEMO Plan connects to public lands in the Inyo, Sequoia, Angeles and San Bernardino National Forests. New conservation near the latter two Forests includes the linkage to the Poppy Preserve, the Big Rock Creek Conservation Area, and the Carbonate Endemic Plants ACEC. The linkages within Los Angeles County would prevent future isolation of the Poppy Preserve and Saddleback Buttes State Park. The WEMO Plan adjoins the Coachella Valley Multiple Species Habitat Conservation Plan near Morongo Valley, and land uses in this area are compatible with both habitat linkages and protection of species in common to the two plans (triple-ribbed milkvetch and Little San Bernardino Mountains gilia). The WEMO Plan recognized the impacts from recreation and route designation to natural communities, and concluded that impacts of recreation and route designation to natural communities are primarily cumulative in nature. Some species are more sensitive to route specific impacts because of their very limited distribution. However, most of the more intensively used OHV Open areas are within the creosote bush scrub, desert wash and saltbush scrub communities. Riding on playas is also popular and may impact the adjacent alkali sink scrub vegetation.

Some potentially sensitive species in these intensively used areas are protected by fencing, and the size of the larger OHV Open Areas provides some intact natural communities away from heavily used staging and start areas. Areas adjacent to population centers are also more intensively used, and the problem is compounded by intensive use on adjacent private lands. In remote or mountainous areas, most travel is confined to roads, so that the woodland communities (Joshua tree woodland, scrub oak, pinyon pine woodland, juniper woodland) suffer relatively fewer direct vehicle impacts.

Outside of the OHV Open Areas, habitat fragmentation is an issue in other areas with a large number of routes, depending to some extent on the frequency of use. This fragmentation is exacerbated in areas with substantial route proliferation. Of the four alternatives evaluated in this SEIS, Alternative 3 would result in the greatest increase in open motorized routes within sensitive biological areas, and therefore would have the greatest potential for impacts to sensitive biological resources. No Action would result in the greatest potential impact to habitat outside of DWMA, and Alternative 3 would result in the greatest potential impact to habitat within DWMA, based on area-wide potential for disturbance.

Alternative 2, by closing the largest mileage of routes and applying the most restrictive minimization and mitigation measures, would result in the fewest adverse impacts to biological receptors over the long-term. All alternatives include an immediate strategy of signing closed routes and providing educational information for the public, which will result in a moderate level of compliance of the route network. The rate of active closures anticipated is similar for all alternatives, so active disturbances would not vary substantially by alternative in the reasonably foreseeable future. Alternative 2 is anticipated to reduce and displace overall use to outside DWMA and MGS habitat to some degree, but is also likely to result in an increased intensity of use on the remaining network in these areas. Other alternatives are likely to change the balance between use and intensity in these sensitive areas. In other ACEC, use and intensity of use is not anticipated to substantially change.

Where motorized routes exist, the contribution to cumulative biological impacts in sensitive areas would still be adverse. Providing additional opportunities in less sensitive areas and directing recreational and commercial activities to OHV Open Areas and the less sensitive areas mediates the cumulative impacts but does not eliminate them. When placed in context of other developments within the West Mojave, including land development, mining and recreational use of habitat lands, as well as the beneficial effects of WEMO management strategies, additional wilderness designation, enhanced protection of sensitive habitat on Fort Irwin, and DRECP strategies, the reduction in surface disturbance by measures to manage, enforce, and restore routes impacting vehicle-sensitive species would be beneficial under all alternatives. In the long-term, Alternative 3 does not directly benefit the species in DWMA as well as No Action, which is an adverse impact to natural communities.

Invasive, Non-Native Species

Invasive species can occur as a result of direct spread of seeds, stressing of native habitat, and surface disturbance and loss of native vegetation, which facilitate the colonization of invasives over many native species. Natural wind conditions in the desert, non-native plantings, wildfire, vehicle use, and the presence of livestock and wildlife can directly spread the seeds of invasive species. Mechanisms for spread include airborne-spread of seeds, seeds sticking to vehicles or to the hides of animals, and deposition of seed through livestock and wildlife digestive systems (Belsky 2000). Historically, non-native plantings by rural residents and project managers, often as windbreaks, have been major contributors to non-native species spread. Current practices prohibit such plantings on authorized projects, but seeds may still be spread by the use of equipment and vehicles on site. Similar spread of seeds is associated with OHV use as described in previous sections. Wildfire continues to be a major source of introduction of non-native species. Post-fire rehabilitation efforts provide for some level of planting or seeding to encourage native species to more quickly be reestablished. Projects which authorize disturbances create conditions that can encourage invasive species. These species can then spread far beyond the project boundaries. These project impacts are minimized by the use of best management practices, such as specific plantings of native species, and treating weed populations with herbicide applications.

The extent to which poor grazing practices contribute to the spread of non-native invasive species on the West Mojave allotments is unknown. However, some grazing practices like overgrazing do reduce the diversity, and reproductive abilities of these native, desert plant communities (Boarman 1999). This in turn promotes the establishment and spread of non-native invasive species that now occupy habitat once primarily inhabited by native species, because poor grazing practices degrade palatable native plant species resulting in a reducing its ability to reproduce, poor plant vigor, poor age class distribution and lower overall productivity. This allows highly aggressive non-native herbaceous plants to invade habitat occupied by stressed native species or habitat once occupied by native species.

The West Mojave allotments that authorize year-long continuous use, often grazing the same area at the same time, year after year, may have contributed to a transition of the native herbaceous ground cover to invasive and non-native species over portions of the West Mojave allotments. This is also the case in areas that serve as corral facilities for livestock and wild horse and burro distribution and collection. The lack of periodic rest for native species in these areas contributes to habitat more vulnerable to invasion by non-natives. The palatability of non-

native vs. native plant species to livestock varies based the species and phenological stage. Overall livestock prefer native forbs over non-native forbs however non-natives forbs typically germinate earlier in the growing season and are generally grazed in an earlier phenology stage than natives which can in some years favor native forbs in the production of seed into the seed bank. Depending on density, the utilization of native forbs can be lower than utilization levels on non-native forbs because native forbs are most palatable when there is the highest level of forage diversity available to the cattle.

Grazing practices that allow for periodic recruitment opportunities commonly have lower densities of non-native species and are more compatible with sustaining native plant communities. Mitigation measures like the deferment of grazing in the spring and fall, strict compliance with the grazing prescriptions contained in the 2006 WEMO Plan, and the other grazing stipulations identified in that plan and in subsequent allotment-specific environmental assessments aid in improving native plant communities and in reducing the spread of non-native invasive species. The lowered utilization thresholds on key forage plants and other requirements should improve the overall trend of native plant communities. However, once such communities get established, they can be very difficult to eradicate.

Overall, the current densities of non-native invasive species on the allotments being analyzed in this document is consider light to moderate based on ocular estimates. Annual fluctuations in densities are directly influenced by the amounts of late winter and/or early spring precipitation.

Socioeconomics

Cumulative socioeconomic impacts to the WEMO Planning area primarily associated with urban development, infrastructure development, mining activities, and regional economic growth and activity. These impacts can be significant and are relatively unaffected by the specific routes and network alternatives in the WEMO Planning area.

Local socioeconomic conditions, including employment rates, addition or loss of industries, military installations, and even single employers can impact the local or regional economies of San Bernardino, Kern, Los Angeles, and Inyo Counties. Grazing is anticipated to continue at or below current stocking rates. These stocking levels are at their lowest point when compared to historic levels, and if the WEMO Plan is fully implemented, are expected to continue to decrease. Therefore grazing continues to have a nominal influence on local economies in the area.

The loss of a substantial portion of the Johnson Valley OHV Area could substantially impact individual businesses but is anticipated to have a nominal effect on the local economies in the surrounding areas. For areas that are more tied to tourism, impacts would be somewhat greater. Of the four alternatives evaluated in this SEIS, Alternative 3, by focusing on maximizing access to both recreational and authorized users, would have the greatest cumulative contribution to socioeconomic impacts. Conversely, Alternative 2 would limit the areas in which recreation could occur, could restrict access to those areas, and could make it more difficult for authorized users to access their facilities. As a result, the contribution of Alternative 2 to cumulative socioeconomic impacts would be adverse, as compared to the No Action Alternative. However, overall, the route network and its associated goals, objectives, and minimization and mitigation measures on recreation and, to a lesser extent, on the ability of authorized users to access their facilities, have a nominal cumulative effect on socioeconomics regionally.

Recreation

Sources of impacts to recreation include conversion of recreational lands for other land uses, such as for military use, urban development, major projects that foreclose access, closure of lands to one or more recreational uses, and modification of lands which decrease its suitability for recreational pursuits. The 2006 WEMO Plan concluded that no significant cumulative impacts to recreation were to be expected. Historically over time, acreage available for motorized recreational opportunities in the WEMO Planning Area have been decreasing from a peak in the early 1970's until today, through a combination of urban and regional development and projects, designation of wilderness and National Parklands, closure of other areas, and expansion of military installations.

These changes, taken together, have resulted in a significant reduction of the land available for motorized recreation in the WEMO Planning area since the CDCA Plan was adopted. This loss was partially anticipated and offset in the CDCA Plan with the designation of OHV Open Areas, and subsequent additions to those areas had nominally increased that acreage prior to the most recent military expansion project. Non-motorized recreational opportunities have remained fairly constant, although substantial additional areas have been set aside by Congress that provide for exclusively non-mechanized use., such as designated wilderness areas.

Prior to the signing of the WEMO Plan, lands north and east of Black Mountain were among those lands transferred by Congress to Fort Irwin. At the time of the WEMO Plan, it was unclear whether these lands would be completely foreclosed from recreational use. This area is now no longer available for motorized vehicle recreation. Recreational use of most of this area was never particularly high, so the scale of the displacement was relatively small compared to other closures. However, these lands were removed from major highways and population centers, and therefore offered a remote recreation experience that is no longer available. The military expansion also included the substantial portion of a series of dry lakes that were very popular for organized recreational land-sailing activities. Since the expansion, no major land-sailing organized events have been permitted in the area.

There are not major conflicts between authorized access routes and recreational access and uses. There are localized conflicts between recreationalist and campers related to the presence of cattle manure on or near allotment routes, especially near watering or corral facilities. A few authorized routes, particularly to mines which are regularly travelled by large mine trucks, exclude travel to the public for safety reasons. Other routes may limit public access to prevent vandalism of facilities. Permits to apiaries and livestock grazing may moderately increase the potential for conflicts with OHV riders, such as collision potential from high-speed riders with cattle or the harassment of cattle or bees by OHV. The presence of authorized facilities is generally associated with authorized access for maintenance; and the need for continued available access to these facilities may facilitate access by recreational users. Long-distance linear facilities in particular, facilitate popular long-distance recreational access routes in the planning area.

As a result of the WEMO Plan, a large portion of the Rands ACEC and a few additional, relatively lightly used or small sensitive areas were also closed to motorized recreation. The permit system in the Rands mediated the closure to that area somewhat, but substantially constrained motor-vehicle based recreational activities. Stopping and Parking constraints in

WEMO further limited recreational opportunities in DWMA, particularly for those with secondary vehicles or large RVs.

Route designations in the 2006 Plan generally redistributed use from more sensitive biological areas for listed and certain other sensitive species to less sensitive biological areas. This has resulted in recreational four-wheel drive and motorcycle use that was shifted to some extent from more resource sensitive areas to less sensitive areas. These shifts generally were from more remote to less remote areas, or to more mountainous or steeper terrain within the planning area. This was anticipated to increase use in nearby OHV Areas, as well as pressures on the network located nearer to urban interface. As motorized recreational activities shift to the remaining OHV Open Areas or other lands that have flatter terrain outside of DWMA, additional conflicts with adjacent land owners are anticipated. Such conflicts already exist in heavily used areas south of the, Stoddard Valley OHV Area. These lands include intermittent private lands that are both a source of impacts and receive impacts from trespassing adjacent public lands motorized users.

Since the WEMO Plan, the impacts of other activities and land-use allocations on recreation, and motorized recreation in particular, have continued the historic trend of foreclosing opportunities. An additional military base expansion significantly reduced the available OHV Open Area acreage and the designation of additional wilderness acreage together have resulted in approximately another 200,000 acres that are foreclosed from motorized recreation. Proposals in the concurrent DRECP Plan under development potentially include more restrictions to motor-vehicle use in various locations throughout the planning area. In particular, new conservation areas and additionally constrained areas will result in direct loss of access and fewer developments and activities in those areas that, over time, will result in less access.

The impacts to recreation from these changes are somewhat mediated by the size of the planning area and the many recreational opportunities it provides. The impacts are exacerbated by the increasing pressure that a growing population and pool of OHV riders has created over time. Since 1980, population in the high desert has substantially increased, as has the demand for OHV recreation. Coupled with decreasing opportunities and the increasing demand, recreational impacts are considered to be cumulatively significant.

Of the four alternatives evaluated in this SEIS, Alternative 2 would have the largest overall adverse cumulative impacts to recreation because it would result in closure of the largest mileage of routes, and application of the most restrictive minimization and mitigation measures, including a more restrictive network in the DWMA than is currently in place. Areas previously accessible for non-motorized recreational pursuits from nearby trailheads or parking sites would become less accessible. The contribution of Alternative 2 to cumulative recreation impacts therefore would be adverse, as compared to the No Action Alternative. Conversely, Alternative 3 would be beneficial with respect to motorized recreation, as it would maintain the largest network of motorized routes, maximize access to non-motorized recreational areas, provide the most diverse recreational opportunities, and apply the least restrictive minimization and mitigation measures. Under Alternative 3, recreational opportunities would be more widely dispersed, and would include a balance of more remote and less remote opportunities for motorized recreation.

No Action would have the largest adverse cumulative impacts to non-mechanized and non-motorized recreation, because no additional non-motorized routes, trailheads, or campsites would

be offered. Campsites identified in existing ACEC Plans would be maintained. Alternative 3 overall provides the most opportunities for non-mechanized and non-motorized designated routes, but other alternatives also provide for a substantial range of these opportunities.

Depending upon the alternative, portions of the planning area are likely to see nominally less or more, or moderately greater recreational use, and overall recreational experience may be somewhat changed. Although a variety of routes and terrain are afforded by the route system, the opportunity to have a “remote experience” is expected to become increasingly difficult during the term of the project due to the cumulative effects of various constraints on remote access. However, the loss of recreation opportunity, together with the rapidly growing Southern California population and the anticipated continued growth in motorized recreation, would displace some visitors onto the smaller remaining BLM land base. The cumulative effect of this is likely to be an increase in impacts to these less remote areas, increasing conflicts in those areas, and the displacement of visitors seeking a remote experience to more remote regions such as the NEMO and NECO Planning areas or onto adjacent jurisdiction lands that are remote and remain accessible.

Livestock Grazing

The 2006 WEMO Plan concluded that several actions would contribute to an overall loss of land designated for livestock grazing that the BLM administers:

- **Fort Irwin Expansion:** The Fort Irwin expansion includes part or all of the Goldstone (100 percent or 9,726 acres), Superior Valley (42 percent or 69,328 acres), and Cronese Lake (<10 percent or 4,200 acres) allotments. Fort Irwin does not authorize grazing. The Goldstone allotment would be entirely unavailable for grazing and the portions of the Superior Valley and Cronese Lake allotment located on Fort Irwin would be unavailable for grazing. This would represent a total loss of approximately 83,254 acres of public land designated for livestock grazing.
- **Voluntary Relinquishment:** Since the 2006, WEMO Plan, some permittees or lessees have voluntarily relinquished their livestock grazing preference for certain allotments. This has resulted in a reduction in the livestock grazing available on public land administered by the BLM.
- **Losses of Ephemeral Sheep Grazing which occurred due to modified DWMA Boundaries and proximity to bighorn sheep locations:** Allotments affected include those located entirely within DWMA, including Gravel Hills (130,075 acres), Superior Valley (the remainder or 95,738 acres), Buckhorn Canyon (4,730 acres), Stoddard Mountain West Unit (63,889) and Shadow Mountain (80 percent or 41,806 acres). Portions of other allotments, including Johnson Valley (109,186 acres), and the Stoddard Mountain East Unit (82,681 acres) were also lost based on proximity to bighorn sheep. Portions of the Cantil Common, Monolith-Cantil, Lava Mountain allotments that are not within DWMA, but were reduced as a result of the adoption of DWMA in the 2006 WEMO Plan.

Since adoption of the 2006 WEMO Plan, additional changes have taken place that have resulted in further losses of livestock grazing.

- The permanent relinquishment of Lava Mountain and Walker Pass Common Grazing Allotments under the authority of the 2012 Appropriations Act (Public Law 112-74) and re-allocation of the 3,368 AUMs in these two allotments from livestock forage and use to wildlife and ecosystem functions;
- The 2014 National Defense Appropriations Act for the expansion of Twentynine Palms (MCAGACC) that resulted in the loss of 10,880 acres from the Ord Mountain Allotment.

In addition to the changes proposed in Chapter 2 (see Table 4.7-1 for summary), the cumulative effects of the implementation of the 2006 WEMO Plan are expected to reduce the size of the portion of the livestock industry centered on the use of BLM administered lands in the California Desert Conservation Area by approximately 465,871 acres. In addition, 119,940 acres were eliminated after the approval of the 2006 WEMO Plan through the two laws referenced above.

The DRECP Plan also proposes the reallocation of forage from livestock grazing to wildlife and ecosystem function for various allotments, including three allotments partially within DWMA.

Under the other aspects of the WEMO Plan, as augmented by the subsequent allotment management plans, active grazing leases and permits would be renewed every 10 years, subject to additional consideration within 6 months of this Record of Decision. The terms and conditions contained on current grazing leases or permits would include the grazing prescriptions listed in the 2006 WEMO Plan, as well as other terms and conditions deemed necessary by the BLM Field Manager. These grazing prescriptions have eliminated ephemeral authorizations and temporary non-renewable (TNR) authorizations below 4,000 feet. They include key terms and conditions contained in previous grazing decisions related to cattle grazing in desert tortoise habitat. New range improvements or proposed changes in grazing management that would be considered more than a minor change, require additional NEPA and ESA consultation.

Livestock grazing would continue on the Ord Mountain Allotment located within the Ord-Rodman DWMA, with the additional mitigation measures for cattle grazing within a DWMA. These prescriptions ensure that there is sufficient forage available for tortoises to thrive and reproduce, and require that the grazing operation be consistent with recovery of the desert tortoise. The Ord Mountain Allotment and the associated grazing operation are not anticipated to be substantially impacted if required to exclude grazing from portions of the allotment in dry years (< 230 lbs./acre) for a three month period in the spring. The current grazing operation on this allotment has been substantially reduced in size and scope and this trend will continue into the foreseeable future.

Additional management actions in all allotments aimed at making positive progress toward achievement of the Native Species and Riparian/Wetland Rangeland Health Standards include deferment of grazing in specific portions of the affected allotments until summer and fencing off of spring sources, where feasible. There would be some additional cost to the lessees in terms of additional time and labor costs. It may take several years before improvement to native plant communities, in those areas deferred from grazing in the spring, can be detected.

There would be a positive, cumulative impact to grazing from the development of select range improvements because these projects enhance livestock distribution and reduce grazing pressure in other portions of the allotments, including the allotment that contains critical habitat (DWMA) for the desert tortoise, and any areas in the allotments that currently are not achieving rangeland health standards.

The cumulative effects from all of these actions, including the WEMO Plan, allotment management plans, and DRECP proposal(s) result in the following beneficial impacts to other resources: Air emissions, although minor from grazing operations would be eliminated; impacts to soils from these operations, although confined, would be eliminated; and any impacts to water quality from grazing operations would be eliminated. Any long-term impacts to cultural resources that have not already been permanently compromised by grazing activities, would cease to be impacted from these activities. The long-term impacts to native plant communities from nearly a century of livestock grazing would continue to be reversed, and the potential increase in non-native plant species from grazing in these allotments would be eliminated. The long-term impacts to habitat for special status species and general wildlife within the allotment boundaries for the ten allotment identified above would be beneficial. Impacts to recreation, ACECs and wilderness, although nominal would also be beneficial in most cases.

Generally, the cumulative effects of the plan amendment decisions and route designations are nominal on grazing and would not have a substantial cumulative effect on grazing activities. As with recreation, the cumulative effects on grazing since the CDCA Plan was approved in 1980 are significant and are unrelated to access management strategies.

On a more local basis, some network-wide minimization and mitigation measures and route designations may nominally affect grazing operations or require additional mitigation measures imposed on the grazing lessee. With respect to operation of the existing grazing allotments, Alternative 3 would have a beneficial impact by maintaining the largest mileage of motorized routes in allotments, which may be used by permittees and lessees to operate their allotments. Conversely, Alternative 2 would contribute, along with other actions which restrict access or impact operations, to adverse cumulative impacts by reducing the mileage of routes available to operators, resulting in nominally higher operating costs. Generally, alternatives and minimization and mitigation measures are consistent with grazing operation goals to manage other use and users in their allotments, and therefore would be supportive of current best management practices.

Energy Production, Utility Corridors, and Other Land Uses

Cumulative impacts to energy production have generally been beneficial. Prior to recent solar and wind energy EIS and the DRECP Plan, the CDCA Plan had targeted energy development in only two specific areas. Since that time, substantially more areas have been identified as suitable for energy development. Corridors for the transmission of energy and other utilities have remained fairly constant over time, but as needed, non-corridor areas have been authorized to transmit energy through the planning area.

The most substantial cumulative effects to other land uses have been to mining and mineral exploration. The 2006 WEMO Plan concluded that withdrawal of lands for resource protection would have at least a slightly negative impact on mineral development and other land uses. As with recreation and grazing, the cumulative impacts of closures since the original adoption of the CDCA Plan, including the 2006 WEMO Plan, are significant. As with recreation, some of the impacts from the 1994 California Desert Protection Act (CDPA) designation of wilderness were anticipated, and BLM recommendations on wilderness factored in to the assessments. However, actual wilderness designations, expansions of National Park units, and expansions of military lands from Congress since adoption of the CDCA Plan as well as ACEC adopted or proposed mineral withdrawals, have substantially exceeded anticipated withdrawals in the CDCA Plan.

Likewise, the cumulative availability of lands for exploration has been negatively impacted by the transition from “existing” routes to designated routes in the 2006 WEMO Plan. Exploration becomes cost prohibitive for most small miners if potential areas are too far from ground access points.

The alternatives proposed in this plan are not anticipated to substantially increase the negative impacts to mining or mineral exploration; however Alternative 3 may moderately benefit mineral exploration. On a local scale, the effects of the closure of specific routes under some alternatives may have a noticeable negative effect on a local level by increasing the mileage that miners and mineral explorers need to travel to reach their facilities or claims, or by placing time of day or seasonal restrictions on access.

Overall, of the four alternatives evaluated in this SEIS, Alternative 2 would have the largest contribution to adverse cumulative impacts to other land users because it would result in closure of the largest mileage of routes, and application of the most restrictive minimization and mitigation measures. The contribution of Alternative 2 to cumulative land use impacts would be adverse, as compared to the No Action Alternative. Conversely, Alternative 3 would be beneficial with respect to other land uses, as it would maintain the largest network of motorized routes, maximize access to other authorized land uses, and apply the least restrictive minimization and mitigation measures. On a site-specific basis, more limited access on some routes under this alternative may be consistent with the preferences of specific users and private landowners, who would desire to further restrict public access. Generally, the contribution to cumulative effects from the WMRNP would be nominal. The WMRNP would not include any additional withdrawal of lands, and access to the WEMO Planning area would be maintained, consistent with law, regulation and policy.

Cultural Resources

Cultural resources are a finite and non-renewable resource so loss of the information they contain is a permanent loss for which there is no mitigation, restoration, or rehabilitation. Opportunities for the public to view these sites in their natural surroundings and to experience the sense of exploration, adventure, and understanding that comes with observing them in situ are permanently lost. Our ability to provide educational and interpretive opportunities is decreased with the loss of each site or portion thereof. Prehistoric sites are repositories of cultural information about people who lived here into the far distant past and are of very great value and concern to Native American people today. Continued destruction removes pieces of our past on a daily basis.

In general, cultural resources have been adversely impacted over time by the implementation of the CDCA Plan, due to the limited cultural information that was available during the development of the plan, and the subsequent impacts of its implementation. However, the most well-known, important sites were recognized in the CDCA Plan, resulting in ACEC designations for cultural resources and management strategies to protect their significant resources. Other significant cultural resources have increased protection since the CDCA Plan as a result of major closures and wilderness designations, but the overall scope of these beneficial impacts is unknown. Therefore, substantial loss of resources has occurred from planned actions as well as general strategies that provided for various authorizations and casual use activities.

Prior to the 1990's few authorizations required Class III surveys and mitigation as a standard measure prior to on-the-ground disturbance. Later authorizations have included such surveys and the results of these surveys serve as one of the primary cultural resource informational sources in the WEMO Planning Area. Two major land-exchange programs in the 1990's resulted in both beneficial and adverse impacts to cultural resources. Exchanges and acquisitions which resulted in blocked up wilderness areas were beneficial. Other programs resulted in both beneficial and adverse impacts to resources, but the relative impacts, on balance, are unknown. Landscape level surveys have not addressed cultural resources that may be affected by these large programs or casual use activities.

The 2006 WEMO Plan concluded that cumulative public land impacts to cultural resources that would otherwise be significant would be mitigated through the Section 106 process. It was not clear whether the impacts of the plan would be beneficial or adverse, or how the Section 106 process would be utilized. Some of the impacts to cultural resources from the 2006 WEMO Plan would be beneficial. Area closures and withdrawals, and generally construction activities which restrict access or provide public information and keep the public on routes, would generally be beneficial. Ground disturbing activities are preceded by surveys and siting may be adjusted to protect cultural resources.

Some adverse impacts from the WEMO Plan may occur as a result of loss of resources that cannot be conserved. Land exchanges proposed in the WEMO Plan may have beneficial as well as adverse impacts, but are generally beneficial to cultural resources. Prior to exchange or sale out of public ownership, surveys are conducted and if significant resources are found, the affected lands may not be included in the exchange or disposal package unless management would be consistent with the protection of the resources. Multiple Use Class (MUC) changes in general do not impact cultural resource protection. Authorized activities follow standard protocols regardless of location, and the MUC does not imply specific additional (or fewer) protections to cultural resources.

The 2006 WEMO Plan provided some limits on cultural resource impacts from the route network by eliminating the "existing routes" language, thereby clarifying the routes that would no longer be available for use, and which would no longer have impacts to cultural resources from casual use access. The overall degree of improvement is unknown, although decisions on specific routes did identify cultural resources as a factor for closures. The impacts to known cultural resources from the designated WEMO network are unclear. Additional field work has been gathered for use in this planning effort and this information gathering continues. Two field teams have been engaged and are continuing this data collection, at substantial BLM expense. Even so, it is anticipated to take dozens of years for development of a comprehensive cultural data set.

Within the West Mojave planning area there are approximately 1,928,926 acres of public land authorized for livestock grazing. Of this total, active livestock grazing operations are continuing on approximately 928,597 acres in the WEMO Planning Area. The Supplemental Programmatic Agreement for Cattle Grazing allowed 10 years to complete cultural resource surveys of the grazing allotments. The agreement "allows for renewal of an existing grazing lease or permit as long as Protocol direction, the BLM 8100 Series Manual guidelines (Protocol Amendment F), and specific stipulations are followed. Field surveys pursuant to the Supplemental Programmatic Agreement for Livestock Grazing between the BLM and California SHPO for the WEMO active allotments are nearly completed. Areas with natural water sources, fence lines, salt licks, and

other cattle congregation areas were the main focus of these surveys. The results of the surveys will be analyzed in conjunction with activities proposed under the existing allotment management plans and associated NEPA compliance.

The opportunities for the public to view cultural sites in their natural surroundings have decreased over time, both as a result of closure of areas and of vandalism of important cultural sites. Significant vandalism can occur anywhere and maybe the result of one action, rather than the result of cumulative effects per se, although vandalism likelihood increases in more accessible or more well-known sites. Tribal access is relatively unaffected by route designations, because accommodations are built into the designation mechanisms; and access to sacred sites is addressed with tribes on a location by location basis as is additional research with universities and other archaeological professionals if not anticipated at the time of designations.

Of the four alternatives evaluated in this SEIS, Alternative 3 would have the largest contribution to adverse cumulative impacts to cultural resources because it would result in maintaining open motorized routes within close proximity to more identified cultural resources, and is estimated to result in more impact to unknown resources. Alternative 2, by closing the largest mileage of routes and applying the most restrictive minimization and mitigation measures, would result in the fewest adverse impacts to cultural resources. However, where motorized routes exist, the contribution of Alternative 2 to cumulative cultural resource impacts would still be adverse.

A programmatic approach to Section 106 compliance for BLM routes of travel within this planning area is currently in development in consultation the with California Office of Historic Preservation, the Advisory Council on Historic Preservation, Tribal and agency partners that includes on-the-ground evaluation of representative cultural resources as part of the analysis of impacts for the alternatives, and strategies to address cultural sites that cannot be assessed in a timely manner. Additional on-the ground survey activities began in September 2014 with two field teams.

Visual Resources

Visual resources are similar to cultural resources—generally a finite and non-renewable resource so loss of the scenic landscapes is a substantial loss for which there may be no mitigation, restoration, or rehabilitation. Some changes to landscapes become scenic landscapes over time, and there is substantial subjectivity in determining and assessing impacts to scenic landscapes. However, overall, impacts to landscapes are lessened when areas are closed or otherwise protected from disturbances, or when those disturbances are minimized.

The cumulative impacts to landscapes prior to the WEMO Plan are difficult to assess overall but included some substantial beneficial impacts as a result of designations and expansions of National Park Units and wilderness and area closures, as well as BLM strategies to consolidate public lands in less disturbed areas with more scenic vistas. The cumulative adverse impacts are not evenly distributed in the planning area, and are focused on the viewsheds around urban landscapes, from the freeway and highway corridors, and near the major utility corridors through the planning area, as well as the cumulative adverse impacts to viewsheds resulting from project-by-project additions throughout the planning area, some of which may be more or less noticeable on the landscape.

Generally the impacts of the 2006 WEMO Plan are beneficial to visual resources, as discussed in section 4.2.3.7 of the WEMO FEIS, by further limiting ground disturbances and identifying areas

for rehabilitation over time. In addition withdrawals to areas for protection of species will also protect scenic landscapes over time. Significant ground disturbances that would substantially impact viewsheds are not proposed in the WEMO Plan. DRECP is not anticipated to directly affect viewsheds but proposals for development and conservation areas will indirectly result in increasing potential impacts to some viewsheds and decreasing impacts to others.

The impact of the route networks evaluated in this SEIS to visual resources are primarily based on the closure of routes, which would allow routes to re-vegetate and resume their original appearance. Of the four alternatives evaluated in this SEIS, Alternative 3 would have the largest contribution to adverse cumulative impacts to visual resources because it would result in maintaining the largest network of motorized routes, and would also apply the least restrictive minimization and mitigation measures in those areas. As a result, Alternative 3 would result in continued use of routes, which would not be allowed to re-vegetate, and which would continue to present adverse impacts to visual resources. Alternative 2, by closing the largest mileage of routes and applying the most restrictive minimization and mitigation measures, would result in the fewest adverse impacts to visual resources. However, where motorized routes exist, the contribution of Alternative 2 to cumulative impacts would still be adverse.

Special Designations

The CDCA Plan is the initial source of ACEC special designations in the BLM, as well as the source for initial recommendations for wilderness, that became wilderness study areas. ACEC route designations and prescriptions serve as specified management actions that are more protective than the general multiple-use class guidelines given in the CDCA Plan. Over time, ACEC designations have been modified and in general, more special designations have been added and additional strategies have been developed in support of protection of the resources singled out in ACEC Plans, thus enhancing their protection.

Wilderness Study Areas (WSA), those areas not designated as wilderness and not released from wilderness study by Congress, are managed per the regulations and subsequent legislation, rather than as a result of the CDCA Plan. However, the CDCA Plan did become the basis for maintain “existing” primitive trails in Wilderness Study Areas.

The 2006 WEMO Plan concluded that ACEC management of tortoise DWMA's would constitute a significant beneficial impact relative to BLM management under the current habitat classifications. It would augment and refine protection ostensibly provided by the critical habitat designation or MUC L guidelines, and provide a BLM LUP basis for evaluation of potential impacts that may not be foreseen at this time, including to sensitive resources other than desert tortoise. Other ACEC designated in the WEMO Plan accomplish the same purpose for the specific resources for which the ACEC has been established, and address the threats to those resources. Specified prescriptions strengthen protection in places where the BLM MUC guidelines do not address the resources or do not address them in a manner appropriate to the specific threats identified. Other resources in ACEC also generally benefit from or are unaffected by the strategies and specific measures identified for ACEC in the WEMO Plan. Since the WEMO Plan did not make location-specific on-the-ground commitments of resources, other resources, if they may be adversely affected by measures, are evaluated prior to surface disturbance and may be mitigated or otherwise avoided.

The Ord-Rodman DWMA ACEC overlaps approximately 117,000 acres or 86 percent of the Ord Mountain grazing allotment. Specific relevant features that formed the basis for ACEC designation are the moderate to high densities of desert tortoise, the presence of critical desert tortoise habitat, and the potential of the area to support desert tortoise populations over the long-term. These factors met the importance criteria for ACEC designation because of the historic declines in desert tortoise populations and habitat throughout the southwest that eventually led to its listing under the Endangered Species Act.

Livestock grazing has historically been present in the Ord-Rodman DWMA ACEC for at least 50 years, and was present at the time of ACEC designation in 2006. At the time of designation, grazing use did not adversely affect the basis for which this area met relevance and importance criteria for ACEC designation, and a strategy to manage the presence of livestock for the reasonably foreseeable future has been included in the WEMO Plan as a component of the ACEC Plan. In addition to the Ord-Rodman DWMA ACEC there are several other ACECs, both cultural and biological co-located within West Mojave grazing allotments. In most cases, relevant and important resources have been protected from the impacts of grazing in key locations (e.g., fencing, exclosures, cattle guards, etc.) consistent with the ACEC Management Plans for each area.

The contribution of the alternative route networks evaluated in this SEIS to cumulative impacts to Special Designation areas would be partially related to the size of the route network within the designated areas, and somewhat related to the use of the network and parameters on stopping, parking and camping. Of the four alternatives evaluated in this SEIS, Alternative 2, by closing the largest mileage of routes and applying the most restrictive minimization and mitigation measures, would result in the fewest adverse impacts to Special Designation areas. However, where motorized routes exist, the contribution of Alternative 2 to cumulative impacts would still be adverse. The relative impacts of the other alternatives to ACEC is highly dependent on the individual ACECs.

With respect to identifying primitive trails that would remain available for use in designated Wilderness Study Areas, Alternative 4 has the greatest impact on WSA (i.e. the most primitive trails would remain), while Alternative 2 has the least impact on WSA (i.e., some of the “open” routes in the 2006 WEMO network would be “closed” in Alternative 2).

Wilderness

Wilderness designations have increased over time and as additional lands have been set aside; overall the wilderness character of these lands have been enhanced. The WEMO Plan, in providing additional disturbance caps adjacent to some wilderness and in reducing the level of motorized access to wilderness areas, enhances the wilderness character of some wilderness lands. Generally adverse impacts to wilderness values did not result from the 2006 WEMO Plan. Generally DRECP is not anticipated to adversely affect designated wilderness, and development focus areas would overall, indirectly reduce viewshed impacts from wilderness in areas with strict disturbance limit caps.

Under cumulative effects, the impacts to designated wilderness areas within West Mojave grazing allotments from grazing would be the same as what occurred prior to the passage of the CDPA. Based on low livestock numbers and limited seasonal use due to the lack of water the

effects of grazing are not considered substantial enough to adversely affect the wilderness character of the designated lands.

The reduction in the utilization thresholds on perennial forage to 25% during the growing season would be beneficial to the naturalness of the affected wilderness areas by protecting the natural composition of vegetation communities. Due to the lack of developed or perennial water sources these wilderness areas are primarily grazed in the winter/spring and typically with light stocking rates. There are currently very few range improvements in designated wilderness; however the development of future range improvements or the hauling of water in close proximity to wilderness boundaries would increase the number and duration of livestock grazing in wilderness areas. Since range improvements are driven by available water sources, it is reasonably foreseeable that at least one wilderness area may be impacted due to the location of suitable perennial water adjacent to its boundary. This may result in a nominal increased impact to naturalness and the opportunity for solitude when cattle are present. Impacts to wilderness from the development of a new range improvement would be documented and analyzed in the project specific EA that would be prepared prior to the development of any proposed project.

In the Ord Mountain Allotment the stipulation that requires a threshold of 230 lb/acre ephemeral forage production or greater to authorize grazing in portions of the DWMA would also be beneficial to the naturalness of the portions of the affected designated wilderness that overlap DWMA. The threshold would help protect native vegetation and consequently native wildlife by helping to prevent excessive use in dry years. During years when the threshold is not met, cattle would be substantially removed from the entire Newberry Mountains Wilderness areas from March 15th to June 15th. Wilderness visitors would have greater opportunity to experience an area without evidence of man during this time period.

For allotments that have been relinquished, the wilderness areas would benefit due to the increases in naturalness discussed above. The naturalness of the areas would no longer be impacted by the presence of a non-native species (cattle). The opportunity to experience an area without evidence of man would not be impacted by the presence of cattle. The wilderness character and the opportunity for solitude would not be affected by the sights and sounds associated with range improvement maintenance including occasional motorized equipment use in wilderness. In addition, there would not be any future potential to graze cattle in the area and range improvements could be removed to improve the areas' naturalness and provide a greater opportunity to experience an area without evidence of man. These beneficial impacts are not considered substantial, because the impacts of grazing did not substantially adversely affect the wilderness qualities at the time of area designations.

There are no direct impacts to wilderness from the alternatives, and therefore no direct cumulative impacts. The indirect impact of the route networks evaluated in this SEIS to wilderness are based on the closure of routes and parking areas along the boundaries of wilderness, which would eventually allow routes to re-vegetate and resume their original appearance and thereby increase the viewsheds of the areas immediately within the boundaries of the wilderness. These impacts are quite nominal; it is likely some footpaths or equestrian trails would remain to provide access to these viewsheds. Of the four alternatives evaluated in this SEIS, Alternative 3 would have the largest contribution to adverse cumulative impacts to visual resources because it would result in maintaining the largest network of motorized routes to access the boundaries of wilderness areas. However, designated parking areas that may be identified under Alternative 3 may result in better focusing impacts and targeting education to

specific trailheads and reducing visual impacts elsewhere. Alternative 2, by closing the largest mileage of routes and applying the most restrictive minimization and mitigation measures, would result in the fewest adverse impacts to visual resources. However, where motorized routes exist, the contribution of Alternative 2 to cumulative impacts would still be adverse.

Noise

The CDCA Plan did not explicitly address noise impacts, and noise impacts are difficult to address on a landscape level since the sources of noise are so diverse and measuring and enforcing noise impacts are difficult. Overall, the WEMO Planning Area is quiet because most of the planning area is rural. Exceptions would be along busy, major freeway and highway corridors and within the Victor Valley urban area. However, a major significant source of loud intermittent noises occurs throughout much of the planning area—sonic booms that are the result of military fly-overs. A major strategy approved in the 1990's and implemented in the following fifteen years to enhance desert tortoise habitat, also indirectly facilitated continued noise impacts by providing for military overflights to continue unimpeded. This acquisition and exchange program consolidated and blocked up public lands with sensitive resources, also prevented facilities that would extend into the airspace for these low-level military overflights.

The relative concentration of military overflights throughout the southern two-thirds of the planning area are the result of the location of four military facilities that “surround” the planning area within the east, west, and north-central areas of WEMO, and associated flight corridors between these bases and from these bases to other parts of Southern California and Nevada. No other noise approaches the decibel levels of intermittent noise that result from military overflights, and these noise levels are not substantially cumulative.

Other noises on public lands in conjunction with authorized activities are evaluated and addressed on a case-by-case basis. No general noise standards have been applied to all authorizations on public lands. The WEMO Plan did not explicitly evaluate or address this impact, but the general impacts of the WEMO Plan are anticipated to be beneficial in conservation areas, by further discouraging developments that result in off-site noises, and by constricting the route network and the relative number of noise sources. DRECP would support the general direction of WEMO in reducing noise impacts in conservation areas, and potentially exacerbating them in some parts of the development areas.

Of the four alternatives evaluated in this SEIS, Alternative 3 would have the largest contribution to adverse cumulative impacts due to noise because it would result in maintaining the largest network of motorized routes in close proximity to sensitive receptors and residences. Alternative 2 would result in the least adverse impact among the alternatives, as it would result in closure of the largest mileage of routes in close proximity to sensitive receptors and residences. However, Alternative 2 would result in the greatest impact from motorcycles, which is generally the loudest vehicle source of noise off-route. Generally intermittent noise impacts from OHVs is nominal, and the regulations limiting noise levels on motorcycles have resulted in a reduction in these impacts.

Travel and Transportation Management

In addition to public land transportation management, most adjacent jurisdictions have adopted transportation plans and route networks. Federal and State networks provide the backbone for all other transportation networks in WEMO, and have both responded to and shaped development

patterns in the Planning Area. County Plans generally recognize County maintained roads and other relatively well used access routes than emanate from the federal and State roads and extend through and connect to local jurisdictional roads. The County General Plans include a transportation component that provides strategic transportation guidance. Local jurisdictions have adopted their own transportation plans that include the routes within their borders as well as limited strategies for future road developments and upgrades to serve their communities. Over time, these plans have responded to public demands, primarily focusing on needed upgrades and connectors between existing major routes, or to new community developments. A few routes that provide access to the major recreational destinations (OHV Areas) have also been singled out. Generally these local plans are not designed to restrict or direct access so much as to respond to access needs as they become evident.

The rest of the transportation network has primarily been overseen by federal agencies with the cooperation of other potentially affected jurisdictions. The military, Forest Service and National Park units have designated routes and route purposes for the networks on lands under their respective jurisdictions, within or adjacent to WEMO public lands. Their land management strategies, over time, have restricted and directed transportation access in significant ways.

On BLM lands, the CDCA Plan did not inherently recognize a specific route network on public lands, other than an “existing” route network that has been difficult to define. Since the CDCA Plan, route designations have been crafted out of a patchwork of authorized routes for site-specific projects, sensitive area route designations under ACEC Plans, location-specific route designations to coordinate with adjacent jurisdictions or for route-specific closures, specific project access decisions, and field office sub-region route designations for portions of areas. In 2000, the first districtwide comprehensive route designation network began to be crafted under various bioregional plans, including the WEMO Plan.

The WEMO Plan route network is one of several in the CDCA which have been developed for routes on public lands since 2000. Public access networks have now been adopted on public lands adjacent to the WEMO Planning Area in four adjacent areas in the CDCA, including the NEMO, NECO, Coachella Valley, and the Western Colorado Desert (WEC) deserts, as well as on adjacent lands to the north of the CDCA in the Bakersfield District. There are an unknown number of additional linear features on the ground within these planning areas, and additional designations will continue to be carried out for newly identified features, as well as to capture routes under mining plan, permit, right-of-way, or lease that may have been excluded, consistent with current policy and guidance.

The WEMO Planning area’s public land base is approximately 31 percent of the public lands located within the CDCA, and the physical extent of those public lands is higher, covering 9.2-million acres of the 25-million acre CDCA (36.8 percent). The large expanse of the planning area coupled with the multiple-jurisdictional interface of the transportation network has resulted in a substantially larger route network in the WEMO planning area than in other parts of the CDCA. Before the new inventory, 43.1 percent of the open routes were estimated to occur within the WEMO planning area, based on the inventories available at that time. Following adoption of all six route network planning efforts, approximately 37.6 percent of the CDCA’s open routes were believed to be located in the West Mojave Planning area. Approximately 60.6 percent of route closures were estimated to occur within the WEMO Planning Area. The relative percentage of closed routes would be substantially higher using the new inventory information, but it is likely that closed route estimates are low elsewhere.

Generally, the route figures reflect the much higher historic usage of WEMO public lands, due to their location immediately adjacent to the Los Angeles metropolitan area and the rapidly urbanizing Antelope and Victor Valleys, the continuing urban interface issues that affect the planning area, and the multi-jurisdictional transportation networks that have arisen out of many different needs.

The West Mojave route network under each alternative has been designed to provide access to recreation venues identified by field surveys and to meet commercial and other access needs, in a manner compatible with sensitive species conservation. The WEMO network should connect seamlessly with the networks in adjacent planning areas and on Forest Service lands, and be consistent with the transportation goals of adjacent federal, State and local jurisdictions to the extent feasible. Ultimately, the regional travel and transportation network goal must function as an effective whole. This is difficult to address in an area that includes such diverse transportation goals, needs and outcomes, and each of the alternatives is proposing a different approach for public lands to get us to this regional network.

Under all the alternatives, including No Action, cumulative impacts on regional motorized access are significant. The public lands network forms the basis of the regional network off of main highways in the entire planning area except the southwestern and Wonder Valley portions which contain few public lands. The public land network serves as the glue that connects resources, private land owners, jurisdictions, agencies, commercial users, recreational users, through travelers and management strategies in most of the WEMO Planning Area. In moving to a discreet network with specific connections and limitations of access, the region is shaping access, and also development and recreational use patterns in both specific and strategic ways that are outlined under each alternative.

4.15 Impact Summary

Table 4.15-1 presents a comparison of the direct, indirect, and cumulative impacts associated with the WMRNP alternatives.

Table 4.15-1. Impact Comparison

Resource	No Action Alternative	Alternative 2	Alternative 3	Alternative 4
Air Quality	The magnitude of air emissions is the same for all alternatives. The No Action alternative over the long term, shows a substantial reduction in areas that would be susceptible to fugitive dust emissions. Route closures under the No Action Alternative total 9,594 miles, resulting in a reduction in fugitive dust emissions and beneficial impact due to re-vegetation and rehabilitation of disturbed soil areas. Mileage of routes near sensitive receptors and residences is only slightly more than in Alternative 2, and grazing impacts do not appreciably differ.	The magnitude of air emissions is the same for all alternatives. Alternative 2 over the long term, shows a substantial reduction in areas that would be susceptible to fugitive dust emissions, modestly greater than No Action. Route closures under Alternative 2 total 10,600 miles, resulting in the highest reduction in fugitive dust emissions among the alternatives. Alternative 2 has the lowest mileage of routes near sensitive receptors and residences, and grazing impacts do not appreciably differ.	The magnitude of air emissions is the same for all alternatives. Alternative 3 over the long term, shows a moderate reduction in areas that would be susceptible to fugitive dust emissions, which would be less than the other alternatives. Route closures under Alternative 3 total 4,404 miles, resulting in the lowest reduction in fugitive dust emissions among the alternatives. Alternative 3 has the highest mileage of routes near sensitive receptors and residences, and grazing impacts do not appreciably differ.	The magnitude of air emissions is the same for all alternatives. Alternative 4 over the long term, shows a substantial reduction in areas that would be susceptible to fugitive dust emissions, which would be less than No Action and Alternative 2 but greater than Alternative 3. Route closures under Alternative 4 total 9,076 miles, resulting in a reduction in fugitive dust emissions which is roughly similar to the No Action Alternative. Mileage of routes near sensitive receptors and residences is approximately the same as Alternative 1, and grazing impacts do not appreciably differ.
Climate Change	None of the alternatives would lead to a change in the motorized vehicle use or miles traveled in the planning area, and therefore none of the alternatives would result in any increase or decrease in direct or indirect GHG emissions from motorized vehicles or livestock grazing.	None of the alternatives would lead to a change in the motorized vehicle use or miles traveled in the planning area, and therefore none of the alternatives would result in any increase or decrease in direct or indirect GHG emissions from motorized vehicles or livestock grazing.	None of the alternatives would lead to a change in the motorized vehicle use or miles traveled in the planning area, and therefore none of the alternatives would result in any increase or decrease in direct or indirect GHG emissions from motorized vehicles or livestock grazing.	None of the alternatives would lead to a change in the motorized vehicle use or miles traveled in the planning area, and therefore none of the alternatives would result in any increase or decrease in direct or indirect GHG emissions from motorized vehicles or livestock grazing.

Table 4.15-1. Impact Comparison

Resource	No Action Alternative	Alternative 2	Alternative 3	Alternative 4
<p>Geology, Soil, and Water Resources</p>	<p>The mileage of routes near desert washes and riparian areas in Alternative 1 is slightly higher than in Alternative 2. Soil and riparian impacts would decrease as a result of livestock grazing measures adopted in the 2006 WEMO Plan. The magnitude of erosion and compaction impacts would be higher for No Action than Alternative 2, and would be higher than under other alternatives if future grazing is authorized in vacant allotments under the 2006 WEMO Plan. Riparian impacts do not substantially vary between alternatives since most natural water sources used by livestock are excluded by fencing.</p>	<p>The route network under Alternative 2 would have the lowest mileage of motorized routes in close proximity to washes, riparian areas, springs, and erosion-prone areas. Therefore, it would have the lowest magnitude of direct, adverse impacts to geology, soil, and water resources, and the lowest contribution to cumulative impacts. The magnitude of erosion and compaction impacts would be lower for Alternative 2 than for all other alternatives. Riparian impacts are the same as No Action.</p>	<p>The route network under Alternative 3 would have the highest mileage of motorized routes in close proximity to washes, riparian areas, springs, and erosion-prone areas. Therefore, it would have the largest magnitude of direct, adverse impacts to geology, soil, and water resources, and the largest contribution to cumulative impacts. The magnitude of erosion and compaction impacts could be lower for Alternative 3 than for No Action, over the long term (if future grazing is authorized under No Action), and would be higher than Alternative 2. Riparian impacts are the same as No Action.</p>	<p>The mileage of routes near desert washes and riparian areas in Alternative 4 is approximately the same as Alternative 1. The magnitude of erosion and compaction impacts could be lower for Alternative 4 than for No Action, over the long term (if future grazing is authorized), and would be higher than Alternative 2. Riparian impacts are the same as No Action.</p>

Table 4.15-1. Impact Comparison

Resource	No Action Alternative	Alternative 2	Alternative 3	Alternative 4
Vegetation	<p>The mileage of routes in close proximity to sensitive vegetation communities, special status plants, and UPAs in Alternative 1 is slightly higher than in Alternative 2. Grazing impacts would be higher than under Alternative 2, even with measures adopted in the 2006 WEMO Plan, because more forage in sensitive species habitat would potentially be available for livestock grazing. Grazing impacts would not substantially vary between other Alternatives, in the short-term, and would be higher than under other alternatives if future grazing is authorized in vacant allotments under the 2006 WEMO Plan.</p>	<p>The route network under Alternative 2 would have the lowest mileage of motorized routes in close proximity to identified vegetation resources. It would also have the most protective minimization and mitigation measures applied to use of those routes, and the most protective goals and objectives to be used in evaluating future routes. Therefore, it would have the lowest magnitude of direct, adverse impacts to vegetation, and the lowest contribution to adverse cumulative impacts. Grazing impacts would be lower under this alternative than other Alternatives because forage in sensitive species habitat would immediately become unavailable for livestock grazing.</p>	<p>The route network under Alternative 3 would have the highest mileage of motorized routes in close proximity to identified vegetation resources. It would also have the least protective minimization and mitigation measures applied to use of those routes, and the least protective goals and objectives to be used in evaluating future routes. Therefore, it would have the largest magnitude of direct, adverse impacts to vegetation resources, and the largest contribution to adverse cumulative impacts. Grazing impacts are more than Alternative 2 and the same as No Action in the short term, but may be lower over the longer term.</p>	<p>The mileage of routes in close proximity to sensitive vegetation communities, special status plants, and UPAs in Alternative 4 is approximately the same as in Alternative 1. Grazing impacts are more than Alternative 2 and the same as Alternative 3.</p>

Table 4.15-1. Impact Comparison

Resource	No Action Alternative	Alternative 2	Alternative 3	Alternative 4
Wildlife	<p>The mileage of routes in close proximity to special status wildlife areas in Alternative 1 is slightly higher than in Alternative 2.</p> <p>Grazing impacts to wildlife are the same as impacts for vegetation; they would be higher under No Action than Alternative 2, and, over the long-term higher under No Action than under Alternative 3 or 4 impacts.</p>	<p>The route network under Alternative 2 would have the lowest mileage of motorized routes in close proximity to identified wildlife areas. It would also have the most protective minimization and mitigation measures applied to use of those routes, and the most protective goals and objectives to be used in evaluating future routes. Therefore, it would have the lowest magnitude of direct, adverse impacts to wildlife, and the lowest contribution to adverse cumulative impacts.</p> <p>Grazing impacts to wildlife are the same as impacts for vegetation; they would be lower under Alternative 2 than the other alternatives.</p>	<p>The route network under Alternative 3 would have the highest mileage of motorized routes in close proximity to identified wildlife areas. It would also have the least protective minimization and mitigation measures applied to use of those routes, and the least protective goals and objectives to be used in evaluating future routes. Therefore, it would have the largest magnitude of direct, adverse impacts to wildlife resources, and the largest contribution to adverse cumulative impacts.</p> <p>Grazing impacts to wildlife are the same as impacts for vegetation; Alternative 3 impacts would be lower than under No Action and higher than under Alternative 2.</p>	<p>The mileage of routes in close proximity to special status wildlife areas in Alternative 4 is slightly higher than in Alternative 1.</p> <p>Grazing impacts to wildlife are the same as impacts for vegetation; Alternative 4 impacts would be lower than under No Action and higher than under Alternative 2.</p>

Table 4.15-1. Impact Comparison

Resource	No Action Alternative	Alternative 2	Alternative 3	Alternative 4
Socioeconomics	<p>The mileage of routes available to support recreation and authorized users in Alternative 1 is slightly higher than in Alternative 2.</p> <p>Grazing impacts from the No Action alternative have been adverse to specific lessees, particularly in the sheep grazing community. Impacts would not substantially vary between No Action and Alternatives 3 or 4, but would be lower than under Alternative 2.</p>	<p>The route network under Alternative 2 would have the lowest mileage of motorized routes available to support recreation and authorized users of BLM lands. Although access for these users would still be available, this alternative would increase the density of recreational use, possibly having a slight adverse impact on recreation-focused businesses. Access for authorized users would also be maintained, but it would require a greater length of travel for some users, again having a slight adverse impact. Impacts under Alternative 2 are higher than under the other Alternatives because it would result in an additional loss to individual lessees and the local tax base.</p>	<p>The route network under Alternative 3 would have the largest mileage of motorized routes available to support recreation and authorized users of BLM lands. The increase in the mileage of motorized routes would be a beneficial impact to recreation-focused businesses and other authorized users, as compared to the No Action Alternative.</p> <p>Impacts are the same as No Action.</p>	<p>The mileage of routes available to support recreation and authorized users in Alternative 4 is slightly higher than in Alternative 1.</p> <p>Impacts are the same as No Action.</p>

Table 4.15-1. Impact Comparison

Resource	No Action Alternative	Alternative 2	Alternative 3	Alternative 4
Recreation	The mileage of routes available to support recreation in Alternative 1 is slightly higher than in Alternative 2. There are no substantial grazing impacts under any of the alternatives.	The route network under Alternative 2 would have the lowest mileage of motorized routes available to support recreation. Although access for these users would still be available, this alternative would increase the density of recreational use in areas that remain open, thus having an adverse impact on the recreation experience.	The route network under Alternative 3 would have the largest mileage of motorized routes available to support recreation. The increase in the mileage of motorized routes would allow recreational users to be more dispersed, increasing their recreational experience and serving as a beneficial impact as compared to the No Action Alternative.	The mileage of routes available to support recreation in Alternative 4 is slightly higher than in Alternative 1.

Table 4.15-1. Impact Comparison

Resource	No Action Alternative	Alternative 2	Alternative 3	Alternative 4
Livestock Grazing	<p>The mileage of routes available to support authorized users in Alternative 1 is slightly higher than in Alternative 2. Livestock grazing would continue on 30 active allotments under the terms and conditions contained in the Final Grazing Decisions for active allotments in the West Mojave Planning Area. Grazing would be evaluated on a case-by-case basis on 13 inactive allotments when new applications are received.</p>	<p>The route network under Alternative 2 would have the lowest mileage of motorized routes available to support the operations of grazing permittees and lessees. Although access for these users would still be available, this alternative may increase the length of routes those operators need to travel to support their operations, thus having an adverse impact on grazing operations. This impact would contribute incrementally to adverse cumulative impacts to grazing due to resource protections and other authorized uses.</p> <p>Livestock grazing would be discontinued on 3 active grazing allotments in portions within DWMA and CHUs, and would be unavailable on 2 inactive, vacant allotments and a small portion of a 3rd inactive, vacant allotment within DMWAs and CHUs within the West Mojave Planning Area.</p>	<p>The route network under Alternative 3 would have the largest mileage of motorized routes available to support the operations of grazing permittees and lessees. By increasing the mileage of motorized routes within grazing allotments, this alternative would have a beneficial impact on the operators of those allotments. Overall impacts to the allotments due to other factors, such as resource protections and other authorized projects, would continue to have an adverse cumulative impact to grazing.</p>	<p>The mileage of routes available to support grazing in Alternative 4 is slightly higher than in Alternative 1. Livestock grazing would be unavailable on 2 currently inactive, vacant grazing allotments and a small portion of a 3rd inactive, vacant allotment within DMWAs and CHUs, as well as the DWMA and CHU portions of those that become inactive and vacant in the future within the West Mojave Planning Area.</p>

Table 4.15-1. Impact Comparison

Resource	No Action Alternative	Alternative 2	Alternative 3	Alternative 4
Energy Production, Utility Corridors, and Other Land Uses	The mileage of the existing authorized or permitted routes are the same in all alternatives. There are no substantial grazing impacts under any of the alternatives.	The route network under Alternative 2 would have the lowest mileage of motorized routes available to support access for any new authorized users for energy production, utility corridors, mining, communications sites, and other facilities. Although access for these users would still be available, this alternative may increase the length of routes those users need to travel to support their new operations. This impact would contribute, incrementally, to adverse cumulative impacts to these land uses due to resource protections and other authorized uses.	The route network under Alternative 3 would have the largest mileage of motorized routes available to support access for new authorized users for energy production, utility corridors, mining, communications sites, and other facilities. By increasing the mileage of motorized routes, this alternative would have a beneficial impact on the operators of those new facilities. Overall impacts to these operations due to other factors, such as resource protections, would continue to have an adverse cumulative impact to other land uses.	The mileage of routes available to support authorized users in Alternative 4 is slightly higher than in Alternative 1.

Table 4.15-1. Impact Comparison

Resource	No Action Alternative	Alternative 2	Alternative 3	Alternative 4
<p>Cultural Resources</p>	<p>The mileage of routes in close proximity to known cultural resources in Alternative 1 is slightly higher than in Alternative 2. Grazing impacts would be the same as Alternatives 3 and 4 and somewhat higher than under Alternative 2 due to the modest potential for additional damage of cultural resources by livestock on the three actively grazed allotments in DWMA's and CHUs.</p>	<p>The route network under Alternative 2 would have the lowest mileage of motorized routes in close proximity to identified cultural resources. It would also have the most protective minimization and mitigation measures applied to use of those routes, and the most protective goals and objectives to be used in evaluating future routes. Therefore, it would have the lowest magnitude of direct, adverse impacts to cultural resources, and the lowest contribution to cumulative impacts. Grazing impacts would be lower under Alternative 2 than under the No Action and other alternatives because any potential for additional damage of cultural resources by livestock on the three currently grazed allotments in DWMA's and CHUs would be eliminated.</p>	<p>The route network under Alternative 3 would have the highest mileage of motorized routes in close proximity to identified cultural resources. It would also have the least protective minimization and mitigation measures applied to use of those routes, and the least protective goals and objectives to be used in evaluating future routes. Therefore, it would have the largest magnitude of direct, adverse impacts to cultural resources, and the largest contribution to cumulative impacts. Grazing impacts are the same as the No Action alternative.</p>	<p>The mileage of routes in close proximity to known cultural resources in Alternative 4 is slightly higher than in Alternative 1. Grazing impacts are the same as the No Action alternative.</p>

Table 4.15-1. Impact Comparison

Resource	No Action Alternative	Alternative 2	Alternative 3	Alternative 4
Visual Resources	<p>The mileage of motorized routes in the most sensitive VRI classes (Class I and II) is slightly higher than in Alternative 2, slightly lower than Alternative 4, but much lower than Alternative 3. There are no substantial grazing impacts under any of the alternatives.</p>	<p>The mileage of motorized routes in the most sensitive VRI classes (Class I and II) is lowest in Alternative 2. Although remaining motorized routes would continue to have an adverse impact on the visual character of the desert, closure of routes would lead to a beneficial impact by allowing routes to re-vegetate and rehabilitate. The route network under Alternative 2 would have the largest mileage of closed routes, and would therefore have a beneficial impact on visual resources, as compared to the No Action Alternative.</p>	<p>The mileage of motorized routes in the most sensitive VRI classes (Class I and II) is highest in Alternative 3. The route network under Alternative 3 would have the lowest mileage of closed routes, and would therefore have an adverse impact on visual resources, as compared to the No Action Alternative.</p>	<p>The mileage of motorized routes in the most sensitive VRI classes (Class I and II) is slightly higher than in Alternatives 1 and 2, but much lower than Alternative 3.</p>

Table 4.15-1. Impact Comparison

Resource	No Action Alternative	Alternative 2	Alternative 3	Alternative 4
Special Designations	<p>The mileage of motorized routes in ACECs, DWMA, wilderness, WSAs, and LWCs is slightly higher than in Alternative 2, slightly lower than Alternative 4, but much lower than Alternative 3. Grazing impacts would be higher than under Alternative 2, even with measures adopted in the 2006 WEMO Plan, because more specially designated areas would potentially be available for livestock grazing. Grazing impacts would not substantially vary between other Alternatives in the short-term, and would be higher under No Action than under the other alternatives, which eliminate the potential for future grazing in additional special areas.</p>	<p>The mileage of motorized routes in ACECs, DWMA, wilderness, WSAs, and LWCs is lowest in Alternative 2. This alternative would also have the most protective minimization and mitigation measures applied to use of those routes, and the most protective goals and objectives to be used in evaluating future routes. Therefore, it would have the lowest magnitude of direct, adverse impacts to special designation areas, and the lowest contribution to cumulative impacts. Grazing impacts would be lower under this alternative than other Alternatives because ACECs that are DWMA and wilderness would immediately become unavailable for livestock grazing or damage.</p>	<p>The mileage of motorized routes in ACECs, DWMA, wilderness, WSAs, and LWCs is highest in Alternative 3. This alternative would also have the least protective minimization and mitigation measures applied to use of those routes, and the least protective goals and objectives to be used in evaluating future routes. Therefore, it would have the largest magnitude of direct, adverse impacts to special designation areas, and the largest contribution to cumulative impacts. Grazing impacts are more than Alternative 2 and the same as No Action in the short term, but lower over the longer term.</p>	<p>The mileage of motorized routes in ACECs, DWMA, wilderness, WSAs, and LWCs is slightly higher than in Alternatives 1 and 2, but much lower than Alternative 3. Grazing impacts are the same as Alternative 3.</p>
Noise	<p>The mileage of routes near sensitive receptors and residences is only slightly more than in Alternative 2, and much less than in Alternative 3. There are no substantial grazing impacts or differences among the alternatives.</p>	<p>The route network under Alternative 2 would have the lowest mileage of motorized routes within close proximity to sensitive human receptors, residences, and wildlife receptors. Therefore, it would have the lowest magnitude of direct, adverse impacts resulting from noise, and the lowest contribution to cumulative impacts.</p>	<p>The route network under Alternative 3 would have the largest mileage of motorized routes within close proximity to sensitive human receptors, residences, and wildlife receptors. Therefore, it would have the largest magnitude of direct, adverse impacts resulting from noise, and the largest contribution to cumulative impacts.</p>	<p>The mileage of routes near sensitive receptors and residences is only approximately the same as in Alternative 1.</p>

Table 4.15-1. Impact Comparison

Resource	No Action Alternative	Alternative 2	Alternative 3	Alternative 4
Travel and Transportation Management	<p>The route network under all alternatives has been designed to ensure connectivity with route networks in adjacent jurisdictions, and to ensure access to public land holdings and authorized users. The No Action Alternative would maintain the current level of connections and access, and would therefore have no impact on travel and transportation management.</p> <p>There are no substantial grazing impacts to the alternatives. There would continue to be limited routes required under No Action and Alternatives 3 and 4 that would no longer be needed under Alternative 2, but they do not substantively affect the overall travel network.</p>	<p>Alternative 2 has been designed to maintain connections with adjacent jurisdictions and ensure access to private land and authorized users. However, by closure of some unauthorized routes to increase resource protections, this alternative may increase the length of routes that some users may travel to access these areas. As a result, this alternative would have a slight adverse, direct impact to travel and transportation management.</p> <p>There are no substantial grazing impacts to the TTM alternatives. Miles of limited routes may eventually be slightly lower under Alternative 2 than the other alternatives if routes are not needed for other purposes.</p>	<p>Alternative 3 would result in the widest network of motorized routes, maximizing connections to adjacent jurisdictions and access to private land and authorized users. As a result, this alternative would have a direct, beneficial impact to travel and transportation management.</p> <p>There are no substantial grazing impacts to the TTM alternatives.</p>	<p>Like all alternatives, Alternative 4 has been designed to ensure connectivity with route networks in adjacent jurisdictions, and to ensure access to public land holdings and authorized users. However, this alternative has been designed to incorporate specific comments regarding access to specific locations and users. As a result, Alternative 4 would be the most beneficial to travel and transportation management.</p> <p>There are no substantial grazing impacts to the TTM alternatives.</p>