Appendix E

Response to Public Comments

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Response to Public Comments

This appendix contains public comments on the Bureau of Land Management's (BLM) Draft Environmental Impact Statement (EIS) for Previously Issued Oil and Gas Leases in the White River National Forest (WRNF), along with responses to those comments. Comments were obtained through the National Environmental Policy Act (NEPA) public involvement process, which includes publishing a Notice of Availability (NOA) for the Draft EIS in the *Federal Register*, news releases, and public meetings. The news release announcing the public comment period was issued on November 17, 2015, and the Federal Register notice was made available three days later on November 20, 2015. As the deadline to submit comments was January 8, 2016, the document was available to the public for 51 days.

E.1 Draft EIS Availability and Public Meetings Advertising

Advertising of the Draft EIS availability and public meetings advertising was accomplished through the following methods:

- BLM News Release announcing the availability of the Draft EIS, which was released on November 17, 2015;
- Federal Register NOA of the Draft EIS, which was published November 20, 2015, and
- Email announcements sent on November 19, 2015 to everyone who had provided the BLM with a valid email address during previous phases of the project.

Each method announced the availability of the Draft EIS and provided: 1) a link to the project website; 2) the BLM project email address to which comments on the Draft EIS might be sent and the due date for those comments; 3) the dates and venue information for three public meetings. In addition to posting links to the Draft EIS, the BLM project website also posted meeting information and comment methods and deadlines, as well as answers to frequently asked questions.

E.2 Public Meetings

Three public meetings for the Draft EIS were held in communities located near the project area, where the greatest impacts from future oil and gas development in the WRNF may be experienced. The locations and meeting dates were as follows:

- Glenwood Springs, Colorado – Monday, December 14, 2015
- De Beque, Colorado – Tuesday, December 15, 2015
- Carbondale, Colorado – Wednesday, December 16, 2015

The meetings included an open house session, followed by a brief presentation of project alternatives and an opportunity for any attendees to provide formal oral comments. In order to ensure the public was provided sufficient information regarding the project, the BLM Field Office Manager, Project Manager, Public Affairs Officer, State Office personnel, and multiple resource specialists were available at each meeting to answer questions. Each meeting also had display boards presenting alternative stipulation coverage and key resource impacts by alternative. All oral comments provided by the public were recorded and transcribed.

There were 94 people in attendance at the Glenwood Springs meeting, which produced 22 oral and 13 written comments. The DeBeque meeting was attended by 8 people, which produced one and no

written comments. The Carbondale meeting was attended by 240 people, and produced 59 oral and 16 written comments.

Public meeting presentation materials were included on the project website.

E.3 Formal Submissions

During the formal comment period, the BLM received a total of 60,515 submissions, in the form of letters, emails, faxes, testimony at an agency-sponsored public meeting, or other methods. Each submission submittal varied in content, and ranged from one to several comments that contained technical information, suggestions for improving the content of the Draft EIS, as well as personal opinions.

The vast majority of the submissions were form letters, which contained identical or near identical text submitted by more than one person. These form letters were submitted by the constituents of several nongovernmental (NGO) organizations or groups and contained comments regarding alternatives evaluated and the issues discussed in the Draft EIS. In some cases, there was additional information added to a form letter that was also analyzed for entry into the comment database. These additional comments were coded if the analysis determined the content was not redundant with the information presented in the form letter itself. In other cases, submissions included supporting information containing potential references to be in evaluated for use in the EIS, or additional comments compiled by the entity in support of the comment letter. **Table E-1** presents a summary of submission by type. **Table E-2** identifies the submittal methods that were utilized by respondents. **Table E-3** identifies the affiliation of each respondent. **Table E-4** provides a submission count and summary of the content of each of the form letters.

Table E-1 Number of Submission by Type

Submittal Type	Count
Form Letters	59,413
Form Letter “Plus”	829
Individual	273
TOTAL	**60,515**

Table E-2 Number of Individual and Form Plus Submission by Submittal Method

Submittal Method	Count
Email	893
Fax	1
Letter	139
Meeting Submittal	73
Other	2
TOTAL	**1,108**

Total does not include any form letters, which were submitted through email and/or or compiled by the organization and submitted in bulk.

Table E-3 Number of Individual and Form Plus Submittals by Entity

Submittals by Entity	Count[1]
Individual	1,048
Federal Agency	5
State Agency	2
Local Agency	13
NGO/Special Interest[2]	25
Business	15
TOTAL	**1,108**

[1] Total does not include form letters, which are largely-- but not exclusively --from individuals.

[2] One submittal by Earthjustice includes 14 additional NGOs as signatories: Wilderness Workshop, the Sierra Club, Rocky Mountain Wild, Western Resource Advocates, Center for Biological Diversity, Natural Resources Defense Council, The Wilderness Society, Conservation Colorado, Great Old Broads for Wilderness, EcoFlight, High Country Conservation Advocates, Citizens for a Healthy Community, San Juan Citizens Alliance, and Western Colorado Congress.

On June 10, 2016, the BLM received addendums to two submissions (SG Interests and WSCOGA) included in **Table E-3**. The addendum referenced a new study to be considered in the Final EIS. The BLM determined the new study constituted best available scientific information to inform BLM's NEPA process and updated the EIS to include this data. Substantive comments from the new submissions are included in Section E.8 under Reasonable Foreseeable Development Scenario (RFDS) and Process, but are not included in the total counts of submittals listed in **Tables E-1** through **E-3** or in the summary of all comments in **Table E-5**.

E.4 Content Analysis

Content analysis is a method developed for analyzing public comment. This method employs both qualitative and quantitative approaches. It is a systematic process designed to provide a mailing list of respondents and to 1) extract concerns from each submission, 2) group similar concerns from different submissions, 3) identify a comprehensive list of specific topics of concern to be addressed in the EIS. The goals of the content analysis process are to:

- Ensure that every submission is considered;
- Identify the concerns raised by all respondents; and
- Represent the breadth and depth of the public's viewpoints and concerns as fairly as possible.

Once received, the comments were coded and entered into a database. Categories were created for each resource within the Draft EIS, as well as other portions of the document such as Wildlife Resources, Alternatives, Reasonable Foreseeable Development, Purpose and Need, etc. This system allows for each of the comments to be properly distributed to relevant resource specialists. In some cases, where comments referred to more than one resource, they were given secondary codes to ensure that all relevant specialists reviewed the comments. **Table E-5** provides a summary of all comments by primary resource issue. There were a total of 1,887 distinct comments extracted from submissions.

Table E-4 Form Letter Summary

Form Letter	Count (includes Form Pluses)	Request or Opinion	Rationale or Additional Information Provided
Form Letter #1	804	Expressed support for Alternative 4.	Identified key economic, watershed, wildlife, and recreation benefits of the Thompson Divide, and indicated that the Thompson Divide has little mineral development potential. Noted that the FS has already closed the Thompson Divide to future leasing
Form Letter #2a	444	Requested that the BLM cancel all 65 leases to protect important resources.	Questioned legality of leases; lack of analysis; expressed concerns impacts to the Thompson Divide; climate change; conflict between climate goals and public lands policies related to leasing.
Form Letter #2b (same as 2a but with some slight text changes and rearrangement)	8		
Form Letter #2c (same as 2b but submitted directly by NGO as worksheet and PDF)	37,976		
Form Letter #2d (same as 2a but different subject line)	2,330		
Form Letter #2e (Same as 2a, except for the last paragraph, which referenced backcountry opportunities)	249		
Form Letter #3a (preprinted postcard)	198	Expressed support for Alternative 4 and cancelling leases in the Thompson Divide area.	Responses augmented the postcard text by providing handwritten comments regarding why Thompson Divide was important. Values included roadless areas, wilderness, recreation, scenic vistas, water, community quality of life/will of the people, heritage/availability for future generations, as well as concerns about hydraulic fracturing, insufficient infrastructure, human health and safety and climate change.
Form Letter #3b (hand revised to express support for Alternative 5 instead of Alternative 4)	131	Requested that the BLM cancel all 65 leases.	
Form Letter #4a	15	Expressed support for Alternative 4 as a balanced solution that protects critical wildlife habitat and allows for oil and gas development in more appropriate areas	Identified key wildlife and water resources in the Thompson divide; supported mixed use but indicated that Thompson Divide area resources are too valuable for sportsmen and the local

Table E-4 Form Letter Summary

Form Letter	Count (includes Form Pluses)	Request or Opinion	Rationale or Additional Information Provided
Form Letter #4b (same as above but with different layout)	314	Expressed support for Alternative 4 as a balanced solution that protects critical wildlife habitat and allows for oil and gas development in more appropriate areas	
Form Letter #5	3,247	Requested that the BLM cancel all 65 leases.	Questioned legality of leases; lack of analysis; expressed concerns impacts to the Thompson Divide; climate change; conflict between climate goals and public lands policies related to leasing.
Form Letter #6	4,343	Requested that the BLM cancel all 65 leases.	Questioned legality of leases; expressed concerns about climate change impacts from development and consumption of fossil fuels.
Form Letter #7	302	Requested cancellation of leases (no alternative specified).	"To protect Thompson Divide"
Form Letter #8	1,028	Requested cancellation of undeveloped leases in and around the Thompson Divide.	Identified key wildlife and water resources in the Thompson Divide.
Form Letter #9a	7,333	Requested the BLM cancel all 65 leases to protect important resources.	Identified values: Roadless forests providing clean drinking water, habitat for lynx, elk and other wildlife, beautiful places for hiking and camping; scenic destination for hunters, hikers and backcountry skiers; backbone of the local ranching economy
Form Letter #9b (same as 9a but collected by NGO and submitted as POD of typed letter with handwritten signatures)	135	Requested the BLM cancel all 65 leases to protect important resources.	
Form Letter #10	1,004	Expressed support for Alternative 4; but also requests the BLM cancel all 65 leases to protect important resources	Expressed concern about impacts from hydraulic fracturing; protections for roadless areas, air quality water, wildlife and community health.
Form Letter #11	381	Requested the BLM cancel all 65 leases.	Stated that all other alternatives fail to adequately protect the Thompson Divide, undeveloped aspen forest areas, bountiful wildlife, and beautiful rivers and streams.
TOTAL	**60,242**		

Table E-5 Comment Count by Issue

Resource	Code
Purpose and Need and Process	135
Proposed Action and Alternatives	
Proposed Action and Alternatives	32
Reasonable Foreseeable Development and development assumptions	39
New Alternatives	400
Resource Issues	
Air Quality and Greenhouse Gas/Climate Change	54
Geology/Minerals/ Paleontology	30
Soils	4
Water Resources	67
Vegetation, Riparian and Wetlands, Special Status Species and Noxious Weeds	27
Terrestrial Wildlife, including Special Status Species	39
Aquatic Resources	7
Transportation	32
Lands and Special Uses	22
Special Designations	10
Recreation	46
Livestock Grazing	12
Scenic Resources	9
Hazardous Materials /Human Health and Safety	41
Socio-economics	100
Non-resource-specific analysis comments	
Short term use- Long term productivity	14
Irreversible and Irretrievable Impacts	4
Mitigation	2
Cumulative Impacts	9
Editorial	2
Consultation and Coordination	
Consultation and coordination	21
Mailing List Requests	7
Comment Period	34
Opinion Only	**669**
Other	**19**
TOTAL	**1,887**

E.5 Comment Disposition

Once coded, comments were reviewed and categorized as substantive or non-substantive. A substantive comment is one that reasonably questions the accuracy and/or adequacy of information presented in the Draft EIS; presents reasonable alternatives other than those analyzed in the EIS or causes changes or revisions one or more of the alternatives; or questions the adequacy of the planning process itself. In accordance with NEPA guidelines, the BLM is required to formally respond to all public comments identified as substantive. A non-substantive comment generally presents an unsupported personal preference or opinion, or may provide information not directly related to Draft EIS content. Although non-substantive comments, including personal preferences and opinions, may be may be considered by the decision-maker as he or she chooses the agency's Preferred Alternative, they generally do not affect the analysis. The BLM is not required to respond to non-substantive comments. **Table E-6** provides a summary of comment disposition and where the reader may find substantive and non-substantive comments and responses (if applicable).

Table E-6 Comment Disposition Coding and Response

Comment Disposition		Description of Comment and Response
S-C	Substantive, change made in the EIS	The comment is substantive and requires a response and a change in the final NEPA document. Responses are included in Section E-7. Reponses indicates where and how the DEIS was changed.
S-NC	Substantive, no change made in the EIS	The comment is substantive and requires a response, but does not require a change in the final NEPA document. Responses are included in Section E-7. Reponses indicates where the existing analysis is already contained in the EIS or why the DEIS was not changed.
NS	Non Substantive	The comment is not substantive. No response required; however, the Table in Section E.6.1 provides a summary of NS issues and where these issues are addressed in the EIS or where the reader may find responses to related substantive comments
OOS	Out of Scope	The comment is out of the scope of the project or NEPA process. No response required; however, Section E.6.2 provides a summary of OOS issues and rationale for why the comment was not considered further.

E.6 Response to Draft EIS Comment Period Extension Requests

As noted in Table E-5, the BLM received 34 comments related to the Draft EIS comment period, most of which formally requested an extension of the comment period to 90 days. Comments cited the following as rationale:

- The comment period covered a timeframe in which there were three federal holidays.
- The comment period occurred during the same period as the Roan Plateau EIS (which had a 90-day comment period).
- The WRNF Draft EIS is 1,344 pages long, requiring considerable time to digest, analyze, and prepare comments. The EIS also refers the reader to the 2014 Oil and Gas Leasing Final EIS and Record of Decision (ROD), which is an entirely separate effort and which must also be reviewed.
- Because the BLM has not selected a Preferred Alternative in the Draft EIS, reviewers must analyze in detail the implications of all five alternatives.
- BLM's action proposed in the WRNF is more akin to a planning decision than a site-specific decision; a 90-day comment period is required for land use plan per the BLM NEPA Handbook.

- Extension requests are not uncommon; BLM's NEPA Handbook identifies a 45-day comment period on a DEIS as the shortest comment period allowed and notes, "...but some programs require longer comment periods."

After careful consideration, the BLM determined that the existing comment period, public meetings, and other public processes, have provided adequate time for meaningful public review and comment on the issues raised in the EIS, while maintaining a transparent and effective process that ensures timely completion of the EIS. The BLM responded to each of these requests in writing during the public comment period. Response clarified that the press release announcing the public comment period was issued on November 17, 2015, and the Federal Register notice was made available three days later on November 20the following, provided a total of 51 days for comment. The response also noted the following:

- The BLM has taken several steps to ensure a transparent process and the engagement of the public, lease holders, and other stakeholders.
- The Draft EIS has been available online since its announcement.
- The BLM also hosted three public meetings (December 14, 15, and 16) to answer questions, provide information, and take comments.
- Throughout the development of the Draft EIS, the BLM has allowed lease holders, the public and other stakeholders to observe our cooperating agency meetings.
- The BLM has been responsive to inquiries throughout this process.
- The EIS is not a planning document and therefore not required to have a 90 day comment period.

Paired with the parallel Forest Service process examining other aspects of oil and gas leasing in the White River National Forest, the BLM believes there have been substantial opportunities to obtain public input on these important issues.

E.7 Responses to Non-Substantive and Out of Scope Comments

E.7.1 Non-Substantive Comments

The majority of comments received were non-substantive comments that were in favor of or against the proposed action or alternatives; agreed or disagreed with BLM policy or resource decisions; or expressed general resource concerns rather than specific comments about the methodology or assumptions used in the analysis. While the BLM is not required to respond to non-substantive comments, the BLM has reviewed and considered all comments. It should also be noted that BLM received many of the same types of comments during public scoping and has therefore also considered them during alternatives development and during preparation of the Draft EIS. **Table E-7** includes a summary of these concerns as well as a general response that indicating where the EIS addresses these issues or which summarizes key points from responses to more substantive comments.

Table E-7 Summary of Non-Substantive Comments

Resource	Concern	Response
Air Quality	General concern about air quality	Impacts to air quality are disclosed in Section 4.2. See also responses to substantive comments regarding air quality.
	General concerns about climate change or support for renewable energy to reduce impacts	Impacts to climate changes are disclosed in Section 4.2. See also response to out of scope comments and responses to substantive comments regarding climate change.
Aquatics	General concern about cutthroat trout habitat	Native trout populations including the Colorado River cutthroat trout lineages are analyzed in Section 4.8. See responses to substantive comments regarding aquatic resources.
Cumulative Impacts	General concern about lack of planning	Appendix B, Cumulative Impacts Scenario, presents estimates of all past, present, and reasonably foreseeable future development for actions such as oil and gas and other development. These estimates have been incorporated into the impacts analysis for each resource to enable the BLM to make an informed decision that considers cumulative effects.
Geology	General concerns about earthquakes	See responses to substantive comments regarding induced seismicity.
	General concerns about hydraulic fracturing	As noted in Section 4.16.2.3, page 4.16-11, “Hydraulic fracturing has been implicated as a potential source of groundwater contamination and concerns have been raised about potential impacts to human health and safety. However to date, no contamination has been attributed to hydraulic fracturing in the analysis area (USFS 2014a). As noted in the 2014 Final EIS, the COGCC published an analysis in 2011 of hydraulic fracturing technology use in the state and potential risks to human health and the environment. The introduction to that report included the following paragraph: “Hydraulic fracturing has occurred in Colorado since 1947. Nearly all active wells in Colorado have been hydraulically fractured. The COGCC serves as first responder to incidents and complaints concerning oil and gas wells, including those related to hydraulic fracturing. To date, the COGCC has not verified any instances of groundwater contaminated by hydraulic fracturing” (USFS 2014a). “
Hazardous materials/human health and safety	Concerns about chemicals used in drilling, radioactive materials, risk of spills, vehicular safety	As discussed in Section 4.16.2.3, the lack of specific evidence linking oil and gas operations with contaminated water wells or other health risks does not preclude the fact oil and gas operations use and produce toxic contaminants that can adversely affect human health above certain levels of amount and duration of exposure. Section 4.16.1.4 provides pipeline incident rates and produced water spill rates by alternative. Section 4.16.2.3 discusses the potential risk of fire, and impacts to emergency services and transportation safety. Potential risks would be statistically related to the amount of oil and gas activity as well as proximity to sensitive receptors, public water supplies, etc. Risk of adverse impacts would vary by alternative.

Table E-7 Summary of Non-Substantive Comments

Resource	Concern	Response
Irretrievable and Irreversible Impacts	Concern about permanence of impacts	As noted in Section 4.20.7, loss of habitat would be considered an irretrievable commitment of the resource until reclamation. The section notes that while some vegetation communities are expected to return to a native state within in a relatively short period of time, other more sensitive habitats, such as sagebrush shrublands, may require up to 50 years or longer to return to native conditions.
Land and Special Uses	Examples of other impacts to private lands, presence of conservation easements	Comment noted. Conservation easements are discussed in Section 4.11. Development would not occur within conservation easement.
Mailing List	Additions, deletions	Mailing list updated as requested.
Opinion Only	General opposition to oil and gas development	Comment noted.
	General support for oil and gas development	
	Support for Alternative 1	Each alternative represents a course of action that addresses issues and concerns to varying degrees. The BLM will select an alternative based upon the overall analysis of environmental impacts, socio-economic considerations, other relevant factors, and the balance of agency statutory requirements and regulations. The basis for alternative selection will be specified in the ROD. Section 101(b) of NEPA outlines the six substantive elements, which include attaining "the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences" and "…approach the maximum attainable recycling of depletable resources" (42 USC § 4331 (b)(3) and (6)). In order to comply with NEPA, the BLM must evaluate which alternative best meets the needs of the public, the environment, and the recovery of oil and gas resources as required by law.
	Support for Alternative 2	
	Support for Alternative 3	
	Support for Alternative 4	
	Support for Alternative 5	
Process	General declarations about the need for an EIS, decision-making process	See response to substantive Process comments.
Public involvement	Comments noting that the general public does not support leasing in the Thompson Divide area	Appendix E, Response to Comments on the EIS, contains a summary of public meeting attendance, opinion and alternative preferences, as well as all substantive comments and responses. The public scoping report, which is available on the CRFVO's website, also discusses these issues.
Purpose and Need	General statements about the BLM's or Forest Service's mission vis-a- vis oil and gas development	See response to substantive Purpose and Need comments. Both the BLM and Forest Service manage public lands for multiple use objectives.
Recreation	Concern about impacts to recreation in the Thompson	While it assumed that recreation and recreation-oriented tourism may still occur with oil and gas development, Section 4.13.3.1 acknowledges that the quality and quantity of the recreation opportunities would likely change or

Table E-7 Summary of Non-Substantive Comments

Resource	Concern	Response
	Divide, recreation-based economy	diminish proportionately to the level of oil and gas development. Impacts would vary by alternative. Sections 4.13 and 4.17 further detail potential recreational and socioeconomic effects, respectively.
Scenic Resources	Concern about impacts to viewsheds or recreation	Section 4.15 discusses impacts to scenic resources. While the analysis discusses the general types of impacts that may occur, the degree of impact would depend on site-specific factors such as slope, vegetation, aspect and topography. Impacts would be determined at a site-specific development stage and mitigation applied as appropriate. Visibility impacts are discussed in Section 4.2, Air Quality.
Short term use-Long term productivity	General statements that the short term gain is not worth the long term disturbance	Section 4.19 discusses short-term uses of the environment and the maintenance and enhancement of long-term productivity. The section acknowledges that restoration of resource values would depend, in part, on successful reclamation as well as the timing of other potential projected oil and gas activities in the area.
Socioeconomics	Declarations regarding value of tourist economy or relative contribution of oil/gas development or recreation/tourism	See responses to substantive comments regarding the current importance of the Thompson Divide's natural qualities and resources for recreational users.
Soils	Concern about carbon release from ground disturbance	Impacts to Soils are disclosed in Section 4.3. The degree of surface disturbance would vary by alternative.
Special designations	Concern about impacts to roadless areas	Section 4.13.3.1 details the potential impacts to roadless areas from oil gas development including habitat fragmentation, natural appearing landscapes and loss of wilderness values. Impacts would vary by alternative. See also responses to substantive special designation comments.
Transportation	Concern about increases traffic, impacts to infrastructure	Tables 4.10-2 through 4.10-8 disclose the traffic impacts along the potential haul route by alternative relative to each phase of oil and gas development. Section 4.16.2.3 addresses transportation safety impacts. Section 4.17.2 acknowledges various impacts particularly related to increased traffic volumes and effects traffic has on rural roads. See also responses to substantive transportation comments.
Vegetation	Expressions for the value of trees; concern about cumulative impact of beetle kill with oil and gas drilling	Section 4.6 discloses the potential amount of surface disturbance that would occur within forested areas by alternative. Section 4.6.6 discusses cumulative impacts to vegetation (see also Appendix B, Cumulative Impacts Scenario). Section 4.2 discloses the potential impacts on climate change. See also responses to substantive vegetation comments.

Table E-7 Summary of Non-Substantive Comments

Resource	Concern	Response
Water Resources	General concern for surface water quality/quantity, impacts to groundwater, concern about spills, erosion and sedimentation	Geologic hazards (e.g., landslides) and erodible soils are identified in Sections 3.3 and 3.4. Section 4.4 discusses potential impacts to soils. Section 4.5 evaluates potential impacts to water resources, including water use, sedimentation, and contamination. Section 4.16.1.4 provides pipeline incident rates and produced water spill rates by alternative. Potential risks from groundwater-borne chemicals would be statistically related to the amount of oil and gas activity as well as proximity to sensitive receptors, public water supplies, etc. Risk of adverse impacts would vary by alternative. See also responses to substantive water resources comments
Wildlife	General concern for wildlife, particularly in the Thompson Divide	Section 4.7 includes a quantification of the potential impacts to wildlife habitat. Risk of adverse impacts would vary by alternative. Section 4.7.3, Impacts Common to All Alternatives, addresses the potential physical impacts of oil and gas development including habitat loss, habitat degradation, habitat fragmentation and isolation, interruption of wildlife movement corridors, and wildlife mortality resulting from vehicle collisions. See also responses to substantive wildlife comments.

E.7.1 Out of Scope Comments

Out of scope comments included the following:

- Statements of support for against negotiated lease exchange, buyout, or legislative removal of the existing leases;
- Requests for an alternative that would cancel additional WRNF leases outside of the 65 leases in question, cancellation of all leases in Colorado or on federal lands; consideration of renewable energy projects in place of the federal oil and gas leasing program;
- Concerns about oil and gas inspections and enforcement activities;
- Requests to expand wilderness areas;
- Concern about the reinstatement of the North Fork Coal Mining Area;
- Suggestions to repeal the General Mining Act of 1872, amend the U.S. Constitution, abolish the CFR, remove the president from office and cease all aerosol spraying by the U.S. Air Force.

As disclosed in Section 1.5 of the EIS, the decision to be made by the BLM is whether the 65 leases should be: 1) Reaffirmed with their current existing stipulations; 2) Modified with additional or different lease stipulations or additional mitigation measures; or 3) Cancelled. Consideration of negotiated lease exchange, buyout, or legislative removal of leases; renewable energy projects in place of the federal oil and gas leasing program; cancelling other leases outside of the 65 leases, repealing the General Mining Act of 1872, or taking other actions unrelated to mineral leasing is out of the scope of this EIS. The EIS does not propose to reinstate the North Fork Coal Mining Area.

Inspection and enforcement activities on public land leased for energy exploration and development are outside the scope of land use planning and are codified in regulatory laws and orders. These regulations and orders include, but are not limited to FOGRMA, 43 CFR Part 3160, The 1872 Mining Act, Onshore Orders for Oil & Gas Operations, Notice to Lessees, and specific COAs. These regulations grant enforcement and inspection officials the authority to conduct regulatory inspections, environmental compliance inspections, and production audits. It also gives them the authority to issue citations, fines, and Written Orders of the Authorized Officer, and, in specific circumstances, cessation of operations.

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E.8 Responses to Substantive Comments

The following sections present the substantive comments from each of the resources identified in Table E-5, followed by responses from the BLM. BLM responses are in shaded boxes to make them easy to find. In many cases, commenters provided similar comments within a subcategory, and the same response is therefore applied to more than one comment. Where multiple comments received the same response, the comments are grouped together and sorted by the last name of the commenter, with the BLM response in a gray shaded box following the grouped comments within that category.

Air Quality and Greenhouse Gas/Climate Change

Note: The comments are grouped together and sorted by the last name of the commenter, with the BLM response in a gray shaded box following the grouped comments within this category.

Comment:

LN-15 ties the need for subsequent mitigation to "significant impacts" as a result of the proposed project. This does not address mitigation requirements that may be identified as necessary based on cumulative analyses. The NPS recommends that based on current air quality conditions in northwestern Colorado (ozone and nitrogen deposition), regional nitrogen oxide and volatile organic compound mitigations from oil and gas may be warranted. We believe that lease stipulations are the most effective and appropriate mechanism for ensuring air quality mitigation across the planning area and region. We welcome the opportunity to discuss a cumulative approach to air quality mitigation within the region with the Colorado BLM.

JOHNSON, SUSAN; NATIONAL PARK SERVICE

BLM Response:

Air quality mitigation measures are most appropriately applied at the APD stage of actual proposed oil and gas development as conditions of approval (COAs) when the site-specific location and the types of equipment, duration of drilling and completion activities, and drilling technology are known and the impacts from such proposed actual oil and gas development suggest the need for additional mitigation above State and Federal Regulations. The current air quality related Lease Notice is a "buyer beware" and provides awareness that existing air quality might warrant the need for additional mitigation measures to be implemented but lease stipulations are not used by BLM Colorado to require mitigation measures that are best developed when more specific actual proposed oil and gas development information is known. It has already been assumed that the BLM, USFS, and operators will not be allowed to violate federal and state laws that apply to air quality standards.

No air quality impact "significant" contribution thresholds currently exist for cumulative hypothetical RFD (non-project level) oil and gas development for most impact parameters (ozone, visibility, deposition, etc.) and therefore, mitigation is not being required at this time according to CARMMS and other regional modeling analyses because BLM Federal oil and gas is not tracking at levels that BLM Colorado determines would result in "significant" air quality contributions.

Note: at this time, the BLM Colorado is using the CARMMS projected 2021 modeling results based on the WestJUMPAQMS year 2008 modeling platform for authorizing future oil and gas development. The BLM did not model beyond year 2021 because of frequent changes in pace and trends of oil and gas extraction due to prices, demand, etc. These changes make it speculative to accurately predict future air quality impacts over a longer timeframe; in addition, an adequate cumulative emissions inventory (U.S.-wide) had not been developed beyond year 2021 when conducting the air quality analysis. The BLM is working on CARMMS 2.0 that will update outdated information and the modeling platforms. CARMMS 2.0 should be ready for use Spring, 2017 and would be used for future analyses. This is consistent with BLM's adaptive management approach. The BLM Colorado through the adaptive management strategy is committed to updating CARMMS and the BLM Colorado plans to also use next iteration of CARMMS (CARMMS 2.0) that will be based on IWDW 2011 Platform and model future year 2025 impacts for authorizing future oil and gas development; modeling results for CARMMS 2.0 should be ready for use Spring, 2017.

Comment:

The Draft EIS considers potential changes to the affected environment that may occur due to climate change (Section 4.2.4). We recommend considering climate change adaptation measures where appropriate.

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

The BLM Colorado Air Resource adaptive management strategy also applies to GHG emissions and Climate Change. Following this approach, GHG emissions and Climate Change will be addressed over the Life of the Plan as future guidance and analysis suggest the need to, meaning that BLM Colorado analyses will adapt to changing times of the Science for future oil and gas authorizations. Adaptive management practices that will be considered include analyzing impact trends, management actions effectiveness and following new guidance requirements. Before any additional mitigation would be required, there would need to be a feasibility analysis and more Climate Change impact contribution analysis information and other guidance / analysis support.

Comment:

Air pollution associated both with industrial traffic and oil and gas operations on the adjoining WRNF will also impair the property's value as a recreational destination. Many recreationalists—particularly the schoolchildren who train and race at Spring Gulch—could be at risk of adverse health effects as a result of breathing polluted air. Many of the outdoor recreational pursuits that the County acquired Jerome Park to protect—such as cross country skiing at Spring Gulch and hiking or running along the Marion Gulch access—demand high levels of aerobic activity that magnify the health risks of air pollution. The County provides more detail on this concern, including documented incidences of wintertime ozone violations associated with oil and gas activity, in its discussion of air quality herein.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

As detailed in Sections 3.11.3 and 4.11.3, Jerome Park is outside the leasing zone boundary. Potential air quality effects that may occur from adjacent leasing areas are detailed in Section 4.2. Ozone contributions from the CRFVO (outside the Roan Plateau) do not amount to more than 0.2 ppb (not even 1 ppb) when the cumulative concentrations exceed the former NAAQS (75 ppb standard), thus is a minimal impact. The maximum source apportionment area contribution (2.6 ppb) is expected to occur when cumulative concentrations are below the NAAQS.

Comment:

Though the CARPP includes a list of potential mitigation measures to be applied at the project level, it provides operators with little to no certainty as to what regulatory requirements the BLM plans to impose. For example, the CARPP proposes the following Statewide Lease Notice: Due to potential air quality concerns, supplementary air quality analysis may be required for any proposed development of this lease. This may include preparing a comprehensive emissions inventory, performing air quality modeling, and initiating interagency consultation with affected land managers and air quality regulators to determine potential mitigation options for any predicted significant impacts from the proposed development. Potential mitigation may include limiting the time, place, and pace of any proposed development, as well as providing for the best air quality control technology and/or management practices necessary to achieve areawide air resource protection objectives. Mitigation measures would be analyzed through the appropriate level of NEPA analysis to determine effectiveness, and will be required or implemented as a permit condition of approval (COA). At a minimum, all projects and permitted uses implemented under this lease will comply with all applicable National Ambient Air Quality Standards and ensure Air Quality Related Values are protected in nearby Class I or Sensitive Class II areas that are afforded additional air quality protection under the Clean Air Act (CAA). CARPP, pg. 10; see Draft EIS, pg. 2-16. This proposed lease notice provides operators with no certainty and no details as to how the BLM will determine which mitigation measures to impose and why. The BLM, for example, may require that an operator use Tier IV, natural gas fired, or electrified drill rigs, but operators will most likely not know which requirement applies until the BLM completes required analysis at the project level. The CDPHE requirements provide operators with far more detail and certainty regarding the regulatory requirements they must implement to protect air quality. This statewide lease notice is, accordingly, inappropriate and the references to it in the Draft EIS and to the CARPP as a whole should be removed in the FEIS and ROD.

SCHOPP, JOHN; ENCANA OIL & GAS

BLM Response:

Because this EIS is a leasing analysis without site-specific knowledge of proposed oil and gas development facilities or the specific types of equipment and drilling technology to be used for each lease, it is impossible to provide certainty on the necessary mitigation measures or site-specific regulatory requirements that would be applied at the project level for future oil and gas development on the Leases. The reference to the CARPP and the lease notice, however, discloses the types of air quality analysis and mitigation measures that may be required at the APD stage of actual proposed oil and gas development. This is the typical approach used during NEPA analysis at the planning level when there is no certainty about precise numbers and locations of wells and detailed information for ancillary facilities and air pollutant emissions sources. Emissions control requirements would depend on existing air quality and other unique factors (new regulations, policies, updated air quality models /analyses, etc.) specific for the time when actual oil and gas development is proposed. As stated in the EIS and in CARPP, additional mitigation measures may be required on a case-by-case basis. Appendix A of the CARPP describes the process for oil and gas NEPA analyses.

Comment:

Impacts will depend on variable conditions with weather patterns and precipitation. The air born particulates, ozone, acid neutralizing components could conceivably be dampened by triggers on the number of active sites per square mile. It is logical that a ceiling could be determined by researching the data which implicated unacceptable air quality from historic information. The effect of air quality does have components that impact water quality cumulatively. The buffering capacity of the water resources may become overwhelmed as the development intensity increases. Cancelling the Zone 3 leases will contribute to maintaining air quality in that area and neighboring communities. Although difficult to quantify or put a price tag on, the positive impacts of avoiding local emissions from this undeveloped landscape contrasts sharply with the potential for pollution from dust, traffic, and oil and gas operations. Alternative 4 will provide important local and regional benefits for air quality and visibility, both of which are fundamental economic drivers and quality of life considerations.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

CARMMS modeled a whole year of meteorology (2008) and therefore considered a wide range of meteorological conditions. As described in the EIS, BLM Colorado will analyze potential air quality impacts as actual proposed oil and gas development plans are received.

Comment:

With regard to the air quality analysis presented in the Environmental Consequences, Chapter 4 of the document, we believe that the Colorado Air Resources Management Modeling Study assessment is a robust analysis, and concur with the proposal to include the results in the EIS for previously issued oil and gas leases in the White River National Forest. We also believe that a standardized process for tracking emissions and determining when additional analysis is required for project-specific NEPA documents is appropriate.

JOHNSON, SUSAN; NATIONAL PARK SERVICE

BLM Response:

Comment noted.

Comment:

Lack of Near-Field Analysis. Near-field impacts from oil and gas development should be included in any air quality analysis. It is critical to undertake such an analysis before designating lands as open for leasing because of the substantial likelihood of near-field impacts on human health and properties in which local governments and GOCO have invested tens of millions of dollars. Both Carbondale and Glenwood Springs are nearly adjacent to the Thompson Divide. And as discussed above, Pitkin County owns a number of properties that are proximate—in some cases immediately adjacent—to leases at issue in this analysis. In the case of Jerome Park in particular, both Nordic and Alpine ski areas operate on the property. In our municipalities and in both ski areas, children and others regularly engage in aerobic and even anaerobic exercise, which increases one's intake of air pollutants. Both the WRFEIS and Ms. Williams' comments indicate risks to human health from near-field contaminants.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

Comment:

Section 4.2.3 Project-Level Analysis and Near-Field Modeling Methodology (page 4.2-54) states that a project-specific, near-field impact analysis was not performed because the scope of analysis for this EIS is regional and cumulative, and project-specific, near-field analyses will be completed when detailed information for future proposed actions is known. This section also discusses the development of an Instruction Memorandum (IM) to guide the adequacy, consistency, and efficiency of these analyses. We recommend that this important commitment be carried through to the Final EIS and ROD, along with a commitment to mitigate adverse air quality impacts identified through the future project-level, near-field analyses. In addition, we recommend the Final EIS clarify that these future analyses will be made available to air quality stakeholder work groups and the public. We also recommend providing the IM to the air quality stakeholder work groups for review and comments to assist in ensuring that the approach aligns with air quality modeling guidelines from the various agencies.

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

The BLM conducts project-specific near-field air quality impact analyses when reviewing actual specific oil and gas development proposals. The project-specific near-field modeling considers detailed information when the information for new oil and gas development timing, location and emissions source equipment are known. The BLM Colorado Air Resources has already developed an Instruction Memorandum (IM) to guide the adequacy, consistency and efficiency of developing project-level emissions inventories and conducting near-field analyses as a result of proposed future project-specific development. The BLM has provided this IM to air quality stakeholder work groups to ensure the approach aligns with accepted methodologies (near-field air quality modeling guidelines, etc.) and approaches for analyzing potential impacts for oil and gas development. BLM's near-field analysis approach has been presented to multiple members of the Technical Workgroup (EPA, NPS, etc.).

Appendix A of the CARPP (which can be found at http://www.blm.gov/co/st/en/BLM_Information/nepa/air_quality.html) describes the oil and gas NEPA analysis process and methodology. This appendix describes the approach for conducting project-specific near-field analyses.

Comment:

We recommend that the Final EIS identify a Preferred Alternative that includes the management actions necessary to protect air quality identified in applicable recent NEPA decisions that are relevant to the White River National Forest Previously Issued Leases. These recent decisions include: the WRNF's Oil and Gas Leasing Final EIS/Draft ROD (2014); the BLM's White River Field Office (WRFO) Resource Management Plan Amendment (RMPA) for Oil and Gas Development approved in August 2015; and the CRVFO RMP approved in June 2015. The EPA worked with the BLM during the development of the CRVFO RMP and specific management actions were found to be appropriate and necessary to incorporate in that RMP/EIS to reduce air quality impacts. In addition to the analysis conducted for the CRVFO RMP, the WRNF Final EIS/Draft ROD air quality analysis was closely tied to, and coordinated with, that done for the BLM WRFO RMPA.

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

The BLM considered all of the documents referenced in this comment during development of the Preferred Alternative and intends that the Preferred Alternative will work in conjunction with these other federal decisions. CARMMS was completed to provide a realistic look at cumulative air quality and impact contributions for each planning area hypothetical future RFD oil and gas development. CARMMS is a primary tool / platform used in the overall adaptive management strategy that is updated as relevant conditions, such as when air quality and oil and gas development forecasts change. The modeling that was conducted for the CRVFO and WRFO Resource Management Plan analyses assumed various levels of oil and gas development through 2028 that are now recognized as obsolete, While RFDSs have changed and updated accordingly for CARMMS, this modeling platform still represents the most up-to-date air quality modeling study that BLM Colorado uses for authorizing oil and gas development. The CARPP describes BLM Colorado's adaptive management approach in which CARMMS is one of the primary tools.

Note: at this time, the BLM Colorado is using the CARMMS projected 2021 modeling results based on the WestJUMPAQMS year 2008 modeling platform for authorizing future oil and gas development. The BLM did not model beyond year 2021 because of frequent changes in pace and trends of oil and gas extraction due to prices, demand, etc. These changes make it speculative to accurately predict future air quality impacts over a longer timeframe; in addition, an adequate cumulative emissions inventory (U.S.-wide) had not been developed beyond year 2021 when conducting the air quality analysis. The BLM is working on CARMMS 2.0 that will update outdated information and the modeling platforms. CARMMS 2.0 should be ready for use Spring, 2017 and would be used for future analyses. This is consistent with BLM's adaptive management approach. The BLM Colorado through the adaptive management strategy is committed to updating CARMMS and the BLM Colorado plans to also use next iteration of CARMMS (CARMMS 2.0) that will be based on IWDW 2011 Platform and model future year 2025 impacts for authorizing future oil and gas development; modeling results for CARMMS 2.0 should be ready for use Spring, 2017.

Comment:

Future Monitoring. The WRFEIS shows a scarcity of reliable monitoring data for air quality within the planning area. See, e.g., WRFEIS at 107; see also WRFEIS Table 19 at 108 ("Note that most sites do not have sufficient annual data to determine trends in ozone levels.") As noted above, the lack of wintertime ozone monitoring data is especially troubling since it appears likely that winter is when ozone concentrations are at their highest in our region. Any alternatives affirming the leases need to analyze a long-term monitoring and mitigation plan that ensures mechanisms to curtail development as necessary to protect air quality.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

Comment:

Development of the Zone 3 leases would result in significant impacts from venting and flaring during exploratory development as the Divide leases are remotely located from existing transportation infrastructure. Given the remote location of the wells, it is likely that delayed releases and fugitive emissions would not be immediately detected or promptly corrected- as is often the case with water contamination and unpermitted air emissions across the region. New EPA ozone standards might contribute to future non-attainment status in the analysis area, potentially resulting in Clean Air Act violations. Protecting the Divide will incrementally diminish potential adverse impacts to air quality and public health for residents and in surrounding communities. For air, water, wildlife and other resources, mitigation measures fall short of no development with regard to the potential for adverse impacts to water, air, wildlife, habitat, livestock, recreation, and other surface resources and uses. Recent Garfield County air quality monitoring data from Colorado Rocky Mountain School property (near the Crystal River between Carbondale and the Divide) is tracking air quality near the Town and the Divide. No recent violations have been detected. To the extent monitoring data is available, Carbondale recommends including it in BLM's analysis of the Divide leases.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

Comment:

Water and air quality testing must be continuous and if abnormalities are detected and can be reasonably associated to wells and related activities, the oil and gas developers must be held 100% accountable. Fines and penalties must be severe. Drilling must halt while deficiencies are cured.

MARKUSON, JAMES

BLM Response:

The BLM will accomplish this through an adaptive management approach, which includes establishing baseline conditions, monitoring, reevaluation, and adjustment as necessary. Adaptive management therefore contemplates regular review and adjustment of management approaches during the authorization of emissions generating activities commensurate with changing circumstances. For more information please consult the Comprehensive Air Resource Protection Protocol (CARPP) available at http://www.blm.gov/style/medialib/blm/co/information/nepa/air_quality.Par.90257.File.dat/Final%20CARPP%207-6-2015.pdf.

Comment:

Encana appreciates that BLM acknowledges in the Draft EIS significant impacts to air quality are not expected to result from the FEIS and ROD and consequently no additional stipulations pertaining to air quality are required. Draft EIS, pg. 4.2-56-57. Encana nevertheless cautions the BLM that it lacks the authority to regulate air quality under FLPMA and the Clean Air Act (CAA) by, among other things, requiring emissions inventories and modeling, monitoring, and mitigation measures at the project level. See Draft EIS, pgs. 2-80, 4.2-1. Although the Draft EIS itself contains no additional stipulations or mitigation measures, it incorporates the Comprehensive Air Resource Protection Protocol (CARPP) and, by reference, the emission inventory, modeling, monitoring, and mitigation requirements contained in that document. Draft EIS, pg. 4.2-2. The BLM does not have direct authority over air quality or air emissions under the CAA. Under the express terms of the CAA, the Environmental Protection Agency (EPA) has the authority to regulate air emissions. In Colorado, the EPA has delegated its authority to the Colorado Department of Public Health and Environment (CDPHE). These regulations are the only authority for regulation of oil and gas-related emissions in Colorado. The Secretary of the Interior, through the Interior Board of Land Appeals (IBLA), has unequivocally determined that, in states such as Colorado, the state, and not the BLM, has authority over air emissions: Decisions of the IBLA are binding upon the BLM and have the force and effect of a Secretarial decision.

The BLM does not have the authority to impose regulations or mandate monitoring or control measures on emissions sources, including oil and gas operations, within Colorado. Given the restrictions on BLM's authority over air quality, the BLM lacks authority to impose any of the emissions measure controls listed in the CARPP. In Section 111.E of the CARPP, the BLM provides that it will "ensure implementation of reasonable mitigation, control measures, and design features through appropriate mechanisms, including lease stipulations identified in RMPs, notices to lessees, and conditions of approval." Nearly identical language appears in the Draft EIS. Draft EIS, pg. 4.2-3. It is inappropriate for the agency to impose emissions or mitigation measures on oil and gas operations. Instead, emissions controls should only be imposed by agencies with expertise and authority over air quality in Colorado, which, according to the Secretary of the Interior, is the CDPHE. The CARPP effectively concedes this point by noting that various requirements the BLM intends to impose under the CARPP-such as green completions, use of "low" or "no bleed" gas operated pneumatic devices/controllers, and various capture and control strategies-are already required and regulated by EPA, CDPHE, or COGCC. CARPP, pgs. 17, 18, 19. Not only have EPA, CDPHE, and COGCC already enacted regulations covering these issues, they have done so with greater detail and precision than the CARPP. Compare Regulation 7, §§ XVII.C., XVII I.C, with CARPP, pgs. 17, 18, 19. For example, the CARPP purports to authorize BLM to require all operators to use "green completion" technology, CARPP, pg. 17; and would potentially require Tier IV diesel engines, natural gas fired engines, or electric engines, see CARPP, pg. 16. These restrictions and potential restrictions are entirely inappropriate and beyond the BLM's authority. Under the CAA, the regulation of reciprocating internal combustion engines and other mobile sources is exclusively within the jurisdiction of the EPA, not the BLM. The EPA, using its authority under the CAA, has issued regulations regarding non-road diesel engines and fuels such as those typically used for drilling and development operations. Further, EPA and the COGCC already regulate green completions. Given BLM's admission that state and federal law already addresses these air quality issues, BLM should at the most refer to the applicable statutes and regulations and remove any indications it will independently attempt to apply these requirements at the project level.

SCHOPP, JOHN; ENCANA OIL & GAS

BLM Response:

The BLM manages public lands in accordance with FLPMA. Section 102(8) of FLPMA requires that "the public lands be managed in a manner that will protect...air and atmospheric [values]." Under NEPA, the BLM is required "to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment" and to "use all practicable means, consistent with the requirements of the Act and other essential considerations of national policy, to restore and enhance the quality of the human environment and avoid or minimize any possible adverse effects of their actions upon the quality of the human environment" (40 CFR 1500.2). NEPA also requires the BLM to include a discussion of measures that may mitigate adverse environmental impacts (40 CFR 1502.14(f), 40 CFR 1502.16(h)). Thus, the BLM must manage the public lands in a manner that protects air quality and related values, as appropriate. For this EIS, the BLM conducted air quality analyses to determine impacts from specific anticipated federal actions and has identified emission control strategies and mitigation measures to address those impacts and achieve desired outcomes for air quality.

This does not mean the BLM is writing new regulations, nor is the BLM establishing itself as a regulatory agency or establishing mitigation measures that are intended to supersede the agencies with regulatory authority over air quality. Rather, the BLM is responding to estimated impacts from the proposed action and alternatives and complying with direction under NEPA, FLPMA, and the Clean Air Act (PRMPA/FEIS, p. 1-14).

Comment:

As the WRFEIS makes clear, oil and gas development on the WRNF and other federal lands will have serious impacts on air quality in our region.

Visibility. Anthropogenic sources have already significantly impaired visibility in the Maroon Bells-Snowmass Wilderness. See WRFEIS at 103. That wilderness area is both adjacent to Pitkin County's four alpine ski areas, and a substantial attraction to our visitors in its own right. The importance of maintaining good visibility in our region cannot be overstated. People travel here for the crisp, breathtaking views for which Colorado is famous, and which receive global exposure through televised coverage of events like the World Cup, the X-Games, and the Pro Cycling challenge—all of which help publicize the state of Colorado to the world. As the WRFEIS shows, oil and gas development places these values at risk. See WRFEIS Table 21 at 117.

Ozone. [O]il and gas development in the western United States can lead to ozone levels that violate air quality standards. [E]xposure to ozone is a serious concern as it can cause or exacerbate respiratory health problems, including shortness of breath, asthma, chest pain and coughing, decreased lung function and even long-term lung damage. Indeed, even "short-term exposure to current levels of ozone in many areas is likely to contribute to premature deaths" (see Ex. 34, Megan Williams Comments on WRDEIS). As Ms. Williams' comments detail, recent data from ozone monitoring in Pitkin County indicate that ozone levels are already exceeding the NAAQS of 75 ppb on some days by a considerable margin. The comments also identify NAAQS violations at Sunlight Mountain, which is located within the Thompson Divide itself, and near the Spring Gulch Nordic Ski Area on the Jerome Park parcel. In fact, the WRFEIS's modeling results (which do not account for winter, when levels would likely be even higher) show ozone concentrations for certain days consistently above the NAAQS in a large area of our region. Results from this modeling event show maximum daily average ozone concentrations above the NAAQS throughout the entirety of the area with concentrations as high as 85 ppb in a large area of eastern Pitkin County. And, as stated in even more detail in Ms. Williams' comments, the EIS's assumptions likely understate the values that may actually occur.

Particulate Matter (PM). Pitkin County has long faced air quality impacts from PM sources and continues to implement mitigation measures to control PM emissions. Any threat to the attainment of the PM NAAQS in the Aspen maintenance area would have direct consequences on the local citizens and governments of Pitkin County. Aspen was designated a "moderate" PM10 nonattainment area in 1990 pursuant to § 107(d)(4)(B) of the Clean Air Act. The EPA approved attainment/maintenance plans for Aspen in 2003, and more recently in 2012. The latest version of the plan includes the following control measures designed to ensure attainment of the NAAQS through 2023: (1) woodburning and restaurant emissions controls; (2) street sanding controls; (3) street sweeping requirements; (4) paid parking requirements to reduce traffic; and (5) transit measures (e.g., expansion of the bus fleet by 14 buses, establishment of a 400 space Park & Ride lot and a 250 space intercept parking lot, and establishment of cross-town and intercept lot shuttle services). Section 175(A)(d) of the Clean Air Act requires that the maintenance plan contain contingency provisions to assure that the state will promptly correct any violation of the PM10 NAAQS that may occur after the re-designation of the area to attainment/maintenance. As part of the approved maintenance plan, the following contingency measures can be recommended to local officials and the Air Quality Control Commission for consideration, if needed: (1) Increased street sweeping requirements; (2) More stringent street sand specifications; (3) Reducing the use of street sanding materials only to key areas selected by the City of Aspen for safety reasons; (4) Re-implementing the following measures (but only if they are not being implemented at the time the contingency measures are triggered): expansion of the bus fleet; establishment of additional Park 'n Ride lot spaces and intercept parking lots; and cross-town shuttle services; (5) Transportation control measures designed to reduce vehicle miles traveled; and (6) Other emission control measures appropriate for the area based on the consideration of cost-effectiveness, PM10 emission reduction potential, economic and social considerations, or other factors that the state deems appropriate.

According to the maintenance plan revision approved by the EPA, it is likely that no federal or state monies will be available to fund the implementation of the selected contingency measure(s). Most, if not all, of the costs will be borne by local citizens and governments, local businesses, and state government agencies.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

Comment:

In addition to the potential decrease in property values, the air quality of neighboring homes would suffer from the heavy truck traffic predicted should West Main Street become an access point.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

Comment:

Air quality is one of the most important environmental amenities on the West Slope. Clean, healthy air and good visibility are integral to the quality of life for local residents, and represent an economic driver for the tourism and recreation sectors. Oil and gas development in the Divide threatens air quality, public health, and visibility. The Town aspires to and relies on having clean mountain air and crystal-clear viewsheds, rather than simply hoping to avoid violations of federal or state air quality standards.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

Comment:

The WRNF ROD cites air quality among the potential impacts to the natural character of the landscape informing the decision to close the Divide to leasing. Although the region is not currently exceeding limits under the Clean Air Act, the Town is very concerned with protecting the air quality locally and across the regional airshed. The WRNF FEIS air quality section stated that impacts are a function of the intensity of development activity causing emissions at any given time. "Air quality impacts to a region are controlled primarily by the magnitude and distribution of local and transported pollutant emissions as well as regional climate. Over the last decade, Western Colorado has experienced a substantial increase of oil and gas development activity contributing to the rapid growth of surrounding communities accompanied by up to a four-fold increase in local sources of air pollution emissions (Pierce 2008a; Garfield County Public Health 2009)." FEIS at 100-101. For the Divide leases, BLM's primary consideration should be whether cancellation will best maintain the currently pristine air quality in the Divide and associated benefits for Carbondale and other local communities.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

Comment:

Air moves. These parcels, while not in wilderness areas, are adjacent to the Maroon Bells-Snowmass Wilderness, a federally designated Class I airshed. As smoke, dust, and methane are released during, before, and after drilling and exploration there will be impacts on the airshed. This airshed has had continuous monitoring for over 20 years to ensure its ‘sanctity’.

ELLISON, SUSY

Comment:

The Clean Air Act declares as a purpose the need to “preserve, protect and enhance air quality in national parks” and other protected areas. It further gives the Federal Land Managers, including the NPS, an “affirmative responsibility” to protect air quality and air quality related values (AQRVs) associated with such areas. The NPS Organic Act mandates that the NPS preserve units of the national park system “unimpaired for the enjoyment of future generations.” Air quality and AQRVs in national parks are being impacted by emissions from significant oil and gas development across the Intermountain West. Any development that occurs subsequent to this leasing decision could potentially influence air quality in nearby parks, including Black Canyon of the Gunnison National Park (NP), Colorado National Monument (NM) and Dinosaur NM.

JOHNSON, SUSAN; NATIONAL PARK SERVICE

Comment:

In 2010, TEDX (The Endocrine Disruption Exchange) in Paonia collected air samples in Garfield County near gas drilling operations. They found 60 chemicals affecting human health. Even at parts per trillion, these chemicals adversely affect human health. They included the following: 53 species of gas was found; 25 caused skin, eye, or sensory organ irritation; 36 caused brain or nervous system effects; 28 caused immune system effects; 30 were endocrine disrupting chemicals; 18 were carcinogens; 14 affected the gastrointestinal tract; 23 affected the kidneys; 27 affected the cardiovascular system and/or blood; 23 were genotoxic (damaging to DNA: pertaining to agents known to damage DNA, thereby causing mutations, which can result in cancer); 33 affected the liver and/or metabolic processes; 29 other effects.

STONE, MARILYN

Comment:

The CRVFO and WRNF (in conjunction with the analysis prepared for the WRFO) EISs have identified air quality concerns and incorporated mitigation measures to minimize or avoid air quality impacts associated with oil and gas development in and around the PIL. To sustain the protections provided in these previous air quality management decisions, the decision for this EIS should be consistent with the WRNF Final EIS/Draft ROD and CRVFO RMP. Sustaining those air quality protection measures is important to minimizing or avoiding impacts that have been identified by this analysis, as well as impacts that have been identified, or reiterated, in the other recent NEPA documents. The Draft EIS identifies impacts to ozone, visibility and nitrogen deposition and in each case, we recommend the application of further mitigation to reduce those impacts as follows:

Ozone: This region of Colorado has elevated background ozone resulting from the high altitude, the I-70 corridor and population centers, as well as surrounding oil and gas development. Generally the design values presented for background ozone near the analysis area would be classified as Moderate under the Air Quality Index (AQI), rather than Healthy. The EIS projects that the development of these leases could contribute 1.5 ppb to 2.6 ppb to total ozone concentrations. Considering the existing air quality, the proximity and effects of ozone concerns in the Uinta Basin and Rangely, and the new lower ozone standard, it is prudent to minimize ozone generated from sources in and around the planning area and the PIL' s.

Visibility and Nitrogen Deposition: The Draft EIS analysis also identifies impacts of concern to air quality related values (AQRVs) including visibility impacts and nitrogen deposition. Although the Draft EIS projects as an overall improvement in visibility from modeled 2008 conditions, the cumulative visibility analysis identifies many days above both the 0.5 delta deciview (dv) and 1.0 delta dv thresholds at Flat Tops Wilderness and Maroon Bells-Snowmass for the "FLAG" methodology resulting from source groups R and S. This is an indication these source groups have the potential to impair visibility. We also note that the method for cumulative visibility analysis should actually compare the best and worst future days to natural conditions, rather than 2008 modeled conditions. The analysis also indicates that 10 of the 15 modeled scenarios exceed the deposition analysis threshold (DAT). Although the analysis does not report the total nitrogen impact associated with the contribution from this action, we believe the areas analyzed are projected to be experiencing cumulative nitrogen deposition at or above critical load thresholds. I f the contributions of the project, above the DAT, are contributing to cumulative impacts above the critical load for nitrogen deposition, then the contribution from the PIL is of concern.

Recommendation: Existing conditions for ozone, visibility and nitrogen deposition in the analysis area are currently degraded. Although the project's contribution to these issues may not be major, we recommend that any contribution to an existing air quality or deposition problem be minimized, and to the extent possible, avoided. Measures taken to address and minimize regional ozone formation will also have the added benefit of reducing nitrogen deposition and visibility degrading pollutants. We welcome the opportunity as a cooperating agency to discuss this in more detail to assure that agreement is reached on the stipulations that will be included for this EIS.

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

The CARMMS regional results presented in Table 4.2-5 do not indicate any significant air quality impact contributions for future Federal oil and gas development within the Field Office / Planning Area. Ozone contributions from the CRFVO (outside the Roan Plateau) do not amount to more than 0.2 ppb (not even 1 ppb) when the cumulative concentrations exceed the former NAAQS (75 ppb standard), thus is a minimal impact. The maximum source apportionment area contribution (2.6 ppb) is expected to occur when cumulative concentrations are below the NAAQS. Table 4.2-5 also shows that the maximum Planning Area contributions to PM cumulative concentrations are minimal with respect to Ambient Air Quality Standards (<= 1% of the applicable Standard). The minimal impacts to PM concentrations for future Federal oil and gas would occur due to the routine application of water or other dust suppressant to unpaved surfaces during construction or travel as a result of a BLM requirement or operator committed control measure. For the CARMMS Low and High Scenarios, a 50% dust control efficiency was applied for surface disturbing activities and 80% dust control efficiency was assumed for the CARMMS Medium scenario (Medium Scenario includes enhanced BLM control measures). The FLAG2010 analysis is not cumulative in the sense that it isolates the visibility impacts of the source grouping and compares them relative to natural background visibility. As described for the EIS analyses, quasi-cumulative oil and gas impacts presented are not project-specific but represent the visibility impacts for all Federal and non-Federal oil and gas in Colorado region (CARMMS Source Groups R and S) which encompasses much more future oil and gas development than could occur on the leases in the analysis area, therefore the number of days with impacts above 0.5 and 1.0 ddv should be interpreted as a very conservative upper limit for all scenarios / alternatives. The analysis for the 20% best and worst days is consistent with EPA's recommendations for Regional Haze Analysis and the use of the MATS tool mitigates the model biases and represents changes from the base year (2008) conditions and not relative to background "natural conditions". Just like visibility, the DATs are values that should be interpreted as limits to deposition for specific / actual proposed projects and the values presented in Table 4.2-12 encompass emissions from an entire state / region and for much more than one single project.

The EIS discloses CARMMS source apportionment AQRV impacts for CRVFO (outside Roan only) and there are no days with visibility impacts above 0.5 dv change for that source group. The WRNF leases for oil and gas development are a small subset of the entire oil and gas development in the CRVFO (outside Roan), so any potential future oil and gas development for the leases from the WRNF would represent a small contribution to potential impacts.

Based on the modeling results and the lack of impacts thresholds for quasi-cumulative (made up of many oil and gas projects) applicable for various levels of oil and gas development, no additional mitigation is warranted at this stage, but mitigation might still be required at the project-level stage when actual oil and gas development is proposed.

Comment:

Multiple discussions included in the Draft EIS compare total expected CRVFO planning area GHG emissions with projected Colorado, U .S. and global GHG emissions. We do not recommend comparing GHG emissions to total State, U.S., or global emissions, as the comparison is not meaningful. Climate change is a global problem resulting from the emissions of many individual sources whose impacts are cumulative. The environmental impacts are best described by using emissions as a proxy when comparing the proposal, alternatives and potential mitigation. We recommend that BLM consider providing a frame of reference, such as an applicable Federal, state, tribal or local goal for GHG emission reductions, in the Final EIS, and discuss whether the emission levels are consistent with such goals. Similarly, it is not meaningful to compare CRVFO planning area GHG emissions to the 2008 USEPA modeled source. We also note that, given the substantial advancements in climate science and associated models since 2008, we do not recommend using the 2008 model in general.

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

The comparison of GHG emissions to the state and the US by relevant sectors is meaningful in that it provides a context of the magnitude of the analysis area emissions. Climate change is a global problem and is the cumulative aggregation of sources that should be considered. Given that there is no substantial advancement in the use of models to provide specific impacts due to the emissions on the analysis area of this EIS, the only possible proxy as indicated by the reviewer, is the disclosure of the GHG emissions.

The 2008 USEPA modeled source that is being referred to is the single source that EPA modeled to determine Climate Change impact contribution and we compare new oil and gas emissions to the single source emissions rates modeled by EPA to determine how the new oil and gas would contribute to Climate Change. There are some GHG Emissions Regulations applicable to the Federal oil and gas but there are no broad no Federal or State –wide GHG goals applicable to Federal oil and gas development outside the regulations. The BLM Colorado will analyze submitted projects on a case-by-case basis to determine if it is feasible and reasonable to require additional mitigation to reduce or offset GHG emissions and to evaluate potential net GHG concentration changes when more detailed information about actual proposed oil and gas development project locations and plans are known. The BLM Colorado Air Resource adaptive management strategy also applies to GHG emissions and Climate Change. Following this approach, GHG emissions and Climate Change will be addressed over the Life of the Plan as future guidance and analysis suggest the need to, meaning that BLM Colorado analyses will adapt to changing times of the Science for future oil and gas authorizations. Adaptive management practices that will be considered include analyzing impact trends, management actions effectiveness and following new guidance requirements. Before any additional mitigation would be required, there would need to be a feasibility analysis and more Climate Change impact contribution analysis information and other guidance / support. The BLM will allow for the identification of design features that reduce carbon emissions in site-specific NEPA and will further analyze compliance with and recommend mitigation consistent with State and Federal Regulations that control GHG emissions.

Finally, the CARMMS modeling is performed for criteria pollutants and air quality related values which are generally chemically reactive but not for CO2 which is relatively inert. The 2008 modeling platform used state-of-the-art models and reasonable estimates on the emission inventory similar to more recent modeling efforts.

Comment:

Have you, the BLM, taken into account the United States commitment to the recent Paris accord? I see Section 3.2.7 of the EIS covers Greenhouse Gas emissions and climate change. You all state that GHG emissions are not regulated under the major reg. programs, but this year that has changed.

ANONYMOUS,

Comment:

Reference:www.globalchange.gov/usimpacts, cosponsored by US Dept of State.

GERRIT, CROUSE

Comment:

Climate change needs to be realistically addressed on all levels.

PERRY, REV. JISHO

Comment:

With climate change now a scientific reality, it is a fact that that the extensive burning of fossil fuels is a major contributor to atmospheric CO2 gases and the global greenhouse effect. Therefore, in support of the current administrations efforts in curtailing climate change, all existing and future oil and gas developments and operations on public lands should be held tightly to comprehensive environmental review, including these significant factors.

RATLIFF, JOE

BLM Response:

The current EIS recognizes that emissions of GHG will contribute to the cumulative concentrations of these gases thus contributing to climate change. With the current state of the science, it is not possible to know the specific impacts from any future oil and gas development on the Leases will have on climate change. However the BLM through adaptive management practices detailed in the Comprehensive Air Resource Protection Protocol (CARPP), considers mitigation with the objective to reduce air quality impacts. Table V1-1 in CARPP lists a series of reduction measures considered best management practices in reduction of emissions from oil and gas development. Many of these measures would effectively reduce GHG and thus their impact on climate change for future oil and gas development. The BLM Colorado Air Resource adaptive management strategy also applies to GHG emissions and Climate Change. Following this approach, GHG emissions and Climate Change will be addressed over the Life of the Plan as future guidance and analysis suggest the need to, meaning that BLM Colorado analyses will adapt to changing times of the Science for future oil and gas authorizations. Adaptive management practices that will be considered include analyzing impact trends, management actions effectiveness and following new guidance requirements. Before any additional mitigation would be required, there would need to be a feasibility analysis and more Climate Change impact contribution analysis information and other guidance support. The BLM will allow for the identification of design features that reduce carbon emissions in site-specific NEPA and will further analyze compliance with and recommend mitigation consistent with State and Federal Regulations that control GHG emissions. The BLM Colorado Air Resource will analyze submitted projects on a case-by-case basis to determine if it is feasible and reasonable to require additional mitigation to reduce or offset GHG emissions and to evaluate potential net GHG concentration changes when more detailed information about actual proposed oil and gas development project locations and plans are known.

Comment:

Forests "are really, at this point, the only practical way to take CO2 out of the atmosphere to sequester carbon. All of the other possibilities are very speculative technologies that may work in 20 or 30 years or may never work," said Doug Boucher, director of climate research and analysis at the Union of Concerned Scientists (UCS). " If we are going to get to what the IPCC [Intergovernmental Panel on Climate Change] says is necessary--which is negative emissions, net carbon sequestration on a global basis in the second half of the century--forests are the only practical way to do it."

DUVALL, MARY

Comment:

Destroying forest for fossil fuel drilling is doubly bad for the environment and climate change by eliminating trees that help remove carbon dioxide which causes climate warming and providing by providing more oil which is the source of the fuel that causes more carbon dioxide and other environmental contaminates.

GRAEFE, JOHN

Comment:

Pristine lands also act as a carbon sink, actually removing carbon from the atmosphere. Please don't destroy our common home.

RIDDLE, CAROLYN

Comment:

The trees give us thirty (30) percent of our Oxygen. We need the clean air to live. I heard it said, or in print that the atmosphere used to be thirty - three (33) percent Oxygen. We are presently at twenty - five (25) percent now you will think something when you can hardly get a clean breath of air. We now have other clean energy sources available. We only have the one planet!

TUCKKNESS, JOHN

BLM Response:

The current EIS recognizes that emissions of GHG will contribute to the cumulative concentrations of these gases thus contributing to climate change. With the current state of the science, it is not possible to know the specific impacts from any future oil and gas development on the Leases will have on climate change. However the BLM through adaptive management practices detailed in the Comprehensive Air Resource Protection Protocol (CARPP), considers mitigation with the objective to reduce air quality impacts. Table V1-1 in CARPP lists a series of reduction measures considered best management practices in reduction of emissions from oil and gas development. Many of these measures would effectively reduce GHG and thus their impact on climate change for future oil and gas development.The BLM Colorado Air Resource adaptive management strategy also applies to GHG emissions and Climate Change. Following this approach, GHG emissions and Climate Change will be addressed over the Life of the Plan as future guidance and analysis suggest the need to, meaning that BLM Colorado analyses will adapt to changing times of the Science for future oil and gas authorizations. Adaptive management practices that will be considered include analyzing impact trends, management actions effectiveness and following new guidance requirements. Before any additional mitigation would be required, there would need to be a feasibility analysis and more Climate Change impact contribution analysis information and other guidance support. The BLM will allow for the identification of design features that reduce carbon emissions in site-specific NEPA and will further analyze compliance with and recommend mitigation consistent with State and Federal Regulations that control GHG emissions. The BLM Colorado Air Resource will analyze submitted projects on a case-by-case basis to determine if it is feasible and reasonable to require additional mitigation to reduce or offset GHG emissions and to evaluate potential net GHG concentration changes due to reduction in CO_2 sinks (forests / vegetation) when more detailed information about actual proposed oil and gas development project locations and plans are known.

Comment:

As an attorney, it is my belief that the DEIS for petroleum and natural gas leases in the White River National Forest fails to satisfy NEPA requirements by inadequately considering and analyzing the cumulative impacts such leases would have in terms of worsening global warming and contributing to climate change nationwide, when those fossil fuels are extracted and subsequently burned to produce energy that can just as readily be obtained from renewable sources that do not require road construction.

LIPMANSON, DONALD

BLM Response:

The current EIS recognizes that emissions of GHG will contribute to the cumulative concentrations of these gases thus contributing to climate change. With the current state of the science is not possible to know the specific impacts from future oil and gas on the Leases on climate change, however the BLM through adaptive management practices detailed in the Comprehensive Air Resource Protection Protocol (CARPP) considers mitigation with the objective to reduce air quality impacts when actual oil and gas development is proposed. Multiple factors need to be considered when determining whether oil and gas development would contribute to climate change impacts. For instance if the BLM denies future oil and gas development in these leases, the development could still occur on nearby private surface at a potentially increased rate or with different oil and gas practices which will not result in a net zero contribution to GHG. Denying oil and gas development in the WRNF could potentially displace the oil and gas development closer to populated areas or other areas. Denying WRNF oil and gas development does not immediately imply that the overall global levels of GHG emissions would be reduced and remain unchanged. The demand for this resource exists and it is likely to be developed somewhere else (if not permitted in WRNF) until other incentives drive the desire for alternative sources of energy.

Regarding road construction and associated impacts, the BLM Colorado routinely requires that an operator put dust controls on new developed and disturbed unpaved surfaces for construction and the operator also must follow other environmental guidelines for developing access roads. This is just one of the mitigation practices that may be required by BLM above and beyond regulations.

Comment:

We recommend including a section that discusses the strengths and weaknesses of the modeling platform based on the results of the CARMMS MPE. We also recommend that this section explain how these uncertainties found in the MPE should be used to interpret the model results. Further, we recommend that consideration be given to mitigation measures from Table VI-I Best Management Practices and Air Emission Reduction Strategies for Oil and Gas Development in the BLM's CARPP that may be necessary.

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

The DEIS references the CARMMS report where there is detailed information on the MPE for the 4-km domain. When and where monitoring data are available, the model results have been used in a relative sense through the use of USEPA's Modeled Attainment Test Software (MATS) which mitigates potential model biases. Additionally, multiple simulations accounting for a range of emissions scenarios have been modeled to obtain a range of expected impacts. Finally the source apportionment results are extremely useful for describing the response of the model to specific groupings of oil and gas sources. Mitigation may be required on a case-by-case basis for specific projects or when CARMMS modeling suggests the need for emissions controls on planning areas or specific source groups. For this EIS, the CARMMS source apportionment impacts do not suggest the need for additional emissions control requirements that go above or beyond existing regulations.

Comment:

Colorado law charges Pitkin County with protecting and advancing the life, health, safety and welfare of its citizens. To do so, the County depends upon tax dollars flowing from the resort, recreational and agricultural-based businesses that form the cornerstone of the Pitkin County economy. The County dispatches its duties in both a proprietary and regulatory capacity. In its proprietary capacity, the County owns and operates a road system and an extensive portfolio of real property holdings acquired to advance agriculture, recreation, scenic enjoyment, wildlife preservation, and a myriad of other open space values. As a regulator, the County administers codes that coordinate land uses and contain requirements governing oil and gas lease development in the County, including on federal land. Oil and gas development in the County directly affects all of these interests. Pitkin County is renowned for its cultural, skiing, scenic and other outdoor amenities. Aspen, the County seat, is a world-class resort that attracts leaders from the worlds of business, government and the arts to cultural events at institutions such as the Aspen Institute and Aspen Music Festival. The ski areas and high country of Pitkin County likewise attract visitors from around the globe who come to experience the natural beauty of landscapes untouched by urban or industrial-level operations and pollution. The Maroon Bells outside of Aspen are the most photographed peaks in Colorado, and the Aspen Mountain, Aspen Highlands, Buttermilk, and Snowmass Ski areas provide world-famous recreation and breathtaking views of surrounding mountains in the WRNF. The White River National Forest's 2014 Final Oil and Gas Leasing EIS ("WRFEIS") and December 2014 Final Oil and Gas Leasing EIS ("WRFEIS") indicate that cumulative effects from oil and gas development on the WRNF and surrounding areas will significantly impair visibility in the Maroon Bells/Snowmass Wilderness, which comprises the viewshed from all four ski areas. See WRFEIS at 103. Other air quality impacts, including winter ozone levels, as well as traffic impacts on the Highway 82 access from I-70 to the resort areas of Aspen and Snowmass Village, will also compromise the overall experience that makes our valley one of the most sought after destinations in the world. Should visitors begin to go elsewhere because oil and gas development has clogged our highways and polluted our air, the impact on Pitkin County's finances will be direct and serious. In a competitive international market, Colorado cannot be too careful about protecting the natural assets that attract our guests.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

The DEIS socioeconomic analysis acknowledges the important role of tourism to regional economy (Section: 4.17.2). As per standard NEPA practice, the socioeconomic impact analysis primarily focuses on identifying and evaluating the impacts attributable specifically to the alternative being analyzed. Additional impacts resulting from the contributing influence of other factors (e.g. other current and foreseeable future oil and gas development in the region) are analyzed as cumulative impacts (Section 4.17-4). The DEIS cumulative impact analysis (Section 4.17-4) recognizes the potential for future adverse socioeconomic impacts such as those identified by the commenter to occur from potential scenic degradation, reduced air quality and negative transportation impacts resulting from major future oil and gas development growth within the region.

The CARMMS regional results presented in Table 4.2-5 do not indicate any significant air quality impact contributions for future Federal oil and gas development within the Field Office / Planning Area. Ozone contributions from the CRFVO (outside the Roan Plateau) do not amount to more than 0.2 ppb (not even 1 ppb) when the cumulative concentrations exceed the former NAAQS (75 ppb standard), thus is a minimal impact. The maximum source apportionment area contribution (2.6 ppb) is expected to occur when cumulative concentrations are below the NAAQS. Table 4.2-5 also shows that the maximum Planning Area contributions to PM cumulative concentrations are minimal with respect to Ambient Air Quality Standards (<= 1% of the applicable Standard). The minimal impacts to PM concentrations for future Federal oil and gas would occur due to the routine application of water or other dust suppressant to unpaved surfaces during construction or travel as a result of a BLM requirement or operator committed control measure. For the CARMMS Low and High Scenarios, a 50% dust control efficiency was applied for surface disturbing activities and 80% dust control efficiency was assumed for the CARMMS Medium scenario (Medium Scenario includes enhanced BLM control measures). The FLAG2010 analysis is not cumulative in the sense that it isolates the visibility impacts of the source grouping and compares them relative to natural background visibility. As described for the EIS analyses, quasi-cumulative oil and gas impacts presented are not project-specific but represent the visibility impacts for all Federal and non-Federal oil and gas in Colorado region (CARMMS Source Groups R and S) which encompasses much more future oil and gas development than could occur on the leases in the analysis area, therefore the number of days with impacts above 0.5 and 1.0 ddv should be interpreted as a very conservative upper limit for all scenarios / alternatives. The analysis for the 20% best and worst days is consistent with EPA's recommendations for Regional Haze Analysis and the use of the MATS tool mitigates the model biases and represents changes from the base year (2008) conditions and not relative to background "natural conditions". Just like visibility, the DATs are values that should be interpreted as limits to deposition for specific / actual proposed projects and the values presented in Table 4.2-12 encompass emissions from an entire state / region and for much more than one single project.

The EIS discloses CARMMS source apportionment AQRV impacts for CRVFO (outside Roan only) and there are no days with visibility impacts above 0.5 dv change for that source group. The WRNF leases for oil and gas development are a small subset of the entire oil and gas development in the CRVFO (outside Roan), so any potential future oil and gas development for the leases from the WRNF would represent a small contribution to potential impacts.

Based on the modeling results and the lack of impacts thresholds for quasi-cumulative (made up of many oil and gas projects) applicable for various levels of oil and gas development, no additional mitigation is warranted at this stage, but mitigation might still be required at the project-level stage when actual oil and gas development is proposed.

Comment:

The provisions of the CARPP set forth in detail when and how the BLM will conduct air quality modeling for oil and gas operations. Unfortunately, the provisions of the CARPP do not comply with the MOU [executed on June 23, 2011] among the United States Department of Agriculture (USDA), United States Department of the Interior (DOI), and the United States EPA regarding air quality analyses and mitigation for federal oil and gas decisions through the NEPA process. The CARPP will create unnecessary confusion and even contradicting requirements as to when and how air quality modeling and monitoring should be performed. It is inappropriate for a single BLM Field Office to attempt to develop its own procedures for air quality modeling when the Department of the Interior has agreed to specific provisions on a national scale.

Encana also notes that the air monitoring and reporting measures in the CARPP are unreasonable and inappropriate. Section Ill.A, for example, allows the BLM to require project proponents to provide one year of monitoring data from a site within or adjacent to the project area; if such a site is not available and there is no existing representative data, the project proponent must install the proper equipment. This is an incredibly burdensome requirement. Installing and maintaining a monitoring station for just one year can cost over $300,000, and $20,000 to $30,000 per year in maintenance costs thereafter. There already exists an extensive network of air monitoring stations throughout Colorado, which can provide "representative data" for most, if not all, projects within the White River National Forest and specifically for the Existing Leases analyzed in the Draft EIS. The BLM should not impose such unreasonable measures because they are unnecessary and very burdensome on project proponents, with no corresponding benefits. The CARPP also contains a number of unreasonable measures relating to emissions inventories. Regardless of the BLM's willingness to accept information validly submitted to the CDPHE, the practical effect of this requirement will be to impose an additional, costly step on project proponents that the EPA and CDPHE do not require. Operators do not submit APENs to the CDPHE until well after permits to drill are obtained; thus they will not be able to utilize the BLM's offer to accept information submitted to the CDPHE. Instead, Encana will have to compile a separate, "comprehensive inventory" for the BLM well before it would be required (if at all) to compile similar information under the CDPHE's rules.

The BLM should remove all references to the CARPP, including to its including its emissions inventory, modeling and monitoring requirement requirements, from the Draft EIS and simply include a copy of the current national policy as exemplified in the MOU between the USDA, DOI, and EPA.

NEPA does not authorize the BLM to require emission inventories or modeling, or to otherwise impose air emissions regulations. While NEPA mandates that agencies follow specific procedures when reaching decisions that significantly affect the environment, NEPA does not impose any requirement on agencies to reach a particular decision. In its ROD and FEIS, the BLM should simply inform the public that CDPHE is responsible for monitoring and enforcing air quality standards in Colorado, and that the BLM will assist with CDPHE actions to the extent permitted by law.

SCHOPP, JOHN; ENCANA OIL & GAS

BLM Response:

The oil and gas memorandum of understanding (MOU) is designed so that federal stakeholders are actively involved in larger EIS modeling projects and are able to provide input to the EIS' air quality impact analyses and methodologies early in the process / modeling studies. The BLM Colorado follows the MOU for all projects. For smaller projects such as EAs for APDs, the BLM has the flexibility to conduct the analysis independently and does not always require the involvement of other federal stakeholders. However, BLM Colorado has included federal stakeholders for oil and gas EA reviews for several small actual proposed oil and gas projects.

Federal stakeholders as part of the MOU are pushing BLM to require more mitigation based on CARMMS planning area - wide modeling results. No air quality impact "significant" contribution thresholds currently exist for cumulative hypothetical RFD (non-project) oil and gas development for most impact parameters and therefore, mitigation is not being required at this time according to CARMMS and other regional modeling analyses because BLM Federal oil and gas is not tracking at levels that BLM Colorado determines would result in "significant" air quality contributions.

The BLM is required to conduct analyses (and disclose them to the public) and protect air quality through compliance with the applicable laws and standards. The CARPP is a protocol that describes how BLM Colorado will conduct air quality analyses and allow for the protection of air quality, and is consistent with the objectives of the MOU and laws/ rules. The CARRP notes that monitoring may be required if baseline data are lacking and there is the potential for significant impacts. It is likely that many projects won't require this level of pre-project monitoring. The CARPP recommends emissions inventories to support the NEPA analyses at the site-specific level and to ensure that the cumulative analysis presented in this document and other supporting documents is consistent with key assumptions and projected emissions. The CARPP adaptive management strategy depends on the collection of this information and the consideration of impacts at the development stage. The CARPP and associated Appendix provide details for other analyses (near-field modeling, monitoring, etc.) outside the large EIS analyses that the BLM Colorado will conduct for future oil and gas assessments.

The BLM Colorado is requesting information from oil and gas operators for proposed projects when BLM conducts project-specific NEPA analyses; this information is needed to aid BLM in developing adequate and accurate emissions inventories for the proposed development to assist in an adequate air quality analysis for authorization of the proposed oil and gas development as required by NEPA.

Comment:

The Draft EIS quantifies annual greenhouse gas emission estimates for Federal oil and gas activities within the entire CRVFO planning area (not including the Roan Plateau planning area) including end-use energy consumption emissions. While we appreciate BLM's efforts of including end-use calculations, providing planning level emissions in a project-level EIS does not provide meaningful information for the analysis. Instead, we recommend that the Final EIS estimate the GHG emissions associated with each of the alternatives including emissions associated with the end use to allow for a comparison of alternatives with respect to GHG impacts.

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

This EIS is similar to a planning-level or leasing-level document when it comes to oil and gas development because the specific locations, drilling technology, equipment to be used, and duration of future oil and gas development is not known at this time. Evaluation of project-level GHG emissions will be further considered at a refined level during NEPA at the APD stage and at which time mitigation will be considered.

Currently, the EIS discloses GHG emissions (including downstream) for the projected new oil and gas associated the CARMMS high and low production scenarios that represent the anticipated limits on new development for the alternatives.

Comment:

We continue to have concerns about how and when air resource mitigation will be implemented. Appendix A, Oil and Gas Leasing Stipulations and Lease Notices, does not incorporate any stipulations for protecting air quality, but rather defers subsequent mitigation decisions to the project-level analysis. Neither the Colorado Air Resources Protection Protocol proposal nor the DEIS is prescriptive in terms of how and when mitigation will be applied at the project level. In other words, there is high degree of subjectivity in the plan's language regarding when air resource mitigation will be applied.

JOHNSON, SUSAN; NATIONAL PARK SERVICE

BLM Response:

The BLM will accomplish this through an adaptive management approach, which includes establishing baseline conditions, monitoring, reevaluation, and adjustment as necessary. Adaptive management therefore contemplates regular review and adjustment of management approaches during the authorization of emissions generating activities commensurate with changing circumstances.

This EIS is similar to a planning-level or leasing-level document when it comes to oil and gas development because the specific locations, drilling technology, equipment to be used, and duration of future oil and gas development is not known at this time. Evaluation of project-level GHG emissions will be considered for NEPA assessments at the actual proposed oil and gas development / APD stage. The BLM Colorado Air Resource adaptive management strategy also applies to GHG emissions and Climate Change. Following this approach, GHG emissions and Climate Change will be addressed over the Life of the Plan as future guidance and analysis suggest the need to, meaning that BLM Colorado analyses will adapt to changing times of the Science for future oil and gas authorizations. Adaptive management practices that will be considered include analyzing impact trends, management actions effectiveness and following new guidance requirements. Before any additional mitigation would be required, there would need to be a feasibility analysis and more Climate Change impact contribution analysis information and other guidance / support.

No air quality impact "significant" contribution thresholds currently exist for cumulative hypothetical RFD (non-project level) oil and gas development for most impact parameters (ozone, visibility, deposition, etc.) and therefore, mitigation is not being required at this time according to CARMMS and other regional modeling analyses because BLM Federal oil and gas is not tracking at levels that BLM Colorado determines would result in "significant" air quality contributions. The CARPP will be followed in order to track emissions levels and provide adaptive management as necessary.

Comment:

Section 4.2.3.2 Protection/Mitigation Measures (page 4.2-56) states that "the CARMMS regional analysis does not predict any significant air quality impact contributions associated with the new CRVFO (outside the Roan Plateau Planning Area) federal oil and gas development, even under the high-development scenario, indicating that additional stipulations containing mitigation measures beyond the applicable state and federal requirements are not warranted under any of the alternatives." From our review of the model results, there appear to be impacts that may warrant consideration of mitigation. For example, based on Table 4.2-5, it appears that there are ozone impacts of concern. There also appears to be AQRV impacts of concern. Further, it is possible that the predicted impacts are under-estimated given the uncertainties in the model performance. For instance, the CARMMS Model Performance Evaluation (MPE) results indicated that the model was biased low for ozone and its precursors. The MPE also indicated that the wet sulfur and nitrogen deposition was underestimated. Therefore, it is possible that the predicted impacts are under-estimated given these results.

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

The CARMMS regional results presented in Table 4.2-5 do not indicate any significant air quality impact contributions for future Federal oil and gas development within the Field Office / Planning Area. Ozone contributions from the CRFVO (outside the Roan Plateau) do not amount to more than 0.2 ppb (not even 1 ppb) when the cumulative concentrations exceed the former NAAQS (75 ppb standard), thus is a minimal impact. The maximum source apportionment area contribution (2.6 ppb) is expected to occur when cumulative concentrations are below the NAAQS. Table 4.2-5 also shows that the maximum Planning Area contributions to PM cumulative concentrations are minimal with respect to Ambient Air Quality Standards (<= 1% of the applicable Standard). The minimal impacts to PM concentrations for future Federal oil and gas would occur due to the routine application of water or other dust suppressant to unpaved surfaces during construction or travel as a result of a BLM requirement or operator committed control measure. For the CARMMS Low and High Scenarios, a 50% dust control efficiency was applied for surface disturbing activities and 80% dust control efficiency was assumed for the CARMMS Medium scenario (Medium Scenario includes enhanced BLM control measures). The FLAG2010 analysis is not cumulative in the sense that it isolates the visibility impacts of the source grouping and compares them relative to natural background visibility. As described for the EIS analyses, quasi-cumulative oil and gas impacts presented are not project-specific but represent the visibility impacts for all Federal and non-Federal oil and gas in Colorado region (CARMMS Source Groups R and S) which encompasses much more future oil and gas development than could occur on the leases in the analysis area, therefore the number of days with impacts above 0.5 and 1.0 ddv should be interpreted as a very conservative upper limit for all scenarios / alternatives. The analysis for the 20% best and worst days is consistent with EPA's recommendations for Regional Haze Analysis and the use of the MATS tool mitigates the model biases and represents changes from the base year (2008) conditions and not relative to background "natural conditions". Just like visibility, the DATs are values that should be interpreted as limits to deposition for specific / actual proposed projects and the values presented in Table 4.2-12 encompass emissions from an entire state / region and for much more than one single project.

The EIS discloses CARMMS source apportionment AQRV impacts for CRVFO (outside Roan only) and there are no days with visibility impacts above 0.5 dv change for that source group. The WRNF leases for oil and gas development are a small subset of the entire oil and gas development in the CRVFO (outside Roan), so any potential future oil and gas development for the leases from the WRNF would represent a small contribution to potential impacts.

The DEIS references the CARMMS report where there is detailed information on the MPE for the 4-km domain. When and where monitoring data are available, the model results have been used in a relative sense through the use of USEPA’s Modeled Attainment Test Software (MATS) which mitigates potential model biases. Additionally, multiple simulations accounting for a range of emissions scenarios have been modeled to obtain a range of expected impacts. Finally the source apportionment results are extremely useful for describing the response of the model to specific groupings of oil and gas sources. Based on the modeling results and the lack of impacts thresholds for quasi-cumulative (made up of many oil and gas projects) applicable for various levels of oil and gas development, no additional mitigation is warranted at this stage, but mitigation might still be required at the project-level stage when actual oil and gas development is proposed. For this EIS, the CARMMS source apportionment impacts do not suggest the need for emissions control requirements on the analysis area.

Comment:

The Draft EIS acknowledges BLM's decision not to include monetary estimates of the Social Cost of Carbon (SCC) in the NEPA analysis for this proposed action. The Draft EIS contains a general discussion regarding the challenges of applying the SCC. The global nature of climate change, inherent uncertainty in the estimation of the SCC, and the inability to monetize all categories of benefits and costs in a benefit -cost analysis do not necessarily preclude considering SCC in a project level analysis.[2] Although the Interagency Working Group (IWG) on SCC estimates pertain only to C02 emission changes, there are methods available for monetizing some non-C02 GHG impacts. BLM may consider using newly published and peer reviewed estimates of the social cost of methane and social cost of nitrous oxide that are consistent with the IWG SCC estimates (Marten et al. 2014).[3] More broadly though, the discussion in the Draft EIS about SCC makes inaccurate statements which mischaracterize SCC. Rather than describe these in detail, we recommend that BLM remove the discussion on SCC in the Final EIS as the discussion, as currently drafted, does not appear to be relevant or necessary to BLM's analysis. If BLM would prefer to retain a discussion on SCC in the FEIS, EPA would be pleased to consult with BLM to discuss this tool and its application.

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

The issue of Social Cost of Carbon (SCC) was brought up during scoping. As such, the BLM included a qualitative discussion in the DEIS and revised text in the FEIS. While the EPA is correct that nothing necessarily precludes considering SCC in a project level analysis, the BLM maintains that for this particular project, including monetary estimates of the SCC associated with the alternatives would not provide additional pertinent information to the decision maker, beyond what is conveyed by reporting GHG estimates. Although CEQ NEPA regulations allow agencies to use cost-benefit analysis in NEPA analyses in certain circumstances (40 CFR § 1502.23). The CEQ regulation states (in part), "…for the purposes of complying with the Act, the weighing of the merits and drawbacks of various alternatives need not be displayed in a monetary cost-benefit analysis and should not be when there are important qualitative considerations." The BLM revised the SCC discussion from the Draft to the Final EIS to more clearly convey this rationale. Further, because we are not monetizing the SCC from any source in this NEPA analysis, we do not include the social cost of methane or nitrous oxide estimates available in the peer-reviewed literature.

Comment:

First, it is sophistry/disingenuous/completely inappropriate for the BLM to discuss climate impacts of exploration in any one field or lease area. These issues must be addressed for the entire set of BLM leases available for exploration. Frankly, honest and useful discussion would include BLM and private exploration.

HILBERMAN, MARK

BLM Response:

Section 4.2.4 discloses potential GHG emissions for hypothetical oil and gas development for all areas within the CRVFO and outside the RPPA (including the Previously Issued Leases) and Climate Change analysis.

Aquatic Resources

Note: The comments are grouped together and sorted by the last name of the commenter, with the BLM response in a gray shaded box following the grouped comments within this category.

Comment:

Many of the leases being evaluated by the BLM are in watersheds containing populations of GB Lineage and CRCT. Specifically, the leased areas have a nexus to conservation populations of native trout in North Thompson Creek, Middle Thompson Creek, Battlement Creek, Beaver Creek, Little Rock Creek and Camp Creek. Leased areas may also affect current populations of native trout in West Divide Creek, East Divide Creek, Owens Creek, Cache Creek, and Park Creek. These trout are listed as a species of special concern in Colorado and both the WRNF and CPW have acknowledged the need for buffers to protect its habitat from the risks of sedimentation and chemical degradation posed by oil and gas development.

BASKFIELD, TYLER; TROUT UNLIMITED

BLM Response:

Native trout populations including the Colorado River cutthroat trout lineages are analyzed in Section 4.8. Cutthroat trout stipulations are part of Alternatives 3 and 4, which provide "no surface disturbance" protection for cutthroat trout populations.

Comment:

The Crystal River Fish Hatchery administered by Colorado Parks and Wildlife also warrants consideration. Because it is vital to the recovery of native cutthroat trout populations, this hatchery is of statewide and regional importance. The Crystal River Hatchery, a cold water facility, raises rainbow, Snake River, and cutthroat trout brood fish. (Brood fish are mature females and males used to produce and fertilize eggs.) Eggs from these brood fish are shipped to other hatcheries that hatch the eggs, feed the fry, and raise them to various sizes for stocking. No other hatchery in the state of Colorado produces as many eggs each year as the Crystal River Hatchery! See http://cpw .state.co.us/lea rn/Pages/Hatcheries.aspx.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

The hatchery is located approximately 20 miles downstream of lease zone 3 with the flow path being North Thompson Creek and the Crystal River. The hatchery location was added to Section 3.8.4.3 and discussed in the zone 3 impact discussion in Section 4.8.3.

Comment:

I collected the genetic samples from both cutthroat trout populations, West Divide and East Divide....Oddly enough the West Divide tested as GB lineage and the East Divide did not. In any case the population in East Divide is still a sensitive species and the leases should most definitely be withdrawn as the watershed is excellent habitat.

LACY, MARK

BLM Response:

Comment noted regarding East Divide Creek. The EIS does analyze the Colorado River cutthroat trout (blue lineage) as special status species, as indicated in Table 3.8-4.

The BLM must consider best available information in analysis of the proposed action and alternatives. Each alternative represents a course of action that addresses issues and concerns to varying degrees. These alternatives meet the purpose and need to address the NEPA deficiency and consider conformity with the Forest Service's recent analysis regarding leasing within the WRNF. The BLM will select an alternative based upon the overall analysis of environmental impacts, socioeconomic considerations, other relevant factors, and the balance of agency statutory requirements and regulations.

Comment:

I'm Program Manager for the Source Water portion of Colorado Rural Water, where we work with communities and help them develop source water protection plans to help protect their drinking water supplies. That process involves looking at potential sources of contamination in relation to those drinking water supplies. That contaminant list might be, look like septic systems, storage tanks, storm water runoff, oil and gas development. I've worked up in this valley with the town of Carbondale. Many small providers as well including those of Oak Meadows Service Company and Oak Meadows Water Association up the Four Mile Creek drainage. Although I'm not speaking on behalf of these water providers, I will say that they both ranked oil and gas development high as potential contaminant sources to their drinking water supply. At the end of the planning process, we develop source water protection areas, which are visible on the water resources map in the back and on your handouts. All of these entities have oil and gas concerns within those protection areas. In fact, for Oak Meadow Service Company, one of the leases in question is 600 feet from one of their community drinking water supplies. With that being said, I want to thank the BLM and the Forest Service for acknowledging these plans and using the source water protection areas that we have established. Really, statewide, when we look at oil and gas development in relation to community drinking water supplies, we ask any governing body, whether it be local, state or federal, to do the best they can to protect them.

HEMPEL, PAUL; COLORADO RURAL WATER ASSOCIATION

BLM Response:

Comment noted. The impact indicators used for the surface-water analysis include, but are not limited to, Colorado Source Water Assessment and Protection (CSWAP) sensitivity zones, Colorado Oil and Gas Conservation Commission (COGCC) Rule 317B water supply protection zones, local Source Water Protection Plans (SWPPs), and outstanding waters use classification. Impacts to SWPPs, including the Oak Meadows Community SWPP are disclosed by alternative in Section 4.5.1.4.

Consultation and Coordination

Note: The comments are grouped together and sorted by the last name of the commenter, with the BLM response in a gray shaded box following the grouped comments within this category.

Comment:

It is clear that the Section 106 process was not followed for any of these undertakings and are in addition in violation of NEPA,

SHIELDS, WILLIAM

BLM Response:

BLM fully initiates the Section 106 process selection of the Agency Preferred Alternative, including consultation with the SHPO, tribes, and other consulting parties; review of existing information on historic properties within the APE; and incorporation information gathered through consultation with the consulting parties. Section 5.2.2 has been updated to include a summary of these efforts.

Comment:

Another basis for lease cancellation is that many of the 65 leases were issued without compliance with the Endangered Species Act (ESA). Section 7(a)(2) of the ESA requires that"[e]ach federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency … is not likely to jeopardize the continued existence of any endangered species or threatened species" or "result in the destruction or adverse modification of a listed species' designated critical habitat". 16 U.S.C. § 1536(a)(2). To ensure compliance with these substantive provisions, the "action agency" must consult with and obtain the expert opinion of the U.S. Fish & Wildlife Service (FWS), before the agency takes any discretionary action that "may affect" a listed species or designated critical habitat. Issuance of an oil and gas lease represents a federal action that may affect listed species or critical habitat, and leasing therefore may not occur without completion of the consultation process. The IBLA's Pitkin County decision recognized this requirement: in addition to invalidating leases for violating NEP A, it also ruled that the leases violated the ESA. The Interior Department's Office of the Solicitor for the Rocky Mountain Region also has concluded that the ESA requires the Forest Service and BLM to complete formal consultation with FWS prior to issuing an oil and gas lease containing habitat occupied by threatened or endangered species. BLM failed to meet these requirements for many of the 65 leases being reviewed. For example, BLM was required to consult with FWS when it issued Zone 3 leases in the Thompson Divide to SG Interests in 2003. These lease parcels fall within or in close proximity to areas identified as providing occupied or high potential habitat for the Canada lynx, a species listed in 2000 as threatened under the ESA.. However, BLM did not consult with FWS when it issued the leases in 2003. Nor is there any indication that BLM even assessed lynx presence in the leasing area or evaluated its ESA obligations prior to issuing the leases. This failure violated the ESA. Like the SG leases, many of the other leases at issue here cover lynx habitat. Assuming BLM issued these leases in a manner similar to the ones in Pitkin County, these leases were issued in violation of the ESA. That violation provides another basis for cancellation.

FREEMAN, MICHAEL S; EARTH JUSTICE

BLM Response:

Comment noted. The BLM prepared a Biological Assessment (BA) to evaluate the potential effects of the action on listed and proposed species and designated and proposed critical habitat and determine whether any such species or habitat are likely to be adversely affected by the action. Based on the analysis contained in the BA, the USFWS issued a Biological Opinion (BO) on whether the project is likely to jeopardize a listed species or destroy or adversely modify a listed species' critical habitat. The BO is included as Appendix F of the Final EIS). Chapter 5, Consultation and Coordination contains an updated summary of consultation with the USFWS.

Cumulative Impacts

Note: The comments are grouped together and sorted by the last name of the commenter, with the BLM response in a gray shaded box following the grouped comments within this category.

Comment:

The presence of a gusher in the Thompson Divide already threatens the area with extensive contamination, and infrastructure that would have to be developed would destroy a precious resource for tourism.

LYN,

BLM Response:

Appendix B, Cumulative Impacts Scenario, presents estimates of all past, present, and reasonably foreseeable future development, including infrastructure development. Infrastructure development assumptions associated with the 65 existing leases are disclosed in Section 2.7 of the Draft EIS and are considered in the impact analysis for each resource. A paragraph was added to Section 4.5.2.3 to identify the rules and regulations under which oil and gas operations are conducted that would lessen the risk of groundwater contamination. No risk can be entirely eliminated no matter how many rules there are. However compliance conducted under a vigorous regulatory program would lessen the risk of impacts.

Comment:

There was a comment made by industry about how two of the major companies on the front range plan on developing 30 percent of their plan and 40 percent, respectively, in residential areas. That's drilling next to playgrounds, next to schools, next to homes. That is just flat out irresponsible to drill in certain areas. The leases in question, it's just flat out irresponsible to lease there. With Alternative Five, you can save multiple communities and have a multiplier effect.

LEGER, NATASHA; CITIZENS FOR A HEALTHY COMMUNITY

Comment:

I want to say I know that the good people of Carbondale and the Roaring Fork Valley are fair-minded and magnanimous, and many of us be tempted to express our desire for Alternative 4, because it seems like a reasonable compromise with industry. I will guarantee you they are not sitting in the boardrooms in Houston right now, talking about, "Well, let's figure out a fair compromise that the citizens of Roaring Fork Valley can live with." That ain't happening. So, Alternative 5. Importantly, some of the values in the Thompson Divide that we all love and cherish are the abundance of wildlife, like the moose that have taken up residence in this area, and the amazing amount of bear in the area. Well, a lot of those leases that would remain on the books in Alternative 4 would so sort of disturb the landscape that it would sever the landscape corridor connecting the Thompson Divide area to the Battlement Mesa, to the incredible bear habitat in the West Divide Creek and Mamm Creek area. If we really want to protect Thompson Divide and all there that we value and cherish, we have to think of the larger landscape. It's part of a larger ecosystem, it doesn't exist in isolation. Alternative 5's the way to go and protect the sources for the moose that have moved from Grand Mesa over to here. We protect the sources of the bear that have this amazing production area in the East Mamm and West Divide Creek area, so they can continue to populate this landscape right here out the window, out the back door.

SHOEMAKER, SLOAN

BLM Response:

Comment noted. Appendix B, Cumulative Impacts Scenario, presents estimates of all past, present, and reasonably foreseeable future development for actions such as oil and gas and other development. These estimates have been incorporated into the impacts analysis for each resource to enable the BLM to make an informed decision that considers cumulative effects.

Comment:

The Associations strongly urge the BLM to consider that the leases included in the EIS do not exist in isolation, either from each other or from the surrounding leases. There are approximately 900 producing wells within 2 miles of these leases; any fair and balanced analysis of impacts must include a consideration of the impacts to these neighboring wells and leases.

LUDLAM, DAVID; COLORADO OIL & GAS ASSOC & WESTERN ENERGY ALLIANCE

BLM Response:

Comment noted. Appendix B, Cumulative Impacts Scenario, presents estimates of all past, present, and reasonably foreseeable future development for actions such as oil and gas and other development. As noted in Table B-2, COGCC identified 1,180 wells within 2 miles of the leases. These estimates have been incorporated into the impacts analysis for each resource to enable the BLM to make an informed decision that considers cumulative effects.

Section 4.3 has been revised to include a discussion of potential impacts to future and existing operations from the addition of NSO stipulations or lease cancellations, by alternative.

Comment:

I do want the BLM to take that into account in this process as well, to be sure to include, as Ugi so eloquently spoke before the break, all of the impacts to all of the watersheds and airsheds in Western Colorado. That includes the North Fork Valley in which we serve.

JOHNSON, MERRILL; WESTERN SLOPE CONSERVATION CENTER

BLM Response:

Comment noted. As disclosed in Section 4.2, Air Quality, the CARMMS modeling area covers all of Colorado and portions of adjacent states for a short-term period of approximately 10 years (up to year 2021). As disclosed in Section 4.5, the analysis area for surface water resources includes the 6th-level subwatersheds, which are displayed in Figures 3.5-1 and 3.5-2.

Comment:

Under Alternatives 3 and 4, BLM proposes to require significantly more stringent stipulations to Oxy Lease No. COC66918, covering hundreds more acres than are currently implicated by operational limitations:
• NSO: Severe or High Landscape Stability Hazards (472 acres); Slope Greater than 50% (367 acres); TEPC Aquatic Species (263 acres); TEPC Plant Species (44 acres); TEPC Wildlife Species (14 acres); Water Influence Zones (233 acres).
• CSU: Authorized Sites and Facilities (120 acres); Big Game Migration Corridors (11 acres); Big Game Summer Concentration (2,123 acres); Big Game Winter Ranges (2,557 acres); High Concern Travel Ways or Use Areas (476 acres); Highly Erodible Soils (2,286 acres); Paleontological Resources (2,553 acres); Sensitive Aquatic Species (0 acres); Sensitive Plant Species (2,557 acres); Sensitive Terrestrial Avian Invertebrate Species (2,493 acres);
• Slopes 30 to 50% (1,242 acres).
• TL: Big Game Summer Concentration (2,123 acres); Big Game Winter Range (2,557 acres).
While proposing extensive and dramatically different stipulations, BLM provides no specific discussion or analysis regarding (1) the current status quo of environmental impacts on Oxy Lease No. COC66918; (2) whether these specific stipulations are necessary to maintain or improve the environmental character on Oxy Lease No. COC66918; (3) whether these lease stipulations would allow for any future development on Oxy Lease No. COC66918 at all (given the extensive scope of multiple overlapping NSO stipulations, at the least); (4) whether BLM's decisions, focusing on Oxy Lease No. COC66918, are consistent with the federal government's policy to "foster and encourage private enterprise in the development of economically sound and stable industries, and in the orderly and economic development of domestic resources to help assure satisfaction of industrial, security, and environmental needs;" and (5) any other considerations important to a "leasing decision." These issues and impacts would have been analyzed and addressed in an EA at the initial bidding process when the lease was first issued. Consequently, here, where BLM is again evaluating a "leasing decision" with respect to each of the individual leases, BLM should be analyzing the impacts of each proposed NSO, CSU, and TL on every single individual lease, considering the existing status quo of that lease. BLM's failure to conduct this analysis on a lease-by-lease basis renders BLM's NEPA analysis inadequate for failure to take a "hard look" at the impacts of its proposed actions.

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

BLM Response:

An analysis of the No Action Alternative (Alternative 1) is provided as the "current status quo". Lease COC 66918, which is currently held by production (see Table 1-1 of the Draft EIS , is considered to be developable under Alternative 3 and 4 (see Appendix D of the Draft EIS for more information).

The BLM's Purpose and Need, disclosed in Section 1.3 and 1.4 of the EIS, includes "fostering and encouraging public enterprise" per the Mining and Minerals Policy Act of 1970 (MMPA), but also includes addressing the NEPA deficiency, supporting USFS mineral policy and considering consistency with recent USFS decisions regarding leasing.

The BLM believes that for all alternatives, the EIS has provided a level of detail sufficient to support reasoned conclusions by comparing the amount and the degree of change (impact) caused by the proposed action and alternatives per 40 CFR 1502.1. The BLM considers whether or not to lease and under what conditions based on more general rather than site-specific analysis. It is speculative to consider site-specific impacts at this level of analysis. Lease-by-lease analyses and maps are not included because future development is unknown and this level of analysis is not necessary to make a reasonable choice between alternatives. The RFDS informs the analysis at the appropriate scale for the analysis.

Comment:

BLM Failed to Adequately Address "Connected Actions," As Required by Law. When an agency prepares an EIS, NEPA requires that agency consider "connected actions" associated with the proposed action, as well as any alternatives. See 40 C.F.R. § 1508.25. A "connected action" is any action that is "closely related" to the proposed action: "Actions are connected if they automatically trigger other actions that may require an EIS; cannot or will not proceed unless other actions are taken previously or simultaneously; or if the actions are interdependent parts of a larger action and depend upon the larger action for their justification." See BLM NEPA Handbook, at 45. In the present WRNF DEIS, BLM failed to analyze all "connected actions" relevant to its proposed alternatives. Specifically, BLM assumes each leasehold interest is an isolated interest that would be unaffected by BLM's decision with respect to a different leasehold interest. BLM's assumption is wrong. Lessors, including Oxy, acquire leases as a coherent portfolio of lease holdings. Furthermore, Oxy has strategically developed infrastructure, often in coordination with other lessors, to transport products to market and ensure sufficient access to its leasehold and associated facilities, to offer only a few examples. In short, Oxy's planning process does not involve evaluation of one individual lease, but requires Oxy to evaluate the entire surrounding leasehold interests, relevant units, and in fact the entire field. BLM failed to recognize and analyze the interrelatedness of each of the Subject Leases. Consequently, BLM's WRNF DEIS is fatally flawed for BLM's failure to analyze "connected actions" in the WRNF DEIS.

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

BLM Response:

As noted in the BLM NEPA Handbook H 1790-2008, "connected actions" are limited to actions that are currently proposed (ripe for decision). Actions that are not yet proposed are not connected actions, but may need to be analyzed in cumulative effects analysis if they are reasonably foreseeable. While operators may seek to develop a cohesive portfolio, not all future plans are reasonably foreseeable. The Draft EIS does consider current and pending APDs as well as the other reasonably foreseeable development its cumulative effect analysis (See Appendix B). The BLM has also considered the use of existing roads in the analysis.

Section 4.3 has been revised to include a discussion of potential impacts to future and existing operations from the addition of NSO stipulations or lease cancellations, by alternative.

Editorial

Note: The comments are grouped together and sorted by the last name of the commenter, with the BLM response in a gray shaded box following the grouped comments within this category.

Comment:

Volume 1, Chapter 3, Section 3.7.5.1 Ungulates- The ungulate section starts in the middle of the raptor impact section. It appears that the ungulate section is about two or three paragraph ahead of where it belongs.

VELARDE, RON; COLORADO PARKS AND WILDLIFE

BLM Response:

Section 3.7.5.1 has been revised to correct placement of ungulate and raptor text.

Comment:

Volume 1, Executive Summary, Section ES. 7 Page ES9 It states in ES.7.4 -Alternative 4 is the proposed action. However in Volume 2, Section 4.7.4.2, page 4.7-21 it states that Alternative 2 is the proposed action.

VELARDE, RON; COLORADO PARKS AND WILDLIFE

BLM Response:

Section 4. 7 .4.2 has been revised to remove reference to the Proposed Action, and Section 4.7.4.4 has been revised to identify Alternative 4 as the Proposed Action.

Geology/Minerals/Paleontology

Note: The comments are grouped together and sorted by the last name of the commenter, with the BLM response in a gray shaded box following the grouped comments within this category.

Comment:

We now know too much about the hazards of the fracking process, not to mention the climate change effects of the always leaking methane and the CO2 released when the gas is burned to continue business as usual. drilling and other threats.

AMBLER, ANNE

BLM Response:

Impacts to climate change are disclosed in Section 4.2.4. Impacts to groundwater are disclosed in Section 4.5.2.3 (Impacts Common to all Alternatives) and Section 4.5.2.4 (impacts by Alternative). A paragraph was added to Section 4.5.2.3 to identify the rules and regulations under which oil and gas operations are conducted that would lessen the risk of groundwater contamination. No risk can be entirely eliminated no matter how many rules there are. However compliance conducted under a vigorous regulatory program would lessen the risk of impacts.

The BLM must consider best available information in analysis of the proposed action and alternatives. Each alternative represents a course of action that addresses issues and concerns to varying degrees. These alternatives meet the purpose and need to address the NEPA deficiency and consider conformity with the Forest Service's recent analysis regarding leasing within the WRNF. The BLM will select an alternative based upon the overall analysis of environmental impacts, socioeconomic considerations, other relevant factors, and the balance of agency statutory requirements and regulations.

Comment:

I am concerned about the possibility of earthquake swarms. These could allow contamination of our water sources, and could lead to landslides or slides affecting our main irrigation canals.

CAMPBELL, JAMES

Comment:

We should consider what is happening in Oklahoma (numerous unexplained earthquakes) before we go off half cocked in Colorado. Do we really need to destroy the beautiful land of Colorado with numerous ugly gas derricks?

FRATTAROLI, ANTHONY

Comment:

Another concern that has recently come to light is the possibility of fracking induced earthquakes. I attended the Oil and Gas Symposium in summer of 2015 in Rifle and sit as an alternate on the Garfield County Energy Advisory Board where we had presentations on this topic. I later did further research and learned the Thompson Divide and surrounding Carbondale area has experienced seismic activity in the past including the Carbondale Swarms of April – May 1984. There are multiple papers about the unstable geology of the area and the Carbondale Swarms including -- The Carbondale, Colorado, earthquake swarm of April - May, 1984, Author: Susan K. Goter; Geological Survey (U.S.), Denver, Colo. : Publisher: U.S. Geological Survey : [Books and Open-file Reports Section, distributor], 1988. Series: U.S. Geological Survey open-file report, 88-417. Also, Geomorphic Evolution at the Boundary of the Southern Rocky Mountains and the Colorado Plateau. Author: Spafford Ackerly and Kayo Ogilby; Colorado Rocky Mountain School, Carbondale, CO 81623; Draft: 2 August 1994; Revised: 22 February 2005. Also, UNITED STATES DEPARTMENT OF THE INTERIOR U. S. GEOLOGICAL SURVEY The Carbondale, Colorado, earthquake swarm of April - May, 1984 Open-File Report 88-417 by Susan K. Goter, Bruce W. Presgrave, R.F. Henrisey and C.J. Langer. The third paper listed stated, “The majority of the earthquakes occurred about 7 km south-southwest of Carbondale, at the northern terminus of the Elk Mountain anticline. The most precisely determined hypocenters of the swarm have focal depths in the 2 to 7 km range.” This paper states 34 earthquakes were located during this swarm. “Nine of the earthquakes were felt in the Carbondale area. The largest of these shocks, which occurred on 14 May 1984, had a local magnitude of 3.2 and caused Modified Mercalli intensity IV effects at Carbondale. This event was also felt at Glenwood Springs, about 18 km northwest of Carbondale.” In the seminar and meetings speakers emphasized if an area has had significant seismic activity, lies on a fault, has geological structure concerns the oil and gas industry should consider not fracking in these areas. I believe that due to the potential for seismic activity that Thompson Divide is not suited to oil and gas drilling."

HARRINGTON, VIRGINIA

Comment:

I now hear that we are to expect earth quakes around the Grand Junction area after the years of drilling there. We have already has a fairly large slide, which no one can prove yet the causes of such an event. However is would be worth looking into and consider all possible outcomes.

LAVERTY, DENISE

Comment:

Perhaps most important of all, it seems the worst-case scenario of hubris to pressure pump lubricating fluids into the very seam of the Rocky Mountain Plateau and the Rocky Mountains, where serious shifts in plate tectonics could be begun, creating massive repercussions in the form of earthquake swarms or other unforeseen and unmitigatable dangers.

SNYDER, TIFFINY

BLM Response:

Induced seismicity is an emerging concern with respect to oil and gas production. The vast majority of induced seismicity incidents involving oil and gas production activities that have been felt on the surface are related to underground injection of produced water and very few incidents have been attributed to hydraulic fracturing (Ground Water Protection Council [GWPC] and Interstate Oil and Gas Compact Commission [IOGCC] 2015). As Section 4.3.3.1 of the DEIS describes, the magnitude of the micro-seismicity that is induced by hydraulic fracturing is very small. Only in rare cases have hydraulic fracturing-induced epicenters been felt by persons. Incidents that are thought to have been attributed to hydraulic fracturing have occurred in diverse locations including Ohio, Oklahoma, British Columbia, and the United Kingdom and the magnitudes were in 2.0 to 3.0 range. Because of the diversity of the locations, no generalizations can be made concerning risk in other areas with differing geological conditions. Hydraulic fracturing is necessary to economically complete gas wells in the Piceance Basin because of the generally very low permeabilities of the sandstones and coals that are productive of gas. With respect to the earthquake “swarm” south of Carbondale that was recorded in 1984, Goter and Presgrave (1986) indicated that the epicenters did not line up as if along a plane, but rather were scattered. They speculated that the epicenters likely were generated by the movement along bedding planes within a geologic unit rather than a fault plane. The epicenter depths (3 to 6 kilometers) indicate the earthquakes may have originated in the Eagle Valley Evaporite. Because of the location and depth of the epicenters, the 1984 Carbondale earthquake “swarm” does not appear to be relevant to the risk of hydraulic fracturing-induced felt seismicity in the Piceance Basin. That does not preclude the existence of other risk factors that to date have not been manifested. Since wastewater injection wells have been implicated in potentially damaging seismicity, Colorado Oil and Gas Conservation Commission rules require that injection disposal well applications must be subjected to a seismicity review (GWPC and IOGCC 2015).

Comment:

I believe that fracking activities should always be robustly overseen and regulated, particularly on federally-owned lands. In some cases such as this regarding the White River NF.

UPSONS, SVEN

BLM Response:

Oil and gas activities on federal leases are mainly regulated by the BLM, however there is a cooperative Memorandum of Understanding between the BLM and COGCC to provide consistency to oil and gas operators. In 2015, the BLM issued rules on hydraulic fracturing, but the regulations are under litigation. Until the BLM rules are in effect, operators on federal leases must comply with COGCC rules that regulate hydraulic fracturing. Relevant rules include the following:
Rule 205 - Inventory chemicals
Rule 205A - Chemical disclosure
Rule 317 - Well casing and cementing; Cement bond logs
Rule 317B - Setbacks and precautions near surface waters and tributaries that are sources of public drinking water
Rule 341 - Monitoring pressures during stimulation
Rule 608 - Special requirements for coal-bed methane wells
Rules 903 & 904 - Pit permitting, lining, monitoring, & secondary containment
Rule 906 - Requires COGCC notify CDPHE and the landowner of any spill that threatens to impact any water of the state

Comment:

There is plenty of evidence to support the notion that fracking and oil drilling have and can cause environmental harm. It is unthinkable that your department would allow this activity in the White River National Forest let alone without a thorough investigation to the risks posed. How many more Americans must confront polluted and toxic water sources before we stop allowing these activities near important water sources?

MILLETT, REBECCA

Comment:

Deadly, dirty, resource-intensive oil gleaned from fracking is disastrous on so many levels. Fracking is invasive and controversial contaminating air, ground and drinking water with chemicals and methane gas.

NICHOLES, LINDA

BLM Response:

Section 4.16.2.3 notes that hydraulic fracturing has occurred in Colorado since 1947, nearly all active wells in Colorado have been hydraulically fractured, and to date, no contamination has been attributed to hydraulic fracturing in the analysis area. However, as discussed in Section 4.16.2.3, the lack of specific evidence linking oil and gas operations with contaminated water wells or other health risks does not preclude the fact oil and gas operations use and produce toxic contaminants that can adversely affect human health above certain levels of amount and duration of exposure.

As with spills and other accidental releases on pads or during fluids transport, potential risks from groundwater-borne chemicals would be statistically related to the amount of oil and gas activity as well as proximity to sensitive receptors, public water supplies, etc. Risk of adverse impacts would vary by alternative.

Comment:

If active geologic structures or areas of high geothermal gradient and/or high fracture density exist, we recommend including a discussion of current Colorado Oil and Gas Conservation Commission (COGCC) well construction regulations, to assure they are sufficient to protect groundwater sources in these areas.

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

A well bore diagram and a description of the well construction rules were added in Section 4.5.2.3. Geothermal exploration and development through the drilling of wells is regulated by the Office of the State Engineer, Colorado Division of Water Resources. Rules governing geothermal wells are available at the internet website: http://water.state.co.us/groundwater/wellpermit/Pages/GeothermalWells.aspx.

Comment:

Understanding the geologic setting is important because geologic structures and active faults may be more likely to lead to groundwater communication with deeper fluids. This is especially true if an active fault is oblique to existing natural fractures/structures, conjugate fracture sets exist, or a high fracture density exists. Thyne (2008), McMahon and others (2010), and the Draft EIS (p. 3.5-18) correlate potential for groundwater communication through natural fractures, even when a confining unit (i.e. Mahogany Oil Shale) exists. Thyne (2008) states "The locations of the most affected [wells] are near structural features where the faults and fractures maximize the vertical mobility of the gas," and that "the trend and location of chloride, which is derived from Williams Fork production water shows similar trends of increasing concentration and locations near structural features." Thyne further states that "most problem wells … [are] coincident with the Divide Creek Anticline" and that "increased fracturing near the anticline … may affect water resources." Divide Creek and Wolf Creek Anticlines are underlain by deep-seated thrust faults that extend beneath the Grand Hogback, and the " Divide Creek Anticline is cut by several normal faults transverse to the fold trend" (Tyler, 1996) We recommend including a geologic structural map scaled to the area of the leased zones showing geologic structures (not just active faults and landslides) in the Final EIS. See for instance, Grout and Verbeek, 1992 1, and Tyler 1996 (basin-wide Tyler map included in the Draft EIS; details scaled to Zones 1 through 4 would help). These detailed map(s) could include:
• Fault/fracture density and orientation to help determine zones of increased potential for groundwater communication; location of bimodal or conjugate fracture sets; geometric relationships between active faults and fracture sets.
• Major structure map to identify folds on a local scale, where fracture orientation can vary and be complicated; especially near structural noses and domed features."

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

The commenter has recommended that a larger scale structural map be made for each lease zone to show the fault and fracture density using the joint-set maps in a publication by Grout and Verbeek (1992) which provides maps of joint sets of various ages and orientations.
The BLM has determined that the inclusion of large-scale structural maps would not provide useful information or insight into the analysis of potential impacts for the reasons outlined below:

Due to the scale of the Grout and Verbeek (1992) maps, transposition of the joint sets onto the detailed lease zone maps would result in data gaps not readily apparent on the small-scale maps and would not accurately convey the intended information. The commenter did not provide other sources that could be used to construct maps showing the "location of bimodal or conjugate fracture sets; geometric relationships between active faults and fracture sets." As such, this information is not readily publically available and would have to be gathered in the field, from specialized fracture detection geophysical wireline logs, or obtained from proprietary data (seismic).

The comment does not include a specific proposal for how the maps would inform the analysis, however, presumably they would be used identify areas where hydraulic fracturing should not be employed or where additional stipulation might be required. As noted in Chapter 2.0, Section 2.4.2, the BLM determined that limiting or disallowing hydraulic fracturing is not feasible because
• There are appropriate mitigation measures required during well development operations to minimize potential adverse impacts;
• Operators cannot feasibly develop many of the target formations in the 65 leases without hydraulic fracturing, which would result in denying access to the leased minerals; and
• Hydraulic fracturing is speculative until the site-specific stage of permitting and therefore is not able to be analyzed in detail at the leasing stage.

The assumptions contained in the groundwater resources analysis (see Section 4.2.2.1) that site-specific analysis would establish appropriate resource protections to minimize adverse impacts, and that the analysis assumes compliance with federal and state regulations, policies, and permit conditions. These would include casing, cementing, and well monitoring requirements as required under COGCC rules, BLM Onshore Orders, Standard Operating Procedures, best management practices, and conditions of approval issued by the BLM.

The subsurface regime in the Piceance Basin is very complex relative to the movement and migration of fluids in the subsurface and the potential movement of contaminants. Due to that complexity, it would be speculative to provide analysis of the migration routes of stray gas based solely on surface joint sets and location of faults at this programmatic level. A detailed joint study of the West Divide Creek seep area was conducted for the COGCC (Walter Group 2011). The study concluded that the mapping of joints and other linear features could not conclusively determine preferred subsurface gas migration pathways.

Section 3.3 has been revised to include additional information on the physical attributes of the subsurface in this part of the Piceance Basin based on data gathered from 1979 to 1988 in the Multiwell Experiment (MWX) test site located in Rulison Field (Lorenz 2012) and the result of the Walter Group joint study 2011. The section includes the following findings that are relevant to the issue of fluid migration:

• Natural fractures are ubiquitous. The natural fracture density in the Mesaverde Formation is very high, often with spacing between fractures on the order of about 3 feet with a dominant west-northwest orientation.
• Based on well test measurements, natural fractures can significantly enhance productivity given the extremely low permeability of the sandstone reservoirs. However, some fractures may not effectively contribute to fluid migration because of in situ stresses or lower pore pressures.
• Properly conducted well stimulation (hydraulic fracturing) can use the natural fracture system to advantage to enhance productivity.
• The vertical movement of hydraulic fractures is inhibited by the heterogeneity of the rocks.

Measurements of in situ stress indicated higher stresses in mudstones and lower stresses in sandstones. The higher stresses in the mudstones have a tendency to limit the upward growth of fractures. Measurements indicated that the stress contrast is as high as 2,000 pounds per square inch (psi). In addition, some of the stresses in the non-reservoir mudstones were found to equal the lithostatic gradient of 1.07 psi/foot.
• Existing mapping of joints and other linear features could not conclusively determine preferred subsurface gas migration pathways.

The revision notes that the subsurface regime in the Piceance Basin is very complex relative to the movement and migration of fluids in the subsurface. Because of the complexity, it would be inaccurate to predict migration routes of potential contaminants based solely on the presence of surface joints and faults.

Comment:

Independent, peer-reviewed geologic and economic analysis of hydrocarbon potential found “little to no economic viability” for the drilling of oil and gas leases in the Thompson Divide area. The same assessment highlighted terrain, geologic structure, historical production trends, lack of existing infrastructure and drilling restrictions (seasonal closures, wildlife, wetlands, etc.) as major contributors to making the Thompson Divide area “extremely unattractive” for oil and gas development. The independent, peer reviewed assessment went on to conclude that any attempt to develop hydrocarbons in the Thompson Divide area will “likely fail, in a commercial sense.”

HAGGERTY, JOANIE

Comment:

With Saudi oil flooding the market fracking is not profitable nor will it be as long as the Saudis have oil. Since no one is fracking now why not restrict that technique from public lands as a compromise to full restriction on any extraction method.

TANSILL, ROY

BLM Response:

The hydrocarbon reserves and production potential of the Piceance Basin is not in dispute, but it is outside of scope of this DEIS to conduct a detailed resource assessment of gas resources that have been well documented from a variety of sources. The US Geological Survey has conducted resource assessments of the Uinta-Piceance oil and gas province. Although US Geological Survey’s oil and gas resource assessment may tend to be conservative, the potential of the basin as a petroleum producing province is well established based on past production and estimates of undiscovered resources. For a detailed summary of oil, gas, and coalbed natural gas resources, please see the White River National Forest Reasonably Foreseeable Development Scenario (USFS 2010a).

Comment:

There are also large gas resources present in the coal seams that are situated above the Rollins sandstone, and commercial gas production has been established in several areas of the basin, and with particularly good success in the SE portion of the basin, near many of the leases subject to this EIS. Contrary to a statement in the EIS, operators do not routinely commingle coal seam gas production with sandstone gas production, because gas production from shallow coal seams usually requires installation and operation of downhole pumps to dewater the coal seam cleats, reduce reservoir pressure and allow adsorbed methane to desorb and flow into the wellbores. The Piceance Basin coal seams, at depths of less than about 5000 feet, have been shown to be gas-saturated and will usually flow gas and water initially. The coal seam gas resource is generally estimated at more than 15-20 Billion SCF per section, with recoveries dependent upon depth and permeability, but potentially as high as 70% of the gas in place. The EIS does not address the fact that the oldest coal seam gas production in the Piceance Basin is at Divide Creek, adjacent to leases in the Thompson Divide area. Willbros has established commercial coal seam gas production just south of Divide Creek, and EnCana recognized commercial coal seam gas production potential west of Divide Creek, with 24 completed coal seam gas wells, and at Wolf Creek, just southeast of the Divide Creek Unit, but did not proceed with development there. Commercial coal seam gas production has been established in multiple wells directly south of the Zone 3 leases, and SG Interests is completing its Bull Mountain EIS, that will provide for about 75 vertical coal seam gas wells there when issued. Coal mines that operated in the Thompson Divide area, and in Coal Basin, were some of the gassiest coal mines in the world, indicating the large potential for recovery of these very large natural gas resources. In the mid-1980's, methane flowrates from the Midcontinent Resources Coal Basin coal mines totaled over 40 million standard cubic feet per day per USBM emissions records, and Midcontinent operated an in-mine gas collection system that enabled its use for coal drying and space heating until that mine was shut down due to a methane fire. Oxbow Mining and Vessels Coal Gas operate an electrical generation facility at the Elk Creek Mine that utilizes methane gas from coal seams to generate electricity, and mitigates the venting of these greenhouse gases.

DOWNEY, ROBERT

Comment:

There are also large gas resources present in the coal seams that are situated above the Rollins sandstone, and commercial gas production has been established in several areas of the basin, and with particularly good success in the SE portion of the basin, near many of the leases subject to this EIS. Contrary to a statement in the EIS, operators do not routinely commingle coal seam gas production with sandstone gas production, because gas production from shallow coal seams usually requires installation and operation of downhole pumps to dewater the coal seam cleats, reduce reservoir pressure and allow adsorbed methane to desorb and flow into the wellbores. The Piceance Basin coal seams, at depths of less than about 5000 feet, have been shown to be gas-saturated and will usually flow gas and water initially. The coal seam gas resource is generally estimated at more than 15-20 Billion SCF per section, with recoveries dependent upon depth and permeability, but potentially as high as 70% of the gas in place. The EIS does not address the fact that the oldest coal seam gas production in the Piceance Basin is at Divide Creek, adjacent to leases in the Thompson Divide area. Willbros has established commercial coal seam gas production just south of Divide Creek, and EnCana recognized commercial coal seam gas production potential west of Divide Creek, with 24 completed coal seam gas wells, and at Wolf Creek, just southeast of the Divide Creek Unit, but did not proceed with development there. Commercial coal seam gas production has been established in multiple wells directly south of the Zone 3 leases, and SG Interests is completing its Bull Mountain EIS, that will provide for about 75 vertical coal seam gas wells there when issued. Coal mines that operated in the Thompson Divide area, and in Coal Basin, were some of the gassiest coal mines in the world, indicating the large potential for recovery of these very large natural gas resources. In the mid-1980's, methane flowrates from the Midcontinent Resources Coal Basin coal mines totaled over 40 million standard cubic feet per day per USBM emissions records, and Midcontinent operated an in-mine gas collection system that enabled its use for coal drying and space heating until that mine was shut down due to a methane fire. Oxbow Mining and Vessels Coal Gas operate an electrical generation facility at the Elk Creek Mine that utilizes methane gas from coal seams to generate electricity, and mitigates the venting of these greenhouse gases.

ROBINSON, BRAD; GUNNISON ENERGY LLC

BLM Response:

The size of coal seam gas resource and history of coal seam development is generally discussed in Section 3.3.3.3. While the section has been revised to indicate that there is currently active mining south of Zone 3, it is important to note that the leases themselves do not have active coal mining; as such, additional information regarding expected recovery is not necessary to make a reasoned decision as to whether the 65 existing leases should be reaffirmed, modified or cancelled. Regarding the comingling seam gas production with sandstone gas production, as a practical matter, given the length and number of staged frac intervals, it may not be possible to avoid coal seam gas contribution to the overall sandstone reservoir production in a given well. As completions evolved and because of large-interval staged fracs, there may be some contribution from the coals that would also get fractured. However, this sentence has been deleted in the EIS.

Hazardous Materials/Human Health and Safety

Note: The comments are grouped together and sorted by the last name of the commenter, with the BLM response in a gray shaded box following the grouped comments within this category.

Comment:

Wildlife in Colorado are already being severely affected by toxins that are causing them to have serious birth defects, including birth defects that cause mortality.

HOY, JUDY

Comment:

Please re consider long term downstream effects of this decision as we face catastrophic drought in the west and more and more scientific finding linking petro-chemical poisoning on our children. There might be more value in pristine wilderness that a few narrowly interested chemical companies are not able to perceive.

JUAREZ, TINA

Comment:

Fracking has some evidence of further environmental damage and increased risk of land shifting including earth tremors. The environmental impact on surrounding residents including gas leakage and leaching of chemicals used in production. The lands will take long to recover and the danger to wildlife and humans is unacceptable.

LAPOINTE, DENISE

Comment:

At this time, in the United States, the greatest danger to any and all wild life comes from the oil fracking industry. It is our (we the people, including EPA, FERC, and all BLMs) responsibility and duty to ensure protection to our environment and to all vulnerable species, including humans. The EPA and FERC and all United States BLM officials should know ALL the facts pertaining to how Big Oil business operates in America, which includes the oil fracking business. Apparently the EPA and FERC and most United States BLM officials do not know ALL the facts, or they are being paid off to NOT know ALL the facts concerning the oil business in America. My observations tell me that the EPA and FERC and most United States BLM officials are simply not doing enough to drastically minimize or completely stop oil fracking in America. In addition any authorization by the DOE for oil fracking operations in America comes under only two requirements: 1) threat to domestic energy security and 2) a policy of promoting market competition - which means environmental impact is NEVER considered. When examining past and ongoing fracking operations of all the companies who do fracking for oil and gas across the United States, two glaring facts emerge. First glaring fact all these fracking companies are actually achieving ZERO profits and usually less than zero profits. What? Check it out for yourself start with (maxkeiser.com)! Second glaring fact - after these fracking companies extract all that they can from the earth environment using hazardous and deadly chemicals with water, they implement NO after-operations clean-up procedures to the affected earth environment. Since there are NO after-operations clean-up procedures to the earth environment, all hazardous and deadly chemical pollutants are deliberately left for the public to deal with. Huh? Check out the flames at the kitchen faucet, if there is an oil fracking operation near you! The deliberate leaving of hazardous and deadly chemical pollutants in the earth environment must be deemed an act of deliberate 'deadly' criminal negligence willfully foisted upon the environment, the wildlife, and the innocent, general public. Any kind of wildlife whose habitat is in or near such polluted areas is definitely at great risk to survive. The chances for species survival could easily go to a stark minimum and even possible extinction. The majority of the American populace is being kept in the dark about the overall, dangerous impact of oil fracking and its effects; and the oil fracking companies want to keep it that way! The EPA and FERC and all United States BLM officials must not succumb to the GREED of certain political figures and to the GREED of oil fracking companies! When will the GREED stop? I am sure that all these oil fracking companies are eyeing our National forests and parks and Federal lands with GREEDY anticipation! Are they already fracking in the Yellowstone Park area? Are the Florida everglades next? The GREED never ends! These crimes never end! We must stop these crimes!

SOKOL, SIGMUND

Comment:

In the summer of 2010, I accompanied my husband and an NRCS employee to a produced water evaporation site near Vernal, Utah. Within a couple of minutes, I was sick to my stomach, unsteady on my feet and continued to suffer nausea for approximately 3 hours after we left the site. No one else got sick and I didn't expect to, but I am apparently very sensitive to whatever air pollutants were present. I will be a "down winder" and a "down drinker" to Thompson Divide drilling. I don't want to find out too late that our water is contaminated with the endocrine disrupting chemicals and carcinogens pumped into the ground and spilled from fossil fuel extraction.

STONE, MARILYN

Comment:

There are only 6,000 people that live in our little town of Carbondale and 8,000 in Glenwood Springs and every one of them will be impacted in the long run with health consequences from an unhealthy environment to live in by the destruction of our water, air and soil if they allow this!

WANNER, PATRICIA

BLM Response:

As discussed in Section 4.16.2.3, the lack of specific evidence linking oil and gas operations with contaminated water wells or other health risks does not preclude the fact oil and gas operations use and produce toxic contaminants that can adversely affect human health above certain levels of amount and duration of exposure. As with spills and other accidental releases on pads or during fluids transport, potential risks from groundwater-borne chemicals would be statistically related to the amount of oil and gas activity as well as proximity to sensitive receptors, public water supplies, etc. Risk of adverse impacts would vary by alternative.

Comment:

In addition, the County owns a number of properties that will be adversely affected by increased industrial traffic on Highway 133, which is a scenic byway. Any accident resulting in a spill of industrial chemicals would seriously harm the County's interests in these lands.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

Comment:

No government entity - be it federal, state, regional, county or municipal - is equipped to adequately handle any environmental catastrophe in this area. We the taxpayers are not interested in cleaning up any wreckage on our federal lands on our dime - or, more accurately, millions of dollars.

TEEPLE, J.

BLM Response:

Section 4.16.1.4 provides pipeline incident rates and produced water spill rates by alternative. Section 4.16.2.3 discusses the potential risk of fire and impacts to emergency services. Potential risks from groundwater-borne chemicals would be statistically related to the amount of oil and gas activity as well as proximity to sensitive receptors, public water supplies, etc. Risk of adverse impacts would vary by alternative. In the event of a spill the responsible parties would be held liable for response and remediation costs.

Comment:

Accidents will happen with the complexity of fracking and once the damage occurs there is no turning back.

CRUMP, LAURA

Comment:

Water is the key to life, how will you or a company from Houston, TX repair a whole ecosystem once an accident occurs and waste and contaminants enter the water? Where are the numbers that show how much economic loss will occur if an accident occurs and streams are polluted? It's probably not quantifiable because there isn't an equation to show loss of wildlife and consequences stemming from an accident.

MEREDITH, BRETT

Comment:

I am an organic and biodynamic gardener in the Crystal and Roaring Fork valley. One of my clients lives directly on Thompson Creek. The purity of our water is essential. There is no room for accidental spills.

RAINS, DAWN

BLM Response:

Section 4.16.1.4 provides pipeline incident rates and produced water spill rates by alternative. Potential risks from groundwater-borne chemicals would be statistically related to the amount of oil and gas activity as well as proximity to sensitive receptors, public water supplies, etc. Risk of adverse impacts would vary by alternative.

Comment:

Meanwhile, bond amounts required by federal law—which allows an operator to post a single $150,000 bond to cover all of its operations nationwide—are wholly inadequate to protect the public from the risks of unexpected contamination. See 43 CFR §3104.3. The remote nature of the Thompson Divide means that emergency response services to address accidents may be unable to arrive in time to prevent mishaps from seriously contaminating vulnerable surface waters. All of this emphasizes the need to close the Thompson Divide to oil and gas development, not pretend that it can be done safely through the use of stipulations or mitigation that cannot be meaningfully enforced in such a remote and rugged location.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

Section 4.16.2.3 discusses the potential risk of fire and impacts to emergency services. Potential risks would be statistically related to the amount of oil and gas activity as well as proximity to sensitive receptors, public water supplies, etc. Risk of adverse impacts would vary by alternative.

Issues related to bond requirements are outside the scope of the EIS. The regulations in 43 CFR 3104 and 3106 require that the oil and gas lessee, operating rights owner, or operator provide bond coverage prior to surface-disturbing activities and to maintain adequate bond coverage during the operational period of a lease and until all liability has been released, the wells have been correctly plugged and abandoned, and the surface conditions are approved by the BLM. The WRNF requires a reclamation bond prior to surface-disturbing activities.

Comment:

Emergency Services. The Thompson Divide is a remote and rugged backcountry area. Provision of emergency services to this area—including law enforcement and fire fighting—would be extremely difficult and expensive. Fire fighting in this area is often provided by volunteers. Combining industrial activities, petroleum products, and forests in a remote area presents obvious risks. Fire, in turn, presents independent and serious risks of contamination and habitat destruction to this largely roadless habitat and our water sources. Once again, we are reminded to expect the unexpected when introducing industrial activities into remote forest locations. Local communities are often the first and primary responders placed in harm's way when things go wrong. In these circumstances we find it both unnecessary and inappropriate to impose such risks on our communities.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

Section 4.16.2.3 discusses the potential risk of fire and impacts to emergency services. Potential risks would be statistically related to the amount of oil and gas activity as well as proximity to sensitive receptors, public water supplies, etc. Risk of adverse impacts would vary by alternative. The Thompson Divide area is no more remote that were many areas before oil and gas development took place. The roadless areas will have sufficient access roads constructed if oil and gas development is carried forth.

Comment:

Our farm for adults with autism is on the Crystal River. People with disabilities are sensitive to pollution. Please do not pollute our air, water and soil by fracking pristine lands.

BERNARD, SALLIE

Comment:

Until the full extent of harms caused by fracking to both the environment and health of workers have been revealed, please protect workers and the environment. It will be a memorable effort on your part if you not only support the proposed alternative that will help protect Colorado's White River National Forest from the risks of fracking, oil drilling and other threats. But please be even bolder on our behalf and defend our spectacular wildlands by canceling all illegal leases in the National Forest.

BOWMAN, CLAIRE

BLM Response:

Section 4.16.2.3 notes that hydraulic fracturing has occurred in Colorado since 1947, nearly all active wells in Colorado have been hydraulically fractured, and to date, no contamination has been attributed to hydraulic fracturing in the analysis area. However, as discussed in Section 4.16.2.3, the lack of specific evidence linking oil and gas operations with contaminated water wells or other health risks does not preclude the fact oil and gas operations use and produce toxic contaminants that can adversely affect human health above certain levels of amount and duration of exposure.

As with spills and other accidental releases on pads or during fluids transport, potential risks from groundwater-borne chemicals would be statistically related to the amount of oil and gas activity as well as proximity to sensitive receptors, public water supplies, etc. Risk of adverse impacts would vary by alternative.

Comment:

While industry may urge that the circumstances examined in these studies did not involve best management practices and therefore are not indicative of future risk, we are reminded of the admonition in the USFS Fernow study: expect the unexpected. Again, risk must be understood in the context of extremely limited oversight resources, as human error, equipment malfunction, or corner cutting (as with the BP Horizon disaster in 2010) can all contribute to significant incidents. To this point, BLM need look no further than an APD submitted by SG Interests to drill in the Thompson Divide. According to BLM, SG's plans failed to properly characterize subsurface water in violation of Onshore Order # 1, and contained a number of deficiencies in casing protocol, including impermissibly shallow casing in violation of COGCC standards. See Ex. 33 (10/26/2012 letter from BLM to SG Interests I, Ltd.) This experience shows that it is one thing to identify BMPs in an EIS or other decision document; it is an altogether different matter to assure that these BMPs are in fact implemented on the ground—particularly when minuscule bond amounts provide operators with little incentive to themselves assure compliance, and federal, state and local agency funds to assure compliance are severely limited.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

The "Fernow Study" referenced is a Forest Service study conducted in in 2007 on a West Virginia Forest. The authors of the study note that "unpredicted impacts will occur." Some of the 'unexpected consequences" resulted from a permitted "surface application" of produced water as a means of disposal. Surface application of produced water as a means of disposal has not been approved in the White River National Forest. The Draft EIS acknowledged that unexpected impacts may occur and emergency notification requirements and emergency response capabilities are designed and provided for just these occurrences. While it is assumed that operators would comply with all laws and regulations related to well development and use and transport of hazardous materials, potential risk of spills and other accidents would be statistically related to the amount of oil and gas activity as well as proximity to sensitive receptors, public water supplies, etc. Section 4.16.1.4 provides pipeline incident rates and produced water spill rates by alternative. Section 4.16.2.3 discusses the potential risk of fire and impacts to emergency services. Risk of adverse impacts would vary by alternative.

The commenter provided Exhibit 33, a Notice of Completeness or Deficiencies for an APD (Lease COC 66693). As noted in the comment, the BLM identified several insufficiencies in the APD and requested correction and resubmission of the APD. This suggests that the regulatory oversight process is adequate to ensure BMPs are implemented on the ground.

Issues related to bond requirements are outside the scope of the EIS. The regulations in 43 CFR 3104 and 3106 require that the oil and gas lessee, operating rights owner, or operator provide bond coverage prior to surface-disturbing activities and to maintain adequate bond coverage during the operational period of a lease and until all liability has been released, the wells have been correctly plugged and abandoned, and the surface conditions are approved by the BLM. The WRNF requires a reclamation bond prior to surface-disturbing activities.

Comment:

These types of leases put the BLM at risk of being a partially responsible party when things go south, and they always go south on these type of deals. Especially ones that are next to megaton nuclear weapon detonation sites. Sites like the one in Garfield County, Colorado, aka Project Rulison, that absorbed an atomic weapon underground, twice the size of the one dropped on Hiroshima, in 1969. Where the babies are now dying and deformed at a rate higher then the national average, and where the entity charged with overseeing health and well-being of its citizens in Colorado, aka, the Colorado Department of Health and Environment, is actually a front-running entity for the industry and should see some of their current and former workers in federal prison for the A ICO scheme that has been at work in our state since the 1950's, if not earlier. Attached are documents that may not seem related to the BLM White River District at first, but as you get through them, you start to realize there is a bigger picture here. And it looks like it involves the BLM stepping up, and taking control of this situation and calling it as it is. A liability the BLM does not want or need. And then the BLM should ask the DOJ to investigate some of its own employees for deliberate and criminal misconduct, and how these leases escaped the purview of the White River District BLM in the first place.

BELASKI, MEGHAN

BLM Response:

The nuclear testing site identified in the comments, located near Rulison, CO is outside of the existing leases and therefore beyond the scope of this EIS. There are several similar sites throughout the western U.S. All of these sites are regularly monitored and excluded from development. As with spills and other accidental releases on pads or during fluids transport, potential risks from site exposure to radiation would be statistically related to the amount of oil and gas activity as well as proximity to the site. Risk of adverse impacts would vary by alternative.

Comment:

Regulations and rules are put in place to keep our communities and families safe. Allowing fossil fuel companies to circumvent these rules and regulations just to make a profit endangers human health and puts our communities at risk. Forests take polluting carbon out of the atmosphere, so we should be planting more trees, not bulldozing what we have. The reckless drilling planned would not only result in more dirty fossil fuels being burned, but tons of dangerous methane gas would also be released. Methane is even more deadly than CO2 since it traps more heat and destabilizes our climate. We have a duty to protect future generations; blocking these illegal oil and gas leases is the best way to ensure that our grandchildren inherit a safe place to live, work, and raise a family.

GUNN, BRIAN

BLM Response:

While it is assumed that operators would comply with all laws and regulations related to well development and use and transport of hazardous materials, potential risk of spills and other accidents would be statistically related to the amount of oil and gas activity as well as proximity to sensitive receptors, public water supplies, etc. Risk of adverse impacts would vary by alternative.

Irreversible and Irretrievable Impacts

Note: The comments are grouped together and sorted by the last name of the commenter, with the BLM response in a gray shaded box following the grouped comments within this category.

Comment:

If it can't be fully restored to it's pre-drilling condition, then it shouldn't be drilled. Once land like this is criss-crossed with roads to facilitate drilling, wildlife suffers, the land itself suffers, and there's no way to put it back- it will literally never be the same. Check with a landscape architect if you disagree- changed land is changed land, it's never the same again.

VOLZ, CANDACE

BLM Response:

As noted in Section 4.20.7, loss of habitat would be considered an irretrievable commitment of the resource until reclamation. The section notes that while some vegetation communities are expected to return to a native state within in a relatively short period of time, other more sensitive habitats, such as sagebrush shrublands, may require up to 50 years or longer to return to native conditions.

Lands and Special Uses

Note: The comments are grouped together and sorted by the last name of the commenter, with the BLM response in a gray shaded box following the grouped comments within this category.

Comment:

Oil and gas development on federal lands surrounding Jerome Park will negatively impact Pitkin County's interests in the Jerome Park parcel. Most obvious are impacts resulting from operator use of Thompson Creek Road, which bisects the property. Currently this road sees little use apart from passenger vehicle traffic from visitors to the Spring Gulch Ski Area. Heavy truck traffic associated with oil and gas development would transform into an industrial corridor the serene landscape that Pitkin County and others invested $10 million to protect. Such a transformation will also compromise the property's value for quiet recreation, its ecological values as shelter for wildlife, and its scenic and open space attributes.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

As detailed in Sections 3.11.3 and 4.11.3, as well as portrayed in Figure 3.11-1, Jerome Park is outside the leasing zone boundary Development would not occur within Jerome Park under any alternative. Effects to transportation on Thompson Creek Road are detailed within Section 4.10. Impacts to wildlife are found in Sections 4.7. Potential changes to property values are discussed in Section 4.17. The DEIS's traffic and socioeconomic analyses did not find sufficient evidence to indicate that the project related traffic and tourism impacts would result in "serious and significant" economic impacts.

Comment:

The Jerome Park Conservation Easement serves the following governmental Conservation policies:
• The Farmland Protection Act, P.L. 97-98, 7 U.S.C. §§4201, et seq., the purpose of which is "to minimize the extent to which Federal programs and policies contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses, and to assure that Federal programs are administered in a manner that, to the extent practicable, will be compatible with State, unit of local government and private programs and policies to protect farmland;"
• Colorado Revised Statutes §§35-3.5-101, which provides in part that "It is the declared policy of the state of Colorado to conserve, protect, and encourage the development and improvement of its agricultural land for the production of food and other agricultural products."
• Colorado Revised Statutes §§38-30.5-101, 102, et seq., providing for the establishment of conservation easements to maintain land "in a natural, scenic or open condition, or for wildlife habitat, or for agricultural … or other use or condition consistent with the protection of open land having wholesome environmental quality or life-sustaining ecological diversity…."
• The Colorado Wildlife and Parks and Outdoor Recreation Statutes, Colorado Revised Statutes §§ 33-1-101, et seq., which provides that "It is the policy of the state of Colorado that the wildlife and their environment are to be protected, preserved, enhanced, and managed for the use, benefit and enjoyment of the people of this state and its visitors."
• The Pitkin County Land Use Code which states that the preservation of wildlife habitat, open space and agricultural operations conforms with Policies 2-120 (Scenic Quality), 2-160 (Wildlife Management) and 2-240 (Compatibility with Agricultural Lands and Operations), 2-280 (Compatibility with Public Lands), and 2-290 (Access to Public Lands).
• The Garfield County Lower Roaring Fork Open Land Heritage Program plan which provides that conserving agricultural lands, upland open mesas and forest and shrub covered slopes and uplands are important to the people of Garfield County.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

Jerome Park and other properties including Cold Mountain Ranch, Crystal Island Ranch, and the Hawkins Parcel are outside of the analysis area. Conservation easements are depicted in Figure 3.11-1 and described in Section 3.11.3. Potential subsequent impacts are detailed in Section 4.11.3. Figure 3.11-1 and subsequent text has been updated to include the Hawkins Parcel easement. The Crystal Island easement is the same area as the Mautz Ranch easement and is already included in Figure 3.11-1 and Sections 3.11.3, 4.11.3, and 4.11.4. Further discussions on potential impacts to wildlife and recreation resources are located in Sections 4.7 and 4.13, respectively.

Comment:

The County has also invested significant funds, through conservation easements and its own restoration activities, in improving water quality in the Crystal River drainage, particularly the Thompson Creek sub-drainage. Conservation easements on Cold Mountain Ranch, Crystal Island Ranch and the Hawkins parcel all specifically identify preservation of riparian habitat as an important easement objective. In the case of Cold Mountain Ranch, the County actually required improvements to the riparian habitat on the property; the County has also invested in riparian habitat restoration on its Thompson Creek Open Space. The County provides public fishing access at Cold Mountain Ranch and Thompson Creek Open Space. The WRFEIS indicates that oil and gas development can be expected to impact water quality in Thompson Creek and the rest of the Crystal River drainage; indeed, the WRFEIS indicates that these streams are extremely susceptible to water quality impacts. See WRFEIS at 85; see also WRFEIS Table 16 at 80. Such impacts would undermine the substantial investments the County has made in protecting these streams.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

The specific properties mentioned (Cold Mountain Ranch, Crystal Island Ranch, and the Hawkins parcel) are outside of the analysis area. Development would not occur within these conservation easement areas.

Impacts to water riparian resources are found in Sections 4.5, and 4.6, respectively. Appendix A contains a summary of water quality classifications for surface waters within the analysis area, including the Crystal River. The importance of the Crystal River for significant plant communities, wildlife habitat, and recreation is acknowledged in Sections 3.6, 3.7, and 3.13, respectively. Impacts to terrestrial wildlife and rare plant species are disclosed in Section 4.6 and 4.7, respectively. Section 4.8 details impacts to aquatic habitat and species. Sections 4.13 details potential recreational effects. Impacts to each of these resources would vary by alternative.

The BLM must consider best available information in analysis of the proposed action and alternatives. Each alternative represents a course of action that addresses issues and concerns to varying degrees. These alternatives meet the purpose and need to address the NEPA deficiency and consider conformity with the Forest Service's recent analysis regarding leasing within the WRNF. The BLM will select an alternative based upon the overall analysis of environmental impacts, socioeconomic considerations, other relevant factors, and the balance of agency statutory requirements and regulations

Comment:

Resources and holdings described by Pitkin County in the Local Governments' Scoping Comments (jointly submitted by the Town, Glenwood Springs, and Pitkin County) are of great value to the Town and its residents. These include:
• The Jerome Park Conservation easement
• County properties and programs in the Crystal River drainage and the Thompson Creek subdrainage.
• Pitkin County Conservation easements on Cold Mountain Ranch, Crystal Island Ranch and the Hawkins parcel.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

The specific properties mentioned (Jerome Park Conservation easement, Cold Mountain Ranch, Crystal Island Ranch, and the Hawkins parcel) are outside of the analysis area. Development would not occur within these conservation easement areas. Conservation easements are depicted in Figure 3.11-1 and described in Section 3.11.3. Potential subsequent impacts are detailed in Section 4.11.3. Figure 3.11-1 and subsequent text has been updated to include the Hawkins Parcel easement. The Crystal Island easement is the same area as the Mautz Ranch easement and is already included in Figure 3.11-1 and Sections 3.11.3, 4.11.3, and 4.11.4.

Comment:

Pitkin County is the instrument of government charged with administering zoning and planning codes that apply to lands within its territorial boundaries—including federal lands. Pursuant to Colorado law, the County has enacted a number of master plans and comprehensive zoning regulations to ensure that land uses in the County are compatible with each other and advance economic and other community goals. These regulations include provisions governing oil and gas development in the County. Due to partial federal and state preemption, however, the County's ability to ensure compliance with its master plans and other zoning requirements may be constrained in the context of oil and gas development. Federal approval of oil and gas development in areas that are inconsistent with master plan and zoning objectives would directly frustrate the County's ability to completely implement and enforce these duly-adopted plans and zoning regulations. Consequently, although the County does retain certain regulatory authority over oil and gas operations, the County must rely on NEPA and other federal processes to comprehensively advance some of the objectives set forth in its ordinances. The local master plan discourages oil and gas development in this area. See Ex. 19 (Crystal River Valley Master Plan). Likewise, the County's land use code places limits on oil and gas development in the Thompson Divide area, and the zoning—were it not preempted—excludes oil and gas development from this area. See Ex. 20 (relevant sections of Pitkin County Land Use Code). A BLM decision to perpetuate oil and gas leases in this area would, therefore, directly frustrate the County's ability to validly implement the goals of the master plan and zoning ordinances. NEPA discourages such results. Moreover, the County is clearly affected by a BLM decision to extend oil and gas leases that will soon require the County to exercise its regulatory authority over, and thereafter provide emergency and other services to, oil and gas development within the County's territorial boundaries.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

The BLM considered local and county plans in development of the alternatives. Section 4.11.4 discloses compatibility with county land use plans and zoning by alternative. The BLM must consider best available information in analysis of the proposed action and alternatives. Each alternative represents a course of action that addresses issues and concerns to varying degrees. These alternatives meet the purpose and need to address the NEPA deficiency and consider conformity with the Forest Service's recent analysis regarding leasing within the WRNF. The BLM will select an alternative based upon the overall analysis of environmental impacts, socioeconomic considerations, other relevant factors, and the balance of agency statutory requirements and regulations.

Comment:

Through conservation easements and outright property acquisitions, Pitkin County and its partners have protected more than 7,747 acres in the Crystal River Drainage. To conserve these lands, Pitkin County invested over $27 million, with the County's partners contributing over $5 million more, for a total investment of $32,334,664. These property interests protect superlative scenery along the Highway 133 Scenic Byway and in the Thompson Divide; connect and expand a vast landscape of wildlife habitat serving species from moose to fireflies; provide habitat for several rare plants and plant communities; conserve a total of approximately 7.8 miles of river corridor; promote the continuing viability of ranchlands critical to continuing agriculture in the Crystal Valley; and provide an array of public recreational access points to public lands on the WRNF. The discussion below highlights some of these significant investments that would be adversely affected—and therefore suffer a diminishment in the value of the County's property interest—by oil and gas development on WRNF lands in Pitkin County.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

Comment:

Alternative 4 protects conservation easement and property acquisitions that Pitkin County and its partners have acquired, involving more than 7,747 acres in the Crystal River Valley and the Thompson Creek Drainage. To conserve these ranch and rangelands, Pitkin County has invested over $27 million, with the county's partners contributing over $5 million more, for a total investment of $32,334,664, which shows, I think, our commitment to the recreation economy.

RICHARDS, RACHEL; PITKIN COUNTY

BLM Response:

As detailed in Sections 3.11.3 and 4.11.3, as well as portrayed in Figure 3.11-1, conservation easements are outside the leasing areas. Impacts to special uses such as recreation and livestock grazing are found in Sections 4.13, and 4.14, respectively.

Comment:

The preservation of Jerome Park protected a large and continuous swath of habitat including WRNF and BLM land that currently sees very little human activity. Having invested some $10 million to protect that habitat, the County is concerned that oil and gas development will fragment and disrupt that habitat with significant industrial-level activities. As the WRFEIS explains, degradation to the greater ecological system from drilling—including noise, traffic, fragmentation from roads, and air and water quality degradation—harms the wildlife community that Jerome Park helps to support. See WRFEIS at 202. Numerous reports document the negative effects of oil and gas development on wildlife habitat and all have either shown or concluded that everything from avian species to mule deer and elk are affected negatively. Further detail on wildlife impacts is provided herein.

The livestock grazed on Jerome Park also use grazing allotments on the adjacent Forest. The ranchers operating out of Jerome Park have indicated that impairment of their federal grazing allotments would likely mean the demise of their operations. Due to its impacts on animals, including livestock, oil and gas development poses such a threat. See Ex. 18 (Cornell Veterinary School Study documenting, among other things, the death within 1 hour of 17 cows exposed to hydraulic fracturing fluid). This would directly affect the County's interests in the Jerome Park Parcel because the ranchers actively manage the Jerome Park parcel to ensure that it remains in good condition and does not become infested with noxious weeds. A loss of these services would require Pitkin County to provide them, which would directly and negatively impact Pitkin County's budget.

The Jerome Park Conservation Easement assures protection of thousands of acres of wildlife habitat, hosting a broad range of species including 16 plant communities and 13 fauna species receiving special conservation designation from the Colorado Natural Heritage Program (CNHP) or other state or federal agencies. Jerome Park not only provides habitat for an abundance of wildlife, it creates a land bridge between USFS and BLM lands resulting in a landscape of protected habitat encompassing hundreds of thousands of acres. This composite of conserved lands includes several Inventoried Roadless Areas (IRAs), the CNHP Middle Thompson Creek Potential Conservation Area (located in part on Jerome Park), BLM ACEC designated lands and other conserved private lands.

Pitkin County's interest in Jerome Park also provides for continuation of Sunlight Mountain Resort operations on the property. The 240-acre lease that is continued through our conservation easement hosts the ski area's eastern portion. Several crosscountry ski trails, snowmobile trails, and horse trails originate from the resort and provide access to the forest located to the south. See WRFEIS at 289. Oil and gas impacts to Sunlight, including impacts from traffic and air pollution, would therefore also negatively impact Pitkin County's investment in Jerome Park.

The Jerome Park Conservation Easement assures continuation of a lease of 240 acres to Sunlight Ski Area, which receives over 100,000 skier visits a year.

The Jerome Park acquisition advanced all of the following Open Space Department programmatic goals: conservation of historic agricultural lands; protection of important wildlife habitat; preserving access to federal public lands; public recreation opportunities; and protection of scenic landscapes. More specifically, the Jerome Park Conservation Easement assures protection of tremendous views of Mount Sopris and other peaks in the Elk Mountains; the sandstone fins and other features of the Thompson Creek Drainage; and the Crystal River Valley from Thompson Creek Road. These little-known views are some of the more dramatic in Colorado.

The Jerome Park Conservation Easement assures public access along Marion Gulch to adjoining WRNF lands on the western boundary of the ranch. This access provides hiking, equestrian and cross country access to the Forest as well as serving as a primary portal for the Sunlight to Powderhorn snowmobile trail.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

As detailed in Sections 3.11.3 and 4.11.3, as well as portrayed in Figure 3.11-1, Jerome Park is outside the leasing zone boundary Development would not occur within Jerome Park under any alternative. Effects to wildlife are detailed within Section 4.7. Impacts to recreation and livestock grazing are found in Sections 4.13, and 4.14, respectively. Potential impacts to scenic resources that may occur on adjacent leasing areas are detailed in Section 4.15.

Comment:

Air pollution associated both with industrial traffic and oil and gas operations on the adjoining WRNF will also impair the property's value as a recreational destination. Many recreationalists—particularly the schoolchildren who train and race at Spring Gulch—could be at risk of adverse health effects as a result of breathing polluted air. Many of the outdoor recreational pursuits that the County acquired Jerome Park to protect—such as cross country skiing at Spring Gulch and hiking or running along the Marion Gulch access—demand high levels of aerobic activity that magnify the health risks of air pollution. The County provides more detail on this concern, including documented incidences of wintertime ozone violations associated with oil and gas activity, in its discussion of air quality herein.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

As detailed in Sections 3.11.3 and 4.11.3, Jerome Park is outside the leasing zone boundary. Potential impacts to air quality that may occur from adjacent leasing areas are detailed in Section 4.2. The CARMMS regional results presented in Table 4.2-5 do not indicate any significant air quality impacts under any modeled scenario. The Alternatives 1 to 4 and the Preferred Alternative are expected to be slightly above the CARMMS low development scenario emissions representing CRVFO (outside Roan Plateau) for the source group specific apportionment analysis. Alternative 5 would be lower. Ozone contributions from the CRFVO (outside Roan) do not amount to more than 0.2 ppb (not even 1 ppb) when the cumulative concentrations exceed the NAAQS (75 ppb standard), thus is a very minimal impact. The maximum project contribution (2.6 ppb) is expected to occur when the cumulative concentrations are well below the NAAQS.

Comment:

The Jerome Park Conservation Easement assures a permanent home for the Mount Sopris Nordic Counsel's Spring Gulch Ski area: 21 kilometers of Nordic trails that are free and open to the public. Spring Gulch receives more than 12,000 annual visits. Pitkin County's ownership interest in this ski area helps ensure that it will continue to operate and attract visitors, including schoolchildren and others who train and host races at Spring Gulch. Spring Gulch ensures that the Roaring Fork Valley from Carbondale to Aspen will continue to host some of the most extensive Nordic skiing opportunities in the United States, which in turn helps attract visitors to the County.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

As detailed in the Recreation analysis, Sections 3.13.4 and 4.13.4.1, Spring Gulch Ski Area is outside the leasing zone boundary. Development would not occur within Spring Gulch Ski Area under any alternative. The potential for indirect adverse Impacts to the Spring Gulch Nordic Ski Area is discussed by alternative in Section 4.13.4.

Comment:

SG contemplates future development in areas of the WRNF that are directly accessed by the Marion Gulch trail access. The value of the County's investment in this recreational amenity will be diminished by drilling activities on the forest, which would introduce an industrial use into areas currently prized for, among many other things, their seclusion, wildlife viewing opportunities, and clean air and water.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

As detailed in Recreation sections 3.13.4.5 and 4.13.4, Marion Gulch is outside the leasing zone boundary. The potential socioeconomic effects of leasing activities are detailed in Section 4.17.

Comment:

In addition to the Jerome Park parcel, Pitkin County has ownership interests in several other significant properties within the Crystal River drainage that future oil and gas development on nearby areas of the WRNF will adversely affect. Pitkin County and GOCO jointly acquired a $7.5 million conservation easement on the Cold Mountain Ranch, which straddles Highway 133 south of Carbondale; Pitkin County invested $5 million to conserve the former Mautz Ranch which now includes Sustainable Settings and incorporates property on both sides of Highway 133; and Pitkin County owns interests in Elk Park and the historic Redstone Coke Ovens, which sit astride Highway 133 at its intersection with the County's Coal Creek Road. Like Jerome Park, these properties were all acquired to advance the outstanding scenic, historic and agricultural values of the Crystal River Valley, a crown jewel of Colorado's mountain country. Heavy truck traffic, which the WRFEIS makes clear will increase along Highway 133 if future development is permitted in nearby areas of the WRNF, will degrade the conservation values underpinning the many millions of dollars invested in these acquisitions, and thus diminish the value of the County's investments. See WRFEIS at 318.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

This is detailed in Section 4.10.4.4. As detailed in Sections 3.11.3 and 4.11.3, as well as portrayed in Figure 3.11-1, conservation easements are outside the leasing areas. The potential for impacts to viewsheds is discussed in Section 4.15, Scenic Resources. Impacts to recreation and livestock grazing are found in Sections 4.13, and 4.14, respectively.

Livestock Grazing/Range Resources

Note: The comments are grouped together and sorted by the last name of the commenter, with the BLM response in a gray shaded box following the grouped comments within this category.

Comment:

Looking at the EIS as it exists so far, there is not one single stipulation in there that protects grazing I think that's a real oversight. We've made a lot of comments through this process about how important grazing is to the economy, as Mayor Bernot spoke to. This economy, we have a stable, thriving economy. We don't have a boom and bust economy. I think it's really important to keep it.

FALES, BILL

Comment:

I manage the Crystal River Ranch, which holds grazing permits in the Thompson Divide area. These permits have been held by this specific ranch owner and previous ranch owner since at least the 1950's. As many as ten other families and individuals are employed by this ranch full time and depend on this income for their livelihood. There are others who do seasonal work. The ranch sells some of the beef to a local restaurant. Several of the ranchers with grazing rights in Thompson Divide are actively involved in building a strong local food movement and reduce the food miles traveled which can average from 1,500 to 2,500 from farm to table. This local market has been increasing each year. This helps to reduce overall dependence on oil and gas. Ranching and agriculture are important contributors to the local economy. Private ranch lands also provide habitat for wildlife, filtration for water and air, open space and scenic viewsheds. Ranching in the Roaring Fork Valley would be at risk due to invasive oil and gas development in Thompson Creek.

HARRINGTON, TOM

Comment:

The ranch depends on its grazing permits on public lands to keep the ranching operation sustainable. Oil and gas development in the Thompson Divide area will have huge and unacceptable impacts on the grazing. Who will compensate grazing permittees/ranchers for the loss of forage and subsequent loss of income, that roads, pipelines, wells and well pads cause? All of the activities surrounding oil and gas drilling will make it very difficult to keep the cattle distributed according to the annual management plans. Cattle, people and wildlife need clean and abundant water. Water quality and availability will be negatively impacted by oil and gas development including groundwater which can become contaminated by fracking fluids. Noxious weed infestation will greatly increase with the disturbances oil and gas development bring and decrease the amount of forage. I have seen the efforts of reclamation in areas of Garfield County and many are unacceptable. Areas are never returned to what they were prior to oil and gas drilling.

HARRINGTON, TOM

Comment:

Ranching: The Thompson Divide area has provided valuable grazing areas for local ranched for more than a century, and it remains one of the strongest enclaves of traditional ranching culture in the West. Dozens of working ranches in the Crystal, Roaring Fork, and Colorado River Valleys rely on U.S. Forest Service grazing allotments within the TDA for their operational viability. These ranches also preserve thousands of acres of increasingly scarce winter range for deer and elk, and thus play an essential role in the larger ecosystem. Ranching operations make important contributions to the local economy and help to define the rural character of the area. Based on number of animal management units raised in the TDA, the immediate economic value of grazing in the Divide is at about $1.9 million per year. The full economic value, however, of the cattle supported by ranches with grazing on the Divide is about $11.2 million per year. See Ex 4.Drilling and industrial development within the Thompson Divide would fragment the landscape and negatively impact existing grazing activities in the area. In tum, drilling activities in the area would threaten the overall viability of dozens of working ranches on the periphery of the TDA.

KESSLER, ZANE; THOMPSON DIVIDE COALITION

Comment:

Likewise, where grazing allotments crossover the leasing areas, these agricultural uses should be prioritized and are not sufficiently addressed within the EIS.

MCNICHOLAS KURY, KELLY

Comment:

The Thompson Divide is a fundamental component of traditional ranching in the Roaring Fork Valley. There are 35 ranching operations which use the Thompson Divide area for critical summer range on federal grazing permits from early June to mid- October. These ranches and allotments preserve thousands of acres of increasingly scarce winter range for deer and elk and thus play an essential role in the larger ecosystem. They are tremendously important for the ranching heritage going forward in our Roaring Fork valley.

PETERSON, HENSLEY AND JAMES

Comment:

The Thompson Divide is a fundamental component of traditional ranching in the Roaring Fork Valley. There are 35 ranching operations which use the Thompson Divide area for critical summer range on federal grazing permits from early June to mid- October. These ranches and allotments preserve thousands of acres of increasingly scarce winter range for deer and elk and thus play an essential role in the larger ecosystem. They are tremendously important for the ranching heritage going forward in our Roaring Fork valley.

PETERSON, HENSLEY AND JAMES

BLM Response:

Impacts to Livestock Grazing are disclosed in Chapter 4.14 of the Draft EIS. While there are no leasing stipulations that apply specifically to livestock grazing allotments, any stipulations that overlap the lease area within a grazing allotment could restrict, modify, or preclude oil and gas development, resulting in a reduction or elimination of potential impacts to grazing allotments. The degree of restriction or modification would vary by alternative. While it assumed that livestock grazing may still occur in the proximity of oil and gas development, potential conflict would be statistically related to the amount of oil and gas activity and livestock grazing interests.

Comment:

I ranch in the Thompson Divide and depend on the Yank Creek and Marion Creek watersheds for our irrigation water. I have followed the Thompson Divide campaign to protect the area from gas leases and industrial development for over seven years. I was impressed with the Forest Service decision to close part of the area to oil and gas leasing. It is my hope and desire that the BLM will recognize the validity of the Forest Service decision for the surface rights and follow suite for the mineral development and cancel the leases.

FOX-PERRY, JUDY

BLM Response:

Water resources and potential impacts to water resources are discussed in Sections 3.5 and 4.5, respectively. Impacts to livestock grazing are disclosed in Section 4.14 of the Draft EIS. While there are no leasing stipulations that apply specifically to livestock grazing allotments, any stipulations that overlap the lease area within a grazing allotment could restrict, modify, or preclude oil and gas development, resulting in a reduction or elimination of potential impacts to grazing allotments. The degree of restriction or modification would vary by alternative. While it is assumed that livestock grazing may still occur in the proximity of oil and gas development, potential conflict would be statistically related to the amount of oil and gas activity and livestock grazing interests.

Section 1.2 describes the mineral leasing process on Forest Service lands; Section 1.3 identifies part of the BLM purpose and need as considering consistency with the recent availability decisions for lands within the WRNF.

Comment:

As a rancher who depends on water sources near currently leased sites, I am concerned that our springs and creeks may be affected by exploratory wells, completed wells and/or subsequent fracking.

CAMPBELL, JAMES

Comment:

Ranchers depend on pure untainted (non fracted) water! This crucial to rancher's community.

FAISON, CHRISTOPHER MAURY

BLM Response:

Impacts to Water Resources, including springs and creeks, are disclosed in Section 4.5 of the Draft EIS. Impacts to Livestock Grazing are disclosed in Chapter 4.14 of the Draft EIS.

Mitigation

Note: The comments are grouped together and sorted by the last name of the commenter, with the BLM response in a gray shaded box following the grouped comments within this category.

Comment:

Please mitigate the damage already done and prevent even more damage.

RAYES, CATHIE

BLM Response:

As noted in Section 2.4 of the Draft EIS, mitigation for wildlife or other resources would be developed on a site-specific basis, after an application for permit to drill (APD) is received.

Comment:

For all leases that are not cancelled, we encourage BLM to consider placing additional stipulations, as appropriate, to mitigate environmental impacts to water quality, air quality, soils, riparian vegetation, sensitive plant species, and sensitive wildlife species. Careful consideration should also be given to important wildlife habitat, with stipulations that minimize the impact to rare upland habitat that provides important connectivity for the entire region.

JOHNSON, MERRILL; WESTERN SLOPE CONSERVATION CENTER

BLM Response:

Alternative 3, 4, and the Preferred Alternative incorporate additional NSO and CSU stipulations designed to protect a variety of resources. As noted in Section 2.4 of the DEIS, the BLM has determined that additional design features and best management practices (BMPs) not incorporated into an action alternative are either regulated by other agencies or more appropriately considered during the Application for Permit to Drill (APD) process, after operators submit a site-specific plan of operations for evaluation. During the APD process, potential resource issues would be identified at the onsite review. The site-specific environmental analysis at the APD stage may identify mitigation measures to be attached to the approved permit as conditions of approval (COAs).

Other

Note: The comments are grouped together and sorted by the last name of the commenter, with the BLM response in a gray shaded box following the grouped comments within this category.

Comment:

Having explained why it does not make economic sense to develop these leases, Dr. Wright addresses the obvious question: why are leaseholders nonetheless proceeding with eleventh hour development applications when the leases were on the verge of expiration near the end of their ten-year primary terms? [see EX 9] All of these factors lead to the conclusion that SG is attempting to extend the leases beyond their primary term rather than develop gas production from them which is consistent with the conclusions of the economic...analysis that there is a high probability of losing a significant amount money if an attempt is made to develop the leases....Dr. Wright's conclusions substantiate the conclusion that cancelling leases in the Thompson Divide is not inequitable, because the leaseholders made deliberate decisions not to diligently develop their leases during the 10-year lease term. The disputed leases should have simply expired by their own terms—and would have, had BLM not suspended them pending the completion of this analysis. We have discussed in extensive detail why the leases should have expired in prior submissions on file with BLM. Accordingly, cancelling these unlawfully issued leases would not somehow deny the leaseholders a benefit of their bargains. Instead, cancellation simply prevents leaseholders from speculating at the expense of the public, in violation of federal law.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

Comment:

The Thompson Divide Could Not, and Cannot, Be Profitably Developed.[See attachments Wright (ex 9)and O'Connor (ex 10) regarding ability of operators to profitably develop leases]…After extensive analysis, Dr. Wright concluded that "it is highly likely that any attempts to develop the leases would lead to a substantial loss of money for the operator." See Ex. 9 at 2. He reaches this conclusion even though "the economic analysis summarized in [his] report is deliberately optimistic from the standpoint of the potential return to be obtained from attempting to develop the leases." Id. At 1. In other words, even after giving the Operators the benefit of the doubt on a host of assumptions, it is still highly likely that these are money-losing leases. Dr. Wright begins his analysis by referring to a geologic analysis prepared by Leslie O'Connor, Licensed Petroleum Geologist. See Ex. 10. ….O'Connor concluded, like Dr. Wright, that the disputed Divide leases have "little to no economic viability." ….Dr. Wright concludes that the "only formation which has any chance of producing economic volumes of gas is the Mancos (or Niobrara) formation." Ex. 9 at 3. To analyze the Mancos, he considered a variety of variables, principle among them being "the probability of finding economically recoverable gas ('success' for these analyses), the capital costs, the production forecast, and the gas price forecast." Id. At 4. His analysis is based on the "expected value" concept; this "methodology is used by all or most major oil companies and a number of independent oil companies".... Even when significant positive assumptions are made in the leases' favor, they were and are economically infeasible to develop under present and projected future market conditions.…Even when indulging all of these assumptions, however, Dr. Wright's analysis predicts a significant loss from attempting to develop leases in the Thompson Divide…Ms. O'Connor also independently conducted an economic analysis of attempting to produce from the Mancos in the Thompson Divide…To quote from her report, "Based upon the economics run on a high performing Mancos well, one would need to drill at least 40 of these wells, with a 100% success rate, to cover the upfront capital cost of the road requirements. It is clear that this endeavor would not constitute a commercially viable project." Ex. 10 at 6.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

Comment:

In a supplemental report dated January 4, 2016, attached as Ex. 56, Dr. Wright examines whether circumstances or intervening events since his original report have changed his conclusions. Update to the 2014 Economic Analysis of the Potential for Oil and Gas Development in the Thompson Divide Area. Dr. Wright again makes very conservative assumptions, making the analysis "deliberately optimistic from the standpoint of the potential return to be obtained from attempting to develop the leases held by SG Interests VII Ltd." Ex. 56 at 1. Dr. Wright used the same methodology as in the original report. Id. Taking into account a reduction in the cost of gas, a reduction in drilling and completion costs, and additional information about producing characteristics of horizontal Mancos/Niobrara gas wells, Dr. Wright continues to conclude that "attempting to develop oil and gas on the subject leases is not an economically viable venture and that it is highly likely that any attempts to develop the leases would lead to a substantial loss of money for the

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

Comment:

BLM should cancel 25 undeveloped, improperly issued leases in the Thompson Divide for the following reason: Independent, peer-reviewed analysis shows that leases in the Thompson Divide cannot be profitably developed. In 2013, TDC commissioned an independent, peer-reviewed analysis of the geologic and economic potential for hydrocarbon development in the TDA. See Ex 6. The assessment was conducted by Denver-based MHA Petroleum Consultants and found "little to no economic viability" for the drilling of oil and gas leases currently held in the Thompson Divide. The primary conclusion of MHA's analysis found oil and gas development in the Thompson Divide area to be uneconomical due to the very low potential of finding commercially viable oil and gas reserves combined with the "prohibitively expensive" capital investments required.

KESSLER, ZANE; THOMPSON DIVIDE COALITION

BLM Response:

Several commenters stated the opinion that the DEIS's future oil and gas production estimates are too conservative and consequently under-represent the project's future government revenue payments. Other commentators contend that the DEIS's production estimates (specifically for wells with the Thompson Divide) are overly optimistic and that the future oil and gas production on those leases will prove to be economically infeasible.

As the DEIS states in 4.17.1.3: "The analysis is not forecasting outcomes (i.e., prices, production, or consumption) as such, but instead modeling regional economic impacts between the alternatives given on the noted and common assumptions. Consequently, this analysis is not a prediction of the future but rather an evaluation and, where possible, an estimation of how the alternatives will each impact the regional economy given the specific and commonly applied assumptions." Furthermore, feasibility assessment of the leases is also outside the DEIS scope and purpose. Both the size of the underlying mineral reserves and their recoverability are inherently difficult to estimate and only verifiable "a posteriori."

Average future production rates for the future wells were based on the performance of other comparable wells in the region. The production assumptions were selected to be a reasonable representation of the wells' potential future performance that were adequate for comparative analysis and evaluation of the alternatives' impacts on the regional economy. As such, the validity of the findings from the comparative analysis will generally be independent of the future accuracy of the specific performance assumptions. The DEIS assumes the majority of wells will be directional; as an example, Alt 1 assumes to have almost 400 (398.4) directional wells and 18 horizontal (Table C-1 in Appendix C). In addition, the production is assumed to be smooth over 20 years, for a total of 1.2 Bcf for directional well and 6.4 Bcf for Horizontal (Appendix C).

Process

Note: The comments are grouped together and sorted by the last name of the commenter, with the BLM response in a gray shaded box following the grouped comments within this category.

Comment:

BLM Risks the Same Error It Alleges Occurred in 1993 if BLM Does Not Formally Adopt the 2014 WRNF Oil and Gas Leasing EIS Oxy contends that any NEPA deficiency that BLM alleges occurred was addressed in 1993 (see Section IV(B)(3), above). Should BLM continue to assert that a NEPA deficiency exists due to BLM's failure to publish a ROD to formally adopt the 1993 Oil and Gas Leasing EIS, BLM risks creating the same deficiency. Consequently, BLM cannot tier to the 2014 WRNF Oil and Gas Leasing EIS without first formally adopting that document. As noted above, BLM incorporated into the WRNF DEIS "as much of the new USFS NEPA analysis of future oil and gas leasing on WRNF lands as possible into its analysis of existing leases." See 80 Fed. Reg. at 72,733. Not only did BLM incorporate the Forest Service's analysis, but BLM's proposed Alternatives 3 and 4 would apply the lease terms outlined in Alternative C of the 2014 Oil and Gas Leasing EIS to the Subject Leases, and BLM's proposed Alternative 4 would cancel all or part of 25 leases in areas identified as closed for future leasing under the 2014 Draft ROD. Although BLM was a cooperating agency in the Forest Service's oil and gas leasing NEPA process, BLM has not yet issued an independent decision adopting the Forest Service's analysis in the 2014 WRNF Oil and Gas Leasing EIS or the final decisions in the 2015 ROD. Following BLM's own line of reasoning, BLM cannot lawfully tier to and adopt NEPA it has not formally adopted. Consequently, unless and until BLM formally adopts the Forest Service's 2014 WRNF Oil and Gas Leasing EIS, BLM cannot effectively adopt (e.g., tier to) the Forest Service's analysis and conclusions regarding the same.

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

BLM Response:

While the BLM intends to adopt the 2014 WRNF Oil and Gas Leasing EIS, this EIS does not tier to that document, which addresses only future leasing of currently unleased areas. Rather, the BLM has undertaken its own independent analysis, which has incorporated the 2014 FEIS analysis by reference. The CEQ regulations direct that: Agencies shall incorporate material into an environmental impact statement by reference when the effect will be to cut down on bulk without impeding agency and public review of the action. The incorporated material shall be cited in the statement and its content briefly described. No material may be incorporated by reference unless it is reasonably available for inspection by potentially interested parties within the time allowed for comment. Material based on proprietary data which is itself not available for review and comment shall not be incorporated by reference (40 CFR 1502.21). As noted in BLM NEPA handbook (H 1790-2008), tiering is a form of incorporation by reference that refers to previous EAs or EISs. Incorporation by reference is a necessary step in tiering, but tiering is not the same as incorporation by reference.

Alternatives 3 and 4 incorporate the stipulations and availability decisions found in the USFS 2014 FEIS and ROD for future leasing, respectively. These alternatives were included in this EIS to match USFS's decisions regarding where future oil and gas development should be located in the WRNF to meet the standards and guidelines of the WRNF Forest Plan based on best available science, and to provide a reasonable range of alternatives for analysis in the EIS as required under NEPA and the Council on Environmental Quality (CEQ) regulations. This approach satisfies Energy Policy Act requirements for consistent lease stipulations between the BLM and the USFS. The BLM has considered the same best available science considered by the Forest Service in their EIS and ROD. The purpose and need identifies that the BLM will consider conformity with the WRNF Plan revised based on the 2015 ROD; however, the BLM will make its own determination regarding the leases in question, as the WRNF EIS did not make determinations on the existing leases.

Comment:

BLM also must comply with the Federal Onshore Oil and Gas Leasing Reform Act of 1987 (FOOGLRA). FOOGRLA requires the consent of the Forest Service for any leases issued by BLM on national forest lands. Under FOOGLRA, BLM also must impose any stipulations identified by the Forest Service for such leases. There were numerous errors during the original Forest Service consent process when the 65 leases were issued. These errors must be corrected for any leases that are not cancelled. For those leases, BLM must obtain new, valid, consent from the Forest Service under FOOGLRA. See infra pp. 43-44. This step is especially important if BLM does not adopt Alternatives 4 or 5, because Alternatives 1-3 depart substantially from the management objectives the Forest Service selected in its recent OGLEIS and ROD.

FREEMAN, MICHAEL S; EARTH JUSTICE

BLM Response:

The USFS has previously consented to leasing all of the 65 parcels in question. The need for new consent depends on BLM's eventual decision as acknowledged by the commenter. Per 43 CFR 3101.7-2, BLM has the ability to apply more restrictive stipulations than those identified by the USFS in prior consent. As needed, BLM would coordinate with USFS on consistency with its earlier consent.

Comment:

The Associations are very concerned BLM has engaged in an overly politicized process with a pre-determined outcome. Local communities have expressed legitimate concerns about economic declines and job loss that will result from the DEIS, but BLM has ignored those concerns. Political interference and direction from Washington D.C. has caused BLM to fail in its legal mandates to balance environmental interests with the economic needs of the larger community, which has resulted in a biased document.

LUDLAM, DAVID; COLORADO OIL & GAS ASSOC & WESTERN ENERGY ALLIANCE

BLM Response:

The decision has not been made and will not be made by the BLM before receiving and considering all comments. The decision will be publicized in the ROD; the EIS is strictly a disclosure document that considers the potential impacts from a reasonable range of alternatives. Each alternative represents a course of action that addresses issues and concerns to varying degrees. The BLM will select an alternative based upon the overall analysis of environmental impacts, socioeconomic considerations, other relevant factors, and the balance of agency statutory requirements and regulations. The basis for alternative selection will be specified in the ROD.

As described in Chapter 5 of the DEIS, the BLM has engaged representatives from the local communities who are Cooperating Agencies at meetings throughout the process and considered all concerns expressed and documents provided by the Cooperating Agencies in support of those concerns.

Comment:

Cancellation of valid, existing oil and gas leases should only be considered in the highly unlikely event that development of the oil and gas resources on those leases would cause significant permanent, irreparable harm to the environment. The EIS does not provide ANY evidence that such development would cause any significant nor irreparable harm, not even significant impacts on the visual resources of the area. In fact, the EIS diligently describes how these oil and gas resources can be safely and efficiently developed in keeping with existing local, state and federal laws, rules and regulations, in order to fully mitigate any significant environmental impacts.

DOWNEY, ROBERT

Comment:

Cancellation of valid, existing oil and gas leases should only be considered in the highly unlikely event that development of the oil and gas resources on those leases would cause significant permanent, irreparable harm to the environment. The EIS does not provide ANY evidence that such development would cause any significant nor irreparable harm, not even significant impacts on the visual resources of the area. In fact, the EIS diligently describes how these oil and gas resources can be safely and efficiently developed in keeping with existing local, state and federal laws, rules and regulations, in order to fully mitigate any significant environmental impacts.

ROBINSON, BRAD; GUNNISON ENERGY LLC

BLM Response:

The BLM has the authority to cancel a lease if it was improperly issued (see 43 CFR 3108.3(d)). The decision has not been made and will not be made by the BLM before receiving and considering all comments. The decision will be publicized in the ROD; the EIS is strictly a disclosure document that considers the potential impacts from a reasonable range of alternatives. Each alternative represents a course of action that addresses issues and concerns to varying degrees. The BLM will select an alternative based upon the overall analysis of environmental impacts, socioeconomic considerations, other relevant factors, and the balance of agency statutory requirements and regulations. The basis for alternative selection will be specified in the ROD.

Comment:

BLM's use of NSO and CSU stipulations and lease cancellation in Alternatives 3, 4 and 5 to address what BLM has concluded, but not adequately discussed, are "changed circumstances" (BLM WRNF DEIS at 1-1) also fails to recognize the protections provided to the subject resources by other state and federal law. The Clean Air Act, the Clean Water Act, the National Historic Preservation Act, the Endangered Species Act and Colorado state law protecting air, water and regulating the development of oil and gas are all existing tools BLM can rely on to avoid the extreme actions proposed in Alternatives 3, 4 and 5. Moreover, the existing Lease terms also allow BLM to "apply regulations and formal orders hereafter promulgated when not inconsistent with lease rights . . . " Ex. A. Paragraph 6 of the existing Leases also requires lessees to conduct operations "in a manner that minimizes impacts to land, air and water, to cultural, biological, visual and other resources, and to other land uses or users . . . " There is a specific language in this contractual provision that addresses threatened and endangered species (one of the changed circumstances that BLM cites) and cultural resources requiring a lessee to "cease any operations that would result in the destruction of such species or object." Id. These resources can be managed through existing federal and state law and site-specific NEPA analysis. The DEIS fails to adequately discuss alternatives to lease cancellation and new NSO/CSU stipulations that would protect other resources and these valid existing Leases in conformity with the MLA, FLPMA and MMPA.

SIMPSON, DON; URSA PICEANCE LLC

BLM Response:

The BLM has the authority to cancel a lease if it was improperly issued (see 43 CFR 3108.3(d)). The decision has not been made and will not be made by the BLM before receiving and considering all comments. The decision will be publicized in the ROD; the EIS is strictly a disclosure document that considers the potential impacts from a reasonable range of alternatives. Each alternative represents a course of action that addresses issues and concerns to varying degrees. The BLM will select an alternative based upon the overall analysis of environmental impacts, socioeconomic considerations, other relevant factors, and the balance of agency statutory requirements and regulations. The basis for alternative selection will be specified in the ROD.

Comment:

Oxy contends that in addition to producing leases, leases committed to a unit, and leases with proven reserves can only be cancelled through judicial cancellation. As such, if sought to be cancelled, BLM must cancel the Oxy Leases pursuant to judicial cancellation. BLM regulations and direction provide little clear guidance on the process for judicial cancellation. Oxy contends that because BLM would be forcing Oxy into a litigatory process, resulting not from error in Oxy's actions or conduct, but rather, an alleged NEPA violation of BLM's obligation, BLM should bear the fees, costs, and other expenses related to the judicial cancellation proceedings, including legal costs and fees. Oxy has spent significant time and resources in exercising its exclusive right to explore for and develop oil and gas resources underlying the Oxy Leases, and BLM must make Oxy whole for costs associated with such lawful activity if it cancels the Oxy Leases. The costs include but are not limited to costs associated with exploration, development, production, as well as NEPA compliance, permitting, and litigation.

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

Comment:

Encana appreciates the BLM's recognition that it lacks the statutory authority to administratively cancel Encana's leases, all of which are either (1) held by production or (2) partially or wholly within producing, approved federal units. See Draft EIS, pg. 2-61, § 2.3.5. As the BLM recognizes in the Draft EIS, and as the USFS previously recognized in the Oi l and Gas Leasing ROD, pg. 9, the Mineral Leasing Act and the BLM's implementing regulations expressly prohibit the BLM from canceling producing leases or leases committed to an approved unit except through appropriate judicial proceedings. Federal courts and the IBLA have recognized this limitation. In Naartex Consulting Corp. v. Watt, for example, the District of Columbia Circuit held unequivocally that "currently-producing oil and gas lease[s]" may not be terminated administratively. So clear was this command, according to the DC Circuit, that to assert any suggestion the federal government could administratively cancel a currently producing lease "would be utterly futile." In addition, the IBLA, which speaks with the authority of the Secretary of the Interior, has repeatedly confirmed that the BLM may not administratively cancel a producing lease. The clear holding of all these decisions is that "where the leasehold contains a well capable of paying production," cancellation is appropriate only by judicial proceedings. The BLM's regulations have repeatedly confirmed this policy. In this case, the BLM may not use its pre-lease, potential violation of NEPA to cancel Encana's producing leases and leases within an approved communitization or unitization agreement. Finally, the BLM's handbook recognizes that it may not administratively cancel a producing lease or a lease committed to a producing federal unit, but must institute judicial proceedings to cancel such leases. BLM Handbook H-3108-1- Relinquishment, Terminations, and Cancellations, § IV.A (Rel. 3-3011/27 /95). Therefore, under clear statutory, regulatory, and judicial precedent, as well as the BLM's handbook, the BLM may not administratively cancel Encana's producing leases or leases committed to approved federal units.

SCHOPP, JOHN; ENCANA OIL & GAS

BLM Response:

As the commenter noted, the BLM has identified in the EIS that leases held by production or partially or wholly within producing federal units would require additional judicial proceedings. As stated in Sections 2.3.3, 2.3.4, and 2.3.5 of the DEIS, should leases need to be cancelled or lease stipulations be changed, subsequent BLM administrative actions including refunds of bonus bids and lease payments or judicial action would be necessary . BLM would not unilaterally modify a lease, but if the leaseholder does not consent to new or modified stipulations, BLM may cancel a lease. Analysis of litigation costs or outcomes is beyond the scope of the EIS and is speculative since the outcome or terms are uncertain, and would involve considerations independent of the project.

Comment:

SELECTION OF ALTERNATIVES 3, 4, OR 5 WOULD VIOLATE NUMEROUS FEDERAL STATUTES. Although the CRVFO pays lip service to the MLA and the MMPA, see Draft EIS at 1-12, Alternatives 3, 4, and 5 actually thwart the congressional intent behind those acts. Indeed, Alternatives 3, 4, and 5 would end development in areas of known geologic potential, cheating the American public out of over 620 billion cubic feet of natural gas and the associated royalties. See Draft EIS at 2-75. Instead of encouraging development of oil and gas deposits on public lands and in areas with existing infrastructure, Alternatives 3, 4, and 5 would wrongly prohibit further development of oil and natural gas on 65 valid existing oil and gas leases. Likewise, Alternatives 3, 4, and 5 fail to protect the lessee's valid existing rights in violation of FLPMA. In light of the foregoing, the CRVFO must select Alternative 1 or Alternative 2.

CAVANAUGH, JAMIE; WILLSOURCE MOUNTAIN STATES LEGAL FOUNDATION

BLM Response:

As required by the CEQ and DOI regulations implementing NEPA (40 CFR 1500-1508; 43 CFR 46.420), the BLM must consider a range of reasonable alternatives that meet the purpose and need statement (see Sections 1.3 and 1.4 of the DEIS) in order to meet the NEPA requirement to take a “hard look” at the alternatives and impacts, and therefore will not remove Alternatives 3 through 5 from analysis. The BLM has not yet made a decision on which alternative will be selected. This EIS is intended to consider a range of alternatives and disclose the potential impacts of each. Excluding reasonable alternatives that meet the purpose and need for action does not meet NEPA requirements.

The BLM has identified the Mineral Leasing Act and the Mining and Minerals Policy Act as part of the Purpose and Need for this EIS. All alternatives are consistent with the purpose and need to address the NEPA deficiency, consider consistency with Forest Service leasing availability decisions as well as meeting domestic energy needs consistent with these laws. These laws are intended to be applied across the broader landscapes of public lands and consideration of these 65 leases would not limit the BLM from broader strategies to address these mandates.

Comment:

BLM did not comply with its NEPA obligations when it issued the 65 leases at issue (the Leases) and it has determined that the 1993 Forest Service NEPA analysis is no longer adequate. Accordingly, the BLM should rectify its decision by requiring all future oil and gas activity to comply with updated planning documents. The WRNF FEIS and WRNF ROD contain the most current science and management prescriptions that pertain to oil and gas development in the area being analyzed, and we commend the BLM for forwarding the Proposed Action in the DEIS. Selecting the Proposed Action will comply with existing laws and regulations. The Proposed Action conforms to the Federal Onshore Oil and Gas Leasing Reform Act (FOOGLRA), which amended 30 U.S.C. § 226. As a result of FOOGLRA, when USFS-administered lands are being considered for oil and gas leasing, the BLM must not issue any lease over the objection of the USFS, and the USFS can require the inclusion of appropriate stipulations. Here, the BLM's decision is analogous to a pre-leasing decision, and the Proposed Action applies the management prescriptions and stipulations that comply with the WRNF FEIS and WRNF ROD.

BASKFIELD, TYLER; TROUT UNLIMITED

Comment:

We recognize that the Forest Service's closure decision was the result of a planning process that was, by its terms, prospective in effect. Id. at 4. However, BLM is not constrained by that fact to likewise leave existing leases in place. This is not a planning process. To the contrary, BLM must make a decision with immediate effect on leases issued without NEPA compliance, ESA compliance or 2001 Roadless Area Conservation Rule ("RACR") compliance. BLM has expressly stated from the outset of this process that cancellation of the leases is an alternative. BLM must now cancel those leases, based on the existing record, for several reasons: (i) BLM committed at the outset of its own NEPA process to "incorporate as much of the U.S. Forest Service's new NEPA analysis of future oil and gas leasing on the WRNF as possible into its analysis of existing leases." Notice of Intent to Prepare an EIS for Previously Issued Leases, 79 Fed.Reg. 18576-77 (April 2, 2014). Pitkin County incorporates the Forest Service WRFEIS and ROD into these comments and makes them part of the administrative record for this BLM NEPA process.5 BLM's decisionmaking properly should rely on the Forest Service's analysis and find, as did the Forest Service, that Thompson Divide resources and benefits make it inappropriate for oil and gas leasing and development. (ii) The Forest Service FEIS contains the most recent and best information on the affected resources in the lands under consideration in BLM's NEPA process. The Forest Service is the expert agency with respect to the surface and its resources, and as such, its conclusions deserve deference by BLM. See, e.g., 30 U.S.C. § 226(h) (providing that the Secretary of Agriculture as surface owner/land manager has the authority to veto leasing, based on the Secretary's expert assessment of a leasing proposal). While this curative NEPA process is not being performed pre-leasing, it is an analogous situation in that BLM is taking the required "hard look" at leasing that was not done at the leasing stage as it should have been. And, while the Secretary of Agriculture is not expressing a § 226(h) position in the WRFEIS and ROD, that procedural distinction makes no difference to the rigor and authoritativeness of the USFS analysis or the propriety of that agency's conclusion that leasing in the Thompson Divide is inappropriate.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

Alternatives 3 and 4 incorporate the stipulations and availability decisions found in the USFS 2014 FEIS and ROD for future leasing, respectively. These alternatives were included in this EIS to match USFS's decisions regarding where future oil and gas development should be located in the WRNF to meet the standards and guidelines of the WRNF Forest Plan based on best available science, and to provide a reasonable range of alternatives for analysis in the EIS as required under NEPA and the Council on Environmental Quality (CEQ) regulations. This approach satisfies Energy Policy Act requirements for consistent lease stipulations between the BLM and the USFS. Appendix B of the USFS 2014 FEIS contains a summary of the purpose and need and rationale for each of the proposed stipulations that were incorporated into Alternatives 3 and 4 of this EIS. NSO stipulations do not prohibit oil and gas development, but limit the location of surface disturbance.

The BLM has considered the same best available science considered by the Forest Service in their EIS and ROD. The purpose and need identifies that the BLM will consider conformity with the WRNF Plan revised based on the 2015 ROD; however, the BLM will make its own determination regarding the leases in question, as the WRNF EIS did not make determinations on the existing leases.

Comment:

The BLM states in the Draft EIS that Alternatives 3 and 4 "incorporate current Forest Service leasing requirements for compliance with the 2012 Roadless Rule." Draft EIS, pg. 2-67, § 2.4.9. The BLM apparently intends to impose road less area restrictions, most of them NSO restrictions, on leases that did not contain these restrictions when originally issued. Compare, e.g., Draft EIS, pg. 2-2, § 2.3.1, tbl. 2-2 (imposing no roadless area restrictions on Lease COC-061121 under No Action Alternative), with Draft EIS, pg. 2-22, § 2.3.3, tbl. 2-3 (imposing roadless area NSO restriction on Lease COC-061121 under Alternatives 3 and 4). These roadless area NSO restrictions are inappropriate for two reasons. First, as the BLM is aware, the Colorado Roadless Rule, finalized in July 2012, does not prohibit oil and gas development as a NSO restriction does. Rather, the rule generally prohibits timber cutting and road construction within inventoried Colorado Roadless Areas (CRAs). 36 C.F.R. § 294.43(a). As an exception to the general prohibition on road construction, the rule allows temporary roads in CRAs where needed pursuant to the exploration and development of oil and gas leases issued prior to July 3, 2012. 36 C.F.R. § 294.43(c)(viii); see 36 C.F.R. § 294.46(b) ("For oil and gas leases issued in a Colorado Roadless Area prior to July 3, 2012, the rule preserves any existing leases and surface development rights."). The Colorado Roadless Ru le thus does not imply or require a total NSO restriction. Second, the BLM issued all of Encana's White River National Forest leases well before July 3, 2012. Hence, the Colorado Roadless Rule does not apply to Encana's leases, but rather "preserves any ... surface development rights" conferred on Encana in its leases. 36 C.F.R. §§ 294.43c(viii); 294.46(b). Although some of Encana's leases were issued with roadless area NSO restrictions, many of Encana's existing leases issued without such restrictions would be subject to such restrictions under Alternatives 3 and 4. The Colorado Roadless Rule explicitly preserved Encana's surface development rights under its original lease terms; it does not authorize or require the BLM to impose NSO restrictions on Encana's leases more than a decade after they were issued.

SCHOPP, JOHN; ENCANA OIL & GAS

Comment:

BLM also analyzes Forest Service roadless areas in the 2012 Colorado Roadless Rule as support for Alternatives 3 (lease stipulations) and 4 and 5 (lease cancellation). BLM WRNF DEIS Chapters 2.0 and 4.12. But again, BLM is inconsistent with the Forest Service. The Forest Service rejected claims that the Leases should be cancelled in light of the Colorado Roadless Rule. Secretary Vilsack told the Board of County Commissioners of Pitkin County in 2012, that: "The Department of Agriculture (USDA) is aware that leases in the proposed unit do not contain stipulations explicitly protecting roadless areas and acknowledge your concerns about the potential impacts to the area's surface resources. USDA's Forest Service is committed to protecting roadless values, but it is equally committed to honoring legal obligations. The Forest Service recognizes these leases as valid existing authorizations, issued in accordance with the legal requirements at the time the leases were issued. Leases are contracts and cannot be unilaterally modified to apply additional stipulations (e.g., no surface occupancy) that would otherwise prohibit exercise of the basic rights granted by the lease." Ex. R. In the Forest Service "Rulemaking for Colorado Roadless Areas," FEIS App. H-8 (May 2012), the Forest Service rejected calls to develop an alternative that does not allow road or well-pad construction on so-called gap leases because, "[t]he final rule cannot unilaterally change the development rights of existing leases as it would give rise to regulatory takings claims under the Fifth Amendment." According to the Forest Service, "[t]he BLM carried out its statutory authority and issued leases containing roadless lands subject to the applicable lease stipulations and notices required by the Forest Service consent. Once issued, the leases grant the exclusive right to drill for, extract, remove, and dispose of all the oil and gas within the lease area, subject to terms and stipulations made a part of the lease." FEIS, Rulemaking for Colorado Roadless Areas at App. H-29. According to the Forest Service, "The Forest Service cannot unilaterally modify existing leases to restrict road construction or surface occupancy when those leases were issued without such restrictions. This would constitute a regulatory taking of lease rights and would require compensating lessees for loss of use of their leases." Id. At H-30. In accord with that reasoning, the 2012 Roadless Rule protects existing oil and gas leases. See 77 Fed. Reg. at 39,588 ("The Colorado Roadless Rule does not affect the terms or validity of leases existing prior to the promulgation of the final rule"); 36 C.F.R. 294.46(b) ("For oil and gas leases issued in a Colorado Roadless Area prior to July 3, 2012, the rule preserves any existing leases and surface development rights."). These Leases were issued in 2003, therefore the Colorado Roadless Rule does not apply to these Leases (36 C.F.R. § 294.43(c)(viii)) and BLM's Alternatives should reflect

SIMPSON, DON; URSA PICEANCE LLC

BLM Response:

Alternatives 3 and 4 incorporate the stipulations and availability decisions found in the USFS 2014 FEIS and ROD for future leasing, respectively. Both include NSO stipulations for Colorado Roadless Areas. These alternatives were included in this EIS in two alternatives that were intended to match the USFS decisions regarding where oil and gas development should be located in the WRNF to meet the standards and guidelines of the WRNF Forest Plan based on best available science, and to provide a reasonable range of alternatives for analysis in the EIS as required under NEPA and the Council on Environmental Quality (CEQ) regulations. Appendix B of the USFS 2014 FEIS contains a summary of the purpose and need and rationale for each of the proposed stipulations that were incorporated into Alternatives 3 and 4 of this EIS. NSO stipulations do not prohibit oil and gas development, but limit the location of surface disturbance.

Comment:

If BLM Voids or Modifies the Oxy Leases, Oxy Would be Due Certain Repayment, Either in the Form of Contractual Damages or Just Compensation. If BLM cancels or modifies the Subject Leases, BLM must make Oxy (as well as all other operators) whole in the form of damages resulting from breach of contract, or as just compensation under the Fifth Amendment to the U.S. Constitution. Given the expansive breadth of the leases at issue, as well as BLM's untimely delay in asserting unlawful cancellation and modification authority, BLM could owe Oxy in excess of $300 million. And, as noted above, BLM's analysis to date fails to consider the economic impacts to both the federal government and the State of Colorado from voiding or modifying the Subject Leases and requiring both BLM and Colorado to refund this significant amount of monies to operators."

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

BLM Response:

The potential impact economic impacts to the State of Colorado and federal government were excluded from the socioeconomic analysis scope due to the very large size of their economies compared to the potential local and regional economic impacts. In addition, it may be considered likely that any oil and gas activity displaced from WRNF may relocate to another location(s) in Colorado and/or federal properties, in which case there would be no net economic impact to the State and/or Federal government, since any of the project-related "lost" economic benefits would be recouped from the new location. Similarly, any damage or compensation for "takings" is also highly uncertain and speculative, and is therefore also excluded from the socioeconomic analysis. As stated in Sections 2.3.3, 2.3.4, and 2.3.5 of the DEIS, should leases be cancelled, subsequent BLM administrative actions including refunds of bonus bids and lease payments or judicial action may be necessary. Analysis of litigation costs or outcomes is beyond the scope of the EIS and is speculative since the outcome or terms are uncertain, and would involve considerations independent of the project.

Comment:

BLM's new-found "determination" that the 1993/2001 Forest Service NEPA "is no longer adequate" (WRNF Lease DEIS at 1-1) is undercut by BLM's actions as recently as 2012 and 2010. In 2012, BLM issued and defended COC 75070 based on the now "inadequate" Forest Service NEP A and in 2010 BLM authorized the development, over the comments of opponents of this development raising similar environmental concerns, of West Mamm lease, COC 67150, based on this same "inadequate" NEP A. BLM also took similar actions based on the now "no longer adequate" NEPA for other of the 65 leases including the PSA leases under contract to Laramie. BLM's new position is arbitrary and capricious and why and how BLM is allowed to change its long-held position concerning the validity of the 65 leases is not adequately addressed in the WRNF DEIS. It is arbitrary and capricious for BLM to now change position after a decade of taking a consistent official actions based on the lease issuance NEP A and the validity of the lease contracts. (2)The Solicitor's Office has also litigated Lease Nos. COC 66918 and COC 66724, not on grounds that the leases are invalid, but on how royalties on gas produced from those leases should be valued. See Plains Exploration & Production Company, 178 IBLA 327 (2010)."

BOSWELL, ROBERT; LARAMIE ENERGY LLC

Comment:

It appears the CRVFO believes it must undertake an entirely new NEPA analysis in light of Pitkin County, yet as already explained, Pitkin County is limited to the BLM's failure to consider "site-specific" factors related to only those three challenged leases. 173 IBLA at 177. Moreover, in Pitkin County, the IBLA ruled that the CRVFO had two options to correct the NEPA deficiency identified by the IBLA. First, the CRVFO could adopt the previous analysis completed by the Forest Service. Ld. At 182-83. Second, the CRVFO could conduct its own NEPA analysis to correct the identified deficiency. Id. As the Scoping Notice indicates, the BLM has chosen the most expensive and burdensome option, i.e., conducting an entirely new NEPA analysis through the preparation of a full-blown EIS to "determine whether these 65 leases should be voided, reaffirmed, modified with additional or different terms, or subject to additional mitigation measures for site-specific development proposals.

CAVANAUGH, JAMIE; WILLSOURCE MOUNTAIN STATES LEGAL FOUNDATION

Comment:

THE CRVFO SHOULD ADOPT THE FOREST SERVICE'S 1993 ROD AND AFFIRM ALL 65 PREVIOUSLY ISSUED LEASES. The CRVFO wrongly claims it must undertake a retroactive NEPA analysis of 65 previously issued leases to "[a]ddress the NEPA deficiency identified by the 2007 IBLA ruling [in Pitkin County] ... that BLM must formally adopt NEPA analysis completed by the Forest Service or conduct a NEPA analysis of its own for issuance of oil and gas leases underlying WRNF lands[.]" Draft EIS at 1-12. Notwithstanding that the IBLA instructed the CRVFO that it could cure any alleged defect by formally adopting the Forest Service's 1993 ROD, Pitkin County, 173 IBLA at 181, the decision in Pitkin County applies only to three specific leases. Id. at 184 ("In sum, we find that BLM failed to comply with NEPA when it included the three parcels at issue in an oil and gas lease sale .... "). The IBLA decided Pitkin County in 2007. Thereafter, the BLM cancelled the three leases in question, but continued holding lease sales in the WRNF pursuant to the 1993 ROD. Indeed, for at least five years following the decision in Pitkin County, lessees of the 65 previously issued leases had no reason to believe their leases were affected by the IBLA's limited ruling. Furthermore, to WillSource's knowledge, leases issued after the Pitkin County decision, which were also premised on the 1993 ROD, were not protested or cancelled. Accordingly, the BLM's own actions demonstrated its belief that Pitkin County applied only to the three challenged leases. Pitkin County does not require, nor justify the CRVFO's recent, albeit seven-year-late decision to reconsider the validity of the 65 oil and gas leases, nor does the IBLA' s decision confer any authority upon the BLM to cancel valid existing leases. See Bookman v. United States, 453 F.2d 1263, 1265 (Ct. Cl. 1972) (authority of agency to change its position must be exercised within a reasonable amount of time). Even if the CRVFO truly thinks that the Pitkin County decision somehow affects any of the 65 previously issued leases, it can avoid the drastic and costly measure of completing this NEP A process by formally adopting the 1993 ROD and affirming that the 65 previously issued leases were validly issued. 173 IBLA at 182-83. Thus, WillSource asserts that the CRVFO should stop wasting limited agency resources, and simply adopt the previous 1993 ROD vis-à-vis the 65 previously issued oil and gas leases.

CAVANAUGH, JAMIE; WILLSOURCE MOUNTAIN STATES LEGAL FOUNDATION

Comment:

THE CRVFO CANNOT USE RECENTLY ACQUIRED DATA AS THE BASIS FOR MODIFYING OR CANCELLING THE 65 PREVIOUSLY ISSUED LEASES. In December 2014, the Forest Service issued the WRNF Oil and Gas Final EIS (2014 FS EIS). The purpose of the 2014 FS EIS was to analyze environmental impacts from oil and gas development in the WRNF, determine future availability of land for oil and gas leasing, and determine what stipulations should attach to "future leases." 2014 FS EIS at 17. The 2014 FS EIS revises and supersedes the 1993 ROD. Id. at 1. The analysis within the 2014 FS EIS and any final decision resulting therefrom, apply only to future leases. On December 3, 2015, the Forest Service issued the Final Record of Decision (2015 FS ROD) regarding future oil and gas leasing in the WRNF. Again, the 2015 FS ROD provides that it is "valid for future leasing and does not change the status of existing leases on the White River National Forest." 2015 FS ROD at 3-4. Likewise, the lease stipulations found in the 2015 FS ROD "will be attached to future leases" Id. at 8. Aware of the BLM's ongoing retroactive NEPA analysis, the Forest Service even admits that "[s]hould the BLM decide to cancel the 65 leases, then and only then will these lands be subject to availability and terms under this decision." Id. At 9. Clearly, the Forest Service did not intend for the CRVFO to apply any of its recent analysis to leases issued between three and twenty years ago. The CRVFO issued the youngest of the 65 leases in 2012, Draft EIS at 1-11, and the oldest in 1995. Id. Therefore, any suggestion by the CRVFO that it must reconsider the validity of the 65 leases in light of the 2014 FS EIS and/or the 2015 FS ROD-documents issued well after the issuance of all 65 oil and gas leases-cannot be used to justify the CRVFO's retroactive NEPA analysis. Moreover, it is nonsensical for the CRVFO to suggest that the validity of the 65leases can only be confirmed vis-a-vis data gathered in 2014 and 2015. Given the foregoing, the CRVFO has failed to demonstrate it has authority to reconsider the validity of the 65 previously issued oil and gas leases in light of newly acquired data. If the CRVFO continues with this ultra vires NEPA process, it must consider the validity of the 65 leases with respect to documents existing at the time the leases were issued, and not in response to environmental analysis performed two decades after the leases were issued. Thus, Alternatives 1 and 2 are the only alternatives that the CRVFO may lawfully consider.

CAVANAUGH, JAMIE; WILLSOURCE MOUNTAIN STATES LEGAL FOUNDATION

Comment:

The Associations are fundamentally opposed to any cancellation of existing lease rights based on retroactive analysis. The entire enterprise of private extraction of minerals on federal lands is founded on contracts entered into between the Federal Government and private entities. It is the strongly held opinion of the Associations that the lease contracts in question have always been and continue to be valid, as they were entered into in good faith by all parties, including the BLM, the US Forest Service, and the purchasers of the leases. These lease contracts represent valid existing rights, and are expressly protected under the Federal Land Policy and Management Act of 1976 (FLPMA), which states that all BLM actions are “subject to existing rights.” Furthermore, under the Mineral Leasing Act, the BLM does not have the authority to cancel leases except in specific and extremely circumscribed situations, none of which pertain to these leases. That authority is vested in the courts, and applies only to cases in which the lessee has failed to meet the terms of the contract. In addition, the DEIS represents a retroactive application of the 2015 Leasing EIS to leases issued between 1995 and 2012. In the absence of significant changes in the interval between the original issuance of the leases and now, regulation and case law clearly indicate that adoption of the 1993 FS EIS is sufficient and that the preparation of a new DEIS is neither appropriate nor necessary.

LUDLAM, DAVID; COLORADO OIL & GAS ASSOC & WESTERN ENERGY ALLIANCE

Comment:

"No “Major Federal Action” Exists to Trigger Supplemental NEPA. BLM mistakenly asserts that new information and changed circumstances require BLM to prepare a new and updated EIS to analyze previously issued leases. Unfortunately, BLM has applied NEPA incorrectly here. Typically, an agency considers the presence of new information or changed circumstances to determine whether the agency must supplement a prior NEPA analysis. See 40 C.F.R. § 1502.9(c)(1)(i)-(ii). As a threshold matter, NEPA requires supplementation only where major federal action remains to occur. Norton v. S. Utah Wilderness Alliance 542 U.S. 55, 73 (2004) (internal quotation marks omitted); see also Marsh v. Or. Natural Res. Council, 490 U.S. 360, 374, 109 S. Ct. 1851, 104 L.Ed.2d 377 (1989); Center for Biological Diversity v. Salazar, 706 F.3d 1085, 1094?95 (9th Cir. 2013). BLM itself has determined that [s]upplementation is not appropriate when new information or changed circumstances arise after the Federal action has been implemented.” BLM Handbook, H-1790-1, at 30; Colorado Environmental Coalition v. Dombeck, 185 F.3d 1162 (10th Cir. 1999). Here, the Oxy Leases were issued years ago (between 2003 and 2008). BLM’s “major federal action was completed when the [Leases] w[ere] approved and issued.” Greater Yellowstone Coalition v. Tidwell, 572 F.3d 1115, 1123 (10th Cir. 2009); see BLM Handbook, H-1790-1, at 30. BLM’s continued compliance and enforcement authority over the leases does not constitute “remaining” or “ongoing” major federal action. See Greater Yellowstone, 572 F.3d at 1122-23; see also Cold Mountain v. Garber, 375 F.3d 884, 894 (9th Cir. 2004). No further major federal action remains to occur with respect to the Oxy Leases, and no ongoing major federal action exists. As a matter of policy, BLM’s actions in preparing this WRNF DEIS for its stated reasons undermines current NEPA practice and current understanding of the scope and extent of a lease or permit issuance. Specifically, BLM’s decision to prepare this WRNF DEIS makes every existing permit, lease, license, authorization, etc., vulnerable to additional environmental review after the federal action has been implemented, and where no major federal action is occurring or ongoing. Under these circumstances, conducting a new NEPA analysis (intended to supplement previous analyses) is neither required by NEPA nor a reasonable public policy decision justifying the extensive resources necessary for BLM to undertake such a task. Rather, as stated above, if anything, BLM should formally document its previous decisions to issue the leases based upon the NEPA analyses existing at the time.

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

Comment:

It is also worth reiterating the statement found in the CEQ’s mandate: “It is the Council’s intention that any trivial violation of these regulations not give rise to any independent cause of action.” The BLM’s failure to complete a minor administrative task should not be cause to re-evaluate these leases, especially when the leases were entered into in good faith by all concerned parties. Although the Associations contest the necessity and validity of the DEIS, we agree with the BLM’s assessment that “an increased level of oil and gas activity has created an increased level of public interest in oil and gas related activities on public lands,” and we recognize that simply completing the process of formal adoption without public discussion may not be in the best interests of the continuing relationship between the public, the BLM, and the oil and gas industry. However, the only action that can be supported by law and regulation is one which does not cancel or modify leases at all. The only action in the DEIS that meets this criterion is Alternative 1, the No Action Alternative, and the Associations urge the BLM to select this alternative.

LUDLAM, DAVID; COLORADO OIL & GAS ASSOC & WESTERN ENERGY ALLIANCE

Comment:

The BLM's choice to prepare an EIS is not supported by the federal regulations governing such actions. The IBLA decision does not require the preparation of a new environmental analysis for the 65 leases included in the DEIS, but merely requires the BLM to respond to the protests received on the four particular leases addressed by the IBLA. The BLM is refusing to adopt the USFS EIS as their own, citing that it is "inadequate." However, it is fundamentally flawed thinking to consider the 1993 EIS as inadequate in comparison to the current state of knowledge, when considering that the leases at issue were granted between 1995 and 2012. If this type of reasoning is taken to its logical conclusion, no agency statements would ever be adequate because more accurate and complete information could always become available at some point in the future. All leasing EISs are necessarily based on incomplete information due to the ever-changing nature of the technical possibilities and business climate in which fluid mineral extraction occurs.

The regulations dealing with NEPA adoption (40 CFR 1506.3) state that "if the actions covered by the original environmental impact statement and the proposed action are substantially the same, the agency adopting another agency's statement is not required to recirculate it except as a final statement." This indicates that the BLM could fulfill its obligation under NEPA simply by adopting the 1993 EIS without further examination, and that the preparation of an EIS is unwarranted. The BLM could be warranted in re-examining the leases in the context of the 1993 EIS under which they were issued, but the retroactive application of new information as used in the DEIS is not supported either by regulation or logic. The only appropriate new environmental analysis would address issues and conditions that existed at the time of the lease sales but were not adequately addressed at that time.

LUDLAM, DAVID; COLORADO OIL & GAS ASSOC & WESTERN ENERGY ALLIANCE

Comment:

No “NEPA Deficiency” Exists to Support BLM’s Action BLM proposes to cancel, modify, or confirm the Subject Leases based on an alleged NEPA deficiency identified by the IBLA in 2007. With respect to the Oxy Leases, however, the alleged NEPA deficiency is not a deficiency at all, and BLM should ultimately select Alternative 1 of the WRNF DEIS. In its 2007 decision, the IBLA stated that BLM violated NEPA because “BLM neither adopted the Forest Service's environmental documents nor conducted any environmental review of its own when deciding whether to make these parcels available for leasing, apparently because BLM was then under the mistaken belief that it had no NEPA responsibility for conducting any environmental review.” See Board of County Commissioners of Pitkin County, 173 IBLA at 181. The IBLA’s factual findings fail, however, to recognize BLM’s acknowledgement of the 1993 Oil and Gas Leasing EIS in its own 1999 Oil and Gas Leasing EIS. As discussed above, the Glenwood Springs Resource Area RMP and associated amendments governed the mineral interests at the time of issuance of the Oxy Leases. In 1999, BLM developed an “Amendment for Oil & Gas Leasing” Final EIS and ROD, which revised the Glenwood Springs Resource Area RMP. In the 1999 BLM Oil and Gas Leasing EIS, BLM expressly states that “Management of the surface resources on national forest system lands [ ] is the responsibility of the United States Forest Service [ ] and decisions for those lands are not part of this SEIS.” See 1999 BLM Oil and Gas Leasing EIS, at 1-6. Thus, “[t]he WRNF’s Oil and Gas Leasing Final EIS (1993) describes the management of oil and gas development on those lands.” Id. (emphasis added). Through this express statement, BLM formally adopted the 1993 Oil and Gas Leasing EIS as its own to inform its decisions regarding leasing in WRNF within the then Glenwood Springs Resource Area. BLM satisfied its obligations under NEPA with respect to the decisions to issue the Subject Leases in question and appropriately acknowledged its deference to the Forest Service’s authority over leasing decisions within the WRNF. Moreover, the 2007 IBLA decision applied only to the three leases at issue in that decision, not to the Oxy Leases. See Board of County Commissioners of Pitkin County, 173 IBLA at 184. In that decision, the IBLA did not mandate or require a new NEPA analysis either for those leases at issue in the 2007 IBLA decision or any other leases subject to the same alleged administrative deficiency. Though Oxy strongly contends that BLM has no authority to take action with respect to the Oxy Leases, to the extent any such action is warranted, BLM could simply formally adopt its previously informal acknowledgement and approval of the Forest Service’s comprehensive and thorough NEPA analyses. In fact, BLM acknowledges as much in the NOI stating, “the [IBLA] ruled that before including WRNF parcels in an oil and gas lease sale, BLM must either formally adopt NEPA analysis completed by the WRNF or conduct a NEPA analysis of its own...” 79 Fed. Reg. at 18,576. Nothing in the MLA or NEPA precludes BLM from electing to formally adopt the prior NEPA analyses, particularly where BLM has made its intent known at the time of leasing. See Board of County Commissioners of Pitkin County, 173 IBLA at 181-84. In fact, BLM’s response to the Tenth Circuit’s holding in Pennaco Energy v. Department of the Interior, 377 F.3d 1147 (10th Cir. 2004) supports an action by BLM to simply adopt the 1993 Oil and Gas Leasing analysis. In Pennaco, the Tenth Circuit concluded that BLM improperly relied upon the NEPA analysis associated with a resource management plan in its coal bed methane lease sale. Id. at 1156. In correcting its improper reliance, BLM conducted an EA that considered the appropriate environmental issues foreseeable at the time the leases were offered for sale. 69 Fed. Reg. 75338, 75339 (December 16, 2004). As BLM concluded in Pennaco, BLM must rely only upon the environmental considerations and analyses existing at the time of lease sale. Where here, adequate NEPA was available at the time of the lease sale, BLM need only formally adopt those NEPA analyses in support of the past lease sales. Thus, the only acceptable option for BLM, should it insist on finalizing the WRNF DEIS, is Alternative 1, no action, and formally adopt the NEPA analyses in support of the past lease sales.st on finalizing the WRNF DEIS, is Alternative 1, no action, and formally adopt the NEPA analyses in support of the past lease sales.

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

Comment:

The Applicable Statute of Limitations Bars BLM's Challenge to the Alleged NEPA Deficiency NEPA does not provide a private right of action; thus, challenges to alleged NEPA violations are brought under the Administrative Procedure Act (APA) and fall within the APA statute of limitations. Pursuant to the APA, challenges to an alleged NEPA deficiency "shall be barred unless the complaint is filed within six years after the right of action first accrues." See 28 U.S.C. § 2401(a); see also Chem. Weapons Working Grp., Inc. v. U.S. Dep't of the Army, 111 F.3d 1485, 1494-95 (10th Cir. 1997). In fact, courts have rejected the argument that the limitations period does not apply to an action alleging unreasonable delay under Section 706(1) of the APA, holding instead that a claim for agency delay in supplementing NEPA documents accrues when the circumstances requiring supplementation first arise. We find the better view to be that a claim for agency delay in supplementing NEPA documents accrues when circumstances requiring supplementation first arise. Such a view prevents plaintiffs from circumventing the limitations period by phrasing their complaints against agencies as continuous delay (from the moment they failed to do something required by NEPA) rather than a failure to act at a discrete point in time. Petitioners argue that certain modifications to IR-178 required supplemental NEPA documentation and that the Air Force did not prepare it. That cause of action accrued when the modifications were implemented without the required documentation. Because all modifications that may have warranted supplementation occurred more than six years before petitioners filed suit, petitioners' supplementation claim is barred. Davis Mountains Trans-Pecos Heritage Ass'n. v. Fed. Aviation Admin., 116 F. App'x 3, 17 (5th Cir. 2004). BLM issued the Oxy Leases to PXP between June 1, 2003 and January 1, 2008, notwithstanding and with full knowledge of the alleged past NEPA deficiency. At no point during this NEPA process—nor during the six-year statute of limitations to file suit in federal judicial court—did the Forest Service, BLM, or any interested party object to BLM and the Forest Service's NEPA process on the ground that such process was deficient, defective, or somehow not in compliance with NEPA. As a result, BLM cannot, as it attempts to do here, circumvent the statute of limitations where the alleged NEPA deficiency and the issuance of each Oxy Lease occurred at a discrete point in time and the time for challenging such action has long since passed. Alternatively, BLM is time barred even if a court were to consider the IBLA's 2007 decision as providing BLM knowledge of its claimed need to supplement the NEPA analysis. Thus, BLM's challenge to the Oxy Leases on the basis of a NEPA deficiency is time-barred.

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

Comment:

The DEIS is a result of an Interior Board of Land Appeals (IBLA) ruling in 2007 in response to a challenge of three leases in Pitkin County that BLM must either do its own environmental analysis or formally adopt the United States Forest Service's (USFS) 1993 Oil and Gas EIS for leasing on the WRNF. It is our understanding that, due to an oversight, BLM failed to formally adopt the WRNF EIS, which required nothing more than a simple administrative action in having BLM sign and submit a letter to the USFS stating its adoption of the 1993 EIS. Due to this minor paperwork error, claims are now being made that these 65 leases issued pursuant to the 1993 EIS are illegal and should be invalidated and closed and/or reissued with significant stipulations. WPX is one of the largest natural gas producing operators in Colorado and the Piceance Basin, and holds one of the 65 existing leases. As such, WPX is concerned by BLM's draft EIS and alternatives that potentially modify, change, or void leases, or require additional mitigation measures for site specific development proposals. WPX is concerned that several actions that could result from the proposed alternatives have the potential to undermine the entire BLM Oil and Gas Management Program especially when the purpose of this undertaking is to simply rectify an administrative error by BLM in not formally adopting the USFS EIS. The actions that should be considered in the DEIS should only be those necessary to correct the administrative error.

ODEGARD, CHAD E; WPX ENERGY

Comment:

Under Alternative 2, Existing Leases Issued Under the 1993 WRNF Oil & Gas EIS should not be Considered Anything Less Than Fully Valid or be Subject to Significant Modification. Although WPX understands that the 2007 IBLA ruling directed BLM to conduct its own EIS or adopt the USFS's EIS, WPX questions why a simple administrative oversight in not formally adopting the EIS is sufficient in itself for BLM to then justify any of the existing 65 leases to be invalid and allow BLM to modify or cancel the leases after operators complied with the legal requirements to obtain and maintain the leases. With respect to the recently approved USFS WRNF Oil & Gas EIS, it is clearly stated that the USFS intends to honor valid existing lease rights. Even under more stringent no leasing alternatives, USFS recognizes operations "of existing leased lands would continue under applicable lease terms ... " (White River National Forest Oil and Gas Leasing Final Environmental Impact Statement, 2014, p. 4). This sentiment is continued under the final Record of Decision, which incorporates a combination of Alternative B: No New Leasing and Alternative C: Proposed Action, which assumes existing leases under production would "remain in effect through the life of this plan because they are either committed to existing federal units or are held by production" (Final Record of Decision, Oil and Gas Leasing on Lands Administered By The White River National Forest, 2015, p. 9). It is clearly stated that leases currently held would continue to be subject to the original lease terms. Recognizing BLM's need to address inadequacies identified in the IBLA ruling, WPX would support adopting Alternative 2, so long as minor modifications to lease terms would not effectively result in reduced access by lease holders to legally obtained Federal mineral leases.

ODEGARD, CHAD E; WPX ENERGY

Comment:

Our Board has consistently opposed any proposal which considers modifying and/or canceling leases in Northwest Colorado, many of which were executed over a decade ago, on the basis of a technicality. Our Board objects to changing any of the existing leases. The Board considers such revisions to be a breach of the BLM's contracts with the leaseholders and an illegal taking of private property. In our Board's scoping comments (May 16, 2014), our Board adamantly requested that the BLM halt this process to "avoid legal action that will inevitably follow if even one of these 651eases is canceled or modified in this process .... ". Our Board strongly reiterates its insistence that the BLM simply reaffirm the existing leases by adopting the 1993 Oil and Gas EIS for leasing on the White River National Forest.

PUGLIESE, ROSE; MESA COUNTY COLORADO

Comment:

In addition to the Mineral Leasing Act's protection of producing leases and leases committed to producing federal units from administrative cancellation, Encana's lease rights are protected by the Mineral Leasing Act's bona fide purchaser provisions and the BLM's implementing regulations. 30 U.S.C. § 184(h)(2). Under the terms of the Mineral Leasing Act, the Secretary of the Interior does not have the authority to cancel a lease that has been assigned to a bona fide purchaser. 30 U.S.C. § 184(h)(2); 43 C.F.R. § 3108.4; Clayton W. Williams, Jr., 103 IBLA 192, 210- 216 (1988). At the time Encana acquired certain of its leases from various third parties, it had no reason to believe the BLM would later elect to prepare additional NEPA analysis. Encana reasonably assumed that the BLM complied with all procedural mandates prior to making the lands available for lease. Encana is, therefore, protected as a bona fide purchaser under the Mineral Leasing Act. Absent Encana's consent, BLM cannot void or modify the terms of these leases. Encana understands the BLM determined it needs to assess the environmental impacts of developing the Existing Leases in light of what the Board held were violations of NEPA related to entirely separate, and now cancelled, leases. See Pitkin County, 173 IBLA 173, 184 (2007). Voidable leases, however, remain subject to the Mineral Leasing Act's bona fide purchaser provisions. See Clayton W. Williams, Jr., 103 IBLA 192, 214 - 15 (1988). The BLM's Handbook explicitly recognizes that the bona fide purchaser protections of the Mineral Leasing Act apply to leases potentially issued in violation of established procedures, including potential violations of the National Environmental Policy Act. "The bona fide purchaser protection does extend to voidable leases, e.g., the lease is issued for the lands available for leasing but is not issued to the first-qualified applicant, or the lease is issued in violation of the established procedures (e.g., National Environmental Policy Act procedures, etc.) (See Clayton W. Williams, Jr. Exxon Corp., 103 IBLA 192 (1988).)" BLM Handbook H-3108-1- Relinquishment, Terminations, and Cancellations, § V (Rel. 3-301 (1/27 /95) (alterations in original). Thus, Encana's leases within the White River National Forest are subject to the bona fide purchaser provisions of the Mineral Leasing Act and may not be canceled by the BLM.

SCHOPP, JOHN; ENCANA OIL & GAS

BLM Response:

As stated in Section 1.4 of the DEIS, there is a need to “address the NEPA deficiency identified by the 2007 IBLA ruling on the appeal by the Board of Commissioners of Pitkin County that BLM must formally adopt NEPA analysis completed by the Forest Service or conduct a NEPA analysis of its own for issuance of oil and gas leases underlying WRNF lands”. The Secretary of the Interior has inherent authority, under her general powers of management over public lands, to cancel leases issued in violation of a statute or regulation. Boesche v. Udall, 373 U.S. 472 (1963) (the Mineral Leasing Act leaves unaffected Secretary’s traditional administrative authority to cancel a lease based on pre-lease factors); 43 CFR 3108.3(d) (the BLM has the authority to cancel a lease if “improperly issued”). The NEPA deficiency at lease issuance makes the leases voidable at the discretion of the BLM based on supporting remedial analysis. See Conner v. Burford, 848 F.2d 1441, 1451, 1454 (9th Cir. 1988) (indicating that leases issued without NEPA and ESA compliance were voidable by contemplating that BLM would later those address those procedural requirements and decide whether the leases should have been issued); Clayton W. Williams, Jr., 103 IBLA 192, 210-11 (1988) (characterizing as “voidable” any lease issued in violation of a procedural requirement, such as NEPA).

Due to the stated deficiency in issuing the leases previously and the many changes in the environmental conditions and the laws and regulations, as well as to the management plan for the WRNF, the RFDS, and the BLM CRVFO RMP, it would be unreasonable to evaluate the leases in the context of the conditions and state of knowledge in 1993. In fact, the WRNF FEIS (2014) and the associated ROD (2015) revise the 2002 Forest Management Plan related to mineral development. Significant new circumstances or information "relevant to environmental concerns and bearing on the proposed action or its impacts” (40 CFR 1502.9) exist. In addition, the BLM determined that an EIS addressing all significant new circumstances and information would ensure appropriate analysis of future development on those leases identified as having the same NEPA deficiency as the leases contested in the IBLA decision. This process allows the BLM to address the NEPA deficiency consistently across all the leases and ensure future activities adequately consider impacts to potentially impacted resources.

Comment:

There is not sufficient cause to justify preparing an EIS for these leases, as the error was an administrative paperwork oversight rather than a violation of NEPA procedure. The mandate of the National Environmental Policy Act (NEPA), the guiding principles as articulated by the Council on Environmental Quality (CEQ) in 40 CFR 1500.3, state that "the provisions of the Act and of these regulations must be read together as a whole in order to comply with the spirit and letter of the law… Furthermore, it is the Council's intention that any trivial violation of these regulations not give rise to any independent cause of action." By the BLM's own assertion, all efforts were made to comply with the 1993 White River National Forest Leasing Plan at the time that the leases under discussion were offered for sale. Specifically, as detailed in the IBLA decision Board of Commissioners of Pitkin County and Wilderness Workshop et al., (173 IBLA 173 [2007]), the BLM contended that, "as a cooperating agency with respect to the 1993 FS EIS and a reviewing agency with respect to the 2001 FS EIS, it should now be deemed to have adopted those EISs." The IBLA disagreed with this position in its decision, and found that the BLM had not formally adopted the EISs. However, no finding was made by IBLA to suggest that the BLM had intentionally failed to comply with the requirements of NEPA. Indeed, under 40 CFR 1503.2, the BLM is required to comment on all EISs to which it is a cooperating agency, whether those EISs are to be adopted or not. Acting under this requirement, the BLM by necessity had to take an active role in the process of evaluating these leases under NEPA prior to offering them. Further evidence that the BLM felt that compliance with NEPA had been achieved should be derived from the fact that the BLM continued to offer WRNF leases under this arrangement for many years, persisting through several changes of leadership. Additional evidence of BLM's intention to comply with NEPA was provided by BLM staff during the original scoping meetings, with repeated statements being made to the effect that the BLM thought that their staff had been handling the leasing process correctly. In addition, there is no reason to believe that the BLM would have found the need to modify the USFS EISs had they been formally reviewed and adopted. Per the Memorandum of Understanding (MOU) between the USFS and BLM regarding oil and gas leasing4, the USFS has the sole responsibility for oil and gas leasing availability and analysis. This MOU formalizes the reasonable assumption and common working procedure that USFS staff have the greater expertise to evaluate existing environmental conditions and potential impacts on USFS lands, and that the BLM defers to USFS judgement on matters regarding surface impacts. Therefore there is no evidence to suggest, nor does the IBLA decision contend, that any changes in the lease offerings would have been likely had the BLM conformed to the letter of the law and formally adopted the USFS NEPA documents prior to issuing the leases. In summary, the Associations contend that the spirit of the law has been adhered to by the operators who purchased these leases in good faith, and also by the BLM who offered the leases under their best understanding of the Act and the associated regulations. The Associations do not contest the IBLA decision at this time, but do contend that BLM's failure to formally adopt the FS EISs is an administrative technicality rather than a failure of intent or the symptom of a systematic dereliction of duty, and is exactly the type of "trivial violation" that the CEQ did not intend to serve as the basis for independent action. The current DEIS represents just such an independent action, and is not justified under a reasoned reading of NEPA and 40 CFR 1500.

LUDLAM, DAVID; COLORADO OIL & GAS ASSOC & WESTERN ENERGY ALLIANCE

BLM Response:

As stated in Section 1.4 of the DEIS, there is a need to “address the NEPA deficiency identified by the 2007 IBLA ruling on the appeal by the Board of Commissioners of Pitkin County that BLM must formally adopt NEPA analysis completed by the Forest Service or conduct a NEPA analysis of its own for issuance of oil and gas leases underlying WRNF lands”. The Secretary of the Interior has inherent authority, under her general powers of management over public lands, to cancel leases issued in violation of a statute or regulation. Boesche v. Udall, 373 U.S. 472 (1963) (the Mineral Leasing Act leaves unaffected Secretary’s traditional administrative authority to cancel a lease based on pre-lease factors); 43 CFR 3108.3(d) (the BLM has the authority to cancel a lease if “improperly issued”). The NEPA deficiency at lease issuance makes the leases voidable at the discretion of the BLM based on supporting remedial analysis. See Conner v. Burford, 848 F.2d 1441, 1451, 1454 (9th Cir. 1988) (indicating that leases issued without NEPA and ESA compliance were voidable by contemplating that BLM would later those address those procedural requirements and decide whether the leases should have been issued); Clayton W. Williams, Jr., 103 IBLA 192, 210-11 (1988) (characterizing as “voidable” any lease issued in violation of a procedural requirement, such as NEPA).

Due to the stated deficiency in issuing the leases previously and the many changes in the environmental conditions and the laws and regulations, as well as to the management plan for the WRNF, the RFDS, and the BLM CRVFO RMP, it would be unreasonable to evaluate the leases in the context of the conditions and state of knowledge in 1993. In fact, the WRNF FEIS (2014) and the associated ROD (2015) revise the 2002 Forest Management Plan related to mineral development. Significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts” (40 CFR 1502.9) exist. In addition, the BLM determined that an EIS addressing all significant new circumstances and information would ensure appropriate analysis of future development on those leases identified as having the same NEPA deficiency as the leases contested in the IBLA decision. This process allows the BLM to address the NEPA deficiency consistently across all the leases and ensure future activities adequately consider impacts to potentially impacted resources.

Section 1.2 of the subject DEIS briefly describes that the BLM has its own responsibilities in leasing and permitting fluid minerals on National Forest System lands. It is not solely the responsibility of the USFS although the BLM relies on recommendations from the USFS. As stated in Section 1.2 of the DEIS, “Section 1.5.2 of the WRNF Oil and Gas Leasing Final EIS (USFS 2014a) provides additional information on the BLM’s process and authority for offering leases for sale and issuing leases on the WRNF.

Comment:

NEPA is a procedural statute that "does not mandate particular results, but simply prescribes the necessary process." Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350 (1989). The IBLA's direction to BLM to conduct additional NEPA does not require BLM to reverse its leasing decisions in favor of other resource values. "[T]he agency is not constrained by NEPA from deciding that other values outweigh environmental costs." Methow, 490 U.S. at 350. BLM, in accord with the federal minerals program as laid out in FLPMA, MLA and MMP A should support alternatives that adopt the 1993/2001 Forest Service NEP A and not alternatives that add new stipulations or cancel leases.

BOSWELL, ROBERT; LARAMIE ENERGY LLC

Comment:

The Forest Service has consistently taken the position that the Leases are valid. For example, in the 2010 West Mamm MDP the Forest Service made its own independent NEPA conclusion finding the existing NEPA adequate for the proposal. In the WRNF 2015 ROD/FEIS, the Forest Service stated that "[t]his forthcoming [BLM] EIS for the Previously Issued Oil and Gas Leases in the White River National Forest and subsequent decision does not affect the analysis or decision made with this ROD." WRNF 2015 ROD at 9. The Forest Service reaffirmed its view that the 65 leases are valid and the 1993 stipulations would continue to apply to those leases. WRNF 2015 ROD at 7-9. See also WRNF 2015 ROD at 9 ("The Forest Service assumes 26 of these [65] leases will remain in effect through the life of the plan because they are either committed to existing Federal units or held by production. As such, these 26 leases fall under the leased/developed category and it is assumed any future additional development would occur under the 1993 stipulations currently attached to the leases;") and WRNF 2014 FEIS at 598 ("None of the proposed alternatives would violate valid existing oil and gas lease rights or force oil and gas operators to let existing leases expire."). The West Mamm lease is both committed to a CA and held by production. Several of the PSA leases under contract to Laramie are also producing. The Forest Service WRNF 2014 FEIS did not analyze lease cancellation or the addition of new stipulations to the Leases. See e.g. WRNF 2014 FEIS at 27 ("The new proposed stipulations identified in Appendix A cannot unilaterally be applied to valid existing leases. The new proposed stipulations would be applied as necessary to new lease parcels offered by the BLM."). In response to comments, the Forest Service explained, "None of the analyzed alternatives would violate valid existing oil and gas lease rights." WRNF 2014 FEIS at 597. "Moreover, any decision made in contravention of valid existing rights would be outside the Forest Service's and the BLM's regulatory authority and contrary to law." Id. at 598.

BLM can't consider the 2003 and 2011 Laramie leasing decisions pursuant to the 2012 Colorado Roadless rule (see WRNF Lease DEIS Chapters 2.0 and 4.12). Colorado Roadless Rule, 77 Fed. Reg. 39576 (July 3, 2012). First, as to the Laramie lease COC 75070 the Forest Service addressed roadless issues in the lease stipulations and two addendums. Second, in the Forest Service "Rulemaking for Colorado Roadless Areas," FEIS App. H-8 (May 2012), the Forest Service rejected calls to develop an alternative that does not allow road or well-pad construction on so-called gap leases because, "[t]he final rule cannot unilaterally change the development rights of existing leases as it would give rise to regulatory takings claims under the Fifth Amendment." According to the Forest Service, "[t]he BLM carried out its statutory authority and issued leases containing roadless lands subject to the applicable lease stipulations and notices required by the Forest Service consent. Once issued, the leases grant the exclusive right to drill for, extract, remove, and dispose of all the oil and gas within the lease area, subject to terms and stipulations made a part of the lease." FEIS, Rulemaking for Colorado Roadless Areas at App. H-29. According to the Forest Service, "The Forest Service cannot unilaterally modify existing leases to restrict road construction or surface occupancy when those leases were issued without such restrictions. This would constitute a regulatory taking of lease rights and would require compensating lessees for loss of use of their leases." Id. at H-30. In accord with that reasoning, the 2012 Roadless Rule protects existing oil and gas leases. See 77 Fed. Reg. at 39,588 ("The Colorado Roadless Rule does not affect the terms or validity of leases existing prior to the promulgation of the final rule."); 36 C.F.R. 294.46 ("For oil and gas leases issued in a Colorado Roadless Area prior to July 3, 2012, the rule preserves any existing leases and surface development rights."). These leases were issued in 2003 and 2011; therefore the Colorado Roadless rule does not apply to these leases. 36 C.F.R. § 294.43(c)(viii). The Forest Service continues to recognize the validity of the Leases and the binding nature of the 1993 lease stipulations on those Leases. It is arbitrary for BLM to rely on the Forest Service 2014 NEPA for its decision to retroactively add stipulations or reverse a decision to lease, particularly when the Forest Service assumed the continued validity of the 65 leases and the continued applicability of the 1993 lease stipulations. WRNF 2015 ROD at 9.

BOSWELL, ROBERT; LARAMIE ENERGY LLC

Comment:

The WRNF Lease DEIS Alternatives 3, 4 and 5 Repudiate Laramie Leases, Violate Contract Law and Would Take Property. BLM will be liable to Laramie for breach of contract damages if it cancels the Leases under Alternatives 4 or 5 as proposed because the agency will have failed to convey a valid leasehold interest as BLM was obligated to do when it originally granted the Leases in 2003 and 2011. BLM will likewise be liable for breach of contract damages if the agency significantly modifies the Laramie lease terms as proposed in Alternatives 3 and 4. It is settled law that once BLM "has granted the lease [BLM] may not derogate the rights of the Federal lessee acquired under the Mineral Leasing Act and the lease granted thereto." The IBLA has held that upon execution of a federal lease by both parties, "it becomes a binding instrument and cannot be vitiated by unilateral action, all else being regular." BLM's internal guidance has long recognized the contract rights in federal leases. In BLM Instruction Memorandum (IM) 92-67, (Dec. 3, 1991), BLM described this in detail. The lease contract conveys certain rights which must be honored through the term, regardless of the age of the lease, a change in surface management conditions, or the availability of new data or information. The contract was validly entered based upon the environmental standards and information current at the time of lease issuance. The significant new NSO and other onerous stipulations sought to be imposed by BLM under Alternatives 3 and 4 would impermissibly and retroactively amend the lease terms and would constitute a breach of the lease for which BLM would be liable in damages. To recover for a breach of contract against BLM, Laramie must show (1) a valid contract between the parties, (2) an obligation or duty arising out of the contract, (3) a breach of that duty, and (4) damages caused by the breach. Here these elements are met:
1. The Laramie federal oil and gas leases are contracts. Oxy USA, Inc., 268 F.3d at 1006-1007.
2. The granting clause in each of the Laramie leases provides that the "lease is issued granting the exclusive right to drill for, mine, extract, remove and dispose of all the oil and gas …. "
3. BLM has breached its duty under the leases. The lease cancellation proposed by BLM in Alternatives 4 and 5 would render the leases void ab initio and BLM would have "violated the granting clause of the lease and the warranty of title implicit in the lease agreement by failing to convey a valid leasehold interest."
4. Laramie would be entitled to damages for its injuries arising from that breach.

In the alternative, cancelling the leases or modifying stipulations would constitute a taking under the Fifth Amendment for which Laramie must receive just compensation. Compensation for a takings in these circumstances would be an alternative to the breach of contract claim. Regardless of any NEP A deficiency under the MLA, BLM cannot void any leases held by bona fide purchasers. 30 U.S.C. § 184(h)(2). Laramie is a "bona fide purchaser" of the West Mamm lease and entitled to protection for lease cancellation or modification based on a lease issuance defect. 43 C.F.R. § 31 08.4; BLM H-308-1 at p. 77. These Laramie leases should not be modified or cancelled as BLM proposes in Alternatives 3, 4 and 5. Laramie regards this retrospective NEPA analysis and these Alternatives as a violation of our valid existing lease rights and will take the actions necessary to protect our property and lease contract rights should BLM determine to void, cancel or burden these leases with new lease stipulations. Finally, BLM should consider how this action will impact the future of the federal minerals program. The "competitive advantage" of the United States in oil and gas is our adherence to the "rule of law." BLM's insistence that years later it can reverse course and repudiate issued leases diminishes is in defiance of the rule of law. BLM should reconsider.

BOSWELL, ROBERT; LARAMIE ENERGY LLC

Comment:

The WRNF Lease DEIS in Alternatives 3 and 4 offers affected lessees an improper "take it or leave it" option. Either agree to new, more stringent lease stipulations that inhibit the development of the lease or face lease cancellation. WRNF Lease DEIS at 2-16-2-59. This is a prohibited unilateral action by BLM to rewrite lease stipulations after lease issuance. The WRNF Lease DEIS cannot impair the Laramie valid existing rights to develop the leases through either stipulation or cancellation. As a federal lessee, Laramie has the right in its two leases to explore for and develop oil and gas. Pennaco Energy v. United States Dep 't of the Interior, 377 F.3d 1147, 1160 (1 01h Cir. 2004). See also Colorado Env 'l Coal, et al., 165 IBLA 221, 228 (2005) citing Colorado Env 'l Coal, 135 IBLA 356, 360 (1996), aff'd Colorado Env 'l Coal v. Bureau of Land Management, 932 F.Supp. 1247 (D. Colo. 1996). The BLM cannot prohibit a lessee from developing its leases. National Wildlife Federation, 150 IBLA 385, 403 (1999). Moreover, BLM's proposal to require new stipulations on existing leases is inconsistent with the Forest Service's decision that the existing lease stipulations would continue to govern the 65 leases. Forest Service, WRNF 2015 ROD at 7-9.

BOSWELL, ROBERT; LARAMIE ENERGY LLC

Comment:

BLM Can Be Estopped from Changing its Position. BLM's attempt, in the WRNF Lease DEIS, to rewrite its consistent legal position over the last decade can't stand. The equitable principles of estoppel and laches are raised by BLM's unprecedented conduct in this EIS process. First, BLM can be estopped from taking actions to repudiate these Laramie lease contracts. Four elements must be present to establish the defense of estoppel, including: (1) The party to be estopped must know the facts; (2) he must intend that his conduct shall be acted on or must so act that the party asserting the estoppel has a right to believe it is so intended; (3) the latter must be ignorant of the facts; and (4) he must rely on the former's conduct to his injury. Spaulding v. United Transp. Union & Union Pac. R.R. Co., 279 F.3d 901, 909 10th Cir. 2002); see also Floyd Higgins et al., 147 IBLA 343 at 347 (1999). To assert "estoppel against the Government in matters concerning public lands," the challenging party must additionally show "affirmative misconduct such as misrepresentation or concealment of material facts" by BLM. Id. 'Affirmative misconduct' need not rise to the level of an effort on the part of Government employees to deliberately mislead an appellant." Higgins, 147 IBLA at 351. First, BLM obviously knew the facts concerning the lease issuance NEP A defect since it was a party to the 2007 Pitkin County decision. Second, as to the Laramie leases, BLM "intended" its conduct to be acted on. In 2011, it offered to lease COC 75070 and defended the lease rights and NEPA adequacy in resolving a lease protest. As to the West Mamm lease, BLM approved proposed the Mamm MDP in 2010. Third, Laramie was never informed by BLM at any time that the Pitkin County decision related to the Laramie leases. We learned of BLM's changed position through media accounts in 2013/2014. Under these facts, the BLM's concealment of a material fact- a lease issuance defect-from Laramie rises to the level of "affirmative misconduct." Fourth, based on BLM's actions, Laramie invested significant sums to develop the West Mamm leases ($21,147,304) and to construct a related pipeline ($800,000). Now BLM proposes to either add new, uncontemplated stipulations to these leases or cancel the leases. Based on these facts, the IBLA or a court would stop BLM from taking actions to repudiate, rewrite or cancel our leases under an equitable estoppel theory. William C. Kirkwood, 175 IBLA 292, 313 (2008) (BLM estopped from changing its position which it put in writing to the lessee). Second, BLM's delay in informing Laramie of its determination that the Forest Service NEPA was not adequate to support lease issuance in 2003 and 2011 or an MDP EA in 2010 should be barred by the related equitable doctrine of laches. Socony Mobil Oil Co. v. Continental Oil Co., 335 F.2d 438, 441-42 (10th Cir. 1964). The government can't wait months or years to take an action when such delay prejudices a party, as is the case here. Jicarilla Apache Tribe v. Andrus, 687 F2d 1324, 1340 (10th Cir. 1982).

BOSWELL, ROBERT; LARAMIE ENERGY LLC

Comment:

THE CRVFO LACKS AUTHORITY TO IMPOSE NO SURFACE OCCUPANCY STIPULATIONS ON ANY OF THE 65 LEASES. It is well settled that no surface occupancy (NSO) leases convey a set of property rights distinct from those rights conveyed by non-NSO leases. See Conner v. Burford, 848 F.2d 1441, 1447-51 (9th Cir. 1988). In fact, non-NSO leases "constitute an irretrievable commitment of resources," id. at 1447-48 (emphasis added), while NSO leases convey to the lessee a mere "right of first refusal." Id. at 1448. Likewise, on non-NSO leases, the BLM cannot deny a permit to drill, but may only impose reasonable conditions on drilling operations. Id. at 1449 (citing Sierra Club v. Peterson, 717 F.2d 1409, 1411 (D.C. Cir. 1983)). Thus, the difference between NSO and non-NSO leases is drastic and any attempt by the CRVFO to impose NSO stipulations upon non-NSO leases would be ultra vires and constitute a breach of contract. It is axiomatic that a federal agency has "no power to act, ... unless and until Congress confers power upon it." La. Pub. Serv. Comm'n v. Federal Communications Comm'n, 476 U.S. 355, 374 (1986). Nothing in the MLA empowers the BLM to rewrite existing leases. In fact, the CRVFO freely admits it lacks authority to impose NSO stipulations upon existing non-NSO leases without the lessee's consent; otherwise it would not have included the caveat that it will"offer the lessee the option of either accepting the new lease terms [(i.e., the NSO condition)] or having the lease cancelled.... Should the lessee not accept the new lease stipulations on a producing lease, it may be necessary for the BLM to request judicial action to cancel the lease." Draft EIS at 2-16; id. at 2-59. Therefore, WillSource objects to Alternative 3 and Alternative 4 insofar as they suggest that the CRVFO should take an action it has no authority to take.

CAVANAUGH, JAMIE; WILLSOURCE MOUNTAIN STATES LEGAL FOUNDATION

Comment:

CRVFO MAY NOT CANCEL OR OTHERWISE INITIATE JUDICIAL CANCELLATION OF WILLSOURCE'S LEASES. The MLA was the first act that provided for the leasing of the Nation's minerals. As the title of the MLA reflects, its purpose is: "To promote the mining of coal, phosphate, oil, oil shale, gas, and sodium on the public domain." 41 Stat. 437 (1920); see Harvey, 384 F.2d at 885; Mountain States Legal Found. v. Andrus, 499 F. Supp. 383, 392 (D. Wyo. 1980) 30 U.S.C. § 184(h)(1). The combined effect of these provisions is that the Secretary must institute a judicial proceeding to forfeit or cancel a lease (or an interest therein) for violations of the MLA, the express terms of the lease, or the regulations promulgated under the MLA. See Pan Am. Petroleum Corp., 284 F.2d at 655. In issuing WillSource's leases, the BLM conveyed to WillSource the exclusive right to drill for, mine, extract, remove, and dispose of all the oil and gas in the leased lands together with the right to build and maintain necessary improvements thereon. See 43 C.P.R.§ 3101.1-2. Therefore, cancellation of WillSource's leases 20 years after their issuance would constitute a taking in violation of the Fifth Amendment to the U.S. Constitution. U.S. Const. Amend. V. Moreover, the CRVFO, acting under the Secretary of the Interior, lacks authority to administratively cancel WillSource's leases and any efforts to do so are in opposition to the MLA. In light of the foregoing, the CRVFO should eliminate any alternative in the Final EIS that suggests cancellation of all or any of the 65 leases, and discuss the reasons for eliminating cancellation as part of any alternatives. See 40 C.F.R. § 1502.14(a). As a bona fide purchaser, WillSource is further protected from the CRVFO's attempts to cancel its leases or otherwise initiate judicial cancellation of its leases. Section 27(h)(2) of the MLA provides: The right to cancel or forfeit for violation of any of the provisions of [the MLA] shall not apply so as to affect adversely the title or interest of a bona fide purchaser of any lease ..., which lease ... was acquired and is held by a qualified person, association, or corporation in conformity with those provisions, even though the holdings of the person, association, or corporation from which the lease ... was acquired, or of his predecessor in title (including the original lessee of the United States) may have been canceled or forfeited or may be or may have been subject to cancellation or forfeiture for any such violation. 30 U.S.C. § 184(h)(2); see 43 C.F.R. § 3108.4; see Winkler v. Andrus, 614 F.2d 707, 711 (10th Cir. 1980). The Supreme Court has long recognized that the United States may not seek forfeiture or cancellation (administrative or judicial) of previously conveyed property interests if those interests are owned by a bona fide purchaser. E.g., Colo. Coal & Iron Co. v. United States, 123 U.S. 307,313-14 (1887). The IBLA has affirmed as much by holding that Section 27(h)(2) of the MLA prohibits both the Secretary of the Interior and the judiciary from cancelling a voidable leases owned by a bona fide purchaser. Clayton W Williams, Jr., 103 IBLA 192, 212 (1988).

CAVANAUGH, JAMIE; WILLSOURCE MOUNTAIN STATES LEGAL FOUNDATION

Comment:

Regardless of whether BLM cancels all 65 leases, or in the alternative just the 25 proposed in Alternative 4, the law is clear that the agency can do so. More than 50 years ago, the Supreme Court held that the Interior Department has inherent authority to cancel leases administratively when they were issued improperly or in error. Boesche v. Udall, 373 U.S. 472, 476 (1963). This authority has been codified in BLM's regulations, which provide that "[l]eases shall be subject to cancellation if improperly issued." 43 C.F.R. § 3108.3(d). There were several errors in the issuance of the leases that support their cancellation.

Before issuing the leases BLM had an obligation to conduct its own NEPA analysis, or review the adequacy of the Forest Service's analysis and adopt it as BLM's own. 40 C.F.R. § 1506.3; BLM Handbook H-3101-1 at 26; Pitkin Cty., 173 IBLA at 181. As discussed in DEIS, BLM did not do so. IBLA and courts have recognized that a lease issued in violation of NEPA is subject to cancellation. BLM, in fact, has previously cancelled leases in Pitkin County based on the same NEPA violation addressed here. See letter from Karen Zurek, BLM, to Encana (Appx. 648-49). In scoping comments, several oil and gas companies disputed that the leases were issued in violation of NEPA. These arguments are meritless. The IBLA's 2007 Pitkin County decision is precisely on point because it involves exactly the same practice used for the 65 leases here. IBLA rulings are intended to guide BLM's application of the law in other cases, ensure that the Interior Department applies the law consistently...and are the final word of the Interior Department on a matter. In fact, Pitkin County is consistent with several previous IBLA rulings addressing NEPA. See, e.g., Wyo. Outdoor Council, 159 IBLA 388, 414-15 (2003); Colo. Envtl. Coal., 125 IBLA 210, 215-16, 220 (1993); Cal. Wilderness Coal., 98 IBLA 314, 319 n. 7 (1987). Moreover, federal law on this point was clear long before any of the 65 leases were issued. As early as 1971, the D.C. Circuit ruled that federal agencies cannot delegate their NEPA obligations by relying on the decisions of other agencies. Calvert Cliffs' Coord. Comm. v. Atomic Energy Comm'n,-449 F.2d 1109, 1122-23 (D.C. Cir. 1971); see also Idaho v. Interstate Commerce Comm'n, 35 F.3d 585, 595-96 (D.C. Cir. 1994), and the Council on Environmental Quality (CEQ) regulation governing this issue was promulgated in 1978. See 40 C.P.R. Part 1506; 43 Fed. Reg. 55,978 (Nov. 29, 1978).

A central requirement of NEPA is that an agency must balance "the particular economic and technical benefits" of a planned action against its environmental costs, and "alternatives must be considered which would affect the balance of values." Idaho, 35 F.3d at 595 (quoting Calvert Cliffs, 449 F.2d at 1123). A different agency's assessment of environmental impacts may "attend only to one aspect of the problem" instead of addressing the full costs and benefits of an action. Id. at 595-96. For example, in this situation, the Forest Service is responsible for addressing only surface impacts of oil and gas development-not impacts to mineral resources that BLM administers. Requiring an independent review and adoption of the other agency's NEPA document ensures that BLM has undertaken a full cost benefit assessment and complied with its own NEPA requirements. See id.; Council on Env. Quality: Guidance Regarding NEPA Regulations, 48 Fed. Reg. 34,263, 34,265-66 (July 28, 1983). BLM's reliance on the Forest Service's analysis failed to meet BLM's independent obligation under NEPA to take its own hard look at the environmental impacts of issuing these leases.

Nor was BLM' s NEPA error insignificant or harmless. Part of a BLM NEPA analysis involves analyzing how issuance of the leases "will or will not achieve the requirements of ... environmental laws and policies." 40 C.F .R. § 1502.2(d). Had BLM conducted its own review, it likely would have identified and been able to correct the Forest Service's failure to comply with the Roadless Rule, and the applicable forest plan, in consenting to issuance of the leases. See infra pp. 11-14. The status of the Roadless Rule, in particular, was a highly visible and controversial subject that BLM almost certainly would have identified had it independently evaluated the foreseeable impacts of issuing these leases. Moreover, had BLM made such an independent review, it could have corrected the mistake itself by imposing roadless stipulations on the leases. See 43 C.P.R.§ 3101.7-2(a) (BLM "may add additional stipulations" beyond those required by the surface managing agency).

FREEMAN, MICHAEL S; EARTH JUSTICE

Comment:

The Associations are opposed to any attempt to modify leases or add stipulations that were not part of the original lease terms, due to damage this breach of contract will inflict on the members' operations, and the serious implications such a decision would have on the viability of federal mineral development nationwide. As stated, the Associations question the need to prepare an EIS at all, and also contend that the BLM does not have the authority to enact several of the Alternatives included in the document. The only action that is fully supported by law and regulation is Alternative 1, the No Action Alternative.

LUDLAM, DAVID; COLORADO OIL & GAS ASSOC & WESTERN ENERGY ALLIANCE

Comment:

Voiding or Modifying the Leases Constitutes a Taking Under the Fifth Amendment to the U.S. Constitution. In the alternative, if BLM cancels or modifies these leases (despite its lack of authority to do so), lessees have a right to just compensation under the Fifth Amendment to the U.S. Constitution. See U.S. Const. amend. V. (. By law, Oxy holds vested rights in the Oxy Leases. See Norman v. U.S., 63 Fed. Cl. 231, 245 (Fed. Cl. 2004); Pan Am. Petroleum Corp. v. Pierson, 284 F.2d 649, 654-55 (10th Cir. 1960); see also Lemmons v. United States, 496 F.2d 864, 873, 873 (Ct. Cl. 1974). These vested rights automatically grant Oxy Fifth Amendment protections. Upon receipt of its leases, and based on a reasonable expectation of its authorized activities, Oxy proceeded to invest significant resources to explore and develop its oil and gas interests. Courts have held that merely refusing to issue a drilling permit to an oil and gas lessee constitutes a compensable taking under the U.S. Constitution. Century Exploration New Orleans, Inc. v. United States, 103 Fed. Cl. 70, 76 (Fed. Cl. 2012). Here, where BLM contemplates not simply a refusal to grant a drilling permit on a lease, but rather contemplates actual cancellation or modification of a valid and existing mineral interest, Oxy would be due just compensation under the Fifth Amendment. In traditional cancellation proceedings where an interested party timely challenges a lease issuance and BLM cancels an issued lease, BLM refunds the lessor the bid price, rentals, and fees—consistent with the Fifth Amendment. See Liberty Southern Partners, LLC, 183 IBLA 383 (2013). Just compensation in these circumstances, however, is equal to the fair market value of the rights taken from Oxy, valued as of the date of the taking. Oxy's recoverable fair market value would include the fair market value of the property at the time of the taking, a value derived from "the price at which property would change hands in a transaction between a willing buyer and a willing seller." See Norman, 63 Fed. Cl. at 279?80 (citing Yancey v. United States, 915 F.2d 1534 (Fed. Cir. 1990)). Importantly, the evaluation of "fair market value" can "also include an assessment of the property's capacity to produce future income if a reasonable buyer would consider that capacity in negotiating a fair price for the property." See Norman v. United States, 63 Fed. Cl. 231, 279?80 (Fed. Cl. 2004). In the context of the Oxy Leases, BLM could owe Oxy the fair market value of the Oxy Leases if Oxy were to enter into a private contract to sell the leases, which would undoubtedly entail consideration of the future production capacity on each lease. Such value could be in the range of hundreds of millions of dollars, particularly given the recent discovery of the Mancos Shale. Where just compensation or restitution would be due for any cancelled or modified leases, Oxy urges BLM to consider the significant impacts both to operators and BLM from any such cancellation or modification on its decision to move forward with this analysis.

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

Comment:

Cancellation of the Oxy Leases Is Unlawful. The BLM lawfully issued the Oxy Leases and no NEPA or other statutory deficiency otherwise exists, therefore cancellation of the Oxy Leases is unlawful. BLM lawfully issued the Oxy Leases in question under the MLA and its implementing regulations. Neither BLM nor the public question that BLM had inherent authority to issue the Oxy Leases under the MLA nor have BLM or the public alleged that BLM violated the MLA in issuing the leases. See Texas Oil and Gas Corp. v. Watt, 683 F.2d 427, 431 (D.C. Cir. 1982) (holding BLM erroneously cancelled leases and such leases "must be reinstated" when leases were validly issued under the governing statute and implementing regulations). In fact, during the scoping meetings for the NOI, BLM repeatedly stated that "these leases are legal," meaning, legally issued under the MLA. That an alleged NEPA deficiency by BLM arguably occurred years ago does not grant BLM authority to cancel the Oxy Leases as "improperly issued." No case law supports the position that BLM's non-prejudicial action under NEPA equates to improper issuance under the MLA and its implementing regulations. This is particularly true in light of that fact that BLM's authority to cancel leases based on pre-lease factors arises from its general duties related to public domain lands, and here the Forest Service has the requisite and relevant authority for analyses of impacts to the surface and environment under NEPA. In fact, courts have held BLM decisions to void a lease arbitrary and capricious when the findings of facts or conclusions of law failed to support the decisions or where BLM exceeded its statutory authority in cancelling the leases. See, e.g., Texas Oil and Gas Corp. v. Watt, 683 F.2d 427, 431 (D.C. Cir. 1982). BLM simply does not have the authority to cancel the Oxy Leases and violate valid existing lease rights. Furthermore, the IBLA has specifically held that BLM does not have the authority to cancel a lease based upon a NEPA analysis conducted after lease issuance. See Carl J. Taffera, 71 IBLA 72, 77 (1983). In Taffera, the record did not disclose any pre-lease administrative errors that would require full or partial cancellation of the lease in question. See id. In that case, "[a]pparently, the only basis for cancellation is that subsequent to lease issuance BLM compiled an EA and decided that no leases should issue in the natural area." See id. The IBLA concluded that "BLM may not retroactively apply its no lease determination to deprive appellant of his lease." See id. Similarly, here, BLM is undertaking new analysis of the Oxy Leases, analyzing impacts of the Oxy Leases at present (as opposed to at the time of lease issuance in 1993), with the intent to apply that analysis to its decision to lease the Oxy Leases to PXP—an action which took place in 1993. BLM cannot retroactively apply a NEPA analysis subsequent in time to the lease issuance decisions in an effort to cancel or modify the Oxy Leases. Given the similarity to the facts of Taffera, here, BLM should determine that cancellation of the Oxy Leases, even through judicial cancellation, is unlawful under the particular set of circumstances.

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

Comment:

Cancellation or modification of valid leases is not within the authority of the BLM under the Mineral Leasing Act (MLA). The MLA does not grant the authority to the BLM to cancel or modify valid existing leases, whether those leases are on USFS lands or BLM lands. Under MLA, cancellation of leases is strictly limited to cases in which the terms have been violated by the leaseholder. Section 31 of the Act states that leases "may be forfeited and cancelled by an appropriate proceedings in the United States district court…whenever the lessee fails to comply with any of the provisions of this Act, of the lease, or of the general regulations promulgated under this Act" (emphasis added). The MLA is quite clear that only the failure of a lessee is cause for cancellation; failure of the BLM to comply with administrative requirements is not addressed as a justifiable cause for cancellation, and a reasonable person would conclude that the lessee should not be held liable for a mistake on the part of the BLM. In addition, the MLA makes it clear that lease cancellation is a matter for the judiciary, and is not a function of the BLM. The Associations are adamant that the leases in question are valid leases, based upon a reasonable interpretation of the good faith under which they were awarded (see Comment 1), the legally binding nature of the contracts that they represent, and the fact that all lessees have remained in good standing. It should be emphasized that the IBLA decision did not find the leases invalid, but simply reversed the BLM's dismissal of the protests lodged against those leases. Given that the leases are valid and that the lessees have given no cause for cancellation by violating the terms, the BLM does not have the authority to consider or enact cancellation of these leases. In the leasing process, once the BLM accepts the bid and the lessee fully pays for the lease, a contract exists between the lessee and the BLM based solely on those identified terms and conditions. See, e.g., Coastal States Energy Co.,80 IBLA 274, 279 (1984); BLM Manual MS-3120 – Competitive Leases, § 3120.64.A (Rel. 3-337, 2/18/13). The unilateral addition of new terms by the BLM is a breach of this contract and violates "the equal opportunity for all bidders to compete on a common basis for leases." See Anadarko Prod. Co., 66 IBLA 174, 176 (1982), aff'd Civ. No. 82-1278C (D. N.Mex. 1983). In a recent IBLA case stemming from Colorado, the IBLA recognized that stipulations could not be added to an existing lease if the BLM could not provide an adequate justification for the inclusion of the additional leases. DeJour Energy Corp (USA, IBLA 2010-175, *16 (April 21, 2011). Absent a coherent rational basis, the BLM does not have the authority to impose additional stipulations on an existing lease. The Associations are not convinced the BLM has provided a full and complete explanation as to why the stipulations were not originally included on the identified leases.

LUDLAM, DAVID; COLORADO OIL & GAS ASSOC & WESTERN ENERGY ALLIANCE

Comment:

Equitable Doctrines Preclude BLM from Cancelling or Modifying the Oxy Leases. Under the circumstances present here, the legal doctrines of equitable estoppel and laches preclude BLM from modifying or voiding the Oxy Leases. BLM learned of IBLA's decision in 2007. Until 2014 (seven years after the IBLA decision), BLM took no action to address the alleged deficiency in the Subject Leases. In fact, with respect to the Oxy Leases, BLM approved transfer of the leases and approved APDs, as well as defended issuance of those actions in federal court. As noted above, Oxy had no reason to expect that BLM would apply the IBLA decision to the Oxy Leases and no reason to question BLM's decisions to authorize development of its vested rights. These facts squarely invoke principles of equitable estoppel and laches that preclude BLM from undertaking the proposed action with respect to the Oxy Leases. See Spaulding v. United Transp. Union & Union Pac. R.R. Co., 279 F.3d 901, 909 (10th Cir. 2002) (to successfully claim equitable estoppel, a party must show that "(1) the party to be estopped must know the facts; (2) the party to be estopped must intend that his conduct will be acted upon or must so act that the party asserting the estoppel has the right to believe that it was so intended; (3) the party asserting the estoppel must be ignorant of the true facts; and (4) the party asserting the estoppel must rely on the other party's conduct to his injury"); Socony Mobil Oil Co. v. Continental Oil Co., 335 F.2d 438, 441?42 (10th Cir.1964) ("The doctrine of laches applies [ ] in cases where, because of lapse of time, it would be inequitable to permit a party to enforce his or her legal rights. In other words, the delay must result in prejudice or an injustice to another."). Here, (1) BLM knew the facts of the potential for modification or cancellation of the Oxy Leases; (2) BLM intended for Oxy (and others) to rely on BLM's actions, which is evidenced by BLM conducting site-specific NEPA on the Oxy Leases and issuing APDs subsequent to lease issuance; (3) Oxy had no actual or constructive knowledge of any potential threat of cancellation or modification of the Oxy leases; and (4) Oxy in fact relied upon, unfortunately to its detriment, BLM's representations and actions indicating that Oxy's leases were not under threat of modification or cancellation. In short, Oxy would be materially prejudiced if BLM seeks to void or modify the Oxy Leases.

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

Comment:

BLM Does Not Have the Authority to Unilaterally Modify the Oxy Leases. As a threshold matter, BLM lacks the authority to unilaterally modify the Oxy Leases. Under BLM regulation and guidance, the relevant BLM RMP and accompanying EIS "serve[ ] as the primary vehicle for identifying and documenting the need for constraints on fluid mineral exploration and development ... in the form of [lease] stipulations," at the time of lease issuance. See BLM Manual 1624, Chapter IV-2, Section 2 – Lease Stipulations. The 1993 Oil and Gas Leasing EIS and the 2001 RMP EIS set forth the stipulations relevant to the Oxy Leases. Here, BLM proposes to impose modified terms and conditions on the Oxy Leases that generally fall into one of three categories: 1. No surface occupancy stipulations; 2. Controlled surface use stipulations; and 3. Timing limitation stipulations. BLM does not have the authority to modify the Oxy Leases without Oxy's agreement. A BLM oil and gas lease represents a contract that BLM must honor. The Interior Board of Land Appeals has consistently held that upon signature of a BLM oil and gas lease by both parties, "it becomes a binding instrument and cannot be vitiated by unilateral action." Even BLM's Colorado River Valley Field Office has acknowledged the significance of a legal and binding lease agreement stating "[a]n oil and gas lease is essentially a contract between BLM and the leases holder. BLM transfers the lease holder the right to explore and develop all the oil and gas resources, subject to stipulations attached to the lease. After issuing the lease, BLM is then obligated to honor the lease rights granted." Moreover, these leases contain no stipulation that allows BLM to later modify their terms. Rather, like all standard BLM leases, each of the Oxy Leases includes the following language: Rights granted herein are subject to applicable laws, the terms, conditions, and attached stipulations of this lease, the Secretary of the Interior's regulations and formal orders in effect as of lease issuance, and to regulations and formal orders thereafter promulgated when not inconsistent with lease rights granted or specific provisions of this lease. Under this statutory and regulatory scheme, if BLM does not include a stipulation in the lease at time of issuance, BLM cannot later add a stipulation without the express agreement of the lessee. To modify the terms, conditions, or stipulations in these leases without Oxy's agreement would be unlawful and a breach of contract.

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

Comment:

Oxy is a bona fide purchaser of the Oxy Leases; and consequently, BLM lacks authority to cancel the Oxy Leases. BLM regulation protects the Oxy Leases from any authority BLM may have to cancel leases "to the extent that such action adversely affects the title or interests of a bona fide purchaser even though such lease or interest, when held by a predecessor in title, may have been subject to cancellation." See 43 C.F.R. § 3108.4. Oxy purchased a 50% interest in the Oxy Leases on February 28, 2008, and purchased the remaining 50% interest on December 1, 2008. Oxy had no notice of any purported defect in the Oxy Leases until April 2, 2014, nearly six years after the transfer of the leases and nearly ten years after BLM first issued the Oxy Leases to Oxy's predecessors—Contex Energy Co., Strachan Exploration Inc., and Laramie Energy LLC. As a result, and unlike the operators with leases directly addressed in the 2007 IBLA decision, Oxy had no reasonable expectation when purchasing the leases in 2008 that its rights in the Oxy Leases would be challenged, revoked, or otherwise modified. Oxy rightfully relied on BLM to confirm the validity of the leases at the time Oxy acquired the leases in 2008. See Clayton W. Williams, Jr., 103 IBLA 192, 214-15 (1988).

The 2007 IBLA Decision constituted a final agency decision affecting only the three leases at issue in that decision, and Oxy had no reason to know that the 2007 IBLA decision could impact the Oxy Leases. The IBLA made no broad or sweeping legal conclusions regarding the validity of any other leases issued pursuant to the 1993 Oil and Gas Leasing EIS or the 2001 RMP EIS, nor did the IBLA direct BLM to re-evaluate other leases. Furthermore, BLM confirmed after the IBLA decision, by approving the transfer of the Oxy Leases from PXP to Oxy the validity of the same.

In May 2008, BLM and the Forest Service, following preparation of an EA, approved Phase 2 of site-specific development at Hells Gulch North associated with Oxy Lease Nos. 66723 and 66918. Relying upon this EA, the agencies authorized the lessee to drill up to 45 exploratory natural gas wells on six pads within the leaseholds as well as construct 6 miles of access roads, all to be located within the WRNF. See Hells Gulch 2 EA; see also Natural Resources Defense Council, 2011 WL 3471011, at 1. In the Hells Gulch 2 EA, BLM and the Forest Service acknowledged that "denial of an action alternative constituting the operator's right to explore for oil and/or gas will violate contractual rights granted by the leases." Hells Gulch 2 EA, at 5. Environmental organizations challenged the decisions by the Forest Service and BLM. See Natural Resources Defense Council, 2011 WL 3471011. BLM and the Forest Service, along with Oxy, successfully defended this challenge, resulting in confirmation by the District Court of Colorado that "OXY USA holds an oil and gas lease entitling it to drill for natural gas on the land at issue" and that BLM and the Forest Service complied with law in approving Oxy's authorizations to drill. Id. at 1, 12. Nothing in BLM's or the Forest Service's actions granting and defending Oxy's rights, or the court's opinion, indicated to Oxy that it had anything less than a full and complete right to exercise its rights under its leases. BLM must remove the Oxy Leases from consideration for cancellation as part of any further analysis.

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

Comment:

BLM Cannot Administratively Cancel Any of the Oxy Leases Under Alternative 5, BLM would cancel all 65 of the Subject Leases. As with modification of a lease, BLM's authority to cancel a lease is not unfettered. Section 188(b) of the MLA grants the Secretary of the Department of Interior (DOI) the power to administratively cancel oil and gas leases under certain delineated circumstances only. Specifically, under Section 188(b), any lease issued after August 21, 1935 "shall be subject to cancellation by the Secretary of the Interior after 30 days' notice upon the failure of the lessee to comply with any of the provisions of the lease, unless or until the leasehold contains a well capable of production of oil or gas in paying quantities, or the lease is committed to an approved cooperative or unit plan or communitization agreement under section 226(m) of this title which contains a well capable of production of unitized substances in paying quantities." See 30 U.S.C. § 188(b) (emphasis added); see also 30 U.S.C. § 188(a) (granting DOI authority to cancel a lease through appropriate federal court proceedings if "the lessee fails to comply with any of the provisions of this chapter, of the lease, or of the general regulations promulgated under this chapter and in force at the date of the lease"). In short, for producing leases, those known to have proven reserves, or those committed to a planned unit, the MLA provides that such leases can only be canceled by judicial proceeding and not through an administrative cancellation. In the WRNF DEIS, BLM concedes only "[f]or producing leases" that lease cancellation "is not within BLM's sole authority to implement so it would be necessary to pursue judicial action." See WRNF DEIS, at 2-61. BLM does not make the same concession with respect to leases committed to a unit, or lease known to contain valuable oil or gas deposits; however, such leases may also only be cancelled pursuant to judicial action. All of the Oxy Leases either are currently held by production, have proven reserves, or are committed to a communitization agreement (i.e., a unit). Specifically, Oxy Leases COC66724 and COC66918 are held by production. Oxy Lease No. COC70631 is committed to the Middleton Creek Unit, which is held by production by Encana. And finally, Oxy Leases COC66723 and COC72157 have proven reserves. As a result, and for the reasons described above, the law precludes BLM from administratively canceling all of the Oxy Leases, not just those that are "producing."

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

Comment:

When BLM issues a lease to a private party, BLM enters into a contract with the private party, such that its "rights and duties therein are governed generally by the law applicable to contracts between private individuals." United States v. Winstar Corp., 518 U.S. 839, 895 (1996) (plurality opinion); see also Amber Resources Co. v. United States, 538 F.3d 1358, 1367 (Fed. Cir. 2008). If BLM modifies the terms and conditions or cancels the Oxy Leases, BLM would be repudiating its contractual promises to Oxy, amounting to a "total breach" of contract. See Amber Resources, 538 F.3d at 1368; Griffin & Griffin Exploration, 116 Fed. Cl. at 175-76. Basic contract law principles mandate that in entering into a lease contract with Oxy, BLM is implicitly bound by the duty of good faith and fair dealing in its performance under contract and BLM cannot violate this duty through action or inaction, whether or not BLM believes its conduct is justified. See Restatement (Second) of Contracts, § 205, comment D. BLM's own administrative error certainly does not justify such a contractual violation on BLM's part. See, e.g., Mobil Oil Exploration and Producing Southeast, Inc. v. U.S., 530 U.S. 604, 616 (2000). When a party to a contract retracts or repudiates the contract, the law entitles the other party to restitution measured either by (i) "the value of the benefits received by the defendant due to the plaintiff's performance" or (ii) the "cost of the plaintiff's performance." See Amber Resources, 538 F.3d at 1380 (citing Landmark Land Co. v. Fed. Deposit Ins. Corp., 256 F.3d 1365, 1372 (Fed. Cir. 2001)); N. Star Alaska Housing Corp. v. United States, 30 Fed. Cl. 259, 272 (Fed. Cir. 993); see also Restatement (Third) of Restitution and Unjust Enrichment § 38. If BLM cancels or modifies the lease contracts, to return Oxy to the status quo ante, Oxy would seek the cost of its performance under the Oxy Leases, including sunken costs expended to exercise its right under the Oxy Leases to explore for, produce, market, and sell oil and gas. See Amber Resources Co. v. United States, 73 Fed. Cl. 738, 757 (Fed. Cl. 2006); Landmark, 256 F.3d at 1378) (citing Restatement (Second) of Contracts § 344(b)); see also Restatement (Second) of Contracts, at § 347, comment A.

Here, if BLM sought to modify the Oxy Leases, such modification would constitute a breach of contract and Oxy would be due certain damages. Due to BLM's unreasonable delay in asserting this action, and the significant resources expended by Oxy pursuant to the Oxy Leases as a binding contract, any restitution analysis must consider not only the value of the lease, but also factors such as the cost of compliance with NEPA and permitting (at various stages), rental payments, expended capital and operational costs, and other investment backed losses incurred by Oxy. Initial prices of the Oxy Leases plus rental costs alone exceed approximately $1.7 million. Since that time, Oxy has invested a substantial amount of money in exploration, development, production costs, as well as for the cost of NEPA compliance, permitting, and litigation. The United States has received over $7 million in royalty payments for certain of the Oxy Leases alone. Consequently, BLM could owe Oxy in excess of $300 million if BLM modifies or cancels the Oxy Leases.

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

Comment:

Cancellation of the Oxy Leases Would Constitute a Breach of Contract. If BLM cancels the Oxy Leases based on its conclusion that such leases were improperly issued by BLM, any such cancellation would constitute a breach of contract by BLM. Griffin & Griffin Exploration, 116 Fed. Cl. at 175-76. In Griffin & Griffin Exploration, BLM issued an oil and gas lease to Smith for land BLM had previously leased to Bayou Exploration LLP (Bayou). Smith subsequently assigned his leasehold rights and obligations to Griffin & Griffin Exploration, LLC (Griffin). When BLM became aware of the mistake, it cancelled Smith's leases pursuant to 43 C.F.R. § 3108.3(d) because the lands subject to the Smith leases were subject to a valid lease held by Bayou for the same mineral rights. Griffin & Griffin Exploration, 116 Fed. Cl. at 170. In the administrative litigation, the IBLA held that the cancellation of the Smith leases was valid on the grounds that the Smith leases were "void ab initio" because BLM did not possess the mineral interest it sought to convey with the leases. While not directly overturning the IBLA decision (which the plaintiffs did not directly appeal), the Federal Court of Claims rejected the argument that a lease issued with a flaw at issuance fails to create a valid contract (whether or not it is called "void ab initio"). See id. at 172-74. Instead, the Court held that the leases constituted a valid contract: "the fact that the leases never effectively conveyed the promised leasehold interests does not affect their validity as contract instruments between the government and plaintiffs." Id. at 173. The Court then held that the government breached this valid contract by failing to convey a valid leasehold interest. Id. at 175-76. The Court's holding is consistent with IBLA precedent, which dictates that upon signature of a BLM oil and gas lease by both parties, the lease "becomes a binding instrument and cannot be vitiated by unilateral action." Leon F. Scully, Jr., 104 IBLA 367, 368 n.1 (1988); Carl J. Taffera, 71 IBLA 72, 76 n.2 (1983); Barbara C. Lisco, 26 IBLA 340, 344 (1976); see also 1999 BLM Oil and Gas Leasing EIS, at 2-4. Importantly, in this 2014 decision, the Federal Court of Claims casts doubt on the entire line of cases that a lease issued with a flaw at issuance is "void ab initio," never creates a contract, and thus can be voided without regard to contractual rights. Griffin & Griffin Exploration, 116 Fed. Cl. 173?74. The Court of Claims asserted that "a finding of fraud or other wrongdoing is a necessary predicate to a finding that the leases were void ab initio for purposes of government contract law." Griffin & Griffin Exploration, 116 Fed. Cl. at 173 (citing Kellogg Brown & Root Servs., Inc. v. United States, 728 F.3d 1348, 1371 (Fed. Cir. 2013). Thus, even if BLM concludes that it improperly issued Oxy's leases and seeks to cancel such leases under 43 C.F.R. § 3108.3(d), BLM's then failure to convey a valid leasehold interest to Oxy constitutes a breach of contract.

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

Comment:

BLM Should Not Seek to Modify or Cancel the Oxy Leases In Light of the Lack of Prejudicial Error. Though Oxy contends no NEPA deficiency exists, the alleged NEPA deficiency at issue here constitutes no more than harmless error. That BLM may not have completed administrative paperwork in connection with its adoption of the Forest Service's NEPA analyses for the Oxy Leases does not result in a legal deficiency that should support BLM seeking modification or judicial cancellation of the Oxy Leases. Instead, BLM's action amounts to harmless error that does not warrant modifying or otherwise overturning the Oxy Leases. Relief for an alleged process deficiency under NEPA should only be granted for "prejudicial error." Drakes Bay Oyster Co. v. Jewell, 2014 WL 114699, at *13 (9th Cir. 2014); see also Burkholder v. Peters, 58 Fed. Appx. 94, 98 (6th Cir. 2003). Where, as here, neither BLM, the Forest Service, nor the public will suffer prejudice from the alleged NEPA deficiency, re-evaluation of previously issued decisions is unwarranted. See Drakes Bay Oyster Co., 2014 WL 114699, at 13. With respect to cancellation, in instances of harmless error, BLM can (and should) exercise its discretion not to cancel a lease. In fact, the U.S. Department of Justice, Environment & Natural Resources Division, Natural Resources Section, recently interpreted BLM's discretion in this regard: [i]mproperly issued leases can be void or voidable. A lease is void, and thus, a 'legal nullity,' when it pertains to lands that were not legally available for leasing at the time the lease was issued. In contrast, a lease is "voidable" when it was issued in violation of a procedural requirement, such as NEPA, which does not compel any particular decision. In other words, a void lease is one that suffers from a substantive defect that BLM cannot cure, such as leasing lands not open to leasing. A voidable lease is one that suffers from a procedural defect that BLM has the discretion to correct with further action on its part. See Solenex LLC v. Jewell, Case No. 13-993-RJL (D.C. Dist., Nov. 23, 2015) (Resp. to Court Order) (citing Clayton W. Williams, Jr., 103 IBLA 192 (1988)). Thus, to the extent BLM selects Alternative 5 or otherwise seeks to pursue judicial cancellation of the Oxy Leases, Oxy requests BLM exercise it discretion, consider the totality-of-the-circumstances, and not seek cancellation of the Oxy Leases. With respect to BLM's proposed Alternatives 3, 4, and 5, because BLM, the Forest Service, and the public considered the environmental impacts associated with the Oxy Leases both prior to leasing and in association with site-specific development, reconsideration, and modification, cancellation of these leasing decisions "would serve no useful purpose." See also Nat'l Forest Pres. Grp. v. Butz, 485 F.2d 408, 412 (9th Cir. 1973); see also Save Our Cumberland Mountains v. Kempthorne, 453 F.3d 334, 348 (6th Cir. 2006). In short, no prejudicial error exists, and thus, BLM should not seek modification or judicial cancellation of the Oxy Leases.

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

Comment:

BLM is Obligated to Honor Valid Existing Lease Rights and Therefore Alternatives 3, 4, and 5 are Unwarranted WPX does not support Alternatives 3, 4, or 5 which propose modifying, cancelling, and/or voiding pmts or all of the 65 leases. NEPA guidance dictates that the range of alternatives proposed for consideration under an EIS must be reasonable. WPX does not believe cancellation or significant modification of leases is reasonable or justifiable in response to an IBLA ruling that determined a minor administrative paperwork error required that BLM conduct its own EIS separate from the USFS EIS. WPX is deeply concerned over the potential disturbing consequences to the future of oil and gas leasing and development on Federal land if leases are modified, cancelled or voided after operators complied with the legal requirements to obtain and maintain the leases. If actions are taken by BLM to cancel, void, and/or significantly modify these existing leases, operators would be compelled to legally challenge these actions. The BLM should expressly recognize that oil and gas leases are existing rights that cannot be modified unilaterally by the BLM. Once the BLM has issued a federal oil and gas lease without NSO stipulations, and in the absence of a nondiscretionary statutory prohibition against development, the BLM cannot deny development on the leasehold that otherwise complies with terms of the lease. See, e.g., National Wildlife Federation, et al., 150 IBLA 385,403 (1999). Only Congress has the right to completely prohibit development or cancel existing leases.

ODEGARD, CHAD E; WPX ENERGY

Comment:

We believe the DEIS goes beyond the scope envisioned by the 2007 Interior Board of Land Appeals' decision and direction to the BLM to correct the leases. The DEIS clearly does not meet one of the documents stated primary purposes: "Fulfill the federal government's policy to 'foster and encourage private enterprise in the development of economically sound and stable industries, and in the orderly and economic development of domestic resources to help assure satisfaction of industrial, security, and environmental needs' (Mining and Minerals Policy Act of 1970) while continuing to sustain the land's productivity for other uses and capability to support biodiversity goals (Forest Service Minerals Program Policy)." DEIS Section 1.3 The DEIS was undertaken to correct administrative oversights of the BLM for existing leases only. All of the Action Alternatives (Alternatives 2 - 5) in the DEIS do not respect the existing legal leases. The Proposed Action (Alternative 4) is based on the 2014 White River National Forest Record of Decision which only applies to future leases and cannot be legally applied retroactively to the existing leases in the DEIS. In fact, any change in the existing leases is a breach of contract with the leaseholders. We agree wholeheartedly with the Supplemental Comments by OXY USA WTP LP submitted to the BLM in 2014 regarding the proposed EIS for the Previously Issued Oil and Gas Leases that concludes: "Consistent with the Federal Court of Claims' decision in Griffin & Griffin Exploration, if BLM cancels the Oxy Leases for ‘improper issuance’, such action would constitute a breach of contract and Oxy would be entitled to damages thereunder."

PUGLIESE, ROSE; MESA COUNTY COLORADO

Comment:

Our Board wants to emphasize, in the strongest of terms, that it deems any unilateral cancellation or modification of existing leases to be an illegal taking of private property rights, and our Board strongly objects to any such action by the BLM.

PUGLIESE, ROSE; MESA COUNTY COLORADO

Comment:

In this case, several companies entered into federal oil and gas leases more than ten years ago which bestowed the right to produce oil and gas from federal lands and minerals. These leases constitute a private property right and a contract with the United States of America. The BLM now seeks, more than 10 years later, to unilaterally and retroactively cancel 25 existing federal oil and gas leases and to drastically modify the contractual terms of another 40 existing federal oil and gas leases with operating stipulations so burdensome that the leases will be rendered worthless. The taking of these property rights is without due process and being applied in a discriminatory manner. Such an action by the BLM would be an unprecedented step of enormous consequence.

ROBINSON, BRAD; GUNNISON ENERGY LLC

Comment:

If the BLM proceeds as it plans, how will another individual or company ever trust a permit issued by the federal government? How could anyone trust a contract with our government if the government is free to retroactively rescind, modify or breach the terms of an agreement it has entered into? How could a company find investors or lenders for a federal project if those investors cannot be sure the government will perform its obligations under its contracts? One can be sure if this proposed action in the Draft EIS is implemented, similar actions will be repeated' In other circumstances. It may even become common for the government to not respect its permits and contracts with third parties. As a result, companies may be unwilling or unable to do business on federal land, federal minerals or to work on federal projects. It appears that the BLM's proposal is in response to pressure from environmental special interest groups. These groups believe that oil and gas exploration and production should not occur in the White River National Forest and certainly not in Pitkin County. I understand these concerns and have personally worked with certain of the environmental groups to mitigate their concerns. However, it is critical to weigh the environmental groups concerns against the fact that the affected companies entered into these leases in good faith and in compliance with existing regulation. These companies have relied upon what were final government actions. These companies have invested millions of dollars in these leases, have been delayed for years in developing the leases and are now facing a taking of their assets. The impact on certain of these companies will be devastating. The detrimental impact on other companies' willingness and ability to deal with the government in the future will be even greater. This is the very reason retroactive rule making is discouraged, that property rights must be respected and contracts honored.

ROBINSON, BRAD; GUNNISON ENERGY LLC

Comment:

Alternatives 3 and 4 would impose on each of Encana's leases new stipulations that were not identified or even contemplated when the United States issued the leases. Because this retroactive modification of Encana's leases would go well beyond BLM's authority and would constitute a breach of contract by the BLM, the BLM must not adopt either of these alternatives in the FEIS and

SCHOPP, JOHN; ENCANA OIL & GAS

Comment:

BLM's proposed modifications of Encana's existing leases also violate Encana's contract rights. See Draft EIS, pgs. 2-16 - 2-54, tbl. 2-3. As explained earlier in these comments, Encana's leases are contracts that cannot be unilaterally modified by the BLM. See Mobil Oil Exploration & Producing Southeast, Inc. v. United States, 530 U.S. 604, 620 (2000) (recognizing that federal oil and gas leases are contracts and that the federal government's breach of lessees the right to explore for and develop oil and gas entitles lessee to refund); Oxy USA, Inc. v. Babbitt, 268 F.3d 1001, 1006-7 {10th Cir. 2001) (noting that the Tenth Circuit has long held that federal oil and gas leases are contracts), rev'd on other grounds, BP America Production Co. v. Burton, 549 U.S. 84 (2006). Once the BLM accepts a bid and the lessee fully pays for the lease, a contract exists between the lessee and the BLM based on the terms and conditions identified at the lease sale. See, e.g., Coastal States Energy Co., 80 IBLA 274, 279 (1984). The BLM may not later add new terms not identified in the sale notice and not part of the contract subject to the oral bidding process. See BLM Manual MS-3120 Competitive Leases, § 3120.64.A (Rel. 3-337, 2/18/13); BLM Handbook H-3120-1 - Competitive Leases, § ll(E)(3a) (Rel. 3-338, 2/18/13). Because imposition of new stipulations or other restrictions through COAs or otherwise would unilaterally modify Encana's contract rights, the FEIS and ROD should adopt the No Action Alternative and preserve Encana's leases as originally issued.

SCHOPP, JOHN; ENCANA OIL & GAS

Comment:

It is well-established that federal oil and gas leases are contracts. See Mobil Oil Exploration & Producing Southeast, Inc. v. United States, 530 U.S. 604, 620 {2000) (recognizing that federal oil and gas leases are contracts and that the federal government's breach of lessees' right to explore for and develop oil and gas entitles lessee to refund); Oxy USA, Inc. v. Babbitt, 268 F.3d 1001, 1006-7 (10th Cir. 2001). After the BLM accepts the bid and the lessee fully pays for the lease, a contract exists between the lessee and the BLM based solely on those identified terms and conditions. See, e.g., Coastal States Energy Co., 80 IBLA 274, 279 (1984); BLM Manual MS-3120 - Competitive Leases, § 3120.64.A (Rel. 3-337, 2/18/13). The unilateral addition of new terms by the BLM is a breach of this contract and violates "the equal opportunity for all bidders to compete on a common basis for leases." See Anadarko Prod. Co., 66 IBLA 174, 176 (1982), aff'd Civ. No. 82-1278C (D. N.Mex. 1983). The BLM's handbook explicitly recognizes the contractual nature of federal oil and gas leases and requires that if the BLM adds, deletes, or revises a stipulation subsequent to a lease sale, the high bidder's written consent is required before the lease may be issued with the revised terms. See BLM Handbook H-3120-1 - Competitive Leases. Thus, under federal court and IBLA precedent and the BLM's own Manual and Handbook, the BLM may not amend Encana's leases without Encana's consent.

SCHOPP, JOHN; ENCANA OIL & GAS

Comment:

The BLM's previous decision to issue the Existing Leases necessarily impacts and limits its options in the current EIS. As explained throughout these comments, the BLM cannot limit, restrain, or unreasonably interfere with existing rights, as the BLM would seek to do under Alternatives 3 through 5. In its FEIS and ROD, the BLM should clearly state that an oil and gas lease is a contract between the federal government and the lessee, that the lessee has certain rights thereunder, and that the FEIS and ROD will not limit, restrain, or unreasonably interfere with these rights.

SCHOPP, JOHN; ENCANA OIL & GAS

Comment:

Encana strongly opposes Alternatives 3 and 4, which would modify the Existing Leases with stipulations that were not part of the leases' original terms and conditions.(3) The BLM does not have the authority to impose new stipulations without Encana's consent and must not select these alternatives in the FEIS and ROD.

SCHOPP, JOHN; ENCANA OIL & GAS

Comment:

The BLM may not modify Encana's valid existing rights through unreasonable conditions of approval (COAs) or by imposing new stipulations on oil and gas leases issued over a decade ago. The BLM proposes in Alternatives 3 through 5 to either cancel Encana's existing leases or impose numerous new stipulations that were not part of the terms and conditions of these leases as originally issued. Compare Draft EIS, pgs 2-2 - 2-6, tbl. 2-1, with Draft EIS, pgs. 2-16 - 2-54, tbl. 2-3. Alternatives 3 and 4 in particular would, in nearly all cases, impose at least ten to twenty new stipulations on each of Encana's leases. Further, the BLM indicates it may attach mitigation to all leases through COAs, best management practices (BMPs), and other means. Draft EIS, pgs. 2-62, 2-70, 2-84. Each of these alternatives would violate Encana's valid existing rights to develop its leases under the terms and conditions to which the United States and Encana originally agreed. Oil and gas leasing is an implementation level decision by the BLM under FLPMA and is subject to FLPMA's provisions. The authority conferred in FLPMA, in turn, is expressly made subject to valid existing rights. See 43 U.S.C. § 1701 (2012). Thus, an EIS prepared to analyze oil and gas leasing decisions, after lease execution and after drilling and production has commenced, is likewise subject to existing rights. See Colorado Envt'l Cool, et al., 165 IBLA 221, 228 (2005). The BLM's FEIS and ROD cannot defeat or materially restrain Encana's valid and existing rights to develop its leases through new stipulations or other means. See id. In order to effectuate FLPMA's stated purpose not to modify valid existing rights, the BLM promulgated policies regarding the contractual rights granted in an oil and gas lease. First, the BLM's Planning Manual mandates the protection of existing lease rights. "All decisions made in land use plans, and subsequent implementation decisions, will be subject to valid existing rights. This includes, but is not limited to, valid existing rights associated with oil and gas leases …. " See BLM Manual 1601 - Land Use Planning, 1601.06.G (Rel. 1-1666 11/22/00). The BLM must comply with the provisions of its planning handbook and recognize valid existing rights. Any attempts to modify Encana's valid existing rights would violate the terms of its leases with the BLM and the BLM's own policies. Like the BLM's Manual, BLM Instruction Memorandum 92-67 states that "[t]he lease contract conveys certain rights which must be honored through its term, regardless of the age of the lease, a change in surface management conditions, or the availability of new data or information. The contract was validly entered based upon the environmental standards and information current at the time of the lease issuance." As noted in the BLM's Instruction Memorandum, the lease constitutes a contract between the federal government and the lessee which cannot be unilaterally altered or modified by the BLM. Encana's existing leases throughout the White River National Forest constitute valid existing contract rights that cannot be unilaterally altered. Further the BLM cannot modify Encana's operation's through unreasonable COAs or the new stipulations BLM would impose under Alternatives 3 and 4, which did not exist at the time of lease issuance.

SCHOPP, JOHN; ENCANA OIL & GAS

Comment:

Encana vehemently opposes the adoption of Alternative 5, which would cancel all the Existing Leases, including through judicial action on producing leases. This alternative is highly impractical and, as the BLM acknowledges, is included as an analytical tool only. Further, cancellation of producing leases would be significantly costly. It would require, among other things, plugging and abandoning all producing wells and removing and reclaiming infrastructure, roads, well pads, and other facilities. Not only would this endeavor cost Encana and other lessees significant sums of money, it also would deprive the federal, state, and local taxpayers and communities of substantial tax revenues and economic opportunities. See, e.g., Draft EIS, pg. 4.17-1 (noting that lease cancellation will negatively impact local economies, lessees, and mineral owners). In addition to the initial impacts of cancellation, the long-term impacts would be socioeconomically disastrous. Cancellation of all Existing Leases would result in losses of 357 billion cubic feet of natural gas product ion with a sales value of almost $1.8 billion over the 20-year period from 2017 through 2036 when compared to the No Action 'Alternative. As the BLM explains in the Draft EIS, these losses would result not only from plugging and abandoning the 75 wells that have been drilled on the Existing Leases, but also from failure to develop new wells under the No Action Alternative. Cancellation would further result in job losses of 2,751 job years from 2017 through 2036, as well as a loss of $1.0 billion in total economic output. As the BLM notes, the lost production associated with lease cancellation would have especially negative impacts on Mesa, Garfield, and Rio Blanco counties. Alternative 5 is also inconsistent with the BLM's Multiple Use mandate. FLPMA directs that the public lands be managed "on the basis of multiple use and sustained yield" and " in a manner which recognizes the Nation's need for domestic sources of minerals ... from the public lands .... " 43 U.S.C. § 1701(8), (12); see also id. §1732(a). Thus, BLM is required under FLPMA to facilitate the development of oil and gas on public lands. Further, although FLPMA instructs BLM to prevent "unnecessary or undue degradation" of the public lands, 43 U.S.C. § 1732(b}, it is well established that "FLPMA prohibits only unnecessary or undue degradation, not all degradation." Theodore Roosevelt Conservation P'ship, 661 F.3d 66, 76 (D.C. Cir. 2011}. FLPMA itself thus recognizes and requires that BLM will authorize some development of the public lands consistent with its Multiple Use mandate. Alternative 5, which would prohibit all degradation by canceling the Existing Leases, is inconsistent with FLPMA's Multiple Use provision. The BLM must not adopt this alternative in the ROD.

SCHOPP, JOHN; ENCANA OIL & GAS

Comment:

Alternatives 3, 4, and 5 Constitute A Breach Of Contract.

SIMPSON, DON; URSA PICEANCE LLC

Comment:

BLM is Equitably Estopped from Canceling the Leases. To assert "estoppel against the Government in matters concerning public lands," the challenging party must additionally show "affirmative misconduct such as misrepresentation or concealment of material facts" by BLM. Id. BLM is equitably estopped from voiding SG's and Ursa's leases. There can be no dispute that BLM "kn[e]w the facts." BLM actively defended its reliance on the Forest Service's NEPA analysis in the Pitkin County litigation before the IBLA and, consequently, was fully aware of the IBLA's holding in that decision. After the IBLA issued the Pitkin County decision, BLM even started to comply with the decision by drafting a decision by which BLM would adopt the Forest Service's NEPA analysis. Supra at n. 5. In August 2009, BLM issued a decision withdrawing the leases at issue in Pitkin County. Ex. Q. Accordingly, there can be no doubt as to BLM's knowledge.

The BLM instructed SG and Ursa to, among other things, submit and prepare APDs, unit applications, and NEPA documents based on the validity of their leases. It was a party to many NEPA and other documents which expressly stated the leases were valid and even issued new leases after Pitkin County based on the Forest Service NEPA. SG and Ursa were not aware of the Pitkin County decision or its potential application to other leases in the White River National Forest until late 2012, when they were so informed by BLM. Prior to that time, SG and Ursa had no reason to doubt BLM's affirmative statements or its sincerity.

SG and Ursa believed that they could unitize their leases and obtain necessary drilling permits well within the end of the primary terms of the leases. But BLM engaged in "unusual" and "abnormal" delay in acting on SG's and Ursa's requests to exercise their lease rights. Now, despite the Lease suspensions granted by BLM, the ten-year Lease terms are within months of expiration (Ex. E). However, BLM's conduct now means that, if allowed to stand, SG and Ursa would lose all or vast portions of their leases. Those losses would vastly exceed the refunds proposed in the BLM WRNF DEIS, which would not include, among other things, the large financial sums invested in development efforts and the value of the lost mineral resources. Even if BLM does not cancel the leases, the new stipulations sought to be imposed by BLM would severely injure SG and Ursa, because they would likely have to start over with new NEPA documents to address the different resource issues applicable under the new lease terms.

BLM engaged in affirmative misconduct because it misrepresented and concealed material facts from SG and Ursa. In the years following Pitkin County, BLM never suggested that there was a problem with the NEPA documents supporting the leases. BLM instead prepared new NEPA documents for site-specific projects confirming the validity of the leases, continued to issue new leases based on the Forest Service NEPA documents which had not been formally adopted, affirmed the validity of the leases in communications with SG and Ursa, and otherwise treated the leases as valid. Perhaps most egregious, however, is evidence that even after BLM decided to undertake a new NEPA analysis based on Pitkin County, the BLM deliberately waited many months to inform SG and Ursa of that fact and instead continued to correspond with the companies as if there was no barrier to the companies' development efforts. For example, the record includes a BLM letter to SG drafted (but not sent) in June 2012 identifying the Pitkin County issue and the need for curative NEPA (Exs. K and BB), yet in the Fall of 2012, BLM was still affirmatively treating SG's and Ursa's leases as valid in correspondence and meetings. SG and Ursa recognize that estoppel is an extraordinary remedy. However, as noted above, the actions of BLM in this case are extraordinary, if not historic. The courts and the IBLA have held that Interior should be estopped from cancelling or voiding leases in lesser circumstances. The severity and egregiousness of BLM' s conduct with regard to the 65 WRNF leases is underscored when looking at the facts of many other cases where estoppel has been held to lie. See, e.g., Carl Dresselhaus, 128 IBLA 26, 33 (1993); Leitmotif Mining Co., 124 IBLA 344, 346 (1992); Higgins, 147 IBLA at 347. As in other cases where adjudicators have applied equitable estoppel against BLM, the actions of BLM here "violate the standards of fundamental fairness." Carl Dresselhaus, 128 IBLA at 35.

SIMPSON, DON; URSA PICEANCE LLC

Comment:

The BLM WRNF DEIS in Alternatives 3 and 4 offers affected lessees an inappropriate, unilateral "take it or leave it" option. Either agree to new, more stringent lease stipulations that inhibit the development of the lease or face lease cancellation. BLM WRNF DEIS at 2-16 - 2-59. This "choice" is no choice at all; it is a prohibited unilateral action by BLM to rewrite lease stipulations after lease issuance. The BLM WRNF DEIS cannot impair SG and Ursa's valid existing rights to develop the leases through either stipulation or cancellation. See Colorado Env'l Coal, et al., 165 IBLA 221, 228 (2005) citing Colorado Env'l Coal, 135 IBLA 336, 360(1996), aff'd Colorado Env 'l Coal v. Bureau of Land Management, 932 F.Supp. 1247, 1255 (D. Colo. 1996). The BLM cannot prohibit a lessee from developing its leases. National Wildlife Federation, 150 IBLA 385, 403 (1999). As BLM stated in the Hells Gulch Phase 2 EA process, only Congress has the right to completely prohibit development once a lease has been issued citing Western Colorado Congress, 130 IBLA 244, 248 (1994). As federal lessees, SG and Ursa have the right under their Leases to explore for and develop oil and gas. Pennaco, 377 F.3d at 1160 (10th Cir. 2004). Moreover, BLM's proposal to require new stipulations on existing leases is inconsistent with the Forest Service's decision that the existing lease stipulations would continue to govern the 65 leases. Forest Service, WRNF 2015 ROD at 8-9.

SIMPSON, DON; URSA PICEANCE LLC

Comment:

BLM Cannot Cancel The Leases Because the Agency Did Not Act Within A Reasonable Time. Assuming, arguendo, that BLM has the authority to cancel the Leases, it cannot cancel the Leases in these circumstances because it has not acted within a reasonable time. In Boesche v. Udall, 373 U.S. 472, 479 (1963), the Supreme Court found that the Secretary of the Interior had inherent authority under its general powers over public lands to administratively cancel leases for pre-leasing errors. The Supreme Court was clear, however, that "[i]n so holding, we do not open the door to administrative abuses." Id. At 485. In this case, BLM is attempting to commit just such an "administrative abuse" by seeking to cancel leases nearly 13 years after they were issued. When an agency exercises its inherent authority to reconsider a decision, as BLM seeks to do here, it may do so only if it acts within a reasonable time. See, e.g., Belville Mining Company v. United States, 999 F.2d 989, 997 (6th Cir. 1993); Brooklyn Heights Association, Inc. v. National Park Service, 818 F.Supp.2d 564, 569-570 (E.D.N.Y. 2011) (collecting cases which show that an agency may be able to wait a matter of months to reconsider when acting under its inherent authority but holding that it is "crystal clear" that a delay of "more than five years" is "unreasonably long"). That analysis of when an agency may exercise its inherent authority reflects two competing policy considerations. "Whenever a question concerning administrative, or judicial, reconsideration arises, two opposing policies immediately demand recognition: the desirability of finality, on the one hand, and the public interest in reaching what ultimately, appears to be the right result on the other." Bookman v. United States, 453 F.2d 1263, 1265 (Fed. Cir. 1972). SG and Ursa do not agree that BLM' s cancellation claim presents a competing "right result," but, regardless of the merits of BLM' s cancellation claim, the need for finality nearly 13 years after the leases were issued far outweighs any competing interest. Thirteen years cannot be justified under any circumstances and is certainly not justified here where BLM has provided no explanation for its delay.

SIMPSON, DON; URSA PICEANCE LLC

Comment:

BLM is Barred by Laches from Canceling the Leases. The equitable doctrine of laches bars BLM from canceling the Leases nearly 13 years after they were issued. Laches will apply when there is an unreasonable delay by the party bringing the action and the delay prejudices the party asserting the defense. See, e.g., Jicarilla Apache Tribe v. Andrus, 687 F.2d 1324, 1338-1340 (10th Cir. 1982). The courts have found that laches is an appropriate bar in actions similar to that at issue here. In Jicarilla, the Tenth Circuit affirmed the district court's finding that the Jicarilla Apache Tribe's lease cancellation action on NEPA grounds was properly barred by laches when the Tribe waited more than three years to bring the action and the oil and gas lessees had already invested millions in their leases. Id at 1337--40. Similarly, in Rosebud Sioux Tribe, 104 F.Supp.2d at 1206, the court found that laches barred the Department of the Interior from voiding a lease when Interior waited 4-5 months after becoming aware of a NEPA violation and after the lessee had already invested $5 million. These cases, of course, do not reach the magnitude of unreasonable delay in this case where the agency has waited nearly 13 years to seek lease cancellation and the amount invested collectively by the oil and gas lessees on all the 65 leases subject to the BLM WRNF DEIS would likely be in the tens of millions of dollars.

SIMPSON, DON; URSA PICEANCE LLC

Comment:

On November 18, 2015, BLM made the BLM WRNF DEIS available to the public. The BLM's WRNF DEIS "Dear Reader" letter explains, "[t]he BLM determined that the U.S. Forest Service NEPA analysis conducted for the 65 previously issued leases is no longer adequate due to changes in laws, regulations, policies and conditions since the earlier EIS was finalized in 1993". BLM can't reverse position more than twelve years after lease issuance and eight years after Pitkin County. Nothing in NEPA precludes BLM from electing to adopt the prior Forest Service NEPA analyses. Pitkin County, 173 IBLA at 181-189. Indeed, given BLM' s actions in approving lease issuance and development in reliance on the validity of the lease issuance process in multiple actions, some as recently as 2012, BLM can and should simply adopt the existing Forest Service NEPA, which the Forest Service continues to support as applicable to the 65 leases. See WRNF 2015 ROD at 9. As discussed below, BLM should more carefully consider how the existing Lease terms and other federal and state laws can buttress the selection of Alternatives 1 or 2. BLM has failed to analyze in the BLM WRNF DEIS how the selection of these Alternatives would better meet the basic policy objectives of the statutory federal minerals program and uphold the rule of law surrounding federal contracts.

SIMPSON, DON; URSA PICEANCE LLC

Comment:

NEPA Does Not Mandate Alternatives that Rewrite or Cancel Leases. NEPA is a procedural statute that "does not mandate particular results, but simply prescribes the necessary process." Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350 (1989). "Even if scrupulously followed, the statute 'merely prohibits uninformed-rather than unwise-agency action.'" New Mexico ex rel. Richardson v. Bureau of Land Management, 565 F.3d 683, 704 (10th Cir. 2009) citing Methow 490 U.S. at 351. Here, there was a procedural violation of NEPA by BLM. Pitkin County. The Forest Service, as the manager of the surface resources, conducted thorough NEPA in 1993 and 2002, which it continues to support as adequate for these 65 Leases, and granted its consent to lease as the Surface Managing Agency. While the IBLA faulted BLM' s failure to properly adopt this Forest Service NEPA, BLM' s decision was not "uninformed." BLM was a cooperating or reviewing agency in each of the Forest Service NEPA processes and relied on the Forest Service's lease stipulations when it issued the Leases. The IBLA' s direction to BLM to conduct additional NEPA does not dictate a finding "in favor" of the environment. "[T]he agency is not constrained by NEPA from deciding that other values outweigh environmental costs." Methow, 490 U.S. at 350. But BLM, in the BLM WRNF DEIS, has failed to adequately analyze the circumstances of lease issuance, the basic policy objectives for the federal minerals program, the existing Lease terms and other federal and state laws in an effort to support the Leases as issued in 2003. The appropriate NEPA "cure" is found in those Alternatives that adopt the 1993/2002 NEPA and not the Alternatives that add new stipulations (Alt. 3), cancel Thompson Divide Leases (Alt. 4) or cancel all leases (Alt. 5). BLM recognizes that the BLM WRNF DEIS is "not required to have plan conformity" with the WRNF 2015 ROD/FEIS. BLM WRNF DEIS at 2-69. Yet BLM's "Proposed Action" Alternative 4 (and Alternatives 3 and 5) are designed to conform with the future leasing decision in that document and, as BLM admits, are inconsistent with the WRNF 1993 FEIS/ROD that governed the issuance of the Leases and, according to the Forest Service, will continue to govern all 65 valid existing leases. Id. Moreover, BLM's reliance on a future leasing analysis is inappropriate when the WRNF 2015 ROD/FEIS did not analyze either lease cancellation or the addition of new stipulations to the 65 Leases. WRNF 2015 ROD at 7-9. As such, Alternatives 3, 4, and 5 are arbitrary and capricious."

SIMPSON, DON; URSA PICEANCE LLC

Comment:

BLM is Judicially Estopped from Canceling the Leases. The doctrine of judicial estoppel provides that "[w]here a party assumes a certain position in a legal proceeding, and succeeds in maintaining that position, he may not thereafter, simply because his interests have changed, assume a contrary position." County of San Miguel v. Kempthorne, 587 F.Supp.2d 64, 73 (D.D.C. 2008). BLM and the Forest Service defended the adequacy of their site-specific NEPA analysis and validity of leases in the WRNF in Natural Resources Defense Council, 2011 WL 3471011 at. BLM now assumes the contrary position in the BLM WRNF DEIS that the leases are invalid. Accordingly, BLM is judicially estopped from now claiming the leases are invalid. Nor would any of the exceptions to judicial estoppel apply. No governmental interest in enforcing the law would be compromised. Nothing prohibits BLM from relying on the Forest Service's 1993/2001 NEPA analysis as it has for the past dozen years. The change in position is strongly driven by political considerations (Ex. F, Chronology), but there has not been a "change in public policy" which supports BLM's change in position. Finally, the facts have not changed.

SIMPSON, DON; URSA PICEANCE LLC

BLM Response:

As stated in Section 1.4 of the DEIS, there is a need to “address the NEPA deficiency identified by the 2007 IBLA ruling on the appeal by the Board of Commissioners of Pitkin County that BLM must formally adopt NEPA analysis completed by the Forest Service or conduct a NEPA analysis of its own for issuance of oil and gas leases underlying WRNF lands”. The Secretary of the Interior has inherent authority, under her general powers of management over public lands, to cancel leases issued in violation of a statute or regulation. Boesche v. Udall, 373 U.S. 472 (1963) (the Mineral Leasing Act leaves unaffected Secretary’s traditional administrative authority to cancel a lease based on pre-lease factors); 43 CFR 3108.3(d) (the BLM has the authority to cancel a lease if “improperly issued”). The NEPA deficiency at lease issuance makes the leases voidable at the discretion of the BLM based on supporting remedial analysis. See Conner v. Burford, 848 F.2d 1441, 1451, 1454 (9th Cir. 1988) (indicating that leases issued without NEPA and ESA compliance were voidable by contemplating that BLM would later those address those procedural requirements and decide whether the leases should have been issued); Clayton W. Williams, Jr., 103 IBLA 192, 210-11 (1988) (characterizing as “voidable” any lease issued in violation of a procedural requirement, such as NEPA).

As required by the CEQ and DOI regulations implementing NEPA (40 CFR 1500-1508; 43 CFR 46.420), the BLM must consider a range of reasonable alternatives that meet the purpose and need statement (see Sections 1.3 and 1.4 of the DEIS) in order to meet the NEPA requirement to take a “hard look” at the alternatives and impacts, and therefore will not remove Alternatives 3 through 5 from analysis. The BLM has not yet made a decision on which alternative will be selected. This EIS is intended to consider a range of alternatives and disclose the potential impacts of each. Excluding reasonable alternatives that meet the purpose and need for action does not meet NEPA requirements.

As stated in Sections 2.3.3, 2.3.4, and 2.3.5 of the DEIS, should leases need to be cancelled or lease stipulations be changed, subsequent BLM administrative actions including refunds of bonus bids and lease payments or judicial action would be necessary . BLM would not unilaterally modify a lease, but if the leaseholder does not consent to new or modified stipulations, BLM may cancel a lease. Analysis of litigation costs or outcomes is beyond the scope of the EIS and is speculative since the outcome or terms are uncertain, and would involve considerations independent of the project.

Due to the stated deficiency in issuing the leases previously and the many changes in the environmental conditions and the laws and regulations, as well as to the management plan for the WRNF, the RFDS, and the BLM CRVFO RMP, it would be unreasonable to evaluate the leases in the context of the conditions and state of knowledge in 1993. In fact, the WRNF FEIS (2014) and the associated ROD (2015) revise the 2002 Forest Management Plan related to mineral development. Significant new circumstances or information "relevant to environmental concerns and bearing on the proposed action or its impacts” (40 CFR 1502.9) exist. In addition, the BLM determined that an EIS addressing all significant new circumstances and information would ensure appropriate analysis of future development on those leases identified as having the same NEPA deficiency as the leases contested in the IBLA decision. This process allows the BLM to address the NEPA deficiency consistently across all the leases and ensure future activities adequately consider impacts to potentially impacted resources.

Comment:

Garfield County remains concerned that an administrative error affecting a few leases is causing significant disruption to the orderly development of 65 existing leases. The County continues to support use of the 1993 EIS that has adequately served the public interest for management of these leases. Should adverse actions be taken to cancel leases or retroactively apply costly stipulations, property rights and long-standing investments to develop these and nearby leases and related Federal Units are at significant risk. As depicted in the map Attachments B&C, we ask BLM to consider that in addition to the wells producing from many of the leases, there are about 600 producing wells within 2-miles of the 65 existing leases and existing proposed or former Federal Units--many of which were undoubtedly developed along with extensive supporting infrastructure based on the certainty of developable minerals provided by the 65 leases now being reconsidered.

MARTIN, JOHN; GARFIELD COUNTY COLORADO

BLM Response:

As stated in Section 1.4 of the DEIS, there is a need to “address the NEPA deficiency identified by the 2007 IBLA ruling on the appeal by the Board of Commissioners of Pitkin County that BLM must formally adopt NEPA analysis completed by the Forest Service or conduct a NEPA analysis of its own for issuance of oil and gas leases underlying WRNF lands”. The Secretary of the Interior has inherent authority, under her general powers of management over public lands, to cancel leases issued in violation of a statute or regulation. Boesche v. Udall, 373 U.S. 472 (1963) (the Mineral Leasing Act leaves unaffected Secretary’s traditional administrative authority to cancel a lease based on pre-lease factors); 43 CFR 3108.3(d) (the BLM has the authority to cancel a lease if “improperly issued”). The NEPA deficiency at lease issuance makes the leases voidable at the discretion of the BLM based on supporting remedial analysis. See Conner v. Burford, 848 F.2d 1441, 1451, 1454 (9th Cir. 1988) (indicating that leases issued without NEPA and ESA compliance were voidable by contemplating that BLM would later those address those procedural requirements and decide whether the leases should have been issued); Clayton W. Williams, Jr., 103 IBLA 192, 210-11 (1988) (characterizing as “voidable” any lease issued in violation of a procedural requirement, such as NEPA).

As stated in Sections 2.3.3, 2.3.4, and 2.3.5 of the DEIS, should leases need to be cancelled or lease stipulations be changed, subsequent BLM administrative actions including refunds of bonus bids and lease payments or judicial action would be necessary . BLM would not unilaterally modify a lease, but if the leaseholder does not consent to new or modified stipulations, BLM may cancel a lease. Analysis of litigation costs or outcomes is beyond the scope of the EIS and is speculative since the outcome or terms are uncertain, and would involve considerations independent of the project.

Section 4.3 has been revised to include a discussion of potential impacts to federal units from the addition of NSO stipulations or lease cancellations, by alternative.

Comment:

The CRVFO acknowledges that scoping comments questioned the agency's authority to cancel or modify leases. See Draft EIS, Table 1-5. The CRVFO provides that this issue is analyzed in sections 1.2 through 1.5, id.; however, sections 1.2 through 1.5 of the Draft EIS do not address the CRVFO's legal authority to modify or cancel leases. WillSource reiterates that the CRVFO lacks authority to cancel or otherwise initiate judicial cancellation of WillSource's leases. Therefore, WillSource requests that the CRVFO supplement the Draft EIS to include a direct explanation of the agency's purported authority to retroactively modify or cancel oil and gas leases.

CAVANAUGH, JAMIE; WILLSOURCE MOUNTAIN STATES LEGAL FOUNDATION

Comment:

Lease cancellation is far from unprecedented. The United States Supreme Court itself has said that the Secretary of the Interior has the authority to cancel oil and gas leases issued in violation of the law. See Boesche v. Udall, 373 U.S. 472 (1963). BLM has a longstanding regulation that provides for cancellation of leases issued improperly. See 43 CFR. §3108.3(d). This regulation is a term of the lease contracts at issue here. See BLM Lease Form 3100-11 (October 1992) at §3. Though industry has made noises about the sanctity of contracts, the simple fact is that the right to cancel improper leases is written right into the contract itself. Industry's position on this point betrays some political spin, because BLM cancelled identically issued leases in the Thompson Divide in 2009 without industry resistance. See Ex. 3. Similarly, in January of 2010 the agency partially voided four Thompson Divide leases held by SG Interests because they were improperly issued on lands occupied by Sunlight Ski Area. See Exs. 4-7. In both cases, industry mounted no protests, no appeals, no public-relations campaigns, and no litigation. Their failure to contest these issues when they first arose in 2009 and 2010 confirms they know BLM had—and continues to have—every right to cancel improper leases. Industry's claim that this BLM process sets some new precedent ignores both its own acceptance of past cancellations and the United States Supreme Court's 1963 ruling in Boesche.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

Comment:

BLM should cancel 25 undeveloped, improperly issued leases in the Thompson Divide for the following reason: BLM has the legal authority to cancel leases in the Thompson Divide. Federal onshore oil and gas lease contracts incorporate, as terms of the lease, "the Secretary of the Interior's regulations and formal orders in effect as of lease issuance." Among the Secretary's regulations is 43 C.F .R. § 3108.3(d), which provides: "Leases shall be subject to cancellation if improperly issued." Thus,§ 3108.3(d) is a provision of the lease contract. See, e.g., Mobil Oil Exploration & Producing Southeast, Inc. v. United States, 530 U.S. 604, 609 (2000); Del Rio Drilling Programs, Inc. v. US., 146 F.3d 1358, 1367 (Fed. Cir. 1998) (same). The authority for§ 3108.3(d) flows from the Secretary of the Interior's general power over public lands. The Supreme Court acknowledged this generalized power authorized the Secretary to cancel invalid leases in Boesche v. Udall, 373 U.S. 472 (1963). The cancellation power has been used regularly over the years, and Boesche remains good law. See, e.g., Atchee CBM, LLC, 183 IBLA 389, 412 n.27 (2013). The Court of Claims has expressly held that BLM does not breach the lease contract when it cancels a lease pursuant to§ 3108.3(d). See Griffin & Griffin Exploration LLC v. United States, 116 Fed. Cl. 163, 176 (2014); Federal Circuit caselaw supports this holding. See, e.g., Century Exploration New Orleans v. US., 745 F.3d 1168, 1178 (Fed. Cir. 2014). BLM has cancelled leases in the Thompson Divide twice before: (1) in 2009, the agency completely cancelled three leases issued in violation of NEPA; and (2) in 2010 BLM partially cancelled four leases held by SG Interests within the proposed Lake Ridge Unit. These partial cancellations eliminated areas illegally leased within the boundaries of Sunlight Ski Area.

KESSLER, ZANE; THOMPSON DIVIDE COALITION

Comment:

My purpose in writing is simply to support what I believe to be the position of the BLM and the federal government that the 65 oil and gas leases that are the subject of the draft EIS may lawfully be cancelled by the BLM because they were issued without full compliance with the National Environmental Policy Act (NEPA). I write in part because some representatives of the oil and gas industry have suggested in comments on the BLM's scoping statement that any attempt by the government to cancel these leases would interfere with the vested rights of the lessee. See e.g., Comments of Western Energy Alliance, et al., (May 15, 2015). While cancellation of oil and gas Leases might lead to an unlawful taking of private rights under some circumstances that is plainly not the case in the situation where, as here, the leases were unlawfully issued in the first place. In Boesche v. Udall, 373 U.S. 472 (1963), the Supreme Court recognized that federal mineral leases convey only limited rights. According to the Court, this ensures that the government has the ability to cancel leases not properly issued in the first place: The Court's holding in Boesche v. Udall, has been memorialized in the Interior Department's oil and gas regulations, which state explicitly that "[l] eases shall be subject to cancellation if improperly issued." 43 C.F.R. § 3108.3(d). Moreover, the Interior Board of Land Appeals (IBLA) has explicitly upheld the BLM's authority to cancel leases that were issued without full compliance with NEPA and the Endangered Species Act. Clayton W. Williams, Jr. (Williams), 103 IBLA 192, 95 I.D. 102 (1988). Because the government has determined that it had failed to fully comply with NEPA in issuing these 65 leases they were issued improperly and the BLM has every right to cancel them without compensation beyond the rental and bonus payments already made.

SQUILLACE, MARK; UNVERSITY OF COLORADO

BLM Response:

As stated in Section 1.4 of the DEIS, there is a need to "address the NEPA deficiency identified by the 2007 IBLA ruling on the appeal by the Board of Commissioners of Pitkin County that BLM must formally adopt NEPA analysis completed by the Forest Service or conduct a NEPA analysis of its own for issuance of oil and gas leases underlying WRNF lands". The Secretary of the Interior has inherent authority, under her general powers of management over public lands, to cancel leases issued in violation of a statute or regulation. Boesche v. Udall, 373 U.S. 472 (1963) (the Mineral Leasing Act leaves unaffected Secretary's traditional administrative authority to cancel a lease based on pre-lease factors); 43 CFR 3108.3(d) (the BLM has the authority to cancel a lease if "improperly issued"). The NEPA deficiency at lease issuance makes the leases voidable at the discretion of the BLM based on supporting remedial analysis. See Conner v. Burford, 848 F.2d 1441, 1451, 1454 (9th Cir. 1988) (indicating that leases issued without NEPA and ESA compliance were voidable by contemplating that BLM would later those address those procedural requirements and decide whether the leases should have been issued); Clayton W. Williams, Jr., 103 IBLA 192, 210-11 (1988) (characterizing as "voidable" any lease issued in violation of a procedural requirement, such as NEPA).

Comment:

BLM's decision to incorporate the Forest Service's 2014 NEPA analysis of future oil and gas leasing on the WRNF for a past decision to lease is not appropriate for the limited purpose and need of correcting the NEPA defect identified in Pitkin County and is inconsistent with its legal position in a virtually identical situation. WRNF DEIS at 1-1. BLM is not deciding to issue new leases, but is correcting its paperwork error, as a cooperating and reviewing agency, to properly adopt Forest Service NEPA it helped prepare, review and relied on in leasing and development decisions. BLM gave the environmental impacts of its leasing decision a "hard look" but simply failed to document its compliance with NEP A. BLM should use a NEPA process that recognizes this fact and would preserve rather than diminish existing lease rights. In Pennaco Energy v. Department of the Interior, 377 F.3d 1147 (10111 Cir. 2004) the Tenth Circuit upheld IBLA's determination that the pre-leasing NEPA relied on by BLM was inadequate for failing to take a "hard look" at the unique impacts of coalbed methane water production and directed curative NEPA. To address the leasing deficiencies identified by the IBLA and the Tenth Circuit in Pennaco, BLM prepared an extensive environmental assessment that analyzed impacts as of the date of lease issuance rather than current conditions. See environmental Assessment, Oil and Gas Leasing, Buffalo Field Office 070-05-064 (August 2005). BLM's Pennaco EA states, The purpose of the Environmental Assessment is to examine particular environmental effects of the oil and gas lease issuance decisions made between February 2000 and August 2004 and to reconsider all relevant factors and issues that were known during the time period of issuance to decide anew whether, after considering such information, these leases should have been issued. EA-1-1. BLM repeatedly stated that its analysis was limited to "consideration of the appropriate environmental issues foreseeable at the time the leases were offered for sale. " Id. at 1-1, 1-2. Certain "issues were not considered in detail because they were not issues that were known during the time of issuance of the 285 leases." Id. at 2-2. The alternatives addressed by BLM in the EA were likewise limited to those "that could have been foreseeable at the time the leases were offered for sale." Id. Because the purpose and need for the WRNF DEIS is to address the inadequacy identified by the IBLA in the "previous decisions" to lease, it is improper for BLM to analyze issues and laws which were not reasonably foreseeable at the time of lease issuance.

BOSWELL, ROBERT; LARAMIE ENERGY LLC

BLM Response:

As stated in Section 1.4 of the DEIS, there is a need to “address the NEPA deficiency identified by the 2007 IBLA ruling on the appeal by the Board of Commissioners of Pitkin County that BLM must formally adopt NEPA analysis completed by the Forest Service or conduct a NEPA analysis of its own for issuance of oil and gas leases underlying WRNF lands”. This approach complies with BLM guidance, which states as noted in Section 1.2 of the Draft EIS: “The BLM must either adopt the Forest Service leasing analysis or conduct a separate leasing analysis in compliance with NEPA and its implementing regulations at 40 CFR 1500 – 1508 and Department of the Interior NEPA regulations at 43 CFR Part 46, in considering the effects of leasing on the human environment, including reasonably foreseeable future development". In addition, the BLM determined that an EIS addressing all significant new circumstances and information would ensure appropriate analysis of future development on those leases identified as having the same NEPA deficiency as the leases contested in the IBLA decision. This process allows the BLM to address the NEPA deficiency consistently across all the leases and ensure future activities adequately consider impacts to potentially impacted resources.

In addition to the need to remedy the NEPA analysis, the BLM has also identified a need to consider consistency with the Forest Service leasing availability analysis and comply with laws and regulations regarding oil and gas leasing on public lands.

Comment:

BLM's Proposed Alternatives 3 and 4 would impose additional mitigation measures for site-specific development proposals to ensure implementation of the new and different lease stipulations. BLM's right to restrict drilling activities on leased lands is limited by each lease's terms and BLM's own regulations. As a consequence, BLM (and the Forest Service) may only restrict drilling pursuant to (1) stipulations included in the lease at the time of lease issuance; (2) "specific, nondiscretionary statutes;" and (3) "such reasonable measures as may be required by the authorized officer to minimize adverse impacts to other resource values, land uses or users not addressed in the lease stipulations at the time operations are proposed." 43 C.F.R. § 3101.1-2; see also Montana Trout Unlimited, 178 IBLA 159, 166 (2009). BLM regulations clarifies that "[r]easonable measures" must be "consistent with lease rights granted," and should not "require relocation of proposed operations by more than 200 meters; require that operations be sited off the leasehold; or prohibit new surface disturbing operations for a period in excess of 60 days in any lease year." 43 C.F.R. § 3101.1-2. Reasonable measures do not include any measures restricting drilling indefinitely or make drilling so economically onerous that the lessee cannot effectively develop the lease. Any NEPA analysis of future drilling conditions should respect these strong limitations upon BLM's actions and consider only those conditions allowed by the lease terms and 43 C.F.R. § 3101.1-2. Here, BLM's proposed stipulations under Alternatives 3 and 4 would require extensive engineering and wildlife studies that could potentially result in the relocation of certain of Oxy's anticipated operations by more than 200 meters; certain of Oxy's operations may need to be sited off the leasehold; and the modified lease stipulations would prohibit new surface disturbing operations for a period in excess of 60 days in any lease year. Furthermore, based off Oxy's initial assessment, the cost of moving infrastructure by up to 200 meters to avoid impacts (as may be required by new stipulations) in the post construction phase of operation, would be cost prohibitive. In effect, BLM's proposed stipulations under Alternatives 3 and 4 would require conditions of approval on any APD that are inconsistent with the current Oxy Leases. BLM's proposal with respect to the Oxy Leases is therefore contrary to law and should be eliminated from review in any final EIS. Note: It is apparent that BLM prepared for its internal use GIS maps depicting the scope, range, and specific acreage of each of the stipulations proposed under Alternatives 3 and 4. These maps would be incredibly informative for operators as they review the proposed stipulations and assess the implications of the same on a lease-by-lease basis. BLM's failure to produce these maps further prejudices this inappropriate NEPA process.

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

BLM Response:

As stated in Section 1.4 of the DEIS, there is a need to "address the NEPA deficiency identified by the 2007 IBLA ruling on the appeal by the Board of Commissioners of Pitkin County that BLM must formally adopt NEPA analysis completed by the Forest Service or conduct a NEPA analysis of its own for issuance of oil and gas leases underlying WRNF lands". The Secretary of the Interior has inherent authority, under her general powers of management over public lands, to cancel leases issued in violation of a statute or regulation. Boesche v. Udall, 373 U.S. 472 (1963) (the Mineral Leasing Act leaves unaffected Secretary's traditional administrative authority to cancel a lease based on pre-lease factors); 43 CFR 3108.3(d) (the BLM has the authority to cancel a lease if "improperly issued"). The NEPA deficiency at lease issuance makes the leases voidable at the discretion of the BLM based on supporting remedial analysis. See Conner v. Burford, 848 F.2d 1441, 1451, 1454 (9th Cir. 1988) (indicating that leases issued without NEPA and ESA compliance were voidable by contemplating that BLM would later those address those procedural requirements and decide whether the leases should have been issued); Clayton W. Williams, Jr., 103 IBLA 192, 210-11 (1988) (characterizing as "voidable" any lease issued in violation of a procedural requirement, such as NEPA).

As required by the CEQ and DOI regulations implementing NEPA (40 CFR 1500-1508; 43 CFR 46.420), the BLM must consider a range of reasonable alternatives that meet the purpose and need statement (see Sections 1.3 and 1.4 of the DEIS) in order to meet the NEPA requirement to take a "hard look" at the alternatives and impacts, and therefore will not remove Alternatives 3 through 5 from analysis. The BLM has not yet made a decision on which alternative will be selected. This EIS is intended to consider a range of alternatives and disclose the potential impacts of each. Excluding reasonable alternatives that meet the purpose and need for action does not meet NEPA requirements.

As stated in Sections 2.3.3, 2.3.4, and 2.3.5 of the DEIS, should leases need to be cancelled or lease stipulations be changed, subsequent BLM administrative actions including refunds of bonus bids and lease payments or judicial action would be necessary . BLM would not unilaterally modify a lease, but if the leaseholder does not consent to new or modified stipulations, BLM may cancel a lease. Analysis of litigation costs or outcomes is beyond the scope of the EIS and is speculative since the outcome or terms are uncertain, and would involve considerations independent of the project.

Figures 2-1 through 2-15 identify by alternative all of the stipulations that would be applied to leases. Alternative 3 stipulations are displayed by lease on Figures 2.-9 through 2-12. Similarly, the stipulation tables (Tables 2-1 through 2-4) also show the effects of the stipulations on the leases. The BLM believes that for all alternatives, the EIS has provided a level of detail sufficient to support reasoned conclusions by comparing the amount and the degree of change (impact) caused by the proposed action and alternatives per 40 CFR 1502.1. The BLM considers whether or not to lease and under what conditions based on more general rather than site-specific analysis. It is speculative to consider site-specific impacts at this level of analysis. Lease-by-lease analyses and maps are not included because future development is unknown and this level of analysis is not necessary to make a reasonable choice between alternatives. The RFDS informs the analysis at the appropriate scale for the analysis.

The inclusion of detailed individual maps of each of the 65 leases by alternative would result in over 250 maps in Chapter 2 alone. While some individuals may feel this would be helpful, the BLM does not feel that it is needed in the EIS for the reasons outlined above. This and other supplementary information has been available upon request throughout development of the EIS; however no requests for this information have been made by letter, telephone call or during any of the three public meetings BLM held to answer questions. The BLM remains available to provide materials such as GIS upon request.

Comment:

The BLM should, however, state clearly that oil and gas lease is a contract between the federal government and the lessee, and that the lessee has certain rights under that contract. See Mobil Oil Exploration & Production Southeast, Inc. v. United States, 530 U.S. 604, 620 (2000) (recognizing that lease contracts under the Outer Continental Shelf Lands Act gives lessees the right to explore for and develop oil and gas); Oxy USA, Inc. v. Babbit, 268 F.3d 1001, 1006-7 (10th Cir. 2001) (noting that the Tenth Circuit has long held that federal oil and gas leases are contracts) rev 'don other grounds, BP American Production CO. v. Burton, 549 U.S. 84 (2006).

ODEGARD, CHAD E; WPX ENERGY

BLM Response:

Section 1.2 of the DEIS provides a brief summary of the leasing and development process for federal fluid minerals on NFS lands. A more complete description of the leasing process can be found in Section 1.4.2 and Appendix C of the WRNF Oil and Gas Leasing Final EIS (USFS 2014a).

Comment:

I believe that the action to be taken by the BLM on this matter should be consistent with the US Forest Service's 2014 Record of Decision for Oil and Gas Leasing on Lands Administered by the White River National Forest (ROD).

HOUPT, JEFFERSON V

BLM Response:

Alternatives 3 and 4 incorporate the stipulations and availability decisions found in the USFS 2014 FEIS and ROD for future leasing, respectively. These alternatives were included in this EIS to match USFS's current decisions regarding where future oil and gas development should be located in the WRNF to meet the standards and guidelines of the WRNF Forest Plan based on best available science, and to provide a full range of reasonable alternatives for analysis in the EIS for analysis as required under NEPA and the Council on Environmental Quality (CEQ) regulations. This approach satisfies Energy Policy Act requirements for consistent lease stipulations between the BLM and the USFS.

Comment:

[Addendum to DEIS comment letter received after the close of the comment period.]

This month, BLM's sister agency, the United States Geological Survey (USGS), announced not only that the Mancos Shale is much larger than assumed in the DEIS, but is in fact at least the second largest shale gas resource in the United States.

This announcement by USGS not only constitutes new information but is in fact "significant new information" that triggers a legal obligation for BLM to reopen and republish the draft EIS alternatives.

Because the Colorado River Valley Field Office and White River National Forest host the second largest natural gas reserve in the United States, the agency's NEPA analysis can and must reflect this significant fact. The public should have the opportunity to comment on the creation of new alternatives. To not do so leaves the final EIS and Record of Decision legally indefensible. Specifically, the USGS announcement upends the validity of alternatives given the increase in resource isn't just a percent or two as assumed in the DEIS, but represents a 40-fold increase in technically recoverable natural gas within the White River National Forest.

Reopening the alternatives for public comment and curating the underlying NEPA and alternatives in an updated DEIS is the only way for the agency to account for this historic announcement by USGS.

LUDLAM, DAVID; COLORADO OIL & GAS ASSOC & WESTERN ENERGY ALLIANCE

BLM Response:

Although the USGS assessment and these comments were received well after the close of the DEIS comment period, the BLM has nevertheless reviewed this information and incorporated it into the description of the affected environment at Section 3.3 of the FEIS. It has also determined, as explained below, that this information does not constitute significant new information requiring the BLM to reopen and republish the draft EIS alternatives.

As noted in response to other comments, the RFDS used for analysis in the EIS already included consideration of unconventional plays as possible candidates for leasing and development in the future, including in the Niobrara and Mancos Formations. BLM Instruction Memorandum (IM) No. 2004-089 directs that, "[i]n addition to estimates concerning the presence of oil and gas resources based on geology, the RFD also considers other factors that affect oil and gas activity. Such factors include economics, changes in exploration, drilling, completion or production technology, physical limitations affecting surface access, bid performance at lease sales, oil and gas related infrastructure, and transportation." The RFDS here is consistent with this direction.

The BLM has reviewed the USGS's assessment, and does not believe it changes the analysis in the RFDS or the EIS. At the outset it must be noted that the USGS assessment is regional in scale, it is not designed or intended to address the extent of the resource found under the area covered by the EIS or any particular lease or group of leases. Geologically, it is not appropriate to assume an even distribution of the gas resource identified in the basin as occurring evenly across the basin, in order to ascribe it to a specific area. The analysis area covered by the PIL EIS is a small fraction of the total area cover by USGS' assessment, which is a broad-scale and general in nature as it tries to assess the total potential resource across five different, and somewhat overlapping, vertically stacked geological areas within the 4,000-foot-thick Mancos shale. It is not appropriate to take that type of study and try to use it to provide deterministic estimates about a particular area.

That said, information related to the potential development of horizontal gas plays within the Niobrara and Mancos formations was considered as part of the RFDS process. Based on the information currently available to the BLM, the development potential of this resource is still being sorted out. While most of the information regarding the methods of exploiting these plays is proprietary within the oil and gas community, information available to the BLM indicates that the potential development of these horizontal gas plays is still in the exploratory stage. This USGS report (Hawkins et al. 2016) does not change that fact or the speculative nature of these plays in terms of development intensity, timing, and location. Despite the documented size of the Mancos shale, as reflected in the USGS assessment, it remains an undiscovered, technically recoverable resource. Per USGS definitions, assessments of technically recoverable resources do not include economic or accessibility considerations.

That the USGS report suggests additional resources are in an area does not mean that their development potential can be quantitatively analyzed with meaningful accuracy at this time. Moreover, in the high potential zone of the Piceance Basin, total recoverable gas far exceeds any measure of annual production under current development, as both current and reasonably foreseeable drilling activity is likely to be far more limited by price and capital availability than by aggregate available gas resources. Moreover, any development of Mancos or Niobrara wells would be applied against the assumed well numbers in the RFD. To date, operators indicate that these deeper shale plays may reduce the number of future Mesa Verde wells. Thus, the release of the USGS report does not change the adequacy of the analysis in the RFDS and/or the development assumptions used by BLM in the EIS.

The reasonableness of the RFDS's projections of future development for the purposes of analysis is also supported by the very limited number of APDs for horizontal Mancos/Niobrara formation wells that have been received by the BLM. During fiscal year 2015, the majority of the APDs received by the CRVFO (for federal minerals both in the analysis area and outside the WRNF) were for the Mesa Verde Formation, with only 4 being located in the Mancos/Niobrara. Of the APDs received by CRVFO in the last 2 years, only 2.9% were for the Mancos/Niobrara formation group. Similarly, in

2015 horizontal wells made up approximately 4% of wells drilled in Garfield and Mesa County, which is consistent with the RFD estimate. Finally, the only horizontal wells drilled near the 65 leases were all in the vicinity of Zone 1, as forecasted in the EIS's RFD scaling appendix (Appendix D), which is the area where the BLM is proposing to reaffirm or modify the leases; none of the leases in that area are proposed for cancellation under the Preferred Alternative.

Although there has been a slight trend towards more horizontal drilling as a percent of total drilling over the last 5 years in the region, it appears to be more related to a decline in directional and vertical wells than a significant increase in horizontal drilling. From the standpoint of the Society of Petroleum Engineer's (SPE) Petroleum Resources Management System (PRMS) guidelines, the resource status of the Mancos shale is indicative of its lower chance of commerciality in the foreseeable future, particularly for the leases proposed for cancellation where development costs and permitting requirements may be higher and longer than in other areas of the basin.

Additionally, because the RFDS assumes that there would be some development of Mancos shale, this report does not change the development assumptions or method used to apply the USFS RFDS to the BLM's analysis of the 65 existing leases in the EIS, as described in Appendix D. Accordingly, no change has been made to RFDS analysis assumptions.

With respect to commenters concerns about the analysis of potential future changes, it should be noted that the RFDS used for this analysis does acknowledge the potential for change regarding accessibility of minerals from horizontal drilling. In the Draft EIS, assumption 4 in Appendix D, page D-8, stated that "[m]ore development may be possible if a higher proportion of horizontal wells [are] developed in the future." This assumption has been clarified to state that "[s]ome minerals that are assumed not to be accessible through directional (s-curve) drilling due to a lack of suitable surface location may be accessible given the longer reaches and alternative methods possible through horizontal drilling." Thus, if horizontal drilling proves to be productive and economical in the area in the future, the RFD may underestimate the future level of horizontal (or total) drilling." However, as noted in other responses regarding drilling of the Mancos formation, an increase in horizontal drilling would likely be offset by a reduction in directional (s-curve) drilling.

Finally, the commenters mischaracterize the purpose of the RFDS and the NEPA process of which it is part. They are not intended to define the specific numbers and locations of wells and pads needed to develop the oil and gas resources in the area. Instead, they are intended to provide sufficient specificity to support the BLM's impact analysis and alternative selection process as part of its review of the 65 previously issued leases. The actual level of oil and gas development associated with any specific alternative is likely to differ from the RFDS due to alternative-specific measures aimed at protection and management of other uses and resources. Furthermore, the RFDS is not intended to be used as a leasable mineral cap, and therefore, does not limit or preclude, practical future mineral plays; instead, it is an analytical tool used to predict potential energy development for purposes of informing this analysis. Therefore, the actual number of drill rigs active at any one time, the number of wells and pads constructed during 20 years, the resultant acres of surface disturbance, and miles of new or upgraded access roads under any of the alternatives may ultimately differ from the assumed numbers due to factors subject to change and that cannot be foreseen at this time, such as natural gas prices, technological advances, or new requirements related to other land uses and resource management goals. This use of the RFDS is explained in Section 1.2.1 and in Appendix D of the DEIS (page 1). The RFDS provides a robust analysis of potential future development to ensure that the BLM has taken a hard look at this issue for purposes of the EIS. The FEIS includes a broad range of alternatives, each representing a different suite of resource protections and allowable patterns of development. The alternatives are responsive to BLM's purpose and need to address the NEPA deficiency and consider conformity with the Forest Service's recent analysis regarding leasing within the WRNF, which was focused on leasing and lease stipulations. While geologic resource availability is part of those considerations, it is not a determinative factor.

As the USFS explained in its October 2015 Record of Decision, the focus of its decision was on both conserving the roadless and existing character of the White River National Forest, while also

providing oil and gas development opportunities with a focus on lands that have proven to be productive in the past 10-15 years. In making that determination, the USFS recognized that while there is high potential in some of the areas closed to leasing, those areas are on the edge of the Piceance formation and up to this point; no producing wells have been developed on these lands. In making its decision, the USFS examined past development on the White River National Forest and looked at where development is likely to occur over the life of its decision, given natural gas prices, exploration costs, and known reserves. The Preferred Alternative in the Final EIS is consistent with those determinations by the USFS.

Based on the foregoing, the BLM does not believe that the data in the USGS report changes its analysis, and that the EIS still includes a reasonable range of alternatives. It should also be noted that the commenters did not suggest a specific feasible alternative that should have been considered. No changes have been made to the FEIS as result of these comments.

Proposed Action and Alternatives

Note: The comments are grouped together and sorted by the last name of the commenter, with the BLM response in a gray shaded box following the grouped comments within this category.

Comment:

THE CRVFO'S ARTIFICIAL DISTINCTION BETWEEN PRODUCING AND NON-PRODUCING LEASES IS UNLAWFUL. The CRVFO's fabricated distinction between producing and non-producing leases constitutes a denial of equal protection and is contrary to the lessees' constitutional rights. Moreover, the CRVFO provides no basis in the Draft EIS for limiting additional stipulations to new operations. See, e.g., Draft EIS at 2-16. The CRVFO readily admits that any modifications to lease stipulations "would not apply to locations with producing wells because the constraints applied through lease stipulation apply to exploration and development, not operations after the well is producing." Id. at 2-16; id. at 2-59. Thus, the CRVFO treats similarly situated lessees differently based upon whether or not a producing well has been drilled, despite the fact that all 65 leases are located in areas of known natural gas potential. Additionally, most if not all of the existing well pads could support more wells. For example, WillSource has two existing wells, the Little Beaver 1-20 and WillSource 1-13; however, WillSource also has already constructed an additional well pad for the planned Northeast Haystack 1-17 Well. Therefore, WillSource has a total of three well pads, each of which could support multiple wells. Given that the surface disturbance associated with the well pads has already occurred, the CRVFO should, at a minimum, encourage lessees to develop multiple wells from existing well pads and within areas with existing oil and gas infrastructure. Instead, the CRVFO arbitrarily states that "any new wells to be developed on a lease with modified stipulations would be required to comply with the modified stipulations." Id.

CAVANAUGH, JAMIE; WILLSOURCE MOUNTAIN STATES LEGAL FOUNDATION

BLM Response:

The EIS considers a range of potential alternatives for addressing producing and non-producing leases. As noted in Section 2.3.3, changes in leasing stipulations would not apply to locations with producing wells because the constraints applied through lease stipulation apply to exploration and development, not operations after the well is producing ; however, any new wells to be developed on a lease with modified stipulations would be required to comply with the modified stipulations. This includes leases where existing wellpads are already in place because there is no guarantee that new wells within the leases would be situated on existing wellpads; and while use of existing wellpads may eliminate some surface disturbance, it would not eliminate all resource impacts. The operator may seek a stipulation exception at the APD stage.

Section 4.3 has been revised to include a discussion of potential impacts to future and existing operations from the addition of NSO stipulations or lease cancellations, by alternative.

Comment:

I represent a document that that flag stands for, and that we all know what that is. That's the Constitution. Myself and 43,000 others of us on my website remain sworn to defend that document. I'm here to speak to the legality or the illegality of what's gone on here. I do not support any of the alternatives because to support any one of those alternatives to lend any kind of legal credibility to the leases. I'm not here to wheedle and weep and moan. I'm here to demand that the BLM rescind those leases. Cancel is not the right legal term. The right legal term is rescind all illegal leases and further, cease and desist from issuing any other leases under those guidelines.

MCWILLIAMS, SHAWN

BLM Response:

As stated in Section 1.4 of the DEIS, there is a need to "address the NEPA deficiency identified by the 2007 IBLA ruling on the appeal by the Board of Commissioners of Pitkin County that BLM must formally adopt NEPA analysis completed by the Forest Service or conduct a NEPA analysis of its own for issuance of oil and gas leases underlying WRNF lands". The Secretary of the Interior has inherent authority, under her general powers of management over public lands, to cancel leases issued in violation of a statute or regulation. Boesche v. Udall, 373 U.S. 472 (1963) (MLA leaves unaffected Secretary's traditional administrative authority to cancel a lease based on pre-lease factors); 43 CFR 3108.3(d) (the BLM has the authority to cancel a lease if "improperly issued"). The NEPA deficiency at lease issuance makes the leases voidable at the discretion of the BLM based on supporting remedial analysis. See Conner v. Burford, 848 F.2d 1441, 1451, 1454 (9th Cir. 1988) (indicating that leases issued without NEPA and ESA compliance were voidable by contemplating that BLM would later those address those procedural requirements and decide whether the leases should have been issued); Clayton W. Williams, Jr., 103 IBLA 192, 210-11 (1988) (characterizing as "voidable" any lease issued in violation of a procedural requirement, such as NEPA, which does not compel any particular decision).

Comment:

The Colorado Roadless Rule was first enacted in 2001. 66 Fed. Reg. 3,244 (Jan. 12, 2001). After extensive legal challenge, the Colorado Roadless Rule was amended in 2012 (2012 CRR). 77 Fed. Reg. 39,576 (July 3, 2012). The 2012 CRR was enacted subject to valid existing rights, and affirms all oil and gas leases issued by the BLM prior to January 12, 2001. ld. at 39, 579. Any stipulations or prohibitions found in the 2012 CRR apply only to future oil and gas leases issued in roadless areas. Thus, it is improper for the CRVFO to attempt to justify adding NSO stipulations to any of the 65 leases because of roadless areas identified by the CRR. See Draft EIS at 4.12-4 to 4.12-6. Moreover, the Forest Service admits that the CRR does not require imposition of NSO stipulations. See 2015 FS ROD at 17. Therefore, WillSource requests that the CRVFO remove all proposed NSO stipulations based upon roadless areas from its leases. See, e.g., Draft EIS at 2-35 to 2-39.

CAVANAUGH, JAMIE; WILLSOURCE MOUNTAIN STATES LEGAL FOUNDATION

Comment:

The BLM states in the Draft EIS that Alternatives 3 and 4 "incorporate current Forest Service leasing requirements for compliance with the 2012 Roadless Rule." Draft EIS, pg. 2-67, § 2.4.9. The BLM apparently intends to impose road less area restrictions, most of them NSO restrictions, on leases that did not contain these restrictions when originally issued. Compare, e.g., Draft EIS, pg. 2-2, § 2.3.1, tbl. 2-2 (imposing no roadless area restrictions on Lease COC-061121 under No Action Alternative), with Draft EIS, pg. 2-22, § 2.3.3, tbl. 2-3 (imposing roadless area NSO restriction on Lease COC-061121 under Alternatives 3 and 4). These roadless area NSO restrictions are inappropriate for two reasons. First, as the BLM is aware, the Colorado Roadless Rule, finalized in July 2012, does not prohibit oil and gas development as a NSO restriction does. Rather, the rule generally prohibits timber cutting and road construction within inventoried Colorado Roadless Areas (CRAs). 36 C.F.R. § 294.43(a). As an exception to the general prohibition on road construction, the rule allows temporary roads in CRAs where needed pursuant to the exploration and development of oil and gas leases issued prior to July 3, 2012. 36 C.F.R. § 294.43(c)(vii i); see 36 C.F.R. § 294.46(b) (For oil and gas leases issued in a Colorado Roadless Area prior to July 3, 2012, the rule preserves any existing leases and surface development rights.). The Colorado Roadless Rule thus does not imply or require a total NSO restriction. Second, the BLM issued all of Encana's White River National Forest leases well before July 3, 2012. Hence, the Colorado Roadles Rule does not apply to Encana's leases, but rather "preserves any ... surface development rights" conferred on Encana in its leases. 36 C.F .R. §§ 294.43(c)(viii); 294.46(b). Although some of Encana's leases were issued with roadless area NSO restrictions, many of Encana's existing leases issued without such restrictions would be subject to such restrictions under Alternatives 3 and 4. The Colorado Roadless Rule explicitly preserved Encana's surface development rights under its original lease terms; it does not authorize or require the BLM to impose NSO restrictions on Encana's leases more than a decade after they were issued.

SCHOPP, JOHN; ENCANA OIL & GAS

BLM Response:

As stated in Section 1.4 of the DEIS, there is a need to “address the NEPA deficiency identified by the 2007 IBLA ruling on the appeal by the Board of Commissioners of Pitkin County that BLM must formally adopt NEPA analysis completed by the Forest Service or conduct a NEPA analysis of its own for issuance of oil and gas leases underlying WRNF lands”. The Secretary of the Interior has inherent authority, under her general powers of management over public lands, to cancel leases issued in violation of a statute or regulation. Boesche v. Udall, 373 U.S. 472 (1963) (MLA leaves unaffected Secretary’s traditional administrative authority to cancel a lease based on pre-lease factors); 43 CFR 3108.3(d) (the BLM has the authority to cancel a lease if “improperly issued”). The NEPA deficiency at lease issuance makes the leases voidable at the discretion of the BLM based on supporting remedial analysis. See Conner v. Burford, 848 F.2d 1441, 1451, 1454 (9th Cir. 1988) (indicating that leases issued without NEPA and ESA compliance were voidable by contemplating that BLM would later those address those procedural requirements and decide whether the leases should have been issued); Clayton W. Williams, Jr., 103 IBLA 192, 210-11 (1988) (characterizing as “voidable” any lease issued in violation of a procedural requirement, such as NEPA, which does not compel any particular decision).

BLM would not unilaterally modify leases, but if the leaseholder does not consent to new or modified stipulations, BLM may cancel leases. Analysis of the litigation costs or outcomes is beyond the scope of the EIS and is speculative since the outcomes are uncertain and would involve other considerations independent of the project.

Alternatives 3 and 4 incorporate the stipulations and availability decisions found in the USFS 2014 FEIS and ROD for future leasing, respectively. Both include NSO stipulations for Colorado Roadless Areas. These alternatives were included to match the USFS decisions regarding where oil and gas development should be located in the WRNF to meet the standards and guidelines of the WRNF Forest Plan based on best available science, and to provide a range of reasonable alternatives for analysis in the EIS as required under NEPA and the Council on Environmental Quality (CEQ) regulations. Appendix B of the USFS 2014 FEIS contains a summary of the purpose and need and rationale for each of the proposed stipulations that were incorporated into Alternatives 3 and 4 of this EIS. NSO stipulations do not prohibit oil and gas development, but limit the location of surface disturbance.

Comment:

To that point, the use of the term "Thompson Divide Area," to differentiate among the leases is not appropriate, as such an area does not exist as a formal geographic designation. Labeling those leases as such acknowledges the politically motivated effort to segregate certain leases and subject them to unlawful proposals such as cancellation. The area within the purported Thomson Divide area holds no more intrinsic value than that outside of it, the leases therein are no less legitimate, and the BLM cannot address them under different criteria than other leases.

CAVANAUGH, JAMIE; WILLSOURCE MOUNTAIN STATES LEGAL FOUNDATION

BLM Response:

Alternative 3 and 4 incorporate the stipulations and availability decisions found in the USFS 2014 FEIS and Draft ROD for future leasing, respectively. The ROD includes rationale for the USFS to close areas to leasing, including “the area locally known as Four-Mile/Thompson Divide” (USFS 2015). As noted in the ROD, Four-Mile/Thompson Divide area was identified by the local public as a “special place”, due to its unique social and natural conditions and the sense of place provided to local communities by that landscape. The USFS and BLM considered these issues in order to be responsive to the interest in the analysis of this particular region.

Comment:

BLM recognizes that the WRNF Lease DEIS is "not required to have plan conformity" with the WRNF 2015 ROD/FEIS. WRNF Lease DEIS at 2-69. Yet, BLM's "Proposed Action," Alternative 4, and Alternatives 3 and 5 are designed to conform with the future leasing decisions in that document which BLM admits, are inconsistent with the WRNF 1993 FEIS/ROD that governed the issuance of the Leases and, according to the Forest Service, will continue to govern all 65 valid existing leases. WRNF 2015 ROD at 7-9. Moreover, BLM's reliance on a future leasing analysis is inappropriate when the WRNF 2015 ROD/REIS did not analyze either lease cancellation or the addition of new stipulations to the 65 Leases. WRNF 2015 ROD at 9. As such, Alternatives 3, 4, and 5 are arbitrary and capricious.

BOSWELL, ROBERT; LARAMIE ENERGY LLC

BLM Response:

While it is understood that plan conformity with the USFS 2014 FEIS and ROD is not required; these alternatives were included in this EIS to match USFS's current decisions regarding where oil and gas development should be located in the WRNF to meet the standards and guidelines of the WRNF Forest Plan based on best available science, and to provide a range of reasonable alternatives for analysis in the EIS for analysis as required under NEPA and the Council on Environmental Quality (CEQ) regulations. This approach satisfies Energy Policy Act requirement to have consistent lease stipulations between the BLM and the USFS.

Comment:

The WRNF DEIS Fails to Consider a Reasonable Range of Alternatives. Under NEPA, federal agencies are required to consider an adequate range of alternatives when evaluating the proposed action. 40 C.F.R. § 1505.1(e). CEQ regulations state that the section of the EIS discussing alternatives is "the heart of the environmental impact statement, "and must "rigorously explore and objectively evaluate all reasonable alternatives." 40 C.F.R. § 1502.14(a). BLM may eliminate alternatives that are "too remote, speculative, impractical, or ineffective, or that do not meet the purposes and needs of the project. " Biodiversity Conservation Alliance, 608 F.3d 709, 7115 (10th Cir. 2010). BLM has not eliminated alternatives it should have and fails to adequately consider alternatives that would best support the policy objectives of the federal minerals program as directed by Congress.

SIMPSON, DON; URSA PICEANCE LLC

BLM Response:

The CEQ regulations direct that an EIS “rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives that were eliminated from detailed study, briefly discuss the reasons for their having been eliminated” (40 CFR 1502.14(a). The BLM disagrees that the proposed alternatives are too remote, speculative, impractical, or ineffective, or do not meet the purposes and needs of the project. Each of the alternatives is consistent with the purpose and need to address the NEPA deficiency while considering best available information and meeting all required laws and regulations. The BLM has not yet made a decision on which alternative will be selected. This EIS is intended to consider a range of reasonable alternatives and disclose the potential impacts of each.

Comment:

The WRNF Lease DEIS in Alternatives 3 and 4 offers affected lessees an improper "take it or leave it" option. Either agree to new, more stringent lease stipulations that inhibit the development of the lease or face lease cancellation. WRNF Lease DEIS at 2-16-2-59. This is a prohibited unilateral action by BLM to rewrite lease stipulations after lease issuance. The WRNF Lease DEIS cannot impair the Laramie valid existing rights to develop the leases through either stipulation or cancellation. As a federal lessee, Laramie has the right in its two leases to explore for and develop oil and gas. Pennaco Energy v. United States Dep 't of the Interior, 377 F.3d 1147, 1160 (1 01h Cir. 2004). See also Colorado Env 'l Coal, et al., 165 IBLA 221, 228 (2005) citing Colorado Env 'l Coal, 135 IBLA 356, 360 (1996), aff'd Colorado Env 'l Coal v. Bureau of Land Management, 932 F.Supp. 1247 (D. Colo. 1996). The BLM cannot prohibit a lessee from developing its leases. National Wildlife Federation, 150 IBLA 385, 403 (1999). Moreover, BLM's proposal to require new stipulations on existing leases is inconsistent with the Forest Service's decision that the existing lease stipulations would continue to govern the 65 leases. Forest Service, WRNF 2015 ROD at 7-9.

BOSWELL, ROBERT; LARAMIE ENERGY LLC

Comment:

The BLM must remove from the FEIS and ROD Alternatives 3 through 5, which would deny development on Encana's previously issued and currently existing leases. It is well settled that once the BLM has issued a federal oil and gas lease without no surface occupancy (NSO) stipulations, and in the absence of a nondiscretionary statutory prohibition against development, the BLM cannot completely deny development on the leasehold. See, e.g., National Wildlife Federation, et al., 150 IBLA 385, 403 (1999). Only Congress has the right to completely prohibit development once a lease has been issued. Western Colorado Congress, 130 IBLA 244, 248 (1994). Thus, any alternative that would void Encana's leases or deny development through modified stipulations or new conditions of approval would be unlawful. Because Alternatives 3 and 4 would impose new stipulations that would render Encana's leases uneconomic to develop, and Alternative 5 would cancel Encana's leases altogether, all these alternatives would unlawfully deprive Encana of its right to develop its leases. Should the BLM adopt Alternatives 3, 4, or 5 and thereby deny or unreasonably delay Encana's ability to develop its leases, the BLM's actions in carrying out that alternative may constitute a taking in violation of the Fifth Amendment to the U.S. Constitution. The Federal Court of Claims has recognized that a temporary taking occurs when the BLM prohibits oil and gas development on a lease for a substantial period of time. Bass Enterprise Prod. Co. v. United States, 45 Fed.Cl. 120, 123 (Fed.Cl. 1999), on reconsideration, 54 Fed. Cl. 400 (Fed. Cl. 2002), aff'd, 381F.3d1360 (Fed. Cir. 2004). A lessee who can demonstrate a taking of an oil and gas lease is entitled to damages in the fair market rental value of the leasehold. See Bass Enterprise Prod. Co. v. United States, 48 Fed.Cl. 621, 625 (Fed.Cl. 2001), on reconsideration, 54 Fed. Cl. 400 (Fed. Cl. 2002), aff'd, 381 F.3d 1360 (Fed. Cir. 2004). If the BLM denies all development opportunities on Encana's leases, Encana will be able to demonstrate a taking. Additionally, Alternatives 3 through S would substantially modify or cancel Encana's lease rights and could subject the BLM to rescission and restitution claims. Amber Resources Co. v. United States, 538 F.3d 1358, 1377 - 78 (Fed. Cir. 2009). Encana encourages the BLM to respect Encana's valid existing rights and select the No Action Alternative in the FEIS and ROD.

SCHOPP, JOHN; ENCANA OIL & GAS

Comment:

The BLM WRNF DEIS in Alternatives 3 and 4 offers affected lessees an inappropriate, unilateral "take it or leave it" option. Either agree to new, more stringent lease stipulations that inhibit the development of the lease or face lease cancellation. BLM WRNF DEIS at 2-16 - 2-59. This "choice" is no choice at all; it is a prohibited unilateral action by BLM to rewrite lease stipulations after lease issuance. The BLM WRNF DEIS cannot impair SG and Ursa's valid existing rights to develop the leases through either stipulation or cancellation. See Colorado Env'l Coal, et al., 165 IBLA 221, 228 (2005) citing Colorado Env'l Coal, 135 IBLA 336, 360(1996), aff'd Colorado Env 'l Coal v. Bureau of Land Management, 932 F.Supp. 1247, 1255 (D. Colo. 1996). The BLM cannot prohibit a lessee from developing its leases. National Wildlife Federation, 150 IBLA 385, 403 (1999). As BLM stated in the Hells Gulch Phase 2 EA process, only Congress has the right to completely prohibit development once a lease has been issued citing Western Colorado Congress, 130 IBLA 244, 248 (1994). As federal lessees, SG and Ursa have the right under their Leases to explore for and develop oil and gas. Pennaco, 377 FJd at 1160 (10th Cir. 2004). Moreover, BLM's proposal to require new stipulations on existing leases is inconsistent with the Forest Service's decision that the existing lease stipulations would continue to govern the 65 leases. Forest Service, WRNF 2015 ROD at 8-9.

SIMPSON, DON; URSA PICEANCE LLC

BLM Response:

As stated in Section 1.4 of the DEIS, there is a need to “address the NEPA deficiency identified by the 2007 IBLA ruling on the appeal by the Board of Commissioners of Pitkin County that BLM must formally adopt NEPA analysis completed by the Forest Service or conduct a NEPA analysis of its own for issuance of oil and gas leases underlying WRNF lands”. The Secretary of the Interior has inherent authority, under her general powers of management over public lands, to cancel leases issued in violation of a statute or regulation. Boesche v. Udall, 373 U.S. 472 (1963) (MLA leaves unaffected Secretary’s traditional administrative authority to cancel a lease based on pre-lease factors); 43 CFR 3108.3(d) (the BLM has the authority to cancel a lease if “improperly issued”). The NEPA deficiency at lease issuance makes the leases voidable at the discretion of the BLM based on supporting remedial analysis. See Conner v. Burford, 848 F.2d 1441, 1451, 1454 (9th Cir. 1988) (indicating that leases issued without NEPA and ESA compliance were voidable by contemplating that BLM would later those address those procedural requirements and decide whether the leases should have been issued); Clayton W. Williams, Jr., 103 IBLA 192, 210-11 (1988) (characterizing as “voidable” any lease issued in violation of a procedural requirement, such as NEPA, which does not compel any particular decision).

As required by the CEQ and DOI regulations implementing NEPA (40 CFR 1500-1508; 43 CFR 46.420), the BLM must consider a range of reasonable alternatives that meet the purpose and need statement (see Sections 1.3 and 1.4 of the DEIS) in order to meet the NEPA requirement to take a “hard look” at the alternatives and impacts, and therefore will not remove Alternatives 3 through 5 from analysis. The BLM has not yet made a decision on which alternative will be selected. This EIS is intended to consider a range of alternatives and disclose the potential impacts of each. Excluding reasonable alternatives that meet the purpose and need for action does not meet NEPA requirements.

As stated in Sections 2.3.3, 2.3.4, and 2.3.5 of the DEIS, should leases need to be cancelled or lease stipulations be changed, subsequent BLM administrative actions including refunds of bonus bids and lease payments or judicial action would may be necessary.

BLM would not unilaterally modify leases, but if the leaseholder does not consent to new or modified stipulations, BLM may cancel leases. Analysis of the litigation costs or outcomes is beyond the scope of the EIS and is speculative since the outcomes are uncertain and would involve other considerations independent of the project.

Comment:

As the current EIS process moves forward, RFC encourages the BLM to select an alternative that best protects the high quality water resources established in the Thompson Divide area. The following excerpts from the BLM Draft EIS summarize water resource impacts of the various alternatives. Regarding water resources: “Compared to the No Action Alternative, Alternatives 2 through 5 progressively provide increased protection to surface water resources inside the lease boundaries through stipulations that limit surface disturbance and minimize sedimentation.” Regarding aquatic habitat: “there would be no impacts to game fish and special status aquatic species under Alternatives 3 and 4, since streams that contain these species are subject to aquatic-focused stipulations” and “Under Alternative 5, there would be no potential alteration of aquatic habitat after reclamation and there would be no water use or depletions related to well drilling or completion within the lease zones.” In addition, Geochemist and Hydrogeologist Dr. Robert Moran states that “some degradation of water quality is inevitable if oil and gas exploration and development becomes a reality within the Fourmile Creek and Thompson Creek Watersheds.”

LOFARO, JR, RICHARD J; ROARING FORK CONSERVANCY

BLM Response:

Comment noted. Potential water quality impacts are discussed in Sections 4.5 and 4.16 of the DEIS. Potential aquatic impacts are discussed in Sections 4.8 of the DEIS.

Comment:

Garfield County Supports Alternative 2: Modify eight leases to address inconsistencies Garfield County has participated as a cooperating agency throughout the DEIS scoping and development process. As recently as August 2015, BLM indicated Alternative 2 would be the Proposed Action within the DEIS. Garfield County still believes Alternative 2 provides the best approach to effectively address lease-stipulation inconsistencies found in just 8 of the 65 leases. Additionally, Alternative 2 preserves opportunity for a negotiated lease exchange and/or legislative removal of leases in the Thompson Divide area as has been sought by the Thompson Divide Coalition, Garfield County, energy leaseholders and other local governments. Per Garfield County Resolution 10-73: "The Board of County Commissioners of Garfield County supports the efforts of the Thompson Divide Coalition to explore legislative initiatives and other opportunities to protect these special areas from energy development in a manner that respects existing rights of leaseholders." A Record of Decision centered on Alternative 2 clearly will provide the best and most equitable path to resolve concerns for energy development in the Thompson Divide. Please see map Attachments B & C that depict producing wells in and near the 65 Existing leases. These maps demonstrate significant current investments in place for over 600 producing natural gas wells within area leases and Federal Units. Garfield County believes this information should be used to inform an equitable decision on future management of the 65 Existing leases.

MARTIN, JOHN; GARFIELD COUNTY COLORADO

BLM Response:

Each alternative represents a course of action that addresses issues and concerns to varying degrees. The BLM will select an alternative based upon the overall analysis of environmental impacts, socioeconomic considerations, other relevant factors, and the balance of agency statutory requirements and regulations. The basis for alternative selection will be specified in the ROD. Section 101(b) of NEPA outlines the six substantive elements, which include attaining "the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences" and "…approach the maximum attainable recycling of depletable resources" (42 USC § 4331 (b)(3) and (6)). In order to comply with NEPA, the BLM must evaluate which alternative best meets the needs of the public, the environment, and the recovery of oil and gas resources as required by law.

A negotiated lease exchange and/or legislative removal of leases is out of the scope of this EIS. It should be noted that the BLM did identify and consider the producing wells that access any of the 65 leases considered in this EIS.

Appendix B, Cumulative Impacts Scenario, presents estimates of all past, present, and reasonably foreseeable future development for actions such as oil and gas and other development. As noted in Table B-2, COGCC identified 1,180 wells within 2 miles of the leases. These estimates have been incorporated into the impacts analysis for each resource to enable the BLM to make an informed decision that considers cumulative effects.

Comment:

WillSource requests that CRVFO supplement the Draft EIS with detailed, individual maps of each of the 65 leases showing all of the proposed stipulations under Alternative 3, so that each lessee is able to better visualize the impact of the proposed lease stipulations. The failure of the CRVFO to include maps of the individual leases with overlays of all proposed stipulations prevents the public from offering substantive technical comments on the proposed stipulations. See Wyo., 277 F. Supp. 2d at 1220, vacated for mootness, 414 F.3d 1207 (public was unable to meaningfully participate in NEPA process in absence of complete "maps accurately depicting the areas" of concern.). As with any supplement to an EIS, WillSource also requests that the public be given additional time to comment on any newly provided maps.

CAVANAUGH, JAMIE; WILLSOURCE MOUNTAIN STATES LEGAL FOUNDATION

Comment:

BLM has failed to take a “hard look” at the environmental consequences and/or benefits of its proposed alternatives. Specifically, although BLM states that its action “is strictly a leasing decision,” BLM fails to analyze on a lease-by-lease basis the implications of its proposed alternatives. See WRNF DEIS, at ES-6. Notwithstanding that BLM’s action here is a “leasing decision,” BLM fails to take the required “hard look” on a lease-by-lease basis of the environmental impacts and/or benefits of its proposed actions on a particular parcel. Specifically, with respect to Alternatives 3 and 4, BLM proposes to modify the Oxy Leases to impose new and different stipulations that would dramatically impact each individual Oxy Lease, but BLM did not take a hard look at the impacts of the modified stipulations on a lease-by-lease basis, nor did BLM justify the need for increasing the rigor of various stipulations on a lease-by-lease basis. Of most concern to Oxy is the significant increase in potential NSO limitations related to landscape hazards, slope stability, raptor breading, aquatic species, and water influence zones, particularly for those Oxy Leases held by production or otherwise containing significant infrastructure and other development. Inherently, any new NSO limitation will likely impact Oxy’s access to minerals, and the value of a lease is greatly reduced when a number of NSO limitations are enforced, effectively reducing the usable surface area of the lease. For example, on Oxy Lease No. COC66918, Oxy has constructed five pads, with 36 producing wells, 3 shut in wells, and 1 temporarily abandoned well, as well as access roads and pipelines. The existing disturbance on this Oxy Lease totals approximately 23 acres. While BLM makes broad and sweeping conclusions as to the land-scape level impacts of generally affirming, modifying, or cancelling the Subject Leases, BLM summarily fails to analyze the specific impacts of its “leasing decision” on Oxy Lease No. COC66918 (and all other Oxy Leases).

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

BLM Response:

Figures 2-1 through 2-15 identify by alternative all of the stipulations that would be applied to leases. Alternative 3 stipulations are displayed by lease on Figures 2.-9 through 2-12. Similarly, the stipulation tables (Tables 2-1 through 2-4) also show the effects of the stipulations on the leases.

The BLM believes that for all alternatives, the EIS has provided a level of detail sufficient to support reasoned conclusions by comparing the amount and the degree of change (impact) caused by the proposed action and alternatives per 40 CFR 1502.1. The BLM considers whether or not to lease and under what conditions based on more general rather than site-specific analysis. It is speculative to consider site-specific impacts at this level of analysis.

Lease-by-lease analyses and maps are not included because future development is unknown and this level of analysis is not necessary to make a reasonable choice between alternatives. The RFDS informs the analysis at the appropriate scale for the analysis. The inclusion of detailed individual maps of each of the 65 leases by alternative would result in over 250 maps in Chapter 2 alone. While some individuals may feel this would be helpful, the BLM does not feel that it is needed in the EIS for the reasons outlined above. This and other supplementary information has been available upon request throughout development of the EIS; however no requests for this information have been made by letter, telephone call or during any of the three public meetings BLM held to answer questions. The BLM remains available to provide materials such as GIS upon request

Comment:

The DEIS also overstates the logistical difficulty of voiding all 65 leases. For example, it states that "all producing wells would have to be plugged and abandoned, infrastructure would be removed, roads, well pads, and other ancillary facilities would be reclaimed, and all disturbed areas would be revegetated." DEIS at 2-61. These tasks, however, will not be required for more than 90% of the leases at issue. As noted, only five of the 65 leases are held by production. DEIS at 1-5 to 1-6 (Table 1-1) (leases COC 61121, COC 66724, COC 66918, COC 66920, COC 67544). Many of those well pads, moreover, are located outside the lease boundaries and are being used to access other minerals, meaning the pad and other infrastructure can still be used even if the federal lease is cancelled. See DEIS at 2-63 (Figure 2-14).

FREEMAN, MICHAEL S; EARTH JUSTICE

BLM Response:

Impacts related to removal of existing lease infrastructure have been addressed throughout the analysis in the EIS to the extent feasible with available information. As with other alternatives, a decision to implement this alternative would not authorize any on-the-ground activities, including specific reclamation actions. If this alternative were selected, additional site-specific analysis would be required.

Comment:

There are a number of reasons for us to set aside the Thompson Divide. But one of the most exciting reasons is a new reason, recent to the area. In 10 years, after a young bull and two cow moose came into our property from the East edge of Grand Mesa, and the two cows each dropped twins on our piece of property, we now have a herd of 30 moose. The sequestering of the Thompson Divide gives us and our children and their children the very real possibility that we could be setting aside the home of perhaps what will become the largest herd of Shiras moose in North America. It's something to think about when you look down the long view of time.

BERGINIE, STEVE

Comment:

I am writing to state my strong opposition to your agency's plan to open the area in and around Thompson Divide and the White River National Forest in Colorado to oil and gas exploration and extraction activities. The BLM should cancel all illegal leases in the Thompson Divide and protect all inventoried roadless areas within these beautiful and important forest and grassland areas. Both of these national treasures are important areas for recreation and sustainable grazing for both the local communities and all Americans. I believe it is your duty to protect and sustainably manage these areas for current and future generations.

BESS, DR JAMES

Comment:

One O/G representative said that fracking has been going on in the Divide since 1960 (Wolf Creek). There were two coal mines in the Thompson Creek area also. But things have changed. The Wilderness Act of 1964. This Act of Congress has set aside areas that were deemed pristine and necessary for wildlife and recreation. Not all wilderness was untouched by development as many old roads and mining shafts are still visible. Then, in the mid 90's, the local wilderness areas were expanded. Including the area near Mt. Sopris which is directly east of the Thompson Divide. Most of the Wilderness Area in this valley is high in elevation, steep grades and covered with rock and ice. I went to college in Durango, studying Environmental Sciences. We studied about policies that affect wilderness. One topic was how to manage the lands surrounding the designated wilderness. This is where ranchers, hunters, dirt bikers, hikers and many others work and recreate. There is an abundance of wildlife, both flora and Fauna, that flourish in these areas around the Wilderness. There is also a lot of resource development. The question is, how do we manage all users and still keep the wilderness wild. He mentioned a buffer zone. This zone will help protect the flora and fauna, while still allowing ranching and recreating and some well regulated minor development.

CHACOS, ERIC

Comment:

We would urge you to respect our wishes for what we want in the Roaring Fork Valley, and that is would be to not allow any natural gas development in the Thompson Divide area.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

Comment:

The percentage of the leases that would be partially cancelled under Alternative 4 as currently formulated range from 98.2% to 3.1% cancelled. DEIS at 2-61, Table 2-4. Two leases stand out: 66700 and 66702. They are in the southwest quadrant of Zone 3. As currently formulated, Alternative 4 would result in only 15 acres being retained for lease 66700 and 97 acres for lease 66702. These leases should be fully cancelled under our suggested slightly modified Alternative 4. First, the remaining acreage is far less than the minimum size for federal onshore fluid mineral leases. Pursuant to 43 C.F.R. § 3110.3-3: "Lease offer size. (a) Lease offers for public domain minerals shall not be made for less than 640 acres or 1 full section, whichever is larger[.]" Second, any development on these lands would trigger the concerns going to potential direct, indirect, and cumulative impacts of development, including access through the Town and potential impacts to the upper reaches of the watershed. At the same time, reflecting governing regulations and policy, it is dubious whether the administrative burden related to the small remaining acreage would be justified. The small fragments remaining would be of effectively no economic value to lessees because developing the remaining acreage would not justify the substantial fixed costs to extend infrastructure to these lands. In addition, attempts to develop the de minimis remaining acreage could threaten the adjacent Divide acreage and result in offsite impacts inconsistent with the existing undeveloped natural character of the landscape that the WRNF decision was designed to protect. The WRNF FEIS and ROD recognizes that the Divide should be protected. Legislation introduced in Congress defines the Thompson Divide landscape and provides for permanent protection for natural values identified by the WRNF, local communities, and the public. In sum, the Town fully supports Alternative 4 subject to the minor modifications proposed for leases 700 and 702.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

Comment:

You need to immediately stop all oil and gas leases in the Thompson Divide. We don't need or want more destruction of our environment and its inhabitants.

CICCHI, CARLA

Comment:

Although CRVFO might think it is outside the scope of this EIS, I want to mention the importance of totally cancelling all of the leases in Zone 3/ Thompson Divide. If any of these leases remain in any form, the risk will remain of an inappropriate political deal to trade them for new leases in the adjoining area of the GMUG NF. This is equally important, but different habitat, and is part of the same landscape. Any additional leasing in that area should be handled by the agencies, not politicians.

DAY, BILL

Comment:

In addition to all of Zone 3, the existing leases also need to be cancelled in all Colorado Roadless Rule areas, Canada lynx habitat, and Greater sage-grouse habitat. I am not as comfortable with NSO stips which could be waived.

DAY, BILL

Comment:

I support Alternative 4 at a minimum with most of Alternative 5, but perhaps retaining some of the producing wells that are in non-critical environmental areas. Maintain contiguous roadless areas. The environment, habitat, water and health of economy are too important to sacrifice.

DICKINSON, JEFF

Comment:

I also strongly support Alternative 5 if it could be modified as proposed. As shown in the DEIS, Alternative 5 would cancel all 65 leases, which from DEIS figures 2- 14 and 2-15, includes approximately ten leases that have currently producing wells on them. It seems to make no sense to cancel leases that contain currently producing wells, especially considering the legal and practical complications that would be involved. Accordingly, if this alternative were to be modified to fix this shortcoming, I would strongly support Alternative 5.

DOWNEY, DORIS

Comment:

I strongly support Alternative 5 in the subject BLM Previously Issued Oil and Gas DEIS, and am hoping it can be modified as proposed below. As defined in the DEIS, Alternative 5 would cancel all 65 leases, which from DEIS figures 2-14 and 2-15, includes approximately ten leases that have currently producing wells on them. It seems to make no sense to cancel leases that contain currently producing wells, especially considering the serious legal complications that would be involved. Also, I fail to see that cancelling these ten producing leases would provide any meaningful relief to the community concerns, which primarily focus on undeveloped leases. However, preserving any existing producing leases would allow the Oil & Gas companies to obtain a financial return on the capital investments that they have already made in this area. The United States is currently enjoying an energy glut, and numerous other countries are using fracking technology to tap their oil and gas reserves. Accordingly, it seems the best overall solution for the area containing the 65 leases is to leave the gas in the ground until the EIS expires sometime in the 2030's, when a more informed decision can be made regarding our Nation's energy needs at that time. Alternative 5, if modified as above, would accomplish this.

DOWNEY, CHUCK

Comment:

We recommend that leases COC 066700 and 066702 be completely cancelled. These two leases contain very small acreage available for development and would have a disproportionate impact on the environment to develop the necessary infrastructure to extract oil or gas.

FARRIS, DOROTHEA; CRYSTAL VALLEY ENVIRONMENTAL PROTECTION ASSOCIATION

Comment:

I cherish the wildlife and recreational value of the Thompson Divide and encourage you to cancel all of the undeveloped leases in and around the Thompson Divide that are being reviewed in this plan. The Thompson Divide provides crucial winter range, summer range, migration routes and birthing grounds for both elk and mule deer. Its lakes and streams not only provide critical fish habitat including native populations of cutthroat trout, but the Thompson Divide also provides the headwaters for critical and iconic rivers such as the Crystal, North Fork of the Gunnison and Roaring Fork. The Thompson Divide provides productive wildlife habitat and a coveted place to recreate for all types of sportsmen. Its neighboring communities have economies based upon this recreation. Please allow this model to continue to provide for wildlife, sportsmen and the local economies by cancelling the undeveloped leases in the Thompson Divide area.

FORM LETTER, MULTIPLE

Comment:

Colorado's White River National Forest is a wonderful and unique stretch of wilderness. We have a beautiful state, and places like the White River area are one thing attracts people to live here. I urge you to cancel all illegal leases in the National Forest and to close all roadless wilderness to oil and gas development, including fracking. I understand you probably get a lot of pressure from oil and gas companies to let them have their way. Please think about the people and wonderful animals who live here every day, and help keep our Colorado beautiful.

FORM LETTER, MULTIPLE

Comment:

[BLM] should cancel all of the illegal leases in the Thompson Divide and all inventoried roadless areas.

FORM LETTER, MULTIPLE

Comment:

For the same reasons of water quality, snowpack retention, unfragmented wildlife habitat, and weeds I ask the BLM to support alternative option #4.5 which is to CANCEL ALL UNDEVELOPED LEASES on the WRNF. I do not support a lease swap which would encroach on similar habitat just south of the Thompson Divide area for the same reasons of water quality, snowpack retention, unfragmented wildlife habitat, and weeds. I do not support canceling all the leases, as in alternative #5, because the leases that are already drilled and producing would be an unnecessary waste of taxpayer time and money in litigation, regardless of their being illegally let. I DO support canceling all undeveloped leases on the WRNF.

FOX-PERRY, JUDY

Comment:

Alternatively, if BLM does not cancel all 65 leases, it should consider a final decision that: (a) cancels all non-producing leases and (b) adds the Alternative 4 stipulations to the few producing leases. The approach would fall within the range of alternatives from the DEIS by combining elements of Alternatives 4 and 5. It also would avoid BLM' s logistical concerns with cancelling producing leases, while minimizing the Property Clause conflict that exists with alternatives that leave leases in effect.

FREEMAN, MICHAEL S; EARTH JUSTICE

Comment:

We recommend that the two leases of COC 066700 and 066702 be retired. Those 2 leases also drain into the Crystal River which has a reputation of being a top fishery, clean and pure, irrigating the ranches of the Crystal Valley. The Crystal River runs through Carbondale in 7 ditches that water town gardens and lawns. Carbondale also produces a million gallons of unfiltered drinking water a day from the Nuche Park well located below the Crystal River Hatchery. That hatchery produces more eggs than any other hatchery in Colorado and sends cutthroat eggs to trout hatcheries worldwide.

HOFFMAN, JOHN; ROARING FORGE LLC

Comment:

All 65 leases on Roadless Inventory that are not in production should be retired in the interest of economic stability, clean water, clean air, and wildlife considerations.

HOFFMAN, JOHN; ROARING FORGE LLC

Comment:

We recommend that the two leases of COC 066700 and 066702 be retired also. These leases in Coal Basin near Redstone contain very small acreage available for development and would have a disproportionate impact on the environment to develop the necessary infrastructure to extract oil or gas. The 40,000 truck trips to develop even just two well pads would adversely affect Hwy 133 and its adjacent communities.

HOFFMAN, JOHN; ROARING FORGE LLC

Comment:

The recommendation is to cancel all leases in the area due to inherent health dangers to wildlife and humans based on past and recent scientific research found in the attached powerpoint presented August 2015 to the Colorado Society of Osteopathic Medicine by Dr. John Hughes, D.O. In sum, natural gas operations affect the health of air, soil, and water to produce radioactive waste, airborne VOCs and other air pollutants (including ozone, hydrogen sulfide) along with other ground and surface water contaminants. These chemicals have shown a documented increase in birth defects (with patients seen at Valley View Hospital in Glenwood Springs), cancers (such as leukemias), and respiratory, skin, and neurological diseases. For more information, see the attached powerpoint for CSOM lecture entitled "Volatile Organic Solvent Screening and Treatment for Patients Living in the Colorado Gas Patch".

HUGHES, JOHN

Comment:

As also stated at that meeting, the BLM has the authority to produce a final decision that combines elements from multiple alternatives. For these reasons, we encourage the BLM to consider cancelling additional nonproducing leases as appropriate to protect wildlife, watershed, air quality, and local economies dependent on clean air, clean water, and healthy public lands. Zones 2 & 3 are of greatest concern for communities in the North Fork of the Gunnison Watershed, as oil and gas development in these zones would pose the greatest risk to our communities' health and quality of life.

JOHNSON, MERRILL; WESTERN SLOPE CONSERVATION CENTER

Comment:

While our thirst for oil and gas seems unlikely to go away anytime soon, it is nonetheless in our Country's best interest to 'leave the best for last' (if we do eventually get to that desperation.) And, as such, I want to appeal to you to cancel leases that may exist presently in, from my understanding, this roadless area.

KEARN, CHRISMAN

Comment:

I would like to go on record as fully supporting alternative 5, canceling the existing leases at this time. The change I would make to this alternative is to keep the existing working wells in operation. In my experience it is the process of drilling that causes the most disruption and release of gas into the atmosphere. Rather than drill elsewhere, I would keep these leases in operation under strict guidelines until their production in complete.

LAVERTY, DENISE

Comment:

Cancel leases present and future in Thompson Divide. (25 leases). Cancel all non-producing lease sites.

LAVIN, SUE

Comment:

RFC recommends that all leases in the Roaring Fork Watershed be voided, consistent with the adoption of Alternative 4 with the above listed corrections to the current maps. This alternative is consistent with the USFS 2014 draft Record of Decision.7 The threat to sensitive watersheds, habitats and wildlife is not worth the risk of disturbance and pollution to surface water, groundwater, and aquatic and soil resources. Any drilling in these areas would severely impair current efforts to protect and restore natural resources vital to local ecological and economic communities.

LOFARO, JR, RICHARD J; ROARING FORK CONSERVANCY

Comment:

Leases COC 66709 and COC 66913 are not cancelled under Alternative 4 but contain some acreage within the Roaring Fork Watershed. To be consistent with the watershed boundary, RFC requests that the portions of these leases within the Roaring Fork Watershed be added to the lease portions cancelled under Alternative 4. This precedent has been established with Lease COC 66708 where the portions inside the Roaring Fork Watershed are cancelled under Alternative 4.

LOFARO, JR, RICHARD J; ROARING FORK CONSERVANCY

Comment:

Cancel Lease No. 070013 because of the following reasons:
• A majority of the lease area is covered by roadless areas.
• Half of the acreage is covered by winter ranges of big game including 634 acres of sensitive elk winter range area.
• A majority of the lease area, 1034 acres has highly erodible soils which will not be protected by the CSU stipulations.
• A majority of the lease area has sensitive plant species and paleontological resources.
• 942 acres of the lease area has black bear fall concentration areas that are important for foraging prior to winter hibernation.
• There is additionally 716 acres of potentially suitable lynx habitat.
• This lease is also overlapped with grazing allotments- an important agricultural resource to be protected and which is not sufficiently addressed in the offered lease stipulations.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease No. 067150 because of the following reasons:
• Almost the entirety of the lease acreage is covered by roadless area.
• A majority of the lease area, 546 acres has highly erodible soils which will not be protected by the CSU stipulations
• The entirety of the acreage is covered by either summer concentrations or winter ranges of big game including 625 acres of sensitive elk production area.
• A majority of the lease area has sensitive plant species and paleontological resources.
• Half of the acreage 307 has black bear fall concentration areas that are important for foraging prior to winter hibernation.
• This lease is also overlapped with grazing allotments- an important agricultural resource to be protected and which is not sufficiently addressed in the offered lease stipulations.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease No. 067542 because of the following reasons:
• This lease is under suspension and should be cancelled.
• A majority of the lease acreage is being considered for NSO stipulations because of 60% steep slopes.
• Additionally, the NSO stipulations are being considered due to presence of TEPC wildlife species on a majority of the lease acreage 297 acres.
• A majority of the lease area has sensitive plant species, sensitive terrestrial avian invertebrate species, and paleontological resources.
• The entirety of the lease acreage has watershed with CRCT and GBCT Conservation populations which should not be threatened by CSU stipulations.
• A majority of the acreage 343 has black bear fall concentration areas that are important for foraging prior to winter hibernation.
• CSU stipulations do not go far enough to protect the old growth stands present in this lease acreage.
• This lease is also overlapped with grazing allotments- an important agricultural resource to be protected and which is not sufficiently addressed in the offered lease stipulations.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease No. 070015 because of the following reasons:
• This lease is under suspension and should be cancelled.
• The entirety of this lease is covered by roadless area.
• The entirety of this lease acreage is being considered for NSO stipulations because of 60% steep slopes.
• A majority of the lease area has sensitive plant species, sensitive terrestrial avian invertebrate species, and paleontological resources.
• A majority of the acreage is covered by winter ranges and or summer concentrations of big game including 683 acres of sensitive elk production area as well as 1287 summer concentration area.
• A portion of the lease acreage 693 acres has watershed with CRCT and GBCT Conservation populations which should not be threatened by CSU stipulations.
• A majority of the acreage 1598has black bear fall concentration areas that are important for foraging prior to winter hibernation.
• CSU stipulations do not go far enough to protect the significant old growth stands 420 acres present in this lease acreage.
• There is additionally 507 acres of potentially suitable lynx habitat.
• This lease is also overlapped with grazing allotments- an important agricultural resource to be protected and which is not sufficiently addressed in the offered lease stipulations.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease No. 067544 because of the following reasons
• The entirety of the lease acreage is being considered for NSO stipulations because of 60% steep slopes.
• The entirety of the acreage is covered by either summer concentrations or winter ranges of big game including 586 acres of sensitive elk production area.
• A majority of the lease area, 580 acres has highly erodible soils which will not be protected by the CSU stipulations.
• A majority of the lease area has sensitive plant species and paleontological resources.
• The entirety of the acreage has black bear fall concentration areas that are important for foraging prior to winter hibernation.
• This lease is also overlapped with grazing allotments- an important agricultural resource to be protected and which is not sufficiently addressed in the offered lease stipulations.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease No. 070014 because of the following reasons:
• This lease is under suspension and should be cancelled.
• The entirety of this lease is covered by roadless area.
• The entirety of this lease acreage is being considered for NSO stipulations because of 60% steep slopes.
• Additionally, the NSO stipulations are being considered due to presence of TEPC wildlife species on a majority of the lease acreage 1163 acres.
• A majority of the lease area has sensitive plant species, sensitive terrestrial avian invertebrate species, and paleontological resources.
• Half of the acreage is covered by winter ranges and or summer concentrations of big game including 389 acres of sensitive elk production area as well as 1486 summer concentration area.
• A portion of the lease acreage 228 acres as watershed with CRCT and GBCT Conservation populations which should not be threatened by CSU stipulations.
• A majority of the acreage 566 has black bear fall concentration areas that are important for foraging prior to winter hibernation.
• CSU stipulations do not go far enough to protect the significant old growth stands 933 acres present in this lease acreage.
• There is additionally 1017 acres of potentially suitable lynx habitat.
• This lease is also overlapped with grazing allotments- an important agricultural resource to be protected and which is not sufficiently addressed in the offered lease stipulations.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease No. 070361 because of the following reasons:
• A majority of this lease acreage is being considered for NSO stipulations because of 60% steep slopes.
• Additionally, the NSO stipulations are being considered due to presence of TEPC wildlife species on a portion of the lease acreage 288 acres.
• A majority of the lease area has sensitive plant, sensitive terrestrial avian invertebrate species, and paleontological resources.
• A majority of the acreage is covered by winter ranges and or summer concentrations of big game including 591 acres of sensitive elk winter range.
• There is additionally 197 acres of potentially suitable lynx habitat.
• This lease is also overlapped with grazing allotments- an important agricultural resource to be protected and which is not sufficiently addressed in the offered lease stipulations.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease No 070016 because of the following reasons:
• The entirety of this lease acreage is being considered for NSO stipulations because of 60% steep slopes.
• Additionally, the NSO stipulations are being considered due to presence of TEPC wildlife species on a majority of the lease acreage 40 acres.
• A majority of the lease area has sensitive terrestrial avian invertebrate species, and paleontological resources.
• A majority of the acreage is covered by winter ranges and or summer concentrations of big game including 46 acres of sensitive elk production area as well as 51 summer concentration area.
• There is additionally 507 acres of potentially suitable lynx habitat.
• This lease is also overlapped with grazing allotments- an important agricultural resource to be protected and which is not sufficiently addressed in the offered lease stipulations.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease No. 066916 because of the following reasons:
• The lease acreage in its entirety is covered by roadless area.
• A majority of the lease area has sensitive plant species, sensitive terrestrial avian invertebrate species, paleontological resources.
• A majority of the lease area, 2193 acres has highly erodible soils which will not be protected by the CSU stipulations.
• A majority of the acreage is covered by summer and winter concentrations or ranges of big game including 1839 acres of elk production range and 2224 acres of sensitive moose range.
• The raptor species breeding territory that is present (292 acres) is sufficient reason to cancel the lease area.
• A majority of the acreage 1176hasblack bear fall concentration areas that are important for foraging prior to winter hibernation.
• This lease is also overlapped with grazing allotments- an important agricultural resource to be protected and which is not sufficiently addressed in the offered lease stipulations.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease No. 067543 because of the following reasons:
• This lease has expired and should not be renewed.
• A majority of the lease area is covered by roadless areas.
• Additionally, the NSO stipulations are being considered due to presence of TEPC wildlife species on a majority of the lease acreage 1024 acres.
• The entirety of the acreage is covered by either summer concentrations or winter ranges of big game including 1167 acres of sensitive elk summer concentration area.
• A majority of the lease area, 834 acres has highly erodible soils which will not be protected by the CSU stipulations.
• A majority of the lease area has sensitive plant species, sensitive terrestrial avian invertebrate species, and paleontological resources.
• CSU stipulations do not go far enough to protect the old growth stands present in this lease acreage.
• A majority of the acreage 1057 has black bear fall concentration areas that are important for foraging prior to winter hibernation.
• There are 767 acres of lynx denning habitat that are not addressed in the lease stipulations.
• This lease is also overlapped with grazing allotments- an important agricultural resource to be protected and which is not sufficiently addressed in the offered lease stipulations.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease no. 066731 because of the following reasons:
• The lease stipulations would restrict to NSO for 100% of lease acreage due to steep slopes.
• The entire area has sensitive plant species and sensitive terrestrial avian invertebrate species.
• A majority of the lease area has high scenic integrity objectives, roadless area, big game summer concentration, paleontological resources.
• half the lease area has plant species of local concern.
• I am also concerned about the protection of old growth stands of fir.
• CSU cannot properly protect for the highly erodible soils, the plant species of local concern or development on steep slopes.
• neither the NSO or CSU protects for the 272 acres of sensitive mule deer range.
• Almost the entire area serves as summer bighorn sheep ranges.
• Almost the entire area serves as black bear fall concentration area.
• Competing use with Grazing allotments that intersect this lease.

MCNICHOLAS KURY, KELLY

Comment:

Leases which are suspended or expired for any reason should be minimally selected for cancellation. Additionally, areas where the Forest Service has delineated as roadless areas should be retained as such and protected via lease cancellation.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease No. 058677 because of the following reasons:
• Total lease area acreage of 543 is a Roadless Area
• Within the lease area acreage are
• bighorn sheep migration corridors and water sources
• high scenic integrity objectives
• severe or high landscape stability hazards
• slopes greater than 50%
• threatened endangered proposed and candidate aquatic species
• threatened endangered proposed and candidate plant species over the entirety of the lease area
• water influence zones
• Controlled Surface Use limitations are inappropriate for some of the reasons listed above as well as for the presence of:
• big game winter range
• highly erodible soils
• paleontological resources that cover the entirety of the lease area
• plant species of local concern that cover the entirety of the lease area
• sensitive aquatic species
• sensitive plant species that cover almost the entirety of the lease area
• sensitive terrestrial avian invertebrate species that cover the entirely other lease area
• 30-50% steep slopes
• There are additional no existing well pads to be removed.
• This lease area further serves in its entirety as a sensitive mule deer range.
• A significant portion of this lease area (362 of 543 acres) serves as a water source and summer range for bighorn sheep. Even under Alternative 3, acreage outside of the lease area but covered by the analysis area will be subject to disturbance to bighorn range.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease No. 059630 because of the following reasons:
• A significant portion of this lease area (365 of 587 acres) serves as a water source and summer range for bighorn sheep.
• approximately a quarter of the lease area (126 acres of 587) serve as fall concentration for black bears who must forage in these area to establish their fat reserves for winter.
• The entirety of the lease area is a roadless area and has slopes greater than 60%.
• a significant portion of the lease area acreage is bighorn sheep habitat (309 of 587 acres).
• The lease stipulations for Controlled Surface Use will not appropriately protect for the following:
• highly erodible soils/paleontological resources/sensitive plant species/sensitive terrestrial avian invertebrate species/
• almost the entirety of the lease acreage serves as sensitive mule deer range.
• the entirety of the lease acreage serves as sensitive winter elk range.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease No. 066727 because of the following reasons:
• This lease has already expired.
• NSO for total lease acreage under all alternatives.
• The entire area is roadless area and has high scenic integrity objectives.
• A majority of the lease area is a bighorn sheep corridor. Even under Alternative 3, acreage outside of the lease area but covered by the analysis area will be subject to disturbance to bighorn range
• half of the lease area has slopes greater than 50%.
• TEPC plant and wildlife species are present.
• controlled surface occupancy would fail to protect the paleontological resource, sensitive plant species and sensitive terrestrial avian invertebrate species that cover the entirety of the lease area.
• approximately a third of the lease area (218 acres of 640) serve as fall concentration for black bears who must forage in these area to establish their fat reserves for winter.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease No. 066728 because of the following reasons:
• NSO for total lease acreage under all alternatives.
• The entire lease area is bighorn sheep migration corridor.
• The entire area has high scenic integrity objectives, paleontological resources, sensitive plant species and sensitive terrestrial avian invertebrate species.
• a significant portion of the lease area is additional roadless area, has TEPC plant species and plant species of local concern.
• three quarters of the lease area is also sensitive winter range for mule deer.
• More than half the area is sensitive winter range for elk.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease No. 066918 because of the following reasons:
• The entirety of the lease acreage is covered by roadless area.
• A majority of the lease area has sensitive plant species, sensitive terrestrial avian invertebrate species, and paleontological resources.
• A majority of the lease area, 2886 acres has highly erodible soils which will not be protected by the CSU stipulations
• The entirety of the acreage is covered by either summer concentrations or winter ranges of big game including 2557 acres of sensitive elk winter range and 916 acres of sensitive moose range
• A majority of the acreage 2084 has black bear fall concentration areas that are important for foraging prior to winter hibernation.
• This lease is also overlapped with grazing allotments- an important agricultural resource to be protected and which is not sufficiently addressed in the offered lease stipulations.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease No. 066730 because of the following reasons
• The entire area has high scenic integrity objectives, paleontological resources, sensitive plant species and sensitive terrestrial avian invertebrate species.
• Almost all of the lease area is additionally roadless area.
• Two thirds of the lease area is bighorn sheep migration corridor.
• additionally half of the lease area has plant species of local concern.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease No. 067147 because of the following reasons:
• Almost the entirety of the lease acreage is covered by roadless area.
• A majority of the lease area, 573 acres has highly erodible soils which will not be protected by the CSU stipulations
• The entirety of the acreage is covered by either summer concentrations or winter ranges of big game including 628 acres of sensitive elk production area.
• A majority of the lease area has sensitive plant species, sensitive terrestrial avian invertebrate species, and paleontological resources.
• A majority of the acreage 662 has black bear fall concentration areas that are important for foraging prior to winter hibernation.
• This lease is also overlapped with grazing allotments- an important agricultural resource to be protected and which is not sufficiently addressed in the offered lease stipulations.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease No. 066732 because of the following reasons:
• almost the entire area is proposed to have NSO stipulations for steep slopes
• a vast majority of the lease area has high scenic integrity objective, roadless areas, paleontological resource, sensitive plant species and sensitive terrestrial avian invertebrate species.
• There is additionally the presence of TEPC plant species to a great extent and to a lesser extent TEPC wildlife species.
• I am also concerned about the CSU stipulations proposed in Alternative 3 to protect the highly erodible soils and spruce fir old growth stands.
• neither the NSO or CSU protects for the 861 acres of sensitive mule deer range.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease No. 066733 because of the following reasons:
• almost the entire area is proposed to have NSO stipulations for steep slopes.
• A majority of the lease area has high scenic integrity objectives, TEPC plant species, plant species of local concern, sensitive plant species, sensitive terrestrial avian invertebrate species, paleontological resources.
• neither the NSO or CSU protects for the 1254 acres of sensitive mule deer range.
• I am also concerned about the CSU stipulations proposed in Alternative 3 to protect the highly erodible soils
• Bighorn sheep range covers three quarters of the lease acres.
• Additionally, given the presence of GHMA habitat for the greater sage grouse in amount of 62 acres of this lease, the lease should be cancelled in view of protection of this habitat
• Given that this lease is within the number of wells projected in the RFDS, and considered to be RFFA and could occur in any area of the WRNF as designated in the 2014 ROD for Future Leasing, and therefore identified as having the highest oil and gas development potential, the cancellation of this lease would set a good precedent for protection where sensitive acreage has been identified as demonstrated above.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease No. 066926 because of the following reasons:
• This lease has already been cancelled.
• almost the entire area is proposed to have NSO stipulations for steep slopes.
• A majority of the lease area has high scenic integrity objectives, raptor species breeding territory, TEPC aquatic species, plant species of local concern, sensitive plant species, sensitive terrestrial avian invertebrate species, paleontological resources.
• I am also concerned about the CSU stipulations proposed in Alternative 3 and their ability to properly protect the highly erodible soils.
• Neither the NSO or CSU protects for the cumulative 689 (427 & 262) acres of sensitive mule deer range.
• A significant amount of acreage serves as bighorn sheep ranges.
• Given that this lease is within the number of wells projected in the RFDS, and considered to be RFFA and could occur in any area of the WRNF as designated in the 2014 ROD for Future Leasing, and therefore identified as having the highest oil and gas development potential, the cancellation of this lease would set a good precedent for protection where sensitive acreage has been identified as demonstrated above.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease No. 061121 because of the following reasons:
• the entirety of the lease area is covered by big game winter ranges.
• a majority of the lease area 805 acres has highly erodible soils which will not be protected by the CSU stipulations.
• A majority of the lease area has sensitive plant species, sensitive terrestrial avian invertebrate species, paleontological resources.
• Almost half the acreage (441) has black bear fall concentration areas that are important for foraging prior to winter hibernation.
• A third of the area is considered for NSO stipulations due to 60% steep slopes.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease No. 066723 because of the following reasons:
• This lease is currently under suspension and should be further cancelled.
• A majority of the lease area, 1045 acres has highly erodible soils which will not be protected by the CSU stipulations.
• A majority of the lease area has sensitive plant species, sensitive terrestrial avian invertebrate species, paleontological resources.
• A majority of the lease area also has big game concentrations in summer and winter including elk and moose.
• A majority of the acreage 1104has black bear fall concentration areas that are important for foraging prior to winter hibernation.
• This lease is also overlapped with grazing allotments- an important agricultural resource to be protected and which is not sufficiently addressed in the offered lease stipulations.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease No. 066724 because of the following reasons:
• A majority of the lease acreage 1221is roadless area.
• A majority of the acreage is covered by summer and winter concentrations or ranges including 768 acres of elk production area and 1973 (100% of the lease area) of moose concentration area.
• A majority of the lease area, 1445 acres has highly erodible soils which will not be protected by the CSU stipulations.
• A majority of the lease area has sensitive plant species, sensitive terrestrial avian invertebrate species, paleontological resources.
• A majority of the acreage 1224has black bear fall concentration areas that are important for foraging prior to winter hibernation.
• There is additionally 550 acres of potentially suitable lynx habitat.
• This lease is also overlapped with grazing allotments- an important agricultural resource to be protected and which is not sufficiently addressed in the offered lease stipulations.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease No. 066915 because of the following reasons:
• A majority of the lease acreage 1916is roadless area.
• A majority of the lease area has sensitive plant species, sensitive terrestrial avian invertebrate species, paleontological resources.
• A majority of the lease area, 2082 acres has highly erodible soils which will not be protected by the CSU stipulations.
• A majority of the acreage 2503hasblack bear fall concentration areas that are important for foraging prior to winter hibernation.
• A majority of the acreage is covered by summer and winter concentrations or ranges of big game including 1845 acres of elk production area, 2537 acres of sensitive moose range.
• This lease is also overlapped with grazing allotments- an important agricultural resource to be protected and which is not sufficiently addressed in the offered lease stipulations.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease No. 066917 because of the following reasons:
• A majority of the lease acreage is covered by roadless area.
• A majority of the lease area has sensitive plant species and paleontological resources.
• A majority of the lease area, 1337 acres has highly erodible soils which will not be protected by the CSU stipulations
• A majority of the acreage is covered by summer concentrations or ranges of big game including 924 acres of elk production summer concentration.
• This lease is also overlapped with grazing allotments- an important agricultural resource to be protected and which is not sufficiently addressed in the offered lease stipulations.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease No. 066920 because of the following reasons:
• A majority of the lease area has sensitive plant species and paleontological resources.
• About half of the lease area, 206 acres has highly erodible soils which will not be protected by the CSU stipulations.
• The entirety of the lease acreage has watershed with CRCT and GBCT Conservation populations which should not be threatened by CSU stipulations.
• This lease is also overlapped with grazing allotments- an important agricultural resource to be protected and which is not sufficiently addressed in the offered lease stipulations.

MCNICHOLAS KURY, KELLY

Comment:

Cancel Lease No. 066729 because of the following reasons:
• The entire area has high scenic integrity objectives, paleontological resources, sensitive plant species and sensitive terrestrial avian invertebrate species.
• a significant portion of the lease area is additional roadless area, has TEPC plant species and plant species of local concern.
• the lease area is also sensitive winter range for mule deer.
• The entire lease area is bighorn sheep migration corridor. While Alternative 3 would protect the corridor with 100% NSO coverage, the controlled surface use limitations would undermine any NSO coverage protection.

MCNICHOLAS KURY, KELLY

Comment:

I would be more enthusiastic in endorsing a proposal to also eliminate those of the leases in the areas west of the Thompson Divide where impacts to irreplaceable native aquatic and terrestrial communities is likely to be significant.

MICHAEL, EDWARD

Comment:

With Alternative 5 – leave any wells now producing intact. No new wells or roads.

OTTERO, RICHARD

Comment:

I was surprised, however, that no one suggested another alternative, "Alternative 4.5" perhaps, wherein all undeveloped leases would be cancelled throughout the study area, while producing and committed leases would be allowed to continue. This would be my preferred option.

ROEHM, GERRY

Comment:

I am writing to urge the Bureau of Land Management to cancel any and all illegal oil and gas leases in the Thompson Divide area as well as inventoried roadless areas. These lands have a greater value for public use and enjoyment, clean domestic water as well as habitat for numerous species of wildlife. Since it appears that the leases were issued without the requisite environmental review, the best course would be to cancel them and seriously reconsider whether such leases should ever be contemplated. There are more valuable uses for these lands which does not involve massive negative impacts.

SARETSKY, RICHARD

Comment:

As a resident of Hotchkiss, CO who believes that smart energy development can coexist with meaningful and long term conservation efforts I am writing this email to voice my support of the cancellation of ALL the 25 gas leases in the Thompson Divide. We need to find a better way to balance to energy development and conservation on the Western Slope's public lands. I think there is a way, but we won't find it without working with our rural, Western Slope communities. Let's commit to finding a solution that provides meaningful, permanent protection for important public lands on both sides of McClure Pass.

SMITH, MARY

Comment:

Having failed to properly issue these 65 leases, the BLM could opt to cancel all of them outright, as suggested by Alternative 5, creating a clean slate for compliant and responsible management of oil and gas development going forward. Given the time that has passed, however, and the fact that some of these leases have already been developed, a better solution might be to confirm only those leases that have actually been developed. Even these leases should be Restricted to the same extent that they would be restricted if issued after full NEPA compliance and should incorporate the protective stipulations set out in Alternative 4. This would ensure leases that have been diligently developed and are producing gas for the American public are protected, while bringing those leases into compliance with existing plans, rules, and regulations. This approach would incorporate elements of Alternatives 4 and 5. All of the other alternatives are problematic since they would by some measure reward noncompliance with NEPA by allowing some leases or lease terms to stand that would not be acceptable as determined following full NEPA compliance and/or if these leases were issued today.

SQUILLACE, MARK; UNVERSITY OF COLORADO

Comment:

We know that irreparable damage can happen to these wild areas if this shortsighted development occurs. Please protect all roadless areas.

VICTORIA, BETTY

Comment:

At the very least, BLM should cancel all leases where there has been little or no fluid mineral production and BLM should work with any remaining lessees to ensure that “grandfathered” drilling is conducted in a manner compatible with Forest Service objectives for other resources.

ZIMMERMAN, KATHLEEN; NATIONAL WILDLIFE FEDERATION

BLM Response:

Per 40 CFR 1505, the alternatives considered by the decisionmaker must be within the range of alternatives discussed in the analysis; however various parts of separate alternatives within that analysis may be “mixed and matched” to develop a complete alternative, as long as the reasons for doing so are explained (see BLM H-1790-2008). Because the range of alternatives analyzed in this EIS includes the cancellation of all leases, a decision that cancelled more leases than those specified in Alternative 4 (which would cancel 25 leases in full or in part) but fewer leases than outlined in Alternative 5 (which would cancel all 65 leases) is within the range of alternatives.

Comment:

Compare existing stipulations (WRNF DEIS 2-3 and 2-4) to Alternative 3 proposal (WRNF DEIS 2-28 and 2-34. As to producing wells, like those on the West Mamm lease, the BLM states: "Changes in lease stipulations would not apply to locations with producing wells because constraints applied through lease stipulations apply to exploration and development, not operations after the well is producing. However, any new wells to be developed on a lease with modified stipulations would be required to comply with the modified stipulations." Id. at 2-16. This change in lease stipulations could hamper or prevent the future Laramie lease development authorized pursuant to the West Mamm MDP. Alternative 4 (WRNF DEIS 2-61), the "Proposed Action," is chiefly targeted at the so-called Thompson Divide leases, but appears to have language that may impact the application of the Alternative 3 stipulations to producing leases like the West Mamm lease.

BOSWELL, ROBERT; LARAMIE ENERGY LLC

BLM Response:

Section 4.3 has been revised to include a discussion of potential impacts to future and existing operations from the addition of NSO stipulations or lease cancellations, by alternative.

Comment:

As a preliminary matter, we call BLM’s attention to a mapping error in Figure 2-13. Lease COC-66701 appears in that Figure to be proposed for modification, in part, rather than cancellation in toto. In a November 19, 2015 email, Gregory Larson of BLM clarified that the entirety of Lease COC-66701 is scheduled for cancellation under Alternative 4. See Ex. 57. Please clarify in the FEIS.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

Comment:

Lease COC 66701 contains a mapping error which shows part of this lease as “not cancelled” under Alternative 4. According to BLM staff, this is an error as the entire lease should be cancelled under Alternative 4. Leases COC 66707 and COC 66708 appear to have edge match issues showing lease portions within the Roaring Fork Watershed Boundary which should be cancelled under Alternative 4, but are not in the current iteration.

LOFARO, JR, RICHARD J; ROARING FORK CONSERVANCY

Comment:

The alternatives analysis is flawed in several other ways. First, Table 2-4 is incorrect. SG lease COC-66701, a contracted lease, would retain 40 acres, not 0 acres.

SIMPSON, DON; URSA PICEANCE LLC

Comment:

There appears to be an error concerning COC 66701 in Table 2-4. Table 2-4, Column 1 shows the lease contains 1,885 acres yet in column 2 the Table shows 1,845 acres to be cancelled. BLM WRNF DEIS at 2-61. The remaining 40 acres are shown on Figure 2-3 as CSU, but those 40 acres are not cancelled in Alternative 4. Id. At 2-54. Yet, Table 2-4 shows the percentage cancelled as 100% in column 3 rather than 97.88%. Id. At 2-61. Column 4 should show acres retained as 40, not O acres. We suggest BLM carefully review Table 4 because it appears there are other similar errors.

SIMPSON, DON; URSA PICEANCE LLC

BLM Response:

Table 2-4 of the Draft EIS is correct in that Lease COC 66701 would be fully cancelled. The Alternative 4 mapping error on Lease COC 66701 that depicted a contracted lease has been corrected in the Final EIS. Edge-matching issues on Lease COC 66707 and 66708 have also been corrected in the Final EIS.

Comment:

Section 2.4.12 at BLM WRNF DEIS 2-68, BLM explains it rejected several alternatives because these design features and "best management practices" ("BMPs") are best addressed at the site-specific APD stage. This is correct; however, it is unfortunate that BLM did not heed its own advice, but instead used very similar concerns to develop this detailed NEPA analysis for existing leases despite the recognition that those concerns are best addressed with site-specific APD NEPA. BLM WRNF DEIS at 2-68.

SIMPSON, DON; URSA PICEANCE LLC

BLM Response:

The appropriateness of applying stipulations at the leasing level is described in Section 1.2 of the Draft EIS, which noted that the Forest Service leasing analysis must comply with the National Forest Management Act and associated regulations at 36 CFR 219 and 36 CFR 228.102, by considering the suitability of lands for leasing and development and making decisions regarding the availability for leasing. The concerns reflected in the alternatives dismissed based on this rationale reflect resource conflicts and solutions that would be unknown until a site-specific plan of operations is submitted for evaluation.

Comment:

If you deem there is some difference between the 25 leases you cancelled, and the 40 you didn't, please provide all relevant information.

KLEIN, FREDERICK

BLM Response:

The BLM has not cancelled any leases. The BLM will select an alternative based upon the overall analysis of environmental impacts, socioeconomic considerations, other relevant factors, and the balance of agency statutory requirements and regulations. The basis for alternative selection will be specified in the ROD. Section 101(b) of NEPA outlines the six substantive elements, which include attaining “the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences” and “…approach the maximum attainable recycling of depletable resources” (42 USC § 4331 (b)(3) and (6)). In order to comply with NEPA, the BLM must evaluate which alternative best meets the needs of the public, the environment, and the recovery of oil and gas resources as required by law.

Comment:

Laramie is disappointed in the half-hearted analysis BLM provides in Alternatives 1 and 2 to support the leases as issued. As we argued in our scoping comments, BLM quotes the direction of the Mining and Mineral Policy Act of 1970 (MMPA) as part of its guidance for this process. The MMPA directs BLM and the Forest Service to "foster and encourage private enterprise in the development of economically sound and stable industries and in the orderly and economic development of domestic resources .... " 30 U.S.C. § 21. We fail to see how voiding leases or materially changing stipulations in leases years after issuance will encourage "private enterprise" to invest private capital in the "orderly and economic development" of federal minerals - it will do the opposite. Accordingly, we suggest BLM devote more effort in the DEIS to consider how its Alternatives can support existing lease contracts and the federal minerals program in accord with the law rather than political expediency.

BOSWELL, ROBERT; LARAMIE ENERGY LLC

Comment:

BLM's alternative analysis in Alternatives 3, 4 and 5 is flawed for relying too heavily on NSO/CSU stipulations and lease cancellation to address resource concerns. BLM should also consider the basic policy objectives of Congress to foster the development of federal minerals and other federal laws for protection of other resources. Congress in the Federal Land Policy Management Act (FLPMA) (43 U.S.C. § 1701, et seq.) requires that federal mineral management decisions be made in a multiple-use context. Finally, numerous federal and state environmental laws (see. e.g. Clean Air Act, Clean Water Act, Safe Drinking Water Act, the ESA, the National Historic Preservation Act) can be used by BLM to protect the other resources at issue in the WRNF Lease DEIS. BLM should consider the basic policy objectives of the federal minerals program, the sanctity of contract and the regulatory tools in other laws, rather than resorting to the extreme proposal in Alternatives 3, 4 and 5 to modify or cancel leases. The Energy Policy Act of 2005 (EP Act) directed the Secretary of Agriculture to enter into a Memorandum of Understanding "MOU) with the Secretary of Interior to improve federal oil and gas leasing. A key provision of this statutory requirement is that the MOU include consistent lease stipulations between the two agencies, but that lease stipulations are" only as restrictive as necessary to protect the resources ... " EP Act § 363; 42 U.S.C. § 15922; BLM MOU WO 300-2006-07 (April 2006). In the WRNF DEIS, Alternatives 3, 4 & 5 BLM relies on NSO, CSU and lease cancellation - rather than crafting stipulations only as restrictive as necessary to protect the resource.

BOSWELL, ROBERT; LARAMIE ENERGY LLC

Comment:

BLM Does Not Adequately Address Alternatives that Preserve the Existing Leases. BLM's alternative analysis in Alternatives 3, 4 and 5 is flawed for relying too heavily on NSO/CSU stipulations and lease cancellation to address resource concerns, rather than the basic policy objectives of Congress to foster the development of federal minerals and other federal laws for protection of other resources. Congress in FLPMA (43 U.S.C. § 1701, et seq.) requires that federal mineral management decisions be made in a multiple-use context. FLPMA's policy is that "the public lands be managed in a manner which recognizes the nation's need for domestic sources of minerals . . . Including implementation of the Mining and Minerals Policy Act of 1970." The MMPA directs the Secretaries of Agriculture and Interior, to "foster and encourage private enterprise in … the development of domestic mineral resources to help assure satisfaction of industrial, security, and environmental needs." Modification and cancellation of lease contracts based on post hoc, politically driven decision-making violates that directive and Alternatives 3, 4 and 5 should be eliminated. The Energy Policy Act of 2005 (EPAct) directed the Secretary of Agriculture to enter into a Memorandum of Understanding (MOU) with the Secretary of Interior to improve federal oil and gas leasing. A key provision of this statutory requirement is that the MOU include consistent lease stipulations between the two agencies, but that lease stipulations are "only as restrictive as necessary to protect the resources … " EPAct § 363; 42 U.S.C. § 15922(3)(c). The required MOU was entered into in April 2006, and the agencies agreed that coordinated lease stipulations shall be "only as restrictive as necessary to protect the resource[s] for which they are applied." BLM MOU WO 300-2006-07 at 1-2 (April 2006). In the WRNF DEIS, BLM simply chose the "easy" options - NSO, CSU and lease cancellation - rather than grapple with the EP Act directions to select stipulations only as restrictive as necessary to protect the resource. For example, lease cancellation in Alternative 4 is analyzed as BLM's method to prevent impacts to lynx denning habitat (BLM WRNF DEIS at 2-85) and to protect streams (BLM WRNF DEIS at 2-86). 23 As discussed below, there are other legal tools that BLM can employ to protect these resources that would not result in lease modification or cancellation, but BLM did not analyze those alternatives.

SIMPSON, DON; URSA PICEANCE LLC

BLM Response:

The BLM purpose and need incorporates the multiple use-sustained yield management principles of the FLMPA as well as requirements of the MLA and Forest service mineral policy. The EIS includes a range of reasonable alternatives that meet the MMPA's goal of fostering orderly and economic development of domestic resources. All alternatives, with the exception of Alternative 5, assume some level of development.

Alternatives 1 and 2 reaffirm the stipulations and availability decisions from the 1993 FEIS. Alternatives 3 and 4 incorporate the stipulations and availability decisions found in the USFS 2014 FEIS and ROD for future leasing, respectively. Alternatives 3 and 4 were included in this EIS to match USFS' decisions regarding where oil and gas development should be located in the WRNF to meet the standards and guidelines of the WRNF Forest Plan based on best available science, and to provide a range of reasonable alternatives for analysis in the EIS as required under NEPA and the Council on Environmental Quality (CEQ) regulations. This approach satisfies Energy Policy Act requirements for consistent lease stipulations between the BLM and the USFS. Appendix B of the 2014 FEIS contains a summary of the purpose and need and rationale for each of the proposed stipulations that were incorporated into Alternatives 3 and 4 of this EIS). All alternatives assume compliance with existing laws and regulations and all alternatives proposing development assume that BMPs and COAs may be developed at the site-specific environmental analysis when locations are known (see Sections 2.4, 2.5 and 2.6 of the Final EIS).

The BLM will make a decision based on the understanding of environmental consequences described in the EIS. Per 40 CFR 1505, the alternatives considered by the decisionmaker must be within the range of alternatives discussed in the analysis; however various parts of separate alternatives within that analysis may be "mixed and matched" to develop a complete alternative, as long as the reasons for doing so are explained (see BLM H-1790-2008). Thus a decision that incorporates stipulations from Alternatives 1 and 2 is within the range of alternatives.

Comment:

Garfield County has recently completed Phase I of the Energy Master Plan: Garfield County Energy Resource Inventory (http://www.garfield-county.com/community-development/garfield-countyenergy-master-plan.aspx) and attached as Appendix Bas a CD. This document provides extensive mapping of natural resources related to energy with the intended purpose of identifying energy resources for their development potential. We ask BLM to consider this Plan during the EIS process and be used in the development of reasonable Alternatives.

MARTIN, JOHN; GARFIELD COUNTY COLORADO

BLM Response:

The Energy Master Plan was provided during scoping and reviewed in conjunction with other natural resources data and incorporated as appropriate.

Comment:

The WRNF FEIS and ROD apply the appropriate buffers to protect native trout habitat in the area, including:
• No Surface Occupancy (NSO) within 350 feet of occupied cutthroat trout habitat;
• NSO in the Battlement Reservoir Watershed;
• NSO in water influence zones; and
• Controlled Surface Use (CSU) stipulation requiring no net density of road increases in watersheds containing conservation populations of cutthroat Trout Unlimited.
TU supports the application of these buffers in the FEIS and ROD here. We are seeking clarification to ensure that the BLM is applying the NSO stipulation within 350 feet of occupied cutthroat trout habitat under the Proposed Action. Information in the DEIS at pp. 4.8-11 – 4.8-18 indicate that the NSO stipulation will be applied to occupied cutthroat trout habitat under the Proposed Action. However, Table 4.8-1 (at. p. 4.8-3) indicates that the NSO stipulation will only apply under Alternatives 1 and 2. TU strongly urges the BLM to apply the NSO stipulation to occupied cutthroat trout habitat in conformance with the WRNF ROD in the Proposed Action and ultimately in the FEIS and ROD, and we ask that you clarify that the NSO stipulation will apply in future analysis.

BASKFIELD, TYLER; TROUT UNLIMITED

Comment:

We ask that the BLM clarify that under the Proposed Action, the 350-foot NSO stipulation for native trout will apply to leases in Zone 2 in the FEIS and ROD.

BASKFIELD, TYLER; TROUT UNLIMITED

BLM Response:

Alternative 4, the Proposed Action, includes an NSO stipulation within 350 feet of occupied cutthroat trout habitat. Table 4.8-1 has been revised to reflect the inclusion of this stipulation in under Alternatives 3 and 4.

Comment:

Garfield County asks the BLM to include a distinct Alternative within the EIS analysis that recognizes the significant political, legal, cultural, environmental, socio-economic and community-preference differences among the leases. Primary differences between leases within the undeveloped Thompson Divide area and leases in other areas are that those leases are adjacent to existing natural gas production with existing adequate site access and exploration and production infrastructure. To this end, Garfield County adopted Resolution 2010-73 (attached as Appendix A) specifically supporting efforts of the Thompson Divide Coalition to explore legislative initiatives and other opportunities to protect federal land areas of the Thompson Divide from energy development in a manner that respects existing rights of leaseholders. These areas include Thompson Creek, Fourmile Creek, Threemile Creek and Coal Creek watersheds as well as the headwaters of East Divide Creek and Muddy Basin.

MARTIN, JOHN; GARFIELD COUNTY COLORADO

BLM Response:

As described in Chapter 2, BLM has considered a wide range of alternatives responsive to the wide range of community preferences expressed in scoping. Each alternative represents a course of action that addresses issues and concerns to varying degrees. The BLM will select an alternative based upon the overall analysis of environmental impacts, socioeconomic considerations, other relevant factors, and the balance of agency statutory requirements and regulations. The basis for alternative selection will be specified in the ROD. Section 101(b) of NEPA outlines the six substantive elements, which include attaining "the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences" and "…approach the maximum attainable recycling of depletable resources" (42 USC § 4331 (b)(3) and (6)). In order to comply with NEPA, the BLM must evaluate which alternative best meets the needs of the public, the environment, and the recovery of oil and gas resources as required by law.

Comment:

Setbacks of wells should be increased to at least one kilometer to protect adjoining homes. Distances between wells must be increased to help contain surface and subsurface contaminants.

MARKUSON, JAMES

BLM Response:

These constraints are best identified and applied at the APD stage of permitting as Conditions of Approval when the site-specific locations of wells and ancillary facilities are known. Providing for a 1-km setback is beyond the scope of the EIS and the need for it is not supported by any of the impacts disclosed in the DEIS or in the comment.

Comment:

As to "developed" and producing leases, BLM states, "For developed leases within areas closed to leasing, the BLM would pursue the plugging and abandonment of all wells and the removal of all associated ancillary facilities located in areas identified as NSO ... changes in lease stipulations under this alternative would not apply to locations with producing wells because lease stipulations apply to exploration and development, not operations; however, any new wells to be developed on a lease with modified stipulations would be required to comply with those changes." Id. at 2-59. It is not entirely clear Mr. Greg Larson, Project Manager January 8, 2016 how this provision would impact the West Mamm producing lease (for example, is it a developed lease to which the developed lease provisions apply?) and this should be clarified.

BOSWELL, ROBERT; LARAMIE ENERGY LLC

BLM Response:

Table 1-1 identifies the status of each lease. The Chapter 2 tables accompanying each alternative describe how stipulations would be applied to each lease.

Comment:

In addition to BLM's lack of authority to impose additional stipulations on Encana's leases, all of Encana's leases already contain environmentally protective stipulations. Nevertheless, Alternatives 3 and 4 greatly expand the number of stipulations to which each lease would be subject. For example, Lease COC-067147 as originally issued was subject to only 3 stipulations, including a steep slopes NSO stipulation that prohibited surface use and occupancy throughout more than 98 percent of the leasehold. Alternatives 3 and 4 would each increase the number of stipulations on this lease to 22, including 7 NSO stipulations, 13 Controlled Surface Use (CSU) stipulations, and 2 Timing Limitation (TL) stipulations. Similarly, Alternatives 3 and 4 would add 8 new NSO stipulations, 8 new CSU stipulations, and a new TL stipulation to Lease COC-058677, the entirety of which is already subject to a roadless area NSO restriction. Encana's other leases also contain protective stipulations, and, as with Leases COC-067147 and COC-058677, the additional stipulations set forth in Alternatives 3 and 4 would largely overlap and duplicate the protections already provided. The BLM does not provide any justification for these additional stipulations, which provide little to no environmental value given the protective stipulations already in place. The BLM should not incorporate these additional stipulations into its final decision.

SCHOPP, JOHN; ENCANA OIL & GAS

BLM Response:

Alternatives 3 and 4 incorporate the stipulations and availability decisions found in the USFS 2014 FEIS and ROD for future leasing, respectively. These alternatives were included in this EIS to match USFS's decisions regarding where future oil and gas development should be located in the WRNF to meet the standards and guidelines of the WRNF Forest Plan based on best available science, and to provide a reasonable range of alternatives for analysis in the EIS as required under NEPA and the Council on Environmental Quality (CEQ) regulations.

Appendix B of the USFS 2014 FEIS contains a summary of the purpose and need and rationale for each of the proposed stipulations that were incorporated into Alternatives 3 and 4 of this EIS. NSO stipulations do not prohibit oil and gas development, but limit the location of surface disturbance.

Purpose and Need

Note: The comments are grouped together and sorted by the last name of the commenter, with the BLM response in a gray shaded box following the grouped comments within this category.

Comment:

Only Alts 4 and 5 agree with the 3rd bullet in the Purpose, Support the Forest Service in managing oil and gas resources, and the 4th bullet, while continuing to sustain the land's productivity for other uses and capability to support biodiversity goals (USFS Minerals Program Policy).

DAY, BILL

BLM Response:

This EIS is intended to consider a reasonable range of alternatives that meet all of the points listed in the purpose and need statement (Sections 1.3 and 1.4 of the DEIS) and disclose the potential impacts of each. All alternatives address the purpose and need and address resource concerns to varying degrees.

Comment:

The mission of the Bureau of Land Management is to sustain the health, diversity and productivity of the public lands for the use and enjoyment of present and future generations. The mission of the USDA Forest Service is to sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations. BLM and the Forest Service must protect our natural resources. Oil and gas exploration and the associated scaring of our lands are no different than affording development by other retail entities. Oil and gas companies must be treated just like any other private company (such as Wal-Mart, Lowes, General Motors or real estate developers)….WE MUST NOT INDUSTRIALIZE OUR FORESTS.

MARKUSON, JAMES

BLM Response:

As noted in Sections 1.3 and 1.4 of the DEIS, the EIS must consider the Mining and Minerals Policy Act of 1970 to fulfill the federal government's policy to "foster and encourage private enterprise in the development of economically sound and stable industries, and in the orderly and economic development of domestic resources to help assure satisfaction of industrial, security, and environmental needs".

Comment:

Alternative 4 in the DEIS respects the results reached in the WRFEIS in terms of meeting purpose and need. The Forest Service ROD closes the Thompson Divide to leasing for the life of the plan precisely because production trends and prices indicate that there is not a purpose and need to make the Divide available for this use. See ROD at 7. At the same time, the ROD recognizes that other areas on the White River National Forest with high potential and past development will be available for leasing. Id. In section III of this letter, the County presents additional data and expert opinion for the proposition that there is no legitimate purpose and need to continue leasing in the Divide. The WRDEIS, WRFEIS and ROD found a “clear need” for an updated analysis of oil and gas leasing on the WRNF, because the Forest Service’s 1993 Oil and Gas EIS and 2002 LRMP were sorely out of date in a world of nconventional oil and gas resources. ROD at 3. The Government Accountability Office, relying on EIA data, reported in May 2014 that the nation experienced more than a five-fold increase in the production of oil and gas from shale and tight sandstone formations from 2007 to 2012 alone. See Ex. 42 at 2. As both BLM and the Forest Service ROD rightly observed, such improvements in drilling technology have already led to a level of oil and gas activity on the Forest that greatly exceeds anything contemplated by prior planning documents. See ROD at 3. The Thompson Divide leases are part of this overall pattern of uncontemplated leasing and development. Alternative 4 represents BLM’s best opportunity to exercise thoughtful planning measures in this critical area.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

The BLM recognized the need to update the analysis from the Forest Service’s 1993 EIS. The alternatives examine a range of management options for the leases and update the analysis with new information for all potential resource issues. The EIS is strictly a disclosure document that considers the potential impacts from a reasonable range of alternatives. Each alternative represents a course of action that addresses issues and concerns to varying degrees. The BLM will select an alternative based upon the overall analysis of environmental impacts, socioeconomic considerations, other relevant factors, and the balance of agency statutory requirements and regulations. The basis for alternative selection will be specified in the ROD.

Comment:

BLM and USFS lands should be accessible not only for recreation, but for the recovery of mineral resources to the maximum benefit of all US citizens. They should not be locked up for the benefit of a very vocal few who happen to live in the area, or otherwise want to stop all minerals exploration and production.

DOWNEY, ROBERT

Comment:

BLM and USFS lands should be accessible not only for recreation, but for the recovery of mineral resources to the maximum benefit of all US citizens. They should not be locked up for the benefit of a very vocal few who happen to live in the area, or otherwise want to stop all minerals exploration and production.

ROBINSON, BRAD; GUNNISON ENERGY LLC

BLM Response:

Both the BLM and USFS manage public lands for multiple use objectives. As stated in the Organic Administration Act of 1987, which guides the use and occupancy of National Forests: “nothing herein shall be construed as prohibiting….any person from entering upon such forest reservations for all proper and lawful purposes, including that of prospecting, locating and developing the mineral resources thereof…” The BLM will select an alternative based upon the overall analysis of environmental impacts, socioeconomic considerations, other relevant factors, and the balance of agency statutory requirements and regulations. The basis for alternative selection will be specified in the ROD.

Comment:

BLM' s Final EIS and ROD should fully reflect the WRNF' s updated oil and gas leasing plans for the Thompson Divide area. BLM should also specifically cite applicable portions of the WRNF's final decision in the BLM Lease FEIS and ROD. The following excerpts from the WRNF ROD should be reflected in the BLM ROD:
• "The White River National Forest provides habitat for a number of big game mammals, native fish, migratory birds, amphibians, and a host of plant species. There is potential for habitat loss and disturbance from human activity, [including] oil and gas extraction. Given the economic and social value of recreation, outfitting, hunting and fishing on the White River National Forest, I chose an alternative that would best protect these values and still provide for oil and gas development opportunities." WRNF ROD at 7.
• “Throughout the process of arriving at this decision, public comment from scoping, meetings, conversations and workshops held over a four-year period confirmed to me that the White River National Forest is strongly valued locally, regionally, and nationally for the existing natural character including wildlife, fish, ranching, recreation, air quality, and sense of place" Id. At 5.
• "[M]y decision places an emphasis on conserving the roadless and existing character of the White River National Forest while providing oil and gas development opportunities with a focus on lands that have proven to be productive in the past 10-15 years" FROD at 5.
• "The White River Forest Plan places emphasis on world-class recreation, designated Wilderness, and wildlife values. But it certainly does not preclude commodity production such as timber harvest, livestock grazing, mining, or natural gas production. Although these values can co-exist, there are instances where some values may take precedent over others in a particular location" FROD at 5.
• "I chose to close through management direction approximately 61,000 acres of high potential lands on the Fore st in order to maintain the natural character of the landscape and continue to protect the outstanding wildlife and recreation values of these lands." Id. At 6.
• "The appeal of some of the areas of concern including the Four-Mile/Thompson Divide area is their singularity as a special place. It is a combination of characteristics that makes a place special and unique. Sense of place involves the human experience in a landscape, the local knowledge, culture and folklore. Sense of place also refers to identifying oneself in relation to a particular piece of land. It is an important component of culture, social, economics, and the self-identity of a community." Id. At 6.
• "The White River National Forest provides unique opportunities for outdoor recreation for over 12million people per year. It is the most visited National Forest in the nation. It is for both world-class ski resorts and its remote and primitive Wilderness areas along with outstanding scenery and opportunities for outdoor recreation including big game hunting, hiking, backpacking, and horseback riding, angling and snowmobiling, and camping. I gave strong consideration to insuring these values, that millions of people enjoy each year, are maintained. The combination of timing, controlled use, no surface occupancy stipulations and 'no leasing through management direction' in my decision, reflects my desire to maintain these values over the long term." ROD at 6-7.
• "Given the natural resource values of the White River National Forest and the millions of people who recreate on these lands, I believe I have made the decision [that] strikes a balance best meeting the needs of the immediate future (15-20 years)." FROD at 8.
• "My decision aims to minimize the impacts to the natural character of the White River National Forest and still provide opportunities for oil and gas leasing and development in high potential areas." FROD at 7-8.

KESSLER, ZANE; THOMPSON DIVIDE COALITION

BLM Response:

Alternatives 3 and 4 incorporate the stipulations and availability decisions found in the USFS 2014 FEIS and ROD for future leasing, respectively. These alternatives were included in this EIS to match USFS's decisions regarding where future oil and gas development should be located in the WRNF to meet the standards and guidelines of the WRNF Forest Plan based on best available science, and to provide a reasonable range of alternatives for analysis in the EIS as required under NEPA and the Council on Environmental Quality (CEQ) regulations. This approach satisfies Energy Policy Act requirements for consistent lease stipulations between the BLM and the USFS. Appendix B of the USFS 2014 FEIS contains a summary of the purpose and need and rationale for each of the proposed stipulations that were incorporated into Alternatives 3 and 4 of this EIS. NSO stipulations do not prohibit oil and gas development, but limit the location of surface disturbance.

The BLM has considered the same best available science considered by the Forest Service in their EIS and ROD. The purpose and need identifies that the BLM will consider conformity with the WRNF Plan revised based on the 2015 ROD; however, the BLM will make its own determination regarding the leases in question, as the WRNF EIS did not make determinations on the existing leases.

Comment:

Alts 1-3 do not appear to conform to the IBLA decision. They also do not agree with the statement on p. 3 that BLM incorporated as much of the 2014 WRNF O&G EIS as possible in this EIS.

DAY, BILL

BLM Response:

The IBLA decision was specific to the three leases at question however all of the alternatives address the NEPA deficiency identified by the ruling.

Alternatives 3 and 4 incorporate the stipulations and availability decisions found in the USFS 2014 FEIS and ROD for future leasing, respectively. These alternatives were included in this EIS to match USFS's decisions regarding where future oil and gas development should be located in the WRNF to meet the standards and guidelines of the WRNF Forest Plan based on best available science, and to provide a reasonable range of alternatives for analysis in the EIS as required under NEPA and the Council on Environmental Quality (CEQ) regulations. Appendix B of the USFS 2014 FEIS contains a summary of the purpose and need and rationale for each of the proposed stipulations that were incorporated into Alternatives 3 and 4 of this EIS.

The BLM has considered the same best available science considered by the Forest Service in their EIS and ROD. The purpose and need identifies that the BLM will consider conformity with the WRNF Plan revised based on the 2015 ROD; however, the BLM will make its own determination regarding the leases in question, as the WRNF EIS did not make determinations on the existing leases.

Comment:

BLM should reject the flawed approach in the WRNF Lease DEIS "Purpose and Need" statement that the Forest Service NEP A is no longer adequate. An agency's "[s]udden and unexplained change" may be arbitrary and capricious in violation of federal law. Motor Vehicle M.fs. Ass 'n v. State Farm Mutual Auto Ins. Co., 463 U.S. 29, 43 (1983). It must be done in a reasonable amount of time. Belville Mining Company v. United States, 999 F.2d 989, 997 (6th Cir. 1993). If an agency is going to change its view it can only do "so long as the agency acknowledges and explains the departure from its views." Seldovia Native Ass 'n v. Lujan, 904 F.2d 1335, 1346 (91 h Cir. 1990). Despite detailed scoping comments from affected lessees describing BLM's past actions that contradict this claim of "no longer adequate NEPA," BLM does not address this important issue in the WRNF Lease DEIS. BLM's "Purpose and Need" and WRNF Lease DEIS are arbitrary and capricious for determining the Forest Service NEPA is no longer adequate. In the DEIS, BLM must more fully discuss this NEPA inadequacy in the context of its own actions relying on and defending the lease NEPA over the last decade. BLM should simply adopt the existing Forest Service NEPA from 1993/2001 that as recently as 2010-2011 was found adequate for the Laramie 2012 lease issuance and 2010 lease development decisions.

BOSWELL, ROBERT; LARAMIE ENERGY LLC

BLM Response:

As stated in Section 1.4 of the DEIS, there is a need to “address the NEPA deficiency identified by the 2007 IBLA ruling on the appeal by the Board of Commissioners of Pitkin County that BLM must formally adopt NEPA analysis completed by the Forest Service or conduct a NEPA analysis of its own for issuance of oil and gas leases underlying WRNF lands”. The Secretary of the Interior has inherent authority, under her general powers of management over public lands, to cancel leases issued in violation of a statute or regulation. Boesche v. Udall, 373 U.S. 472 (1963) (the Mineral Leasing Act leaves unaffected Secretary’s traditional administrative authority to cancel a lease based on pre-lease factors); 43 CFR 3108.3(d) (the BLM has the authority to cancel a lease if “improperly issued”). The NEPA deficiency at lease issuance makes the leases voidable at the discretion of the BLM based on supporting remedial analysis. See Conner v. Burford, 848 F.2d 1441, 1451, 1454 (9th Cir. 1988) (indicating that leases issued without NEPA and ESA compliance were voidable by contemplating that BLM would later those address those procedural requirements and decide whether the leases should have been issued); Clayton W. Williams, Jr., 103 IBLA 192, 210-11 (1988) (characterizing as “voidable” any lease issued in violation of a procedural requirement, such as NEPA).

Due to the stated deficiency in issuing the leases previously and the many changes in the environmental conditions and the laws and regulations, as well as to the management plan for the WRNF, the RFDS, and the BLM CRVFO RMP, it would be unreasonable to evaluate the leases in the context of the conditions and state of knowledge in 1993. In fact, the WRNF FEIS (2014) and the associated ROD (2015) revise the 2002 Forest Management Plan related to mineral development. Significant new circumstances or information "relevant to environmental concerns and bearing on the proposed action or its impacts” (40 CFR 1502.9) exist. In addition, the BLM determined that an EIS addressing all significant new circumstances and information would ensure appropriate analysis of future development on those leases identified as having the same NEPA deficiency as the leases contested in the IBLA decision. This process allows the BLM to address the NEPA deficiency consistently across all the leases and ensure future activities adequately consider impacts to potentially impacted resources.

Comment:

In short, BLM's purpose (based on an unsubstantiated "need") is to determine whether the Subject Leases within the WRNF, issued between 1995 and 2012, "should be cancelled, reaffirmed, or modified with additional or different terms." 80 Fed. Reg. at 72,733. BLM lacks the authority to cancel or modify the Oxy Leases. Given this lack of legal grounding, BLM alternatives that would cancel or modify the Oxy Leases do not constitute reasonable alternatives that BLM should consider in any NEPA analysis, with the exception of the no action alternative. See Biodiversity Conservation Alliance, 608 F.3d at 714–15. Moreover, even if BLM could modify or cancel the leases, the cost of doing so—for Oxy Leases alone, much less all Subject Leases—makes all of the alternatives unreasonable and infeasible. As a result, BLM has presented no reasonable alternatives for evaluation under NEPA. Furthermore, if in fact BLM's proposed action was consistent with its stated need to "meet domestic energy needs" and "ensure that deposits of oil and gas owned by the U.S. shall be subject to disposition through the land use planning process," BLM's proposed alternatives would support, rather than (as here) oppose responsible energy development. Consequently, any NEPA analysis with respect to the Oxy Leases serves no purpose and in fact raises significant questions about its legal and policy basis. See, e.g., Minard Run Oil Co. v. United States Forest Service, 670 F.3d 236, 251 (3d Cir. 2011) (NEPA not required when agency has no authority to act). BLM must eliminate the Oxy Leases from any further review under this NEPA analysis and any subsequent decision documents.

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

Comment:

The cancellation of leases described in Alternatives 4 and 5 is inconsistent with the 2014 WRNF EIS and Record of Decision. Throughout the different Alternatives considered in the EIS, the USFS assumes that valid existing lease rights would be honored. As previously stated, even in Alternative B, the No New Leasing Alternative, the EIS recognizes the validity of existing lease rights, and the legal requirement that operations on existing leases be allowed to continue according to the terms of the leases until the conclusion of the original lease terms unless extended by production.

ODEGARD, CHAD E; WPX ENERGY

BLM Response:

As stated in Section 1.4 of the DEIS, there is a need to “address the NEPA deficiency identified by the 2007 IBLA ruling on the appeal by the Board of Commissioners of Pitkin County that BLM must formally adopt NEPA analysis completed by the Forest Service or conduct a NEPA analysis of its own for issuance of oil and gas leases underlying WRNF lands”. The Secretary of the Interior has inherent authority, under her general powers of management over public lands, to cancel leases issued in violation of a statute or regulation. Boesche v. Udall, 373 U.S. 472 (1963) (the Mineral Leasing Act leaves unaffected Secretary’s traditional administrative authority to cancel a lease based on pre-lease factors); 43 CFR 3108.3(d) (the BLM has the authority to cancel a lease if “improperly issued”). The NEPA deficiency at lease issuance makes the leases voidable at the discretion of the BLM based on supporting remedial analysis. See Conner v. Burford, 848 F.2d 1441, 1451, 1454 (9th Cir. 1988) (indicating that leases issued without NEPA and ESA compliance were voidable by contemplating that BLM would later those address those procedural requirements and decide whether the leases should have been issued); Clayton W. Williams, Jr., 103 IBLA 192, 210-11 (1988) (characterizing as “voidable” any lease issued in violation of a procedural requirement, such as NEPA).

As required by the CEQ and DOI regulations implementing NEPA (40 CFR 1500-1508; 43 CFR 46.420), the BLM must consider a range of reasonable alternatives that meet the purpose and need statement (see Sections 1.3 and 1.4 of the DEIS) in order to meet the NEPA requirement to take a “hard look” at the alternatives and impacts, and therefore will not remove Alternatives 3 through 5 from analysis. The BLM has not yet made a decision on which alternative will be selected. This EIS is intended to consider a range of alternatives and disclose the potential impacts of each. Excluding reasonable alternatives that meet the purpose and need for action does not meet NEPA requirements.

As stated in Sections 2.3.3, 2.3.4, and 2.3.5 of the DEIS, should leases need to be cancelled or lease stipulations be changed, subsequent BLM administrative actions including refunds of bonus bids and lease payments or judicial action would be necessary . BLM would not unilaterally modify a lease, but if the leaseholder does not consent to new or modified stipulations, BLM may cancel a lease. Analysis of litigation costs or outcomes is beyond the scope of the EIS and is speculative since the outcome or terms are uncertain, and would involve considerations independent of the project.

Due to the stated deficiency in issuing the leases previously and the many changes in the environmental conditions and the laws and regulations, as well as to the management plan for the WRNF, the RFDS, and the BLM CRVFO RMP, it would be unreasonable to evaluate the leases in the context of the conditions and state of knowledge in 1993. In fact, the WRNF FEIS (2014) and the associated ROD (2015) revise the 2002 Forest Management Plan related to mineral development. Significant new circumstances or information "relevant to environmental concerns and bearing on the proposed action or its impacts” (40 CFR 1502.9) exist. In addition, the BLM determined that an EIS addressing all significant new circumstances and information would ensure appropriate analysis of future development on those leases identified as having the same NEPA deficiency as the leases contested in the IBLA decision. This process allows the BLM to address the NEPA deficiency consistently across all the leases and ensure future activities adequately consider impacts to potentially impacted resources.

Comment:

Finally, in terms of purpose and need, the County notes that the majority, if not all, of the Thompson Divide leases were issued without protective stipulations, in violation of the national Roadless Area Conservation Rule. Paragraph 3 of the lease agreement form used for leases issued during 2001-2005 provides that the rights granted in the leases are "subject to applicable laws, the terms, conditions, and attached stipulations of [the] lease, the Secretary of the Interior's regulations and formal orders in effect as of lease issuance, and to regulations and formal orders hereafter promulgated when not inconsistent with lease rights granted or specific provisions of this lease." See, e.g., Lease for Oil and Gas, Serial No. COC66917 (Sept. 1, 2003) (sample Thompson Divide lease). It is well-settled that, once it was published in the Code of Federal Regulations, the 2001 Rule had the effect of a statute. See Sheridan-Wyoming Coal Co. v. King, 172 F.2d 282, 287 (D.C. Cir. 1949); Northern States Power Co. v. Rural Electrification Admin., 248 F. Supp. 616, 622 (D. Minn. 1965). Because the Thompson Divide leases are located in areas managed by the Forest Service, they also contain a term requiring the lessee to "comply with all the rules and regulations of the Secretary of Agriculture set forth at Title 36, Chapter II of the [CFR] . . . When not inconsistent with the rights granted by the Secretary of Interior in the permit." Notice for Lands of the National Forest System Under Jurisdiction of the Department of Agriculture (appended to Thompson Divide sample Lease No. COC66917). The Rule was continuously published in Title 36 of the CFR from July 1, 2001 until June 30, 2005. The FEIS and Record of Decision on these Previously Issued Leases should clarify that the leases were subject to the RACR from the date of their issuance, for the reasons above. That clarification can be made as one of the conditions of granting the lessees' request for suspension, and should be documented in the ROD on this action.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

Paragraph 3 of standard lease form states that leases are subject to existing laws, among other requirements. USFS is responsible for site-specific analysis and approvals of proposed surface use and development on the leaseholds and will determine measures to implement any applicable roadless rule requirements through the SUPO.

Comment:

The BLM WRNF DEIS relies on future NEPA to address a leasing decision made in the past. Rather than considering the several congressional statutes supporting leasing of federal minerals (e.g., the Mineral Leasing Act (MLA), the Federal Land Policy Management Act (FLPMA) and the Mining and Minerals Policy Act of 1970 (MMPA)), BLM proposes Alternatives that undercut the federal leasing program by rewriting stipulations and cancelling existing leases. BLM states that, "Following the IBLA's decision, the BLM determined that the Forest Service NEPA analysis conducted for the previously issued leases is no longer adequate due to changes in laws, regulations, policies, and conditions since the Forest Service's EIS was issued in 1993." BLM WRNF DEIS at ES-1.16 BLM fails to inform the reader when this BLM "determination" was made and why it took 7-8 years after Pitkin County for BLM to take any action to address the "determination" that the Forest Service NEPA was "no longer adequate." BLM's 2014 "determination" is undercut by the evidence of the above-described agency actions in which BLM took numerous legal positions acting on and defending the validity of the Leases, some within two years of the initiation of this NEPA process. Supra at 9-11. BLM's "Purpose and Need" statement (BLM WRNF DEIS at ES-5) inappropriately considers Forest Service decisions for future leasing, to cure a procedural defect for Leases issued in 2003. BLM' s post hoc rationale is wrong for several reasons.

BLM' s actions in the years following Pitkin County were to rely on and defend the adequacy of both the leasing decisions and the underlying Forest Service 1993/2002 NEPA. BLM's proposed cancellation is an abrupt change from its nearly decade-long position that the existing NEPA was adequate. For example, the "rationale" for BLM' s decision approving 7 exploratory wells in Lease No. COC-66918 was that "[a]pproval of the proposed action is validating the rights granted with the federal oil and gas leases to develop the leasehold to provide commercial commodities of oil and gas." See C0-140-2006-140 EA and FONSI at 23.In the BLM's defense of a NEPA challenge to the Hells Gulch North, Phase 2 EA, the government defended the NEPA analysis. In 2011 the court affirmed the validity of the lease. In 2012, two years before the initiation of this NEPA process, BLM defended Ursa's Lease No. COC-66708, also issued under the "no longer adequate" 1993 NEPA, as having "created contractual rights and obligations between [Ursa] and the United States." In the BLM WRNF DEIS, BLM never acknowledges its prior NEPA documents or many other affirmative statements to lessees that the leases are valid. BLM cannot adopt its new lease cancellation position without acknowledging and thoroughly explaining its decision to depart from the view that the leases are valid.

Forest Service has consistently taken the position that the Leases are valid. WRNF 2014 FEIS at 598: "The Forest Service assumes 26 of these [65] leases will remain in effect through the life of the plan because they are either committed to existing Federal units or held by production. As such, these 26 leases fall under the leased/developed category and it is assumed any future additional development would occur under the 1993 stipulations currently attached to the leases". In the WRNF 2015 ROD/FEIS, the 39 undeveloped leases, including SG's 18 leases and Ursa's 7 leases, were considered by the Forest Service under two NEPA "scenarios" to Alternatives B and C, each of which was based on the continuing validity of the 1993/2002 Forest Service NEPA and the decision to lease.

Because the purpose and need for BLM's WRNF DEIS analysis is to analyze the "previous decisions" to issue the leases, BLM must analyze the environmental consequences of the leases at the time of lease issuance under the laws and policies in existence at that time. BLM's rationale that "changed circumstances" would allow it to consider current laws and policies violates the terms of the Leases. Alternative 3 stipulations which prevent or make development more difficult and the Alternative 4 and 5 lease cancellation proposals are all in conflict with those lease rights. BLM' s proposal that it can unilaterally avoid this promise in the lease is a repudiation of the lease terms and, thus, arbitrary and capricious.

Finally, BLM's WRNF DEIS decision to "incorporate as much of the Forest Service's new NEPA analysis of future oil and gas leasing on the WRNF as possible into this analysis" is inconsistent with its legal position in a virtually identical situation. BLM's Pennaco EA repeatedly recognized that its

analysis was limited to "consideration of the appropriate environmental issues foreseeable at the time the leases were offered for sale. Certain issues were not considered in detail because they were not issues that were known during the time of issuance of the 285 leases." Because the purpose and need for the BLM WRNF DEIS is to address the inadequacy identified by the IBLA in the "previous decisions" to lease, it is improper for BLM to analyze issues and laws which were not reasonably foreseeable in 2003.

SIMPSON, DON; URSA PICEANCE LLC

BLM Response:

As stated in Section 1.4 of the DEIS, there is a need to “address the NEPA deficiency identified by the 2007 IBLA ruling on the appeal by the Board of Commissioners of Pitkin County that BLM must formally adopt NEPA analysis completed by the Forest Service or conduct a NEPA analysis of its own for issuance of oil and gas leases underlying WRNF lands”. The Secretary of the Interior has inherent authority, under her general powers of management over public lands, to cancel leases issued in violation of a statute or regulation. Boesche v. Udall, 373 U.S. 472 (1963) (the Mineral Leasing Act leaves unaffected Secretary’s traditional administrative authority to cancel a lease based on pre-lease factors); 43 CFR 3108.3(d) (the BLM has the authority to cancel a lease if “improperly issued”). The NEPA deficiency at lease issuance makes the leases voidable at the discretion of the BLM based on supporting remedial analysis. See Conner v. Burford, 848 F.2d 1441, 1451, 1454 (9th Cir. 1988) (indicating that leases issued without NEPA and ESA compliance were voidable by contemplating that BLM would later those address those procedural requirements and decide whether the leases should have been issued); Clayton W. Williams, Jr., 103 IBLA 192, 210-11 (1988) (characterizing as “voidable” any lease issued in violation of a procedural requirement, such as NEP)A.

Due to the stated deficiency in issuing the leases previously and the many changes in the environmental conditions and the laws and regulations, as well as to the management plan for the WRNF, the RFDS, and the BLM CRVFO RMP, it would be unreasonable to evaluate the leases in the context of the conditions and state of knowledge in 1993. In fact, the WRNF FEIS (2014) and the associated ROD (2015) revise the 2002 Forest Management Plan related to mineral development. Significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts” (40 CFR 1502.9) exist. In addition, the BLM determined that an EIS addressing all significant new circumstances and information would ensure appropriate analysis of future development on those leases identified as having the same NEPA deficiency as the leases contested in the IBLA decision. This process allows the BLM to address the NEPA deficiency consistently across all the leases and ensure future activities adequately consider impacts to potentially impacted resources.

As required by the CEQ and DOI regulations implementing NEPA (40 CFR 1500-1508; 43 CFR 46.420), the BLM must consider a range of reasonable alternatives that meet the purpose and need statement (see Sections 1.3 and 1.4 of the DEIS) in order to meet the NEPA requirement to take a “hard look” at the alternatives and impacts, and therefore will not remove Alternatives 3 through 5 from analysis. The BLM has not yet made a decision on which alternative will be selected. This EIS is intended to consider a range of alternatives and disclose the potential impacts of each. Excluding reasonable alternatives that meet the purpose and need for action does not meet NEPA requirements.

As stated in Sections 2.3.3, 2.3.4, and 2.3.5 of the DEIS, should leases need to be cancelled or lease stipulations be changed, subsequent BLM administrative actions including refunds of bonus bids and lease payments or judicial action would be necessary . BLM would not unilaterally modify a lease, but if the leaseholder does not consent to new or modified stipulations, BLM may cancel a lease. Analysis of litigation costs or outcomes is beyond the scope of the EIS and is speculative since the outcome or terms are uncertain, and would involve considerations independent of the project.

Reasonable Foreseeable Development Scenario

Note: The comments are grouped together and sorted by the last name of the commenter, with the BLM response in a gray shaded box following the grouped comments within this category.

Comment:

Finally, the DEIS inadequately evaluates the mineral resources within the affected leases, and does not account at all for the very considerable financial and logistical impacts associated with the disruption of existing and planned surface development infrastructure.

LUDLAM, DAVID; COLORADO OIL & GAS ASSOC & WESTERN ENERGY ALLIANCE

BLM Response:

Section 4.3 has been revised to include a discussion of potential impacts to future and existing operations from the addition of NSO stipulations or lease cancellations, by alternative.

Comment:

The BLM cannot impose COAs or other restrictions to interfere with Encana's existing lease rights. Federal courts have interpreted the phrase "valid existing rights" to mean that federal agencies cannot impose stipulations or COAs that make development on existing leases either uneconomic or unprofitable. See Utah v. Andrus, 486 F. Supp. 995, 1011 (D. Utah 1979); see also Conner v. Burford, 84 F.2d 1441, 1449-50 (9th Cir. 1988). Similarly, the BLM cannot prohibit a lessee from developing its leases. National Wildlife Federation, et al., 150 IBLA 385, 403 (1999). Only Congress has the right to completely prohibit development once a lease has been issued. Western Colorado Congress, 130 IBLA 244, 248 (1994). Although Encana acknowledges that the BLM may impose mitigation measures on its operations, BLM's authority has limits. See, e.g., 43 C.F.R. 3101.1-2. The BLM cannot, for example, impose COAs that are inconsistent with Encana's existing, contractual lease rights and the BLM cannot restrict operations to the point that economic development on a lea se is precluded. Sierra Club v. Hodel, 848 F.2d 1068, 1087-99 (10th Cir. 1988); Colorado Envt'l Coal., 165 IBLA 221, 228 (2005) (determining that an RMP may not impose restrictions on the exercise of existing oil and gas leases that defeat or materially restrain existing rights); Colorado Open Space Council, 73 IBLA 226, 229 (1983) (holding that regulation of existing oil and gas leases may not "unreasonably interfere" with the rights previously conveyed in an oil and gas lease). Further, if the BLM were to select the No Action Alternative, as it should, and decline to add new stipulations to Encana's leases, the BLM would be prohibited from later attempting to bootstrap these stipulations onto Encana's leases by applying them as COAs at the site-specific level. The BLM often cites a relatively recent decision from the IBLA for the proposition that the agency can modify existing leases by imposing COAs on applications for permits to drill. Yates Petroleum Corp., 176 IBLA 144 (2008). The Yates decision does not stand for the proposition that BLM can impose COAs whenever it deems necessary or in broad programmatic documents such as the White River Leasing EIS. Rather, in Yates, the IBLA merely affirmed the imposition of an additional COA based on site-specific information including recent and directly applicable scientific research. Yates, 176 IBLA at 157; William P. Maycock, 177 IBLA 1, 16-17 (2009). The Yates decision does not authorize the BLM to ignore relevant lease terms or the BLM regulations at 43 C.F.R. § 3101.1-2. Further, BLM must recall that it cannot impose new, unreasonable mitigation requirements on existing leases. Courts have recognized that once the BLM has issued an oil and gas lease conveying the right to access and develop the leasehold, the BLM cannot later impose unreasonable mitigation measures that take away those rights. See Conner v. Burford, 84 F.2d 1441, 1449-50 (9th Cir. 1988); 43 C.F.R. § 3101.1-2 (BLM can impose only "reasonable mitigation measures … to minimize adverse impacts … to the extent consistent with lease rights granted").

SCHOPP, JOHN; ENCANA OIL & GAS

BLM Response:

In Yates Petroleum Corp., 176 IBLA 144 (2008) the IBLA cited to several statutory and regulatory provisions that provide "authority to condition post-lease approvals" or "impose post-lease, site-specific surface use controls." Yates Petroleum Corp., 176 IBLA 144 (2008). Under these authorities the BLM can, consistent with lease right and based on site-specific analysis, regulate both the siting and timing of development to minimize adverse impacts to a resource value not addressed in lease stipulations at the time operations were proposed. Id. at 155-56.

Comment:

The Associations specifically contest the following assumptions and conclusions found in the DEIS socioeconomic analysis and the supporting RFDS: "No horizontal drilling would occur outside of Mesa County. No horizontal drilling is projected in Garfield, Pitkin, or Rio Blanco Counties." This is an inaccurate assumption. Horizontal drilling has occurred within the general area of analysis in Garfield county (e.g. Encana's Benzel 6-11H), Delta County (e.g. SG Interests' Falcon Seaboard), and on the border of Pitkin County (Texaco's Thunderhawk #1). All these wells have shown strong production, and the target formation underlies the entire area under evaluation. It is should be assumed that horizontal drilling will occur in all of the leases, and is in fact likely to be a primary technique used during development.

LUDLAM, DAVID; COLORADO OIL & GAS ASSOC & WESTERN ENERGY ALLIANCE

BLM Response:

As shown in Table 2-7 of the DEIS, at least 1 horizontal well is assumed in each zone, with the majority assumed for analysis in Mesa County based on the methodology presented in Appendix D of the DEIS. The use of horizontal wells in other areas is limited and therefore lower levels were assumed for analysis.

Specific to recent Mancos shale gas wells production wells:

• Encana's Benzel 6-11H (J12W) well (API # 05-045-20326-00-S1) has reported production (11/2015) of 23,192 MCF of Gas, 0 Bbls of Condensate, and 510 Bbls of Produced Water for the 30 days of November 2015.
• The Falcon Seaboard 11-90-12-3 (API # 05-051-06045-00-S1) began producing on 12/13/2015 after the DEIS was published. The production from this well was still not available on 1/22/2016. The BLM could only use known and available production number at the time of the RFDS in its analysis.
• The Texaco Thunderhawk Unit #1 well (API # 05-077-08581-00-X1) was never placed into production. While the logs do indicate gas shows in the Mancos, there is not enough data to assume it would productive.
• The BLM has not been able to verify any data on the Chevron Hurd #1 well as we are unable to locate it in the Colorado Oil and Gas Conservation Commission web site or the BLM's database.
• Two test wells on or near the WRNF Leases in the Zones 2 & 3 (the DCU 35 (B1-DCU) (API # 05-077-08812-00-S1 & The Renninger 30-7-2 NGG30NE (API # 05-077-10210-00-S1) did not prove as successful. The DCU 35 only shows 153 MCF of Gas, 0 Bbls of Condensate, and 0 Bbls of Produced Water for the month of Nov. 2015 and the Renninger 30-7-2 shows 5,641 MCF of Gas, 0 Bbls of Condensate, and 1,068 Bbls of Produced Water according to volumes reported to COGCC's Web Site. The Renninger was the Obligation well for the Groundhog Gulch Unit and was determined to be not capable of production in unit quantities and as a result the unit has since terminated.

The data cited are not publicly available or of great enough detail to use in analysis. Although a recent USGS report (Hawkins et al. 2016) confirms the extent of the Mancos shale resource, the potential development in relation to horizontal gas plays is still in the exploratory stage. The USGS report does not change the speculative nature of these plays in terms of development intensity, timing, and location; thus, they still could not be quantitatively analyzed with meaningful accuracy in the RFDS or EIS. In the high potential zone of the Piceance Basin, total recoverable gas far exceeds any measure of annual production, and in general drilling is likely to be far more limited by price and capital availability than by available gas resources. Additionally, because the RFDS does assume that there would be some development of Manco shale, this information does not change the development assumptions or method used for applying to the USFS RFDS to the existing leases, as described in Appendix D. Accordingly, no change has been made to RFDS analysis assumptions.

The RFDS used for this analysis does acknowledge the potential for change regarding accessibility of minerals from horizontal drilling. In the Draft EIS, assumption 4 in Appendix D, page D-8, stated that "More development may be possible if a higher proportion of horizontal wells is developed in the future." This assumption has been clarified to state that "Some minerals that are assumed not to be accessible through directional (s-curve) drilling due to a lack of suitable surface location may be accessible given the longer reaches and alternative methods possible through horizontal drilling. Thus, if horizontal drilling proves to be productive and economical in the area in the future, the RFD may underestimate the future level of horizontal (or total) drilling." However, as noted in other responses regarding drilling of the Mancos formation, an increase in horizontal drilling would likely be offset by a reduction in directional (s-curve) drilling.

Comment:

BLM's use of "Zones" as an analytical device for the RFDS is arbitrary and capricious. WRNF DEIS, 1-8. For example, the Laramie leases are in Zone 2. This is a unique designation and the BLM has never used it in connection with the Laramie leases. BLM states it has grouped the Leases "spatially into Zones" based on the location of past development, production infrastructure, and access for exploration and production. Id. BLM emphasizes "that the Zones do not constitute management units or legal entities. They are intended only to be used to facilitate the analysis of indirect effects across the EIS alternatives by grouping the leases geographically and to organize the leases by terrain and development potential where useful to the resource discussion." WRNF DEIS, 1-9. BLM' s creation of geographical zones unrelated to existing "management units or legal entities" is puzzling when the claimed purpose of the NEP A process is to conduct NEPA on BLM' s decisions in 2003 and 2011 to lease minerals in specific "management units or legal entities." BLM does not adequately explain the basis for the zones and why these zones are an appropriate mechanism to analyze a past decision to lease.

BOSWELL, ROBERT; LARAMIE ENERGY LLC

Comment:

BLM's Use of "Zones" is Arbitrary and Capricious. BLM' s use of "Zones" as an analytical device for the RFDS is arbitrary and capricious. BLM WRNF DEIS at 1-8. BLM states it has grouped the Leases "spatially into Zones" based on the location of past development, production infrastructure, and access for exploration and production. Id. BLM emphasizes "that the Zones do not constitute management units or legal entities. They are intended only to be used to facilitate the analysis of indirect effects across the EIS alternatives by grouping the leases geographically and to organize the leases by terrain and development potential where useful to the resource discussion." BLM WRNF DEIS at 1-9. BLM's creation of geographical zones unrelated to existing "management units or legal entities" is suspect when the ostensible purpose of the NEPA process is to conduct NEPA on BLM's decade-old decisions to lease based in specific "management units or legal entities." According to BLM's WRNF DEIS "Purpose and Need" statement, each of the 65 leases suffers from the same procedural defect, but rather than treating each of these "procedurally flawed" leases the same, BLM has developed a unique geographically-based classification system for its RFDS analysis. The purpose of the Zone classification system appears to be to provide BLM the means to avoid cancelling producing leases (which would require judicial action and substantial damage payments) yet still allow BLM to reach its desired end of cancelling the non-producing Leases in the Thompson Divide area. This impermissible motivation is made clear from BLM' s internal communications. In September, 2013, BLM Colorado State Director Hankins was asked by BLM's congressional affairs office to respond to an inquiry from Senator Bennet' s office concerning a discussion the Senator had with Encana about the BLM' s WRNF NEPA process. Encana sought to have some of its leases excluded from BLM' s NEPA process. Hankins replied, "I think anything we consider on Thompson Divide needs to be in the context of all of these moving pieces and the implications need to be looked at in a bigger context - not just in individual requests for a particular entity or company." Ex. Y, H. Hankins email to M. Nedd et al, BLM (September 25, 2013). A November 5, 2013 BLM "internal working document" put a finer point on BLM's reasoning, "Any action on the existing leases is under scrutiny by environmental groups, resulting in high risk of appeals and litigation. Limiting the NEPA analysis to the leases in the Thompson Divide or excluding leases in production would pose a high litigation risk. Therefore, the decision was made to address all the existing leases in the White River National Forest that share this NEPA deficiency." Ex. Z, BLM, Internal Working Document, Briefing Paper (November 5, 2013) at 2. This is made even more obvious when you compare Zone 3 (WRNF DEIS at ES-3, Figure 1-1) to the outline of the Thompson Divide area on the map at slide 17 in BLM' s April 2014 Scoping Power Point and the map on the Thompson Divide Coalition website. See Ex. AA, www.savethompsondivide.org/uploads/maps/image/TDC map oilgas new sm.jpg. Zone 3 is a "zone" to target SG and Ursa's Leases in the "Thompson Divide area." The balance of the 65 leases were included to give the process an appearance of regularity and lower the litigation risk. Zone 3 is a means to the desired objective - the elimination of the Thompson Divide area leases. The Zones are suspect classifications that violate the U.S. Constitution. See Romer v. Evans, 517 U.S. 620, 633 (1996). BLM's use of "Zones" in its NEPA analysis is therefore arbitrary and capricious.

SIMPSON, DON; URSA PICEANCE LLC

BLM Response:

As stated in the DEIS (see Section 1.2.1) and referenced in the comment, zones were identified to group the leases geographically and by similar development potential based on past development activity. As further explained in Appendix D (see page D-2), using zones as the unit of comparison of impacts across the alternatives analyzed in detail facilitates discussions of potential impacts in a larger area than each lease. The use of zones enables the reader of the EIS to more easily visualize the locations without requiring intimate knowledge of each lease and facilitates the presentation on maps. A lease-by-lease analysis would be speculative because specific future locations of well, road, and pipeline development are unknown at the leasing stage of permitting. Essentially, the zones provide a way to consider "all of these moving pieces and the implications … in a bigger context" as cited in DEIS comments. No additional ultimate goal for the use of zones should be ascribed beyond their use, as required by CEQ's Regulations for Implementing NEPA at 40 CFR 1502.8, which states "Environmental impact statements shall be written in plain language and may use appropriate graphics so that decisionmakers and the public can readily understand them." In identifying zones for the purpose of NEPA analysis, the BLM was not acting in a legislative capacity, and the zones are not intended to be used as the basis for any decision resulting from the EIS. This statement has been added to the Final EIS.

Comment:

Other formations in the Piceance Basin, such as the Mancos shale formation, hold substantial potential for oil development and a number of operators in western Colorado have expressed interest in conducting exploration activities in the Mancos shale. Laramie has drilled a successful Mancos shale test well. WPX has drilled test wells in both the Mancos and Niobrara shale formations. Axia has drilled a Mancos test well in Moffat County, Encana in its Orchard Unit in the Parachute area and Black Hills Energy in the western Piceance. The same is true for Oxy, Chevron, SG Interests and Gunnison Energy. There is also interest in the Niobrara shale formation, portions of which underlie the WRNF. BLM's assumption in the RFDS that only 4 percent of wells will be horizontal is not supported by the potential in the Mancos and Niobrara formations where almost 100% of the development would be predicated on horizontal drilling.

BOSWELL, ROBERT; LARAMIE ENERGY LLC

Comment:

Similarly, the Draft EIS fails to accurately account for the existing natural gas resources accessible from the 65 leases. On January 4, 2016, a new natural gas well was drilled on private land less than a mile from the southern border of the Thompson Divide Area. This well demonstrates "prolific initial natural gas production." West Slope Colorado Oil & Gas Association, Media Release at 1 (Jan. 5, 2016). WillSource requests that the CRVFO supplement the Draft EIS to incorporate the data available from the newly drilled well.

CAVANAUGH, JAMIE; WILLSOURCE MOUNTAIN STATES LEGAL FOUNDATION

Comment:

To date, about 85 wells have been completed in the Mancos shale and placed on production; about 40 are poorly completed vertical wellbores, and the other half were horizontal wells completed with undersized fracture stimulation treatments. Some of the vertical wells, and the most recent horizontal Mancos shale wells, have clearly demonstrated commercial gas production rates and reserves, and operators will no doubt begin development of this resource as gas prices improve in the coming months. A good example of a highly commercial Mancos shale horizontal gas well is the Encana Benzel 35-2HM, in Section 25, Township 6 South, Range 92 West. This well has a completed horizontal length of 7,250 feet, produced 1.5 Billion cubic feet of gas during its first year of production, and has an Estimated Ultimate Recovery of 10 Billion cubic feet of gas. There are at least 10 other horizontal Mancos shale gas wells having equal or greater EUR's than this well. Mancos shale exploration and development is ongoing today, despite low natural gas prices. For example, a few miles directly south of the Zone 3 lease area, SG Interests recently drilled two horizontal Mancos shale gas wells on fee lands in Section 12, Township 11 South, Range 90 West.

DOWNEY, ROBERT

Comment:

The Mancos shale is about 4000 feet thick, underlies the entire Piceance Basin, and contains approximately 3000 Trillion cubic feet of natural gas; this is twice the volume of natural gas in the entire Marcellus shale, concentrated in just 5% of the surface area. Development of the Mancos shale gas resource will most likely be predominantly conducted via long horizontal wells drilled from pads, with as many as 50 wells per pad. The estimated gas in place in the Mancos shale averages more than 500 Billion cubic feet per square mile. In the 80,380 acres of leases subject to this EIS, there is likely to be more than 62 Trillion cubic feet of natural gas in the Mancos shale. Full development could provide for a recovery of more than 35% of this gas resource; and at an average gas price of $4 per MCF, with a 12.5% royalty rate, the value of the federal oil and gas minerals would exceed $11 Billion.

DOWNEY, ROBERT

Comment:

Perhaps most importantly, the EIS also barely mentions the truly enormous Mancos gas shale resource present across the entire Piceance Basin. The exploration and development of the natural gas resources contained in this massively thick gas shale deposit is in its infancy, with only 85 wells drilled to date. However, the most recent wells, including wells surrounding, in and adjacent to the leases subject to the EIS, have demonstrated excellent commercial production rates, and enormous gas reserves in excess of 10 BCF per well. As with the development of natural gas from gas shales in other basins, well construction in the initial development wells is usually not optimized, and further development will no doubt prove out this enormous strategic gas resource.

DOWNEY, ROBERT

Comment:

The assessment of oil and gas hydrocarbon development potential appears to be grossly inadequate, and does not accurately consider the geological and petrophysical characteristics nor the commercial production potential of the hydrocarbon-bearing formations present. There is no discussion of the petroleum geology of the Piceance Basin and its multiple formations that have proven productive for oil and gas, and only cursory mention of the exploration and development that has occurred in this area of the Piceance Basin over the past several years. Most of the 11,000+ producing oil and gas wells in the Piceance Basin are producing from lenticular and padular sandstones the Upper Cretaceous Williams Fork formation, and are predominantly located in the central portion of the basin, where burial depth, temperature and pressure have provided maximum gas generation, and where mostly privately owned minerals and surface have enabled their exploration and development. Much of the leasehold in question is within this "basin centered gas" center area of the basin. These wells are generally drilled directionally from the surface, with as many as 20 wells per pad. Typical reserves from these wells ranges from 1 to 5 BCF. Away from the center of the basin, lower temperature gradients have enabled generation of gas with a higher Btu value and some liquid hydrocarbons; these areas of the basin have been less developed to date but are likely to be present across large areas, including much of the leases subject to this EIS. The higher Btu value and presence of liquid hydrocarbons in these areas provides for more attractive well development economics. Ursa Resources is producing rich natural gas and condensate from many wells completed in Williams Fork sandstones directly north and adjacent to the Zone 2 and 3 leases."

DOWNEY, ROBERT

Comment:

This draft EIS provides an in-depth assessment of a wide range of potential flora, fauna, and visual resources of these federal lease areas, but unfortunately does not adequately assess the potential and value of the oil and gas mineral resources under the subject lands. The EIS very seriously fails to account for the enormous gas resources present in the massively thick Mancos shale that underlies the Piceance Basin, and that has proven commercially productive in dozens of wells around and on the subject leases, as well as the proven potential in other formations, such as the Williams Fork sands, shales and coal seams, and the Iles Formation sands and shales.

DOWNEY, ROBERT

Comment:

However, the socioeconomic analysis contained in the DEIS is still inadequate, as the “future full development” considered by the BLM does not account for the latest information regarding natural gas production from the extremely productive Mancos Shale formation in the lease area. The Associations contest the BLM’s foundational assumption in preparing the RFDS that “future development will follow past development trends.” Recent results from well completions suggest that future development will be distinctly different from past development, due to the increased use of horizontal drilling and completion within the Mancos Shale, and that these changes have the potential to dramatically increase production from these leases beyond previous expectations. The potential of the Mancos Shale underlying the lease area has been most recently demonstrated by SG Interest’s Falcon Seaboard #3 natural gas well. This well is less than 1 mile outside the area under consideration in the DEIS, and is currently producing between 6,000 Mscf and 7,000 Mscf per day. In addition to the new Falcon Seaboard #3 well, there are several other key indicators available that point to the enormous gas resource in the Mancos shale across the Thompson Divide: Encana’s Benzel 6-11H was completed in October 2011 a few miles to the northwest of the DEIS area, and has already produced 3.7 BCF of gas and is currently producing 900 Mscf per day. Texaco’s Thunderhawk #1 well was drilled in 1989 at the intersection of Mesa, Delta, and Pitkin Counties, in the heart of the DEIS area. It was drilled through the Mancos Shale to reach lower target formations, but the well logs included many gas shows in the Mancos Shale. The Chevron Hurd #1 was drilled in 1998 within the DEIS area, and “the drill stem test flowed gas to surface at an estimated rate of 7 million ft3/day.” These examples represent only a few of the more notable successes in Mancos Shale development that have occurred throughout the DEIS area. The Mancos shale is known to be about 4000 feet thick across the entire area, and contains prodigious recoverable gas reserves, estimated to be as large as 500 Bscf per square mile. There is no reason to doubt that lessees will be able and willing to extract these resources, which were not available in the past but are now recoverable with modern drilling techniques. Based on the preponderance of evidence, the DEIS must include a consideration of this new information when evaluating the scale of socioeconomic benefits that will result from the development of these leases.

LUDLAM, DAVID; COLORADO OIL & GAS ASSOC & WESTERN ENERGY ALLIANCE

Comment:

This draft EIS does not adequately assess the potential and value of the oil and gas mineral resources under the subject lands. The EIS very seriously fails to account for the enormous gas resources present in the massively thick Mancos shale that underlies the Piceance Basin, and that has proven commercially productive in dozens of wells around and on the subject leases, as well as the proven potential in other formations, such as the Williams Fork sands, shales and coal seams, and the lies Formation sands and shales.

ROBINSON, BRAD; GUNNISON ENERGY LLC

Comment:

The assessment of oil and gas hydrocarbon development potential appears to be grossly inadequate, and does not accurately consider the geological and petrophysical characteristics nor the commercial production potential of the hydrocarbon-bearing formations present. There is no discussion of the petroleum geology of the Piceance Basin and its multiple formations that have proven productive for oil and gas, and only cursory mention of the exploration and development that has occurred in this area of the Piceance Basin over the past several years. Most of the 11,000+ producing oil and gas wells in the Piceance Basin are producing from lenticular and padular sandstones the Upper Cretaceous Williams Fork formation, and are predominantly located in the central portion of the basin, where burial depth, temperature and pressure have provided maximum gas generation, and where mostly privately owned minerals and surface have enabled their exploration and development. Much of the leasehold in question is within this "basin centered gas" center area of the basin. These wells are generally drilled directionally from the surface, with as many as 20 wells per pad. Typical reserves from these wells ranges from 1 to 5 BCF. Away from the center of the basin, lower temperature gradients have enabled generation of gas with a higher Btu value and some liquid hydrocarbons; these areas of the basin have been less developed to date but are likely to be present across large areas, including much of the leases subject to this EIS. The higher Btu value and presence of liquid hydrocarbons in these areas provides for more attractive well development economics. Ursa Resources is producing rich natural gas and condensate from many wells completed in Williams Fork sandstones directly north and adjacent to the Zone 2 and 3 leases.

ROBINSON, BRAD; GUNNISON ENERGY LLC

Comment:

Perhaps most importantly, the EIS also barely mentions the truly enormous Mancos gas shale resource present across the entire Piceance Basin. The exploration and development of the natural gas resources contained in this massively thick gas shale deposit is in its infancy, with only 85 wells drilled to date. However, the most recent wells, including wells surrounding, in and adjacent to the leases subject to the EIS, have demonstrated excellent commercial production rates, and enormous gas reserves in excess of 10 BCF per well. As with the development of natural gas from gas shales in other basins, well construction in the initial development wells is usually not optimized, and further development will no doubt prove out this enormous strategic gas resource. The Mancos shale is about 4000 feet thick, underlies the entire Piceance Basin, and contains approximately 3000 Trillion cubic feet of natural gas; this is twice the volume of natural gas in the entire Marcellus shale, concentrated in just 5% of the surface area. Development of the Mancos shale gas resource will most likely be predominantly conducted via long horizontal wells drilled from pads, with as many as 50 wells per pad. The estimated gas in place in the Mancos shale averages more than 500 Billion cubic feet per square mile. In the 80,380 acres of leases subject to this EIS, there is likely to be more than 62 Trillion cubic feet of natural gas in the Mancos shale. Full development could provide for a recovery of more than 35% of this gas resource; and at an average gas price of $4 per MCF, with a 12.5% royalty rate, the value of the federal oil and gas minerals would exceed $11 Billion. To date, about 85 wells have been completed in the Mancos shale and placed on production; about 40 are poorly completed vertical well bores, and the other half were horizontal wells completed with undersized fracture stimulation treatments. Some of the vertical wells, and the most recent horizontal Mancos shale wells, have clearly demonstrated commercial gas production rates and reserves, and operators will no doubt begin development of this resource as gas prices improve in the coming months. A good example of a highly commercial Mancos shale horizontal gas well is the Encana Benzel 35-2HM, in Section 25, Township 6 South, Range 92 West. This well has a completed horizontal length of 7,250 feet, produced 1.5 Billion cubic feet of gas during its first year of production, and has an Estimated Ultimate Recovery of 10 Billion cubic feet of gas. There are at least 10 other horizontal Mancos shale gas wells having equal or greater EUR's than this well. Mancos shale exploration and development is ongoing today, despite low natural gas prices. For example, a few miles directly south of the Zone 3 lease area, SG Interests recently drilled two horizontal Mancos shale gas wells on fee lands in Section 12, Township 11 South, Range 90 West.

ROBINSON, BRAD; GUNNISON ENERGY LLC

Comment:

Other formations in the Piceance Basin, such as the Mancos Shale Formation, hold substantial potential for oil development and a number of operators in western Colorado have expressed interest in conducting exploration activities in the Mancos Shale. A number of operators in western Colorado have drilled successful Mancos Shale test wells that they believe will lead to commercial development. For example, WPX has drilled test wells in both the Mancos and Niobrara Shales. Axia has drilled a Mancos test well in Moffat County, Encana in its Orchard Unit in the Parachute area and Black Hills Energy in the western Piceance. The same is true for Oxy, Chevron and Piceance Energy. SG Interests and Gunnison Energy have similarly tested the Mancos Shale in the southern Piceance in Gunnison County and SG intends to drill the Mancos underlying its Leases. SG recently completed the Falcon Seaboard 11-90-12 #3, a Niobrara horizontal well in the Bull Mountain Unit in Section 12, Township 11 South, Range 90 West, Gunnison County, Colorado. The lateral completion length in this well is 2,875' and the average production rate for the first 21 days of production is 6,451 MCFD with 3,382 psi of casing pressure. A chart showing gas rate, casing pressure, water rate and choke size is attached as Ex. U. This well is located approximately 7 miles south of one of the SG Leases and SG believes that the production potential of the SG Leases will be the same as the Falcon Seaboard 11-90-12 #3 well. Other operators are pursuing exploration activities in the Niobrara Shale, which shows promise as an oil rich play, in areas closer to the basin center which underlie the WRNF. These developments undercut the BLM' s assumption that only 4 percent of wells will be horizontal. WRNF DEIS, ES-1. To the contrary, development of the Mancos Shale and Niobrara Shale Formations would utilize horizontal wells almost exclusively. WRNF DEIS at 1-9; 2-77 (only one horizontal well in Zone 3). Moreover, the high potential for oil and gas underlying the portions of the WRNF that are proposed to be closed to leasing under the ROD or subject to surface use restrictions has been known to BLM for some time. Yet, the BLM WRNF DEIS RFDS ignores these prior findings and relies on a constrained Forest Service analysis that eliminates high potential areas. For example, in an internal BLM Briefing Memorandum from Acting Deputy State Director for Lands and Minerals, Steven Bennett, Mr. Bennett states "The leases in the Lake Ridge Unit area have been identified as having high potential for oil and gas development." Ex. V. Similarly, the then BLM Colorado State Director, Helen Hankins, told the then BLM Director Robert Abbey on February 7, 2012 in describing the proposed Lake Ridge unit in the Thompson Divide, "[t]he proposed unit lies on the eastern flank of the Piceance Basin structure and the area is considered to have a high potential for O&G development ... " Ex. W. In the 2002 Documentation of Land Use Plan Conformance and NEPA Adequacy for the November 2003 Oil and Gas Lease Sale, which contained a number of the Lease parcels, BLM stated that over 300 wells were expected in the area in the next twenty years. In comments to the WRNF DEIS, Pitkin County's air quality expert acknowledged the high potential for oil and gas development in the Thompson Divide area, stating that the Forest Service had underestimated the potential for new wells in the area. Megan M. Williams, under contract with Pitkin County, Wilderness Workshop, and Natural Resources Defense Council, November 29, 2012, "Comments on the Air Quality Analysis for the August 2012 White River National Forest Oil and Gas Leasing Draft Environmental Impact Statement (DEIS), " Attachment pp. 40-41. Ex. X.

SIMPSON, DON; URSA PICEANCE LLC

BLM Response:

In preparing this EIS, BLM has used the Reasonably Foreseeable Development Scenario (RFDS) developed for the White River National Forest (WRNF) as the basis for analyzing the potential future indirect effects of each of the alternatives (USFS 2010a) .The RFDS notes that the WRNF generally has a favorable geologic setting for the occurrence of hydrocarbons such as oil and gas and that the western portion of the WRNF lies within the Piceance Basin. The RFDS specifically states that high oil and gas occurrence potential lies in the portion of the WRNF overlapping with the Glenwood Springs (now the CRVFO) FO (USFS 2010a, page 3). This has been clarified in Appendix D of the FEIS. Additional information about area geology as well as oil and gas potential in the area contained in the USFS RFDS (USFS 2010a) has also been incorporated by reference into Appendix D.

The RFD was prepared in accordance with Instruction Memorandum (IM) No. 2004-089; subject "Policy for Reasonable Foreseeable Development (RFD) Scenario for Oil and Gas", dated January 16, 2004. Its baseline assumption is that all potentially productive areas are open to development under standard lease terms, except those areas closed to leasing under law, regulation, or executive order. Five Total Petroleum Systems and 20 Assessment Units extend into the Piceance Basin, which were used to determine the areas of greatest potential for oil and gas occurrence. Additionally, unconventional plays were also analyzed and considered as possible candidates for leasing and development, including the Niobrara, Mancos Formation, and the Eagle Basin. The development potential for the CRVFO resource area was determined by analyzing occurrence potential cross-referenced with leasing information.

As stated in Instruction Memorandum No. 2004-089, "In addition to estimates concerning the presence of oil and gas resources based on geology, the RFD also considers other factors that affect oil and gas activity. Such factors include economics, changes in exploration, drilling, completion or production technology, physical limitations affecting surface access, bid performance at lease sales, oil and gas related infrastructure, and transportation." To that end, the RFDS also considered information provided by energy companies operating within the CRVFO resource area. Most of the data provided addressed development scenarios based on current mainstream technology. Data related to potential horizontal gas plays within the Niobrara and Mancos formations have been mostly proprietary within the oil and gas community. Although a recent USGS report (Hawkins et al. 2016) confirms the extent of the Mancos as a resource, the potential development in relation to horizontal gas plays is still in the exploratory stage. This USGS report does not change the speculative nature of these plays in terms of development intensity, timing, and location; thus they still could not be quantitatively analyzed with meaningful accuracy in the RFS or EIS. In the high potential zone of the Piceance Basin, total recoverable gas far exceeds any measure of annual production, and in general drilling is likely to be far more limited by price and capital availability than by available gas resources. Moreover, any development of Mancos or Niobrara wells would be applied against the assumed well numbers in the RMP. To date, operators indicate that these deeper shale plays may reduce the number of future Mesa Verde wells.

Despite the documented size of the Mancos as an undiscovered, technically recoverable resource, the RFDS projections as an estimate of future development for the purposes of analysis are supported by the very limited number of APDs for horizontal Mancos/Niobrara formation wells. During fiscal year 2015, the majority of the APDs received by the CRVFO were for the Mesa Verde Formation, with only 4 for the Mancos/Niobrara. Of the APDs received by CRVFO in the last 2 years, only 2.9% were for the Mancos/Niobrara formation group. In 2015, horizontal wells have made up approximately 4% of wells drilled in Garfield and Mesa County- again, on par with the RFD estimate. Further, the only horizontal wells drilled near the 65 leases were all in the vicinity of Zone 1, as forecasted in the EIS's RFD scaling appendix (Appendix D). Although there has been a slight trend to more horizontal drilling as a percent of total drilling over the last 5 years, it appears to be more related to a decline in directional and vertical wells than a significant increase in horizontal drilling. From the standpoint of the Society of Petroleum Engineer's (SPE) Petroleum Resources Management System (PRMS) guidelines, the resource status of the Mancos shale is indicative of its lower chance of commerciality in the foreseeable future, particularly in the leases in question where

development costs and permitting requirements may be higher and longer than in other areas of the basin, such as more highly developed private lands. Per USGS definition, assessment of technically recoverable resources does not include economic or accessibility considerations.

Specific to recent Mancos shale gas wells production wells:

• Encana's Benzel 6-11H (J12W) well (API # 05-045-20326-00-S1) has reported production (11/2015) of 23,192 MCF of Gas, 0 Bbls of Condensate, and 510 Bbls of Produced Water for the 30 days of November 2015.
• The Falcon Seaboard 11-90-12-3 (API # 05-051-06045-00-S1) began producing on 12/13/2015 after the DEIS was published. The production from this well was still not available on 1/22/2016. The BLM could only use known and available production number at the time of the RFDS in its analysis.
• The Texaco Thunderhawk Unit #1 well (API # 05-077-08581-00-X1) was never placed into production. While the logs do indicate gas shows in the Mancos, there is not enough data to assume it would productive.
• The BLM has not been able to verify any data on the Chevron Hurd #1 well as we are unable to locate it in the Colorado Oil and Gas Conservation Commission web site or the BLM's database.
• Two test wells on or near the WRNF Leases in the Zones 2 & 3 (the DCU 35 (B1-DCU) (API # 05-077-08812-00-S1 & The Renninger 30-7-2 NGG30NE (API # 05-077-10210-00-S1) did not prove as successful. The DCU 35 only shows 153 MCF of Gas, 0 Bbls of Condensate, and 0 Bbls of Produced Water for the month of Nov. 2015 and the Renninger 30-7-2 shows 5,641 MCF of Gas, 0 Bbls of Condensate, and 1,068 Bbls of Produced Water according to volumes reported to COGCC's Web Site. The Renninger was the Obligation well for the Groundhog Gulch Unit and was determined to be not capable of production in unit quantities and as a result the unit has since terminated.

As noted above, the data cited are not publicly available or of great enough detail to use in analysis. Additionally, because the RFDS does assume that there would be some development of Manco shale, this information does not change the development assumptions or method used for applying to the USFS RFDS to the existing leases, as described in Appendix D. Accordingly, no change has been made to RFDS analysis assumptions.

The RFDS used for this analysis does acknowledge the potential for change regarding accessibility of minerals from horizontal drilling. In the Draft EIS, assumption 4 in Appendix D, page D-8, stated that "More development may be possible if a higher proportion of horizontal wells is developed in the future." This assumption has been clarified to state that "Some minerals that are assumed not to be accessible through directional (s-curve) drilling due to a lack of suitable surface location may be accessible given the longer reaches and alternative methods possible through horizontal drilling. Thus, if horizontal drilling proves to be productive and economical in the area in the future, the RFD may underestimate the future level of horizontal (or total) drilling." However, as noted in other responses regarding drilling of the Mancos formation, an increase in horizontal drilling would likely be offset by a reduction in directional (s-curve) drilling.

The RFDS and the planning process of which it is part are not intended to define the specific numbers and locations of wells and pads needed to develop oil and gas resources. Instead, they are intended to allow flexibility during resource development while providing sufficient specificity to support the impact analysis and alternative selection process. The actual level of oil and gas development associated with any specific alternative is likely to differ substantially from the RFDS due to alternative-specific measures aimed at protection and management of other uses and resources. Furthermore, the RFDS is not intended to be used as a leasable mineral cap, and therefore, does not limit or preclude, practical future mineral plays; instead, it is an analytical tool used to predict potential energy development. Therefore, the actual number of drill rigs active at any one time, the number of wells and pads constructed during 20 years, the resultant acres of surface disturbance, and miles of new or upgraded access roads under any of the alternatives may differ from the assumed numbers due to factors subject to change, such as natural gas prices, technological advances, or new requirements related to other land uses and resource management goals This use of the RFDS is explained in Section 1.2.1 and in Appendix D of the DEIS (page 1).

Comment:

The MLA, FLPMA, and the Energy Policy Act of 2005 contain language that affirm that federal mineral resources are to be managed for sustained yield and the greatest benefit for the American taxpayer, as well as for the benefit of national energy independence and energy security. It is crucial that the DEIS accurately describe the mineral resources that would be affected by the proposed action, especially given the preponderance of evidence that suggests that the resources (and associated production and royalty revenues) are very significant. Therefore the Associations contend that the BLM must revise their evaluation of the leases, and the RFDS that supports it, to more accurately account for the latest information.

LUDLAM, DAVID; COLORADO OIL & GAS ASSOC & WESTERN ENERGY ALLIANCE

BLM Response:

In preparing this EIS, BLM has used the Reasonably Foreseeable Development Scenario (RFDS) developed for the White River National Forest (WRNF) as the basis for analyzing the potential future indirect effects of each of the alternatives (USFS 2010a) .The RFDS notes that the WRNF generally has a favorable geologic setting for the occurrence of hydrocarbons such as oil and gas and that the western portion of the WRNF lies within the Piceance Basin. The RFDS specifically states that high oil and gas occurrence potential lies in the portion of the WRNF overlapping with the Glenwood Springs (now the CRVFO) FO (USFS 2010a, page 3). This has been clarified in Appendix D of the FEIS. Additional information about area geology as well as oil and gas potential in the area contained in the USFS RFDS (USFS 2010a) has also been incorporated by reference into Appendix D.

BLM has used the WRNF's RFDS to reasonably consider future development under these alternatives. Per Appendix D of the DEIS, "An RFDS is a long-term projection (scenario) of oil and gas exploration, development, production and reclamation activity for a defined area and defined period of time. An RFDS is not a prediction of activity; rather it is a possible reasonable scenario of activity under a specified set of assumptions in order to evaluate potential effects that might reasonably occur as a result of BLM leasing. The RFDS is based on geology; resource occurrence potential; past and current leasing, exploration, and development activity; and engineering technology. It also considers economics and physical limitations on access to resources. An RFDS is not a decision, and it does not establish or imply a cap on development."

The purpose and need for action included in Sections 1.3 and 1.4 of the DEIS reference compliance with the MLA and all of the laws cited in the comment are identified in Section 1.6 because they were considered during the preparation of the EIS.

Comment:

We question BLM's assertion that it analyzed "unconstrained" estimated projection of future oil and gas development in the BLM WRNF DEIS RFDS. BLM WRNF DEIS at ES-1. According to the RFDS used in the WRNF 2014 FEIS, based on minimal constraints (baseline) oil and gas development, up to 1,014 wells from up to 179 pads could be developed in the WRNF over the next 20 years. WRNF 2014 FEIS at 44. However, based upon the proposed management restrictions and closures contained in the WRNF 2015 FEIS/ROD, nothing close to that level of development will be possible. These restrictions include a significant reduction in acreage available for leasing from 411,475 acres under the current plan to 198,513 acres under the WRNF 2015 ROD and also very large increases in areas designated as NSO and CSU. See WRNF 2014 FEIS Tables 7 at 53, 8 at 55, 9 at 57, and 10 at 58.

Moreover, BLM, like the Forest Service, has underestimated future development by reliance on the Forest Service's flawed assumption that past development informs future development. BLM WRNF DEIS, ES-2; 1-9; 2-77 and Appendix D. The BLM's RFDS states that future development will follow past development trends and technology, but no method is provided for those areas where there is either no development history or historic development falling outside of the Forest Service's arbitrary "last 10-15 years" time period to judge future leasing potential. WRNF DEIS, D-7.

SIMPSON, DON; URSA PICEANCE LLC

BLM Response:

As stated in the USFS RFDS (USFS 2010a), the term “unconstrained” in an RFDS means that there are no restrictions on surface use assumed in the baseline scenario. This is discussed in Section 1.2.15, which states that Table 1-2 summarizes the existing wells and projected future unconstrained development in each zone, assuming no constraints such as lease stipulations. Table 1-2 has been revised to include a definition of “unconstrained” contained in the USFS 2010 RFDS.

Because the 65 existing leases are only a small portion of the entire area of available federal minerals in the WRNF addressed by that RFDF, assumed well numbers used for this EIS are similarly scaled from the original projections in the USFS RFDS to 444 wells (see Section 1.4.1 of the Draft EIS). As described in Section 2.7.4, this RFDS was then scaled by alternative to reflect constraints of stipulations. Although some areas of the WRNF have been closed to leasing since development of the RFDS, the well numbers still represent the best available information regarding development in the next 20 years. Moreover, the RFDS is not intended to define the specific numbers and locations of wells and pads needed to develop oil and gas resources. Instead, the RFDS is intended to allow flexibility during resource development while providing sufficient specificity to support the impact analysis and alternative selection process. The actual level of oil and gas development associated with any specific alternative is likely to differ substantially from the RFDS due to alternative-specific measures aimed at protection and management of other uses and resources. Furthermore, the RFDS is not intended to be used as a leasable mineral cap, and therefore, does not limit or preclude, practical future mineral plays; instead, it is an analytical tool used to predict potential energy development.

The RFDS used for this analysis does acknowledge the potential for change regarding accessibility of minerals from horizontal drilling. In the Draft EIS, assumption 4 in Appendix D, page D-8, stated that “More development may be possible if a higher proportion of horizontal wells is developed in the future.” This assumption has been clarified to state that “Some minerals that are assumed not to be accessible through directional (s-curve) drilling due to a lack of suitable surface location may be accessible given the longer reaches and alternative methods possible through horizontal drilling. Thus, if horizontal drilling proves to be productive and economical in the area in the future, the RFD may underestimate the future level of horizontal (or total) drilling.” However, as noted in other responses regarding drilling of the Mancos formation, an increase in horizontal drilling would likely be offset by a reduction in directional (s-curve) drilling.

Comment:

Several other assumptions and figures do not appear correct in BLM' s RFDS. BLM assumes that formations not accessible via s-curved wellbores will not be developed, but provides no technical basis for this conclusion. BLM WRNF DEIS at App. D. SG's experience in the area demonstrates that vertical wellbores can reach the formations in question. BLM also makes unrealistic assumptions that horizontal wells can have a 10,500 foot reach from the surface - that does not seem feasible and perhaps should be clarified to state that this includes vertical depth and not horizontal reach alone. BLM WRNF DEIS at D-8. Unfortunately, this incorrect assumption is used to make further assumptions about the number of pads per lease and number of wells per pad. See BLM WRNF DEIS at App. D-8. The numbers on Table D-2 do not appear correct. BLM WRNF DEIS at App. D-11. For most of BLM's alternatives only 1 well is horizontal which would leave the remainder of the wells (about 50 for the first two alternatives) as directional or vertical. This is not what is shown in Table D-2.

SIMPSON, DON; URSA PICEANCE LLC

BLM Response:

The development assumptions presented in Section 2.7 of the DEIS and Appendix D are generally derived from the USFS RFDS (USFS 2010a). As stated in Section 2.7.2, the RFDS for the analysis area assumes development of the Mesa Verde Formation primarily by the use of conventional vertical or directionally drilled wells. The rationale for this statement is contained in Appendix D, which states as an assumption that future development will follow past development trends and technology. While the USFS RDS 2010a and Appendix D do assume that most wells will be directionally drilled (see USFS 2010a, page 24), vertical wellbores are considered in the RFDS. Table 2-7 considers supplies the number of the projected wells by well type and considers that vertical drilling may be used in place of directional drilling.

The assumption in Appendix D identifies a 10,500 foot horizontal reach. The lateral reach for a horizontal well is dependent on multiple factors which include the geology of the target reservoir, the capabilities of the drilling rig, the service equipment, and the economics of the well to be drilled. Many of the horizontal wells in the area around the existing leases are between 1 to 1.5 miles; however there are two permitted wells in Township 8 South, Range 96 West that are permitted for a 2 mile lateral reach. Based on a review of the surrounding wells, the lateral reach of all horizontal wells in the analysis was assumed to be 2 miles. The 2 mile lateral reach exceeds the current lateral reach of wells in the area; however, it is a conservative estimate based on industry comments on the WRNF RFDS.

Table D-2 is corrected to be identical to Table 2-7 in Chapter 2.0. There was an error in Table D-2 in that the “Totals” line was not included so it inadvertently displayed the total number of wells as occurring in Zone 4.

Comment:

The number of transportation trips per well pad indicated in Table 2-6 appears to be unrealistically high. For example, for horizontal wells, the total for drilling a single well would be 458 trips, and 248 trips for completion. Horizontal Mancos shale wells in the Piceance Basin usually require about 30 days to drill, and 30 days to complete. Likewise the number of employees, 55 per day, is much higher than actually experienced.

DOWNEY, ROBERT

Comment:

The number of transportation trips per well pad indicated in Table 2-6 appears to be unrealistically high. For example, for horizontal wells, the total for drilling a single well would be 458 trips, and 248 trips for completion. Horizontal Mancos shale wells in the Piceance Basin usually require about 30 days to drill, and 30 days to complete. Likewise the number of employees, 55 per day, is much higher than actually experienced.

ROBINSON, BRAD; GUNNISON ENERGY LLC

BLM Response:

In preparing this EIS, the BLM has used the Reasonably Foreseeable Development Scenario (RFDS) developed for the White River National Forest (WRNF) as the basis for analyzing the potential future indirect effects of each of the alternatives (USFS 2010a) The number of truck trips is based on the RFDS and is generally consistent with the assumptions used by the WRNF in the 2014 FEIS for Oil and Gas Leasing (USFS 201a, USFS 2014). It is also generally reflective of BLM assumptions in analyzing site-specific development proposals by industry, and correspondence with operators.

Comment:

The RFDS departs significantly from the conclusions of independent experts that exploration of the Zone 3 leases would be highly unlikely to result in the discovery of economic quantities of oil or gas. The Local Government Joint Scoping Comments (at 21-25) presents an in-depth discussion of the conclusions of Wright Consulting Company (by John Wright, PhD, PE) and Leslie O'Connor (Licensed Petroleum Geologist) regarding the geological potential (or more accurately, the lack thereof) of the Zone 3 leases, formation by formation. Specifically, the statement that there "are 50 existing wells within 2 miles of the lease boundaries within this zone" would not appear to pass the straight face test for the level of geological and petroleum engineering certainty that a reasonably prudent investor would exercise before investing tens of millions of dollars in drilling and infrastructure costs. DEIS at 1-9. This projection is highly suspect. It appears on its face to be supported by nothing more than an untested assumption that lands within 2 miles of existing wells would be likely to be as productive as the established locations. If only the fluid minerals business were so simple and predictable.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

The determination of whether leases can be developed profitably is outside the scope of this EIS. The identification of 50 existing wells within 2 miles of the Zone 3 lease boundaries is based on COGCC spatial data downloaded for the EIS and can be checked using this publicly available information. It is not a projection. The RFDS provides a reasonable projection based on the best available data. The studies referenced in the comment did not consider the potential of the deeper formation (Mancos/Niobrara, Frontier, Dakota/Cedar Mountain) and assumed that a very expensive road from the west would be built into the area in order to develop the area. The RFDS was prepared for the WRNF and used by the BLM to ensure analysis that is consistent with the USFS Oil and Gas Leasing FEIS (USFS 2014) and ROD (USFS 2015).

Comment:

The amount of fresh water use in Table 2-8 appears to be unrealistically high. Most Piceance Basin operators either use their own produced water, or purchase produced water from other operators, for use in hydraulic fracture stimulation treatments.

DOWNEY, ROBERT

Comment:

The amount of fresh water use in Table 2-8 appears to be unrealistically high. Most Piceance Basin operators either use their own produced water, or purchase produced water from other operators, for use in hydraulic fracture stimulation treatments.

ROBINSON, BRAD; GUNNISON ENERGY LLC

BLM Response:

In preparing this EIS, BLM has used the Reasonably Foreseeable Development Scenario (RFDS) developed for the White River National Forest (WRNF) as the basis for analyzing the potential future indirect effects of each of the alternatives (USFS 2010a) The source of the freshwater use data is based on the RFDS. The estimate is based on available data in the Piceance Basin. Produced water or recycled water was included in the calculations that were assumed to occur over 20 years. Industry has not provided better numbers to use. Water use can vary by operator, location, well specifications, and other factors. As such, this general estimate is reasonable for the purposes of comparison and analysis.

Comment:

The Forest Service 2010 analysis was based on historical oil and gas development and did not include the modern technological advancements that have dramatically changed the domestic oil and gas supply story. The Forest Service based its WRNF 2015 FEIS/ROD analysis on where "past activities including where oil and gas development has proven productive." WRNF 2015 ROD at 4. The Forest Service identified "low potential" areas as areas that have had no oil or gas production in the last 10-15 years and limited future oil and gas leasing to "lands that have proven to be productive in the past 10-15 years." Id. This backwards looking analysis did not account for new, more recent discoveries in the Piceance Basin. The Piceance Basin is where Laramie has its most significant investments and it is an area we know well. There are significant and attainable natural gas and oil resources in the Piceance Basin underlying the WRNF that BLM should analyze in the RFDS. The Forest Service WRNF 2015 ROD RFDS ignores the potential for oil and gas development in the region, and instead comes to the unsupported conclusion that the geology underlying the Forest does not support economically viable oil or gas bearing formations. According to ICF International, the Uinta-Piceance formation straddling eastern Utah and western Colorado holds 150.1 Tcf of unproved gas reserves.

BOSWELL, ROBERT; LARAMIE ENERGY LLC

Comment:

The previous comments also asked BLM to consider advancements in technology and operational practices, specifically directional and horizontal drilling from existing well pads to access minerals from adjacent leases that are inaccessible at the surface due to designated No Surface Occupancy (NSO) stipulations. These technological advancements reduce the overall surface disturbance and allow drilling to access minerals in otherwise inaccessible areas within the feasible reach of drilling and well construction.

ODEGARD, CHAD E; WPX ENERGY

Comment:

The Forest Service 2010 analysis was based on historical oil and gas development and did not include the modem technological advancements that have revolutionized domestic oil and gas development. The Forest Service 2010 RFDS also failed to adequately address undeveloped but prospective geologic horizons. The Forest Service based its WRNF 2015 FEIS/ROD analysis on where "past activities including where oil and gas development has proven productive." WRNF 2015 ROD at 5. The Forest Service identified "low potential" areas as areas that have had no oil or gas production in the last 10-15 years and limited future oil and gas leasing to "lands that have proven to be productive in the past 10-15 years." Id. The Forest Service even closed areas to future leasing, including the Thompson Divide area, that have recognized "high" potential for oil and gas development because "up to this point no producing wells have been developed on these lands." WRNF 2015 ROD at 6. But in the highly technological and competitive oil and gas industry the past is not prologue when predicting future oil and gas development. The advances in production technology, notably, a new combination of horizontal drilling and hydraulic fracturing, have resulted in a dramatic increase in economically-viable reserves in historically unproductive shales. These modem technologies have been developed and proven within the last 8 years - commercially viable production of shale gas was proven in 2007 and shale oil extraction proven in 2010. There are significant and attainable natural gas and oil resources in the Piceance Basin underlying the WRNF that BLM should analyze in the RFDS. The WRNF overlaps with three U.S. Geological Survey Assessment Provinces: the Uinta-Piceance Province, the Southwestern Wyoming Province and the Park Basins Province. The WRNF lies within the Piceance Basin portion of the Uinta-Piceance Province, the Greater Green River Basin portion of the Southwestern Wyoming Province, and the Middle Park Basin portions of the Park Basins Province. The Forest Service WRNF 2015 ROD RFDS ignores the potential for oil and gas development in the region, and instead comes to the unsupported conclusion that the geology underlying the Forest does not support economically viable oil or gas bearing formations. These three basins are estimated to contain huge volumes of proven natural gas and un-proven oil reserves. According to ICF International, the Uinta-Piceance formation straddling eastern Utah and western Colorado holds 150.1 Tcf of unproved gas reserves. Ex. T.

SIMPSON, DON; URSA PICEANCE LLC

BLM Response:

Section 2.7 of the DEIS includes a description of typical oil and gas technology and operational practices. Section 2.7.2 (Differences between Vertical or Directionally Drilled and Horizontally Drilled Wells) acknowledges the ability to operators to access minerals from adjacent leases that are inaccessible at the surface through directional and horizontal drilling. The section notes that the RFDS for the analysis area assumes development of the Mesa Verde Formation primarily by the use of conventional vertical or directionally drilled wells; Table 2.5 includes estimated projections of vertical or directionally drilled and horizontally drilled wells. These estimates were derived from the Reasonably Foreseeable Development Scenario (RFDS) developed for the White River National Forest (USFS 2010a).

The RFDS was developed with consideration of information provided by energy companies operating within the CRVFO resource area. Most of the data provided addressed development scenarios based on current mainstream technology. Data related to potential horizontal gas plays within the Niobrara and Mancos formations have been mostly proprietary within the oil and gas community. Although a recent USGS report (Hawkins et al. 2016) confirms the extent of the Mancos as a resource, the potential development in relation to horizontal gas plays is still in the exploratory stage. This USGS report does not change the speculative nature of these plays in terms of development intensity, timing, and location; thus they still could not be quantitatively analyzed with meaningful accuracy. In the high potential zone of the Piceance Basin, total recoverable gas far exceeds any measure of annual production, and in general drilling is likely to be far more limited by price and capital availability than by available gas resources. Moreover, any development of Mancos or Niobrara wells would be applied against the assumed well numbers in the RMP. To date, operators indicate that these deeper shale plays may reduce the number of future Mesa Verde wells.

Despite the documented size of the Mancos as an undiscovered, technically recoverable resource, the RFDS projections as an estimate of future development for the purposes of analysis are supported by the very limited number of APDs received for horizontal Mancos/Niobrara formation wells. During fiscal year 2015, the majority of the APDs received by the CRVFO were for the Mesa Verde Formation, with only 4 for the Mancos/Niobrara. Of the APDs received by CRVFO in the last 2 years, only 2.9% were for the Mancos/Niobrara formation group. In 2015, horizontal wells have made up approximately 4% of wells drilled in Garfield and Mesa County- again, on par with the RFD estimate. Further, the only horizontal wells drilled near the 65 leases were all in the vicinity of Zone 1, as forecasted in the EIS's RFD scaling appendix (Appendix D). Although there has been a slight trend to more horizontal drilling as a percent of total drilling over the last 5 years, it appears to be more related to a decline in directional and vertical wells than a significant increase in horizontal drilling.

The RFDS used for this analysis does acknowledge the potential for change regarding accessibility of minerals from horizontal drilling. In the Draft EIS, assumption 4 in Appendix D, page D-8, stated that "More development may be possible if a higher proportion of horizontal wells is developed in the future." This assumption has been clarified to state that "Some minerals that are assumed not to be accessible through directional (s-curve) drilling due to a lack of suitable surface location may be accessible given the longer reaches and alternative methods possible through horizontal drilling. Thus, if horizontal drilling proves to be productive and economical in the area in the future, the RFD may underestimate the future level of horizontal (or total) drilling." However, as noted in other responses regarding drilling of the Mancos formation, an increase in horizontal drilling would likely be offset by a reduction in directional (s-curve) drilling.

Comment:

The assertion that one paying well can be drilled for each of these 25 leases is gainsaid and contradicted by the lack of any wells to date, and the absence of so much as a single APD for the majority of these leases. The few APDs that were submitted in a transparent and documented attempt to stave off expiration were belated, incomplete, could not be finalized before expiration, and fell far short overall of satisfying the lease covenant requiring diligent development to avoid termination at the end of the generous ten-year base term. If future development follows past trends, these leases would remain undeveloped by lessees. The lack of horizontal drilling (per the DEIS and RFDS) would be expected to result considerably greater adverse impacts and risks to renewable resources than if horizontal drilling programs were employed. The 53 wells optimistically predicted for Zone 3 are inconsequential: representing less than 12% of the 444 total wells projected for the 65 leases. The RFDS groups the projected wells "based on the location of past development, production infrastructure, and access for exploration and production." DEIS at ES-2. These factors tend to mitigate against the proposition that developing dubious or marginal oil and gas under the Divide leases squares with the comprehensive environmental analysis documenting the remoteness of these leases, the lack of any existing development, the difficulties inherent in attempting development in or extending costly infrastructure to this rugged terrain, and the unequivocal weight of public and local government opinion.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

In preparing this EIS, BLM has used the Reasonably Foreseeable Development Scenario (RFDS) developed for the White River National Forest (WRNF) as the basis for analyzing the potential future indirect effects of each of the alternatives (USFS 2010a). The basic assumptions used to allocate the total unconstrained RFDS by zone are summarized in Appendix D. Relative to the comment, they include the following:

- The RFDS is a 20-year projection.
- Future development will follow past development trends and technology.

For analysis purposes, it was assumed that one horizontal well would be drilled in Zone 3 although none have yet been drilled in this area to date. The assumption does not state that this well (or any well) would be a paying well. As noted in Appendix D, the application of these assumptions to each lease are only intended to be applied at the scale of the zone and do not reflect any knowledge or prediction of site-specific proposals for development at the scale of each lease. As the RFDS is a 20-year projection, it is not expected nor implied that all of the RFDS would be developed within a 10-year life of these leases.

Comment:

The assessment does not appear to accurately consider current Piceance Basin well construction and well spacing in the "Per Alternative Estimation of Well and Well Pad Numbers by Zone". Horizontal wells are the predominant type of well being drilled for most unconventional gas resource plays in the US today. Yet, the Table D-2 shows the maximum number of projected horizontal wells at 16, in Zone 1, with only 1 horizontal well in Zones 2 and 3, and none in Zone 4. Obviously, no consideration was given to the development of the Mancos shale, which would most likely involve hundreds of horizontal wells to fully develop. Horizontal wells provide real advantages over vertical and directional wells, in that multiple wells can be drilled from a single pad location. This minimizes the surface disturbance area, concentrates activities to pads, reduces the number of pads required for development, provides for high drilling and completion efficiencies, enables surface equipment to be optimized, and minimizes air, water, vegetation, wildlife and visual impacts. In addition to the Mancos shale, some operators have completed horizontal wells in the lies Iles formation in the Piceance Basin, and likewise this was not noted, and may not be known to the preparers, but can be determined from a review of well completion data available on line via the Colorado Oil and Gas Conservation Commission website. Directional wells, most likely anticipated to target the Williams Fork sandstones, were indicated in Table D-2, but the number of wells indicated does not appear to represent full development of that resource. For example, all Alternatives indicate a total of 318.1 wells projected in Zone 2, which encompasses 24,938 acres. This equates to more than 78 acres per well; yet Williams Fork directional wells have been generally drilled on 20 to 40 acre spacing in the Piceance Basin.

DOWNEY, ROBERT

Comment:

The assessment does not appear to accurately consider current Piceance Basin well construction and well spacing in the "Per Alternative Estimation of Well and Well Pad Numbers by Zone”. Horizontal wells are the predominant type of well being drilled for most unconventional gas resource plays in the US today. Yet, the Table D-2 shows the maximum number of projected horizontal wells at 16, in Zone 1, with only 1 horizontal well in Zones 2 and 3, and none in Zone 4. Obviously, no consideration was given to the development of the Mancos shale, which would most likely involve hundreds of horizontal wells to fully develop. Horizontal wells provide real advantages over vertical and directional wells, in that multiple wells can be drilled from a single pad location. This minimizes the surface disturbance area, concentrates activities to pads, reduces the number of pads required for development, provides for high drilling and completion efficiencies, enables surface equipment to be optimized, and minimizes air, water, vegetation, wildlife and visual impacts. In addition to the Mancos shale, some operators have completed horizontal wells in the Iles formation in the Piceance Basin, and likewise this was not noted, and may not be known to the preparers, but can be determined from a review of well completion data available online via the Colorado Oil and Gas Conservation Commission website. Directional wells, most likely anticipated to target the Williams Fork sandstones, were indicated in Table D-2, but the number of wells indicated does not appear to represent full development of that resource. For example, all Alternatives indicate a total of 318.1 wells projected in Zone 2, which encompasses 24,938 acres. This equates to more than 78 acres per well; yet Williams Fork directional wells have been generally drilled on 20 to 40 acre spacing in the Piceance Basin.

ROBINSON, BRAD; GUNNISON ENERGY LLC

BLM Response:

The RFDS does not project full development, but only future development over the next 20 years. Therefore, no assumptions regarding well spacing were applied. It should be noted that the areas covered by many of the 65 previously issued leases are not in locations that would be easy to drill or likely to experience full development within 20 years, especially in areas with little existing infrastructure. Many of these leases are undeveloped many years after being issued. More information on the historic development trends in different zones, including the data on horizontal wells, is provided in Appendix D. See also other RFDS responses regarding consideration of the development of Marcos shale.

Comment:

The assumption that only 3.9 percent of the wells on all leases will be horizontally drilled is erroneous and does not reflect actual recent well development activities in the Piceance Basin. Further, assuming only 7 wells per pad is not consistent with current well development activities for directional wells. There are numerous examples in the Piceance Basin where well pads have as many as 24 wells. The assumption of such a small number of horizontal wells, just 2 horizontal wells per pad, and only 7 directional or vertical wells per pad, in turn causes an assumption of a higher number of well pads and greater resulting projected surface disturbance than what would most likely actually occur. Piceance Basin operators seek to minimize the number of well pads and miles of access roads in order to reduce construction, operation and reclamation costs, and to improve operating efficiency. Minimizing surface disturbances also lowers the costs associated with well and facilities permitting, and the risks and delays of permit denials, objections and amendments.

DOWNEY, ROBERT

Comment:

The assumption that only 3.9 percent of the wells on all leases will be horizontally drilled is erroneous and does not reflect actual recent well development activities in the Piceance Basin. Further, assuming only 7 wells per pad is not consistent with current well development activities for directional wells. There are numerous examples in the Piceance Basin where well pads have as many as 24 wells. The assumption of such a small number of horizontal wells, just 2 horizontal wells per pad, and only 7 directional or vertical wells per pad, in turn causes an assumption of a higher number of well pads and greater resulting projected surface disturbance than what would most likely actually occur. Piceance Basin operators seek to minimize the number of well pads and miles of access roads in order to reduce construction, operation and reclamation costs, and to improve operating efficiency. Minimizing surface disturbances also lowers the costs associated with well and facilities permitting, and the risks and delays of permit denials, objections and amendments.

ROBINSON, BRAD; GUNNISON ENERGY LLC

BLM Response:

In preparing this EIS, BLM has used the Reasonably Foreseeable Development Scenario (RFDS) developed for the White River National Forest (WRNF) as the basis for analyzing the potential future indirect effects of each of the alternatives (USFS 2010a). Despite the documented size of the Mancos as an undiscovered, technically recoverable resource, the RFDS projections as an estimate of future development for the purposes of analysis are supported by the very limited number of APDs for horizontal Mancos/Niobrara formation wells. During fiscal year 2015, the majority of the APDs received by the CRVFO were for the Mesa Verde Formation, with only 4 for the Mancos/Niobrara. Of the APDs received by CRVFO in the last 2 years, only 2.9% were for the Mancos/Niobrara formation group. In 2015, horizontal wells have made up approximately 4% of wells drilled in Garfield and Mesa County- again, on par with the RFD estimate. Further, the only horizontal wells drilled near the 65 leases were all in the vicinity of Zone 1, as forecasted in the EIS's RFD scaling appendix (Appendix D). Although there has been a slight trend to more horizontal drilling as a percent of total drilling over the last 5 years, it appears to be more related to a decline in directional and vertical wells than a significant increase in horizontal drilling.

The RFDS used for this analysis does acknowledge the potential for change regarding accessibility of minerals from horizontal drilling. In the Draft EIS, assumption 4 in Appendix D, page D-8, stated that "More development may be possible if a higher proportion of horizontal wells is developed in the future." This assumption has been clarified to state that "Some minerals that are assumed not to be accessible through directional (s-curve) drilling due to a lack of suitable surface location may be accessible given the longer reaches and alternative methods possible through horizontal drilling. Thus, if horizontal drilling proves to be productive and economical in the area in the future, the RFD may underestimate the future level of horizontal (or total) drilling." However, as noted in other responses regarding drilling of the Mancos formation, an increase in horizontal drilling would likely be offset by a reduction in directional (s-curve) drilling.

The high numbers of wells per pad referenced in the comment is in areas that are more fully developed. The assumed 7 wells per pad is an average estimate, and assumes that some of the development would be exploratory, not infill.

Comment:

The DEIS fails to adequately consider the development and infrastructure implications of the proposed partial lease cancellations. The DEIS does not address a significant impact of the proposed lease cancellations, which is the impact to planned and existing surface facilities and infrastructure on the subject leases and adjacent leases. NEPA requires that a consideration of "connected actions" associated with the proposed action be included where relevant and germane to the analysis, and further requires that impacts to the human environment "shall be interpreted comprehensively" (40 CFR 1508). In this case, the impact to unit- and field-wide infrastructure planning must be considered. Individual leases are acquired by companies as part of a coherent portfolio of lease holdings. Although the primary factor that determines a lease's potential value are the hydrocarbon resources contained in that lease, a major secondary factor is the extent of the capital outlay required to extract those hydrocarbons. Oil and natural gas companies have worked diligently to acquire contiguous lease holdings that are appropriate for their individual business models and resources, and which can be developed in an efficient and cost-effective fashion. Orderly development of the hydrocarbon resource relies on years of planning regarding the siting of well pads, the development of an efficient road network, and sufficient access to pipeline infrastructure to transport the products to market. This planning process does not take place at the level of the lease, but at the level of the unit or even the entire field. Well pads are located to reach the desired bottom hole locations; road networks are planned to service the necessary well pads with a minimum of surface disturbance; pipeline gathering networks are planned to minimize construction and maintenance costs and conform to negotiated purchase agreements.

LUDLAM, DAVID; COLORADO OIL & GAS ASSOC & WESTERN ENERGY ALLIANCE

BLM Response:

As noted in the BLM NEPA Handbook H 1790-2008, "connected actions" are limited to actions that are currently proposed (ripe for decision). Actions that are not yet proposed are not connected actions, but may need to be analyzed in cumulative effects analysis if they are reasonably foreseeable. While operators may seek to develop a cohesive portfolio, not all future plans are reasonably foreseeable. The Draft EIS does consider current and pending APDs as well as the other reasonably foreseeable development its cumulative effect analysis (See Appendix B). The BLM has also considered the use of existing roads in the analysis.

Section 4.3 has been revised to include a discussion of potential impacts to future and existing operations from the addition of NSO stipulations or lease cancellations, by alternative.

Comment:

Cancelling some or all of a single lease has impacts beyond the boundaries of that lease, and methodology used for adjust the RFDSs for Alternative in the DEIS14 does not account for the economic and logistical challenges posed by canceling portions of an otherwise-contiguous leaseholding. The DEIS does contain a basic analysis that purports to show that all remaining leases would be accessible under Alternative 4 (Figure D-3) despite the proposed cancellations and additional NSO stipulations. However, this analysis is extremely flawed, since it assumes that all development can be achieved using horizontal bores of 2 miles in length, regardless of topographic, stratigraphic, and economic constraints.

LUDLAM, DAVID; COLORADO OIL & GAS ASSOC & WESTERN ENERGY ALLIANCE

BLM Response:

As noted in Table D-2 of Appendix D (page D-11 in the Draft EIS), only 1 horizontal well was projected in Zone 3 for purposes of analysis. In Assumption 4 on page D-8 in the Draft EIS, it states that "horizontal wells can reach target formations up to 10,500 feet away from the surface location". An additional qualifier was added to this assumption to clarify that the actual distance for a successful horizontal well depends on other factors, such as the topographic and stratigraphic constraints and the target formation. The analysis displayed in Figure D-3 was not used for anything other than to show where there would be NSO limitations off-lease within the maximum distance for horizontal drilling, based on the Forest Service's stipulations for future leasing. Actual analysis of site-specific horizontal wells was not undertaken for this leasing-level analysis and economic constraints cannot be considered as that is based on decisions by each operator.

In the Draft EIS, assumption 4 in Appendix D, page D-8, stated that "More development may be possible if a higher proportion of horizontal wells is developed in the future." This assumption has been clarified to state that "Some minerals that are assumed not to be accessible through directional (s-curve) drilling due to a lack of suitable surface location may be accessible given the longer reaches and alternative methods possible through horizontal drilling. Thus, if horizontal drilling proves to be productive and economical in the area in the future, the RFD may underestimate the future level of horizontal (or total) drilling." However, as noted in other responses regarding drilling of the Mancos formation, an increase in horizontal drilling would likely be offset by a reduction in directional (s-curve) drilling.

Comment:

The analysis also fails to take into account the COGCC minimum spacing rules for wellbores, which make it impossible to direct more than a limited number of wells in a given cardinal direction from a single well pad. In other words, it is not accurate to assume that full development can be achieved from outside the lease, especially at a distance of as much as 2 miles.

LUDLAM, DAVID; COLORADO OIL & GAS ASSOC & WESTERN ENERGY ALLIANCE

BLM Response:

Assumption 5 on page D-8 of Appendix D states that well spacing and density were not considered limiting factors due to the low projected future well numbers for this leasing-level analysis. The RFDS projections assume a relatively low density due to the exploratory nature of development, especially in Zone 3. Site-specific spacing and density rules would be considered at the APD stage of permitting and there is no assumption of unlimited well numbers conveyed by lease rights.

Comment:

Furthermore, the analysis concludes that no additional lease would become inaccessible “should more extensive use of horizontal drilling be employed by operators.” This assumption conflicts with the rest of the RFDSs, which assumes that “future development will follow past development trends” and places minimal emphasis on horizontal drilling. In summary, the existing analysis does not take into account the effect of lease cancellation and NSO stipulation on the feasible development of surface facilities. The effect of the proposed lease cancellations on subsurface mineral accessibility is analyzed on a per-lease basis, which is misleading and inaccurate, and does not account for limitations imposed by state regulations regarding wellbore spacing. Finally, the analysis of impacts to neighboring leases is a perfunctory feel-good effort that reaches its conclusion of minimal effect by shifting the burden to the operators by assuming a reliance on expensive, potentially-infeasible horizontal drilling, all while contradicting all previous analyses in the DEIS that minimize the likelihood of horizontal drilling. Anyone reasonably familiar with oil and gas development would recognize this analysis as inadequate to evaluate the impacts to the lessees.

LUDLAM, DAVID; COLORADO OIL & GAS ASSOC & WESTERN ENERGY ALLIANCE

BLM Response:

The analysis was based primarily on limitations due to NSO stipulations and the maximum reach of directional drilling, which is the predominant drilling technology used in the area (see page D-11 and Table D-2). The statement referenced by the commenter regarding more extensive use of horizontal drilling just acknowledges that more horizontal drilling could be used in the future, allowing for the fact that technology could result in changes that were not considered in this analysis.

Comment:

Finally, Figure D-3 and the text accompanying the map at D-12 are confusing. The Wolf Creek lease (and Source Gas storage area) are shown as NSO. These leases are held by production, were not subject to the lease issuance infirmity and in Map 2 of the 2014 WRNF FEIS are shown as leased. See WRNF DEIS App. D-11.

SIMPSON, DON; URSA PICEANCE LLC

BLM Response:

Figure D-3 has been corrected to remove the NSO from all areas that would be closed to future leasing outside of the 65 leases analyzed in this EIS. This includes the Wolf Creek Gas Storage Area.

Comment:

[Addendum to DEIS comment letter received after the close of the comment period.]

Although the comment period on the BLM WRNF DEIS closed in January, 2016, BLM "may," and in this instance, should consider this addendum citing to a U.S. Geological Survey ("USGS") mineral assessment of the Mancos Shale in the Piceance Basin as it constitutes the "best available" scientific information to inform BLM's National Environmental Policy Act ("NEPA") process and decision-making.

On June 8, 2016, the USGS issued the "Assessment of Continuous (Unconventional) Oil and Gas Resources in the Late Cretaceous Mancos Shale of the Piceance Basin, Uinta-Piceance Province, Colorado and Utah, 2016."2 The USGS report updates a previous USGS assessment in 2003. The USGS explains, "[s]ince the last assessment, more than 2,000 wells have been drilled and completed in one or more intervals within the Mancos Shale of the Piceance Basin ... [and] the USGS Energy Resources Program drilled a research core in the southern Piceance Basin that provided significant new geologic and geochemical data that were used to refine the 2003 assessment of undiscovered, technically recoverable oil and gas in the Mancos Shale." Id. at 1. The USGS determined the Mancos Shale holds an estimated 66 trillion cubic feet of undiscovered, technically recoverable shale gas. In comments to the media, USGS spokesman Alex Demas stated, "The Mancos is the 2nd-largest continuous/shale gas assessment we've ever done, behind the Marcellus and ahead of the Barnett."3 Attached. In addition, the USGS estimates the Mancos contains 45 mb of natural gas liquids and 74 mb of recoverable shale oil. Id. at 3.

The USGS report on the Mancos Shale has a high degree of "utility" for BLM' s decisions on lease cancellation/modification, possesses "integrity" and is "objective" - accurate, reliable and unbiased. The "value" of this new information is described by USGS as "significant."

BLM, rather than relying on the dated and flawed RFDS analysis of the Forest Service in the WRNF ROD/FEIS (2015) that ignored the potential of the Mancos Shale, must consider this "best available information" on the potential of the Mancos Shale underlying the 18 SG leases. BLM must reevaluate its reliance on the Forest Service 2010 RFDS in its analysis of the DEIS alternatives particularly when considering the oil and gas and socio-economic impacts of the proposed action and the BLM preferred alternative to cancel SG's 18 leases in their entirety. To fail to do so would ignore the legal requirements of NEPA and BLM' s own guidelines to use the best available information for decision-making.

WATSON, REBECCA; WELBORN SULLIVAN MECK AND TOOLEY, P.C. REPRESENTING SG INTERESTS

BLM Response:

Although the USGS assessment and these comments were received well after the close of the DEIS comment period, the BLM has nevertheless reviewed this information and incorporated it into the description of the affected environment at Section 3.3 of the FEIS. It has also determined, as explained below, that this information does not constitute significant new information requiring the BLM to reopen and republish the draft EIS alternatives.

As noted in response to other comments, the RFDS used for analysis in the EIS already included consideration of unconventional plays as possible candidates for leasing and development in the future, including in the Niobrara and Mancos Formations. BLM Instruction Memorandum (IM) No. 2004-089 directs that, "[i]n addition to estimates concerning the presence of oil and gas resources based on geology, the RFD also considers other factors that affect oil and gas activity. Such factors include economics, changes in exploration, drilling, completion or production technology, physical limitations affecting surface access, bid performance at lease sales, oil and gas related infrastructure, and transportation." The RFDS here is consistent with this direction.

The BLM has reviewed the USGS's assessment, and does not believe it changes the analysis in the RFDS or the EIS. At the outset it must be noted that the USGS assessment is regional in scale, it is not designed or intended to address the extent of the resource found under the area covered by the EIS or any particular lease or group of leases. Geologically, it is not appropriate to assume an even distribution of the gas resource identified in the basin as occurring evenly across the basin, in order to ascribe it to a specific area. The analysis area covered by the PIL EIS is a small fraction of the total area cover by USGS' assessment, which is a broad-scale and general in nature as it tries to assess the total potential resource across five different, and somewhat overlapping, vertically stacked geological areas within the 4,000-foot-thick Mancos shale. It is not appropriate to take that type of study and try to use it to provide deterministic estimates about a particular area.

That said, information related to the potential development of horizontal gas plays within the Niobrara and Mancos formations was considered as part of the RFDS process. Based on the information currently available to the BLM, the development potential of this resource is still being sorted out. While most of the information regarding the methods of exploiting these plays is proprietary within the oil and gas community, information available to the BLM indicates that the potential development of these horizontal gas plays is still in the exploratory stage. This USGS report (Hawkins et al. 2016) does not change that fact or the speculative nature of these plays in terms of development intensity, timing, and location. Despite the documented size of the Mancos shale, as reflected in the USGS assessment, it remains an undiscovered, technically recoverable resource. Per USGS definitions, assessments of technically recoverable resources do not include economic or accessibility considerations.

That the USGS report suggests additional resources are in an area does not mean that their development potential can be quantitatively analyzed with meaningful accuracy at this time. Moreover, in the high potential zone of the Piceance Basin, total recoverable gas far exceeds any measure of annual production under current development, as both current and reasonably foreseeable drilling activity is likely to be far more limited by price and capital availability than by aggregate available gas resources. Moreover, any development of Mancos or Niobrara wells would be applied against the assumed well numbers in the RFD. To date, operators indicate that these deeper shale plays may reduce the number of future Mesa Verde wells. Thus, the release of the USGS report does not change the adequacy of the analysis in the RFDS and/or the development assumptions used by BLM in the EIS.

The reasonableness of the RFDS's projections of future development for the purposes of analysis is also supported by the very limited number of APDs for horizontal Mancos/Niobrara formation wells that have been received by the BLM. During fiscal year 2015, the majority of the APDs received by the CRVFO (for federal minerals both in the analysis area and outside the WRNF) were for the Mesa Verde Formation, with only 4 being located in the Mancos/Niobrara. Of the APDs received by CRVFO in the last 2 years, only 2.9% were for the Mancos/Niobrara formation group. Similarly, in

2015 horizontal wells made up approximately 4% of wells drilled in Garfield and Mesa County, which is consistent with the RFD estimate. Finally, the only horizontal wells drilled near the 65 leases were all in the vicinity of Zone 1, as forecasted in the EIS's RFD scaling appendix (Appendix D), which is the area where the BLM is proposing to reaffirm or modify the leases; none of the leases in that area are proposed for cancellation under the Preferred Alternative.

Although there has been a slight trend towards more horizontal drilling as a percent of total drilling over the last 5 years in the region, it appears to be more related to a decline in directional and vertical wells than a significant increase in horizontal drilling. From the standpoint of the Society of Petroleum Engineer's (SPE) Petroleum Resources Management System (PRMS) guidelines, the resource status of the Mancos shale is indicative of its lower chance of commerciality in the foreseeable future, particularly for the leases proposed for cancellation where development costs and permitting requirements may be higher and longer than in other areas of the basin.

Additionally, because the RFDS assumes that there would be some development of Mancos shale, this report does not change the development assumptions or method used to apply the USFS RFDS to the BLM's analysis of the 65 existing leases in the EIS, as described in Appendix D. Accordingly, no change has been made to RFDS analysis assumptions.

With respect to commenters concerns about the analysis of potential future changes, it should be noted that the RFDS used for this analysis does acknowledge the potential for change regarding accessibility of minerals from horizontal drilling. In the Draft EIS, assumption 4 in Appendix D, page D-8, stated that "[m]ore development may be possible if a higher proportion of horizontal wells [are] developed in the future." This assumption has been clarified to state that "[s]ome minerals that are assumed not to be accessible through directional (s-curve) drilling due to a lack of suitable surface location may be accessible given the longer reaches and alternative methods possible through horizontal drilling." Thus, if horizontal drilling proves to be productive and economical in the area in the future, the RFD may underestimate the future level of horizontal (or total) drilling." However, as noted in other responses regarding drilling of the Mancos formation, an increase in horizontal drilling would likely be offset by a reduction in directional (s-curve) drilling.

Finally, the commenters mischaracterize the purpose of the RFDS and the NEPA process of which it is part. They are not intended to define the specific numbers and locations of wells and pads needed to develop the oil and gas resources in the area. Instead, they are intended to provide sufficient specificity to support the BLM's impact analysis and alternative selection process as part of its review of the 65 previously issued leases. The actual level of oil and gas development associated with any specific alternative is likely to differ from the RFDS due to alternative-specific measures aimed at protection and management of other uses and resources. Furthermore, the RFDS is not intended to be used as a leasable mineral cap, and therefore, does not limit or preclude, practical future mineral plays; instead, it is an analytical tool used to predict potential energy development for purposes of informing this analysis. Therefore, the actual number of drill rigs active at any one time, the number of wells and pads constructed during 20 years, the resultant acres of surface disturbance, and miles of new or upgraded access roads under any of the alternatives may ultimately differ from the assumed numbers due to factors subject to change and that cannot be foreseen at this time, such as natural gas prices, technological advances, or new requirements related to other land uses and resource management goals. This use of the RFDS is explained in Section 1.2.1 and in Appendix D of the DEIS (page 1). The RFDS provides a robust analysis of potential future development to ensure that the BLM has taken a hard look at this issue for purposes of the EIS. The FEIS includes a broad range of alternatives, each representing a different suite of resource protections and allowable patterns of development. The alternatives are responsive to BLM's purpose and need to address the NEPA deficiency and consider conformity with the Forest Service's recent analysis regarding leasing within the WRNF, which was focused on leasing and lease stipulations. While geologic resource availability is part of those considerations, it is not a determinative factor.

As the USFS explained in its October 2015 Record of Decision, the focus of its decision was on both conserving the roadless and existing character of the White River National Forest, while also

providing oil and gas development opportunities with a focus on lands that have proven to be productive in the past 10-15 years. In making that determination, the USFS recognized that while there is high potential in some of the areas closed to leasing, those areas are on the edge of the Piceance formation and up to this point; no producing wells have been developed on these lands. In making its decision, the USFS examined past development on the White River National Forest and looked at where development is likely to occur over the life of its decision, given natural gas prices, exploration costs, and known reserves. The Preferred Alternative in the Final EIS is consistent with those determinations by the USFS.

Based on the foregoing, the BLM does not believe that the data in the USGS report changes its analysis, and that the EIS still includes a reasonable range of alternatives. It should also be noted that the commenters did not suggest a specific feasible alternative that should have been considered. No changes have been made to the FEIS as result of these comments.

Recreation

Note: The comments are grouped together and sorted by the last name of the commenter, with the BLM response in a gray shaded box following the grouped comments within this category.

Comment:

The Colorado Division of Wildlife noted in comments dated June 30, 2010 that maintenance of water quality in the Crystal River and its tributaries is "essential" to the health of native cutthroat trout. See Ex. 27 at 6. The WRFEIS rates the Crystal as having Moderate-High Watershed Sensitivity. See WRFEIS Table 16 at 80. The Crystal is among the last free-flowing rivers in the state, and carves one of the most picturesque valleys in the mountain west. Pitkin County has invested tens of millions of dollars in property acquisitions and restoration activities to protect that valley from inconsistent development and degradation. The Crystal watershed provides drinking water to thousands of people and agricultural water to local farms and ranchland. The river provides recreational opportunities for fishermen, kayakers, and sightseers, and habitat for cutthroat trout, bighorn sheep, bald eagles, Lewis's Woodpeckers, and rare plant species such as the stream orchid (Epipactis gigantea). The Forest Service has found the Crystal eligible for federal Wild and Scenic River designation. See Ex. 43.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

Appendix A contains a summary of water quality classifications for surface waters within the analysis area, including the Crystal River. The importance of the Crystal River for significant plant communities, wildlife habitat, and recreation is acknowledged in Sections 3.6, 3.7, and 3.13, respectively. Impacts to terrestrial wildlife and rare plant species are disclosed in Section 4.6 and 4.7, respectively. Section 4.8 details impacts to aquatic habitat and species. Sections 4.13 details potential recreational effects. Impacts to each of these resources would vary by alternative.

The BLM must consider best available information in analysis of the proposed action and alternatives. Each alternative represents a course of action that addresses issues and concerns to varying degrees. These alternatives meet the purpose and need to address the NEPA deficiency and consider conformity with the Forest Service's recent analysis regarding leasing within the WRNF. The BLM will select an alternative based upon the overall analysis of environmental impacts, socioeconomic considerations, other relevant factors, and the balance of agency statutory requirements and regulations.

Comment:

Spring Gulch Ski Area sits within the Thompson Divide boundaries. This regionally known recreational area is heavily visited by expert and novice skiers alike. The area is vast and the vistas abundant, offering some of the best free of charge recreational opportunities in Colorado. Thousands of people a year seek exercise and quiet contemplative time in this minimally developed area. The track is used by youth ski teams as a training facility and competitive race venue. Incompatible development in the vicinity and potential disruption of the air quality would detract from this local recreational gem, and the magnificent experience it currently offers to the general public and the organized youth programs it supports.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

As detailed in Sections 3.13.3, Spring Gulch Ski Area is outside the leasing zone boundary. The potential indirect impacts to recreation in this area are discussed by alternative in Section 4.13.4. Potential visual effects impacts to scenic resources that may occur on areas adjacent to leases are detailed in Section 4.15.

Comment:

BLM is “strongly encouraged” by its own Instruction Memorandum 2013-131 to incorporate “A quantitative analysis of nonmarket values in EIS-level NEPA analyses…” The easiest way for BLM to perform such a quantitative analysis is using Benefit Transfer. For big game hunting there is a Benefit-Transfer Toolkit of Loomis and Richardson (see http://dare.agsci.colostate.edu/outreach/tools/#BTT) that provides an average net economic benefit to big game hunters in the intermountain region based on 141 big game hunting studies in that region. The average value is $71.37 ($83.81in $2014). This is the added benefits the hunter receives themselves after all their travel costs have been paid. This is the measure of benefit used by Federal agencies when performing an economic efficiency analysis (as compared to an IMPLAN economic impact study). At $83.81 per hunter day, Table 4 (Annual Elk Hunter Benefits by Alternative for Zone 3) presents the results of the losses in nonmarket values from the lost elk hunter benefits. These annual losses in elk hunter benefits should be incorporated into the Final EIS.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

Comment noted. The commenter suggests that a quantifiable decrease in future hunting recreation benefits of between approximately a net $40,000 (Alternative 1) and $6,500 (Alternative 4) can be attributed to the proposed leasing decision. The commenter's projected benefit loss represents less than a 2.7 percent reduction in hunting days and less than a 1.5 percent smaller decrease in the Thompson Divide's estimated $2.7 million in annual hunting and fishing related spending as estimated by BBC Research. The commenter's cost estimates are consistent with the DEIS qualitative socioeconomic impact assessment findings that hunting and other recreation impacts would be expected to result in relatively negligible reductions. Additionally, the BLM suggests that the commenter's estimate may yet overstate the potential elk hunting reduction since it appears to be based on an assumption that lost elk carrying capacity occurs for all of total unprotected acreage of the leases. However, well development would not extend or affect such a large area and an absence of specific elk habitat protection would not necessarily result in reduced future presence of elk use within those areas. The BLM disagrees with this assumption and instead contends that elk would likely continue to be able to access and graze (where forage is present) on nearly all the lease area except for the 48 acres of long-term disturbed areas occupied by the oil and gas facilities and infrastructure. Based on that acreage of habitat loss, using either the commenter's carrying capacity value or BLM's 0.1 AUM estimate (as applied for the livestock impact analysis), BLM projects that less than one elk might be expected to be lost due to the Zone 3 carrying capacity reduction. Using the commenter hunting value estimates, this would result in a total economic loss value for elk hunting of less than $520 per year - which is less than that commenter's suggested Zone 3 estimated 11.5 elk population reduction and economic loss estimate of $6,481 per year. Given the uncertainty inherent in the proposed method and future effects given unknown patterns of development, as well as the relatively small suggested level of change, BLM does not find the incorporation of the proposed method into the FEIS is necessary for a reasoned consideration and comparison of the effects under each alternative.

Comment:

On January 1, 2016 I counted 20 vehicles parked along fs road 300 near the source gas property. Climbing Williams Peak, with skis, snowboards, or snowshoes, is very popular now. Big trucks coming through this area on their way to the industrialized lease areas within sight of Williams Peak would be totally incompatible and unsafe for this area. I mention this because numbers are needed to determine just how popular Williams Peak is as a beautiful backcountry recreation area.

DELANEY, BETTY

BLM Response:

Comment noted. Traffic impacts to FS 300 are analyzed by alternative in Section 4.10.

Comment:

The Thompson Divide is frequently and heavily utilized for active outdoor recreation which is the predominant use of the White River National Forest, as the FE IS and ROD acknowledge. The Divide attracts visitors to Carbondale because of its unspoiled and unparalleled beauty, and to take part and participate in the extensive outdoor recreation opportunities that the area presents. Carbondale recommends that BLM's analysis compare the potential impacts to recreation, socio-economics, and the sense of place under cancellation and non-cancellation alternatives.
BLM's analysis should consider how active outdoor recreation within the Thompson Divide area by both visitors to Carbondale and its local citizens supports the Town's economy, provides public revenues, and creates local jobs. As the ROD and FEIS recognize, Carbondale residents greatly prize the ruggedness and isolation of the undeveloped and easily accessed Thompson Divide area, with Mt. Sopris as a backdrop, which provides an important "sense of place" value. The Town recommends that BLM fully acknowledge the importance of this value that attracts residents who chose to live near here the undeveloped federal lands adjacent to the community. Sense of place goes beyond the ability to pursue recreational activities and enjoy scenery, to the core values of why many citizens make Carbondale their home. The Town recommends that BLM defer to the WRNF's recognition of the associated quality-of-life values and characteristics that explain how the unspoiled Divide landscape contributes to residents' decisions to live, work, and raise families in Carbondale-contributing to the vitality of the community. To the extent oil and gas development would change the scenic and natural character of the Thompson Divide, it would detract from the landscape, visual attractiveness, and sense of vastness that make recreating and ranching in the area a notable experience. We recommend that BLM adopt the Forest Service's recognition that losing the natural character of the landscape would diminish residents' quality of life, and that BLM compare the socio-economic cost and benefits of keeping the Divide natural versus development scenarios.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

Impacts to the community's 'sense of place' are detailed in Sections 4.13.3.1, 4.13.2.2, 4.17.2, 4.17.3.6, and 4.17.4.4. A reference to the WRNF FEIS acknowledgement of the importance of 'sense of place' to the community was included within Section 4.13.3.1 of the Draft EIS. Text has been added to further clarify this.

Comment:

Allowing any oil and gas leases, much less illegal ones, in the White River National Forest is not compatible with "White River National Forest is the most visited national forest in the nation encompassing 2.3 million acres of opportunities. With 12 ski resorts, eight Wilderness areas, 10 mountain peaks over 14,000 feet and 2,500 miles of trails, this forest is a place where you can press play on adventure and inspiration!" as stated on the USDA's web site.

CARRELL, JIMMY

BLM Response:

Alternatives 3 and 4 were included in this EIS to match USFS's current decisions regarding where future oil and gas development should be located in the WRNF to meet the standards and guidelines of the WRNF Forest Plan based on best available science, and to provide a reasonable range of alternatives for analysis in the EIS for analysis as required under NEPA and the Council on Environmental Quality (CEQ) regulations. This approach satisfies Energy Policy Act requirements for consistent lease stipulations between the BLM and the USFS.
The BLM has considered the same best available science considered by the Forest Service in their EIS and ROD. The purpose and need identifies that the BLM will consider conformity with the WRNF Plan revised based on the 2015 ROD; however, the BLM will make its own determination regarding the leases in question, as the WRNF EIS did not make determinations on the existing leases.

While it assumed that recreation and recreation-oriented tourism may still occur with oil and gas development, Section 4.13.3.1 acknowledges that the quality and quantity of the recreation opportunities would likely change or diminish proportionately to the level of oil and gas development. Impacts would vary by alternative. Sections 4.13 and 4.17 further detail potential recreational and socioeconomic effects, respectively.

Comment:

BLM should cancel 25 undeveloped, improperly issued leases in the Thompson Divide for the following reason: Local economies and existing users would be negatively impacted by oil and gas development in the Thompson Divide. The White River National Forest attracts more annual visitors than any other National Forest in the nation. As such, recreation and tourism activities connected on National Forest lands in the Thompson Divide are a significant economic driver for local economies on the periphery of the TDA. Indeed, existing surface uses in the TDA support long-term jobs and sustainable economic benefits for communities such as Glenwood Springs, Carbondale, Redstone, Marble and Paonia. In 2013, TDC commissioned independent economic analysis in an effort to quantify the overall economic impacts of existing uses on public lands in the Thompson Divide area. The study was conducted by Denver-based BBC Research, a nationally recognized economic, market, and policy research firm with significant expertise in the energy and public lands arenas. BBC's analysis found that hunting, fishing, grazing and recreation activities in the Thompson Divide support nearly 300 jobs and $30 million in recurring annual economic outputs. In addition, BBC's study highlighted the large expanse of undeveloped lands in the TDA as a valuable scenic and backdrop for a regional tourism industry that underlies the economy of the neighboring communities. See Ex 4. Indeed, local governments have made this case to the BLM previously. In scoping submitted to the BLM, Pitkin County, the Town of Carbondale, and the City of Glenwood Springs highlighted their collective concerns that "impacts to our economy from development of these leases would not be limited to existing uses within the Thompson Divide." The local jurisdictions went on to argue that they "anticipate impacts of even greater economic significance from the heavy volumes of industrial traffic and other off-site impacts that oil and gas development in the Divide would bring to the hearts of our communities. From diminished real property values along the Four Mile and Thompson Creek Road alignments to impaired tourism in Glenwood Springs, Carbondale and beyond, we expect those economic impacts will be serious and significant." See Ex. 5. Industrial drilling activities within the TDA would undoubtedly reduce or extinguish the recurring economic benefits associated with hunting, fishing, grazing and recreation activities in the Thompson Divide.

KESSLER, ZANE; THOMPSON DIVIDE COALITION

BLM Response:

Section 4.17 of the Draft EIS contains detail regarding the potential socioeconomic effects of leasing activities by alternative. Table 3.17-12 provides a summary of the recreation sector's contribution to employment. Cited sources include the BBC 2013 study referenced in the comment.

The public scoping report (available online at http://www.blm.gov/co/st/en/fo/crvfo/existing_leases_on.html) summarized the issues and sentiments expressed by those who submitted scoping comments, including Pitkin County, the Town of Carbondale, and the City of Glenwood Springs. Scoping issues were used to shape the range of alternatives and identify the resource issues to be analyzed in the EIS. A summary of the scoping report issues is presented in Section 1.7 of the EIS. Additionally, 4.13.1.2 and 4.17.1.2 presents a summary of recreation and socioeconomic issues identified during scoping.

The BLM must consider best available information in analysis of the proposed action and alternatives. Each alternative represents a course of action that addresses issues and concerns to varying degrees. These alternatives meet the purpose and need to address the NEPA deficiency and consider conformity with the Forest Service's recent analysis regarding leasing within the WRNF. The BLM will select an alternative based upon the overall analysis of environmental impacts, socioeconomic considerations, other relevant factors, and the balance of agency statutory requirements and regulations.

Comment:

The Thompson Divide is popular among all manner of outdoor enthusiasts who use the area to mountain bike, climb, cross-country ski at the local Spring Gulch track, snowmobile, hunt, and hike. Our communities are economically supported by tourism based on these activities and by the stores, restaurants, lodges, and other businesses that rely on these outdoor activities.

HAGGERTY, JOANIE

Comment:

Recreation values: The Thompson Divide is a backcountry destination for all manner of outdoor enthusiasts who use the area to mountain bike, climb, cross-country ski at the local Spring Gulch track, snowmobile, hunt, and hike. Our communities are economically supported by tourism based on these activities and by the stores, restaurants, lodges, and other businesses that rely on these outdoor activities. According to independent analysis, outdoor recreation in the Thompson Divide, excluding hunting and fishing, supports 138 jobs and generates $12.6 million dollars in recurring economic outputs for our communities. See Ex 4.Drilling activities in the Thompson Divide would undoubtedly reduce or eliminate outdoor recreation opportunities in the Thompson Divide and negatively impact local economies, in tum.

KESSLER, ZANE; THOMPSON DIVIDE COALITION

BLM Response:

Sections 3.17.3.4 and 3.17.3.5, which discuss the respective contribution of recreation to employment and income within the study area, acknowledge these contributions. Section 4.17.2 discloses socioeconomic impacts to recreation. While it assumed that recreation and recreation-oriented tourism may still occur with oil and gas development, Section 4.13.3.1 acknowledges that the quality and quantity of the recreation opportunities would likely change or diminish proportionately to the level of oil and gas development. Impacts would vary by alternative. Sections 4.13 and 4.17.2 further detail potential recreational and socioeconomic effects, respectively.

Comment:

Thompson Creek, including North, Middle, and South branches, is a pristine watershed with usable groundwater, good stream health, and the most favorable conditions for aquatic life in the broader area. The WRFEIS indicates that Outlet Roaring Fork River, which includes Thompson Creek, has High Watershed Sensitivity, meaning it is among those watersheds most susceptible to degradation from oil and gas development. See WRFEIS at 81; see also WRFEIS Table 15 at 79. Thompson Creek provides habitat for Colorado River cutthroat trout, lynx, and elk. It is eligible for Wild and Scenic designation, flows through a BLM designated Area of Critical Environmental Concern and boasts striking sandstone fins and stunning views. It also includes a CNHP-identified Potential Conservation Area because of exceptional biodiversity. The Thompson Creek watershed is prized by recreationalists, naturalists, and hunters. Like Gunnison and Garfield Counties, we believe that this watershed, like the rest of the Thompson Divide, should be protected from future oil and gas leasing.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

Sections 4.13 and 4.17 further detail potential recreational and socioeconomic effects, respectively. Appendix A contains a summary of water quality classifications for surface waters within the analysis area, including Thompson Creek. The importance of Thompson Creek for significant plant communities, aquatic habitat, and recreation is acknowledged in Sections 3.6, 3.8, and 3.13, respectively. Impacts to terrestrial wildlife and rare plant species are disclosed in Section 4.6 and 4.7, respectively. Section 4.8 details impacts to aquatic habitat and species. Sections 4.13 details potential recreational effects. Impacts to each of these resources would vary by alternative.

The BLM must consider best available information in analysis of the proposed action and alternatives. Each alternative represents a course of action that addresses issues and concerns to varying degrees. These alternatives meet the purpose and need to address the NEPA deficiency and consider conformity with the Forest Service's recent analysis regarding leasing within the WRNF. The BLM will select an alternative based upon the overall analysis of environmental impacts, socioeconomic considerations, other relevant factors, and the balance of agency statutory requirements and regulations.

Comment:

A. Narrowness of Analysis by Focusing Just on Oil and Gas Surface Disturbance
. BBC (2013:11) estimates 18,000 elk hunting days and 6,000 deer hunting days per year that accounts for 72 jobs throughout the state of Colorado, with half of those 36 jobs being in the local economy surrounding the Thompson Divide (essentially Zone 3). Thus, big game hunting, particularly elk hunting should be given greater recognition by BLM in the FEIS. Likewise, BBC (2013: 5) estimates there are 138 jobs supported by Thompson Divide recreation visitors spending in the economy. Thus, outdoor recreation warrants attention by BLM. The assuming away of much impacts to recreation by the BLM's DEIS is due to the DEIS focusing too narrowly on just the acres of surface disturbance, and ignoring what I would call oil and gas (O&G) development's extended "footprint" and "area of influence" on recreation beyond the immediate areas physically disturbed. The extended footprint is related to BLM's acknowledged impacts of oil and gas activity on off-site impacts in Chapter 4, section 4.13 (4.13-4): "For lands that are subsequently developed, adverse impacts to recreation resources would be greatest during the initial construction phases when vehicle traffic, human activity, and noise are the greatest. Adverse impacts may result from changes to the existing landscapes through introduction of new industrial features such as access roads, well pads, facilities, pipelines, and utility corridors. Associated impacts from initial disturbances could include noise, lights, dust, smell, construction equipment, and construction traffic. Changes in traffic volume during construction could negatively affect recreational users' experiences. These adverse impacts also would potentially affect lands adjacent to leasing areas, not to just the leasing areas themselves." (emphasis added). While BLM acknowledges this spillover effect (and mentions "avoidance of wildlife"—BLM DEIS page 4.7-3), BLM does not appear to fully incorporate this extended area when analyzing Alternatives #1 and #2 as it focuses heavily on acres of No Surface Occupancy--NSO. If BLM is focusing primarily on acres of surface disturbance BLM substantially underestimates the impacts of the O&G activity on recreation. This narrow analysis of recreation then carries over to a narrow and qualitative economic analysis that essentially dismisses significant effects to hunting and other recreation.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

Text in Section 4.13.4.1 details that even with stipulations in place, impacts to recreation would still be experienced as a result of a heightened level of industrial type activities associated with lease development. Impacts to recreation and economics from oil and gas development have been incorporated into this analysis to the degree possible at this time. The economics of hunting and outdoor recreation are considered in Section 4.17. However, until site-specific proposals for development are known, these impacts can only be addressed in general terms.

Comment:

The Thompson Divide Coalition surveys some of the recreation and quality of life related values of the Divide at http://www.savethompsondivide.org/whats-at-stake/recreation-tourism.html. The Thompson Divide area is defined by abundant wildlife and wildlife habitat, essential watersheds, and environmental, economic, agricultural, recreational and social values. The area's clean water, clean air, rural and agricultural heritage, and recreational and sporting activities would be negatively impacted by oil and gas development. Colorado River Cutthroat Trout, a species of special concern in Colorado, can be found in two forks of Thompson Creek. Additionally, the area has been recognized by the Colorado Division of Wildlife as high-value habitat and critical migration corridor for lynx, moose, bear, deer, elk, and mountain lions. Lastly, the area is one of the last great swaths of undeveloped mid-elevation forest land in Colorado. Recreation activities in the Thompson Divide are a critical source of the economic prosperity our local communities have seen since 2008. Recreation in the Thompson Divide supports 138 jobs and generates $12.6 million in annual economic impact in Colorado. Recreational activities in the Divide include:

• Game Management Unit #43 is considered one of the best hunting units in the state, and along with #521, #42 and #421 generate more than 20,000 big game hunting licenses every year;
• The pristine and remote creeks in the area support ecologically significant populations of fish, including the endangered Colorado River cutthroat trout, and supports more than 10,000 annual fishing days;
• Hikers, mountain bikers, dirt bikers, horseback riders, campers and anglers all enjoy the area;
• The Sunlight to Powderhorn snowmobile route traverses more than 250 miles of trail system from east to west;
• The Thompson Creek Finns are a well-known sport-climbing destination. Ice climbing is a popular winter activity in the Hay Creek and Coal Basin watersheds;
• Spring Gulch, a public Nordic ski area just outside Carbondale, is an enormous asset to the local economy as is Ski Sunlight, an alpine resort, near Glenwood Springs.

The Thompson Divide is home to a vast array of recreational opportunities. From bouldering in the Fins to hunting in what is considered one of the best hunting units in the state, the Thompson Divide promotes our outdoor spirit, preserves our quality of life, and in turn helps create long-term, sustainable jobs and a strengthened economy for local communities. The WRNF ROD (at 6) relies on the need to "protect the outstanding wildlife and recreation values" of the Divide as one of the reasons for closing that landscape to leasing. ROD at 6. See FE IS 3.4.2.5 Recreation, FE IS at 284-91. The ROD further recognizes that part of the "recreation setting that is valued is the quiet and the remoteness from the sights and sounds of human development, clean air, and clear night skies. Commenters felt that these values would be compromised if leased and subsequently developed by additional oil and gas related activities." ROD at 6.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

The contribution of the game management units within the study area is discussed in Section 3.17.3.4. The importance of surface waters in the study area as aquatic habitat and areas of recreation is acknowledged in Sections 3.6 and 3.13, respectively. Popular recreational activities and areas are identified in Section 3.13. Sections 3.13.4.1 and 4.13.4 have been modified to include a reference to the Thompson Creek Rock Fins Climbing Area. Section 4.13.4 further details the effects by alternative on recreational resources, including impacts to the Thompson Divide area, hunters potentially utilizing GMU 43, and recreationists utilizing the Sunlight to Powderhorn snowmobile trail, and adjacent summer and winter trailhead. As detailed in Sections 3.13.3, Spring Gulch Ski Area is outside the leasing zone boundary. The potential indirect impacts to recreation in this area are discussed by alternative in Section 4.13.4.

Section 4.8 details impacts to aquatic habitat and species. Section 4.17.2 discloses socioeconomic impacts to recreation such as hunting. Potential impacts to scenic resources that may occur on areas adjacent to leases are detailed in Section 4.15. Impacts to each of these resources would vary by alternative.

Comment:

The hunting areas within the Thompson Divide are some of the most hunted units in Colorado. In 2011, more than 5,000 deer and elk tags were available by draw to hunters in the three main game management units that comprise the Thompson Divide. Hunters were also able to purchase unlimited over the counter bull tags that were viable in all three units. Safeguarding habitat in areas like those analyzed in this DEIS is important to ensure that these opportunities are available for future generations.

BASKFIELD, TYLER; TROUT UNLIMITED

Comment:

The TDA includes portions of four big game management units. Based on the information developed by way of BBC's 2008 Colorado Divisions of Wildlife economic impact model, hunting on the Thompson Divide generates approximately $6.8 million in annual economic outputs and supports 72 total jobs in our communities. See Ex 4.

KESSLER, ZANE; THOMPSON DIVIDE COALITION

BLM Response:

The current contribution of hunting to recreation and socioeconomics is discussed in Section 3.13.4 2 and 3.17.3.4. Section 4.17.2 discloses socioeconomic impacts to recreation such as hunting. Section 4.13.4 details the effects by alternative on recreational resources in the Thompson Divide area, including hunting. While it assumed that recreation and recreation-oriented tourism may still occur with oil and gas development, Section 4.13.3.1 acknowledges that the quality and quantity of the recreation opportunities would likely change or diminish proportionately to the level of oil and gas development. Impacts would vary by alternative.

The BLM must consider best available information in analysis of the proposed action and alternatives. Each alternative represents a course of action that addresses issues and concerns to varying degrees. These alternatives meet the purpose and need to address the NEPA deficiency and consider conformity with the Forest Service’s recent analysis regarding leasing within the WRNF. The BLM will select an alternative based upon the overall analysis of environmental impacts, socioeconomic considerations, other relevant factors, and the balance of agency statutory requirements and regulations.

Comment:

My wife and I have been in the lodging business near Redstone for over 27 years and I have been selling real estate in the Crystal Valley for 46 years. Our lodging facilities, past and present, border the Thompson Divide and depend on the same for our guest's enjoyment and continued return business. We and our guests hike, snowshoe and hunt in the Thompson Divide. My daughter and her family are in the local cattle business, supplying meat to numerous, nationwide outlets. The Divide is critical to their summer grazing, income and way of life. Thompson Creek flows past their property and provides domestic and drinking water for their farm and animals. I understand that there are jobs and revenue associated with drilling but I would suggest the jobs are transitory in nature and most of the revenue goes out of state. Expanded drilling on the illegal leases will basically curtail our businesses that we have worked so hard to establish over the years.

BIER, JEFF; ALPINE RIVER LODGING

BLM Response:

The current contribution of recreation and agriculture to the economy is discussed in 3.17.3.4. Section 4.17.2 discloses socioeconomic impacts to recreation and agriculture. While it assumed that recreation and recreation-oriented tourism may still occur with oil and gas development, Section 4.13.3.1 acknowledges that the quality and quantity of the recreation opportunities would likely change or diminish proportionately to the level of oil and gas development. Impacts would vary by alternative.

The BLM must consider best available information in analysis of the proposed action and alternatives. Each alternative represents a course of action that addresses issues and concerns to varying degrees. These alternatives meet the purpose and need to address the NEPA deficiency and consider conformity with the Forest Service’s recent analysis regarding leasing within the WRNF. The BLM will select an alternative based upon the overall analysis of environmental impacts, socioeconomic considerations, other relevant factors, and the balance of agency statutory requirements and regulations.

Comment:

My reassessment of the Effects of Oil and Gas Development on Elk Habitat and Elk Hunting by Alternative. BLM notes in Chapter 3 on terrestrial wildlife that: "Big Game Analysis Area: The big game analysis area consists of the Game Management Units (GMUs) that are crossed by the lease boundaries. Sensitive habitat is typically considered the limiting factor for big game populations, therefore additional focus will be given on these areas (e.g., winter range, transition range, migratory corridors, fawning and calving areas and summer range) within the GMUs." BLM DEIS page 3.7-1. Based on this section, it would seem there is a strong and direct relationship between impacts to sensitive habitat and big game populations. This is especially true for elk, since Area 3 (Thompson Divide area) provides thousands of acres of sensitive elk habitat. Specifically, Zone 3 contains 13,523 acres of what BLM calls Production Area, 18,063 acres of Summer Concentration Area, 100 acres of Severe Winter Range and 2,112 acres of Winter Range for a total of 33,798 acres of sensitive habitat (Page 3.7-17). Only 7% of the Elk Production Areas are covered under No Surface Occupancy (NSO) in Alternative #2 and only 41% have Timing Limitation (Page 4.7-22). Thus, Alternative #2 does not provide protection for 20,000 acres of Sensitive Elk habitat. Alternative #1 leaves even more elk habitat unprotected. However, these 20,000 acres of sensitive elk habitat may underestimate the total elk habitat at risk. In particular, it is not clear whether BLM is focusing just on the area of surface disturbance associated with the leases (as the focus is on No Surface Occupancy—NSO), and not the broader area of elk avoidance of sights and sound of human activities associated with oil and gas wells. BLM notes (DEIS page 4.7-7) that the WRNF did look at behavioral disturbance as well as physical impacts. This is appropriate because as noted by Sawyer, et al (2006: 396) in an article on a less human sensitive species than elk (mule deer) and natural gas fields in Wyoming, "Changes in habitat selection appeared to be immediate (i.e., year 1 of development), and no evidence of well-pad acclimation occurred through the course of the study; Lower predicted probability of use within 2.7 to 3.7 km of well pads suggested indirect habitat losses may be substantially larger than direct habitat losses." (emphasis added). It is not completely clear in the BLM DEIS that BLM included these behavioral responses. It is not unusual for BLM to estimate these indirect habitat losses beyond just the surface disturbance. BLM, in the Buffalo Field Office of BLM in Wyoming, developed maps and analysis that showed the elk avoidance areas beyond those of just surface disturbance from oil and gas. In particular elk avoided habitat areas from where elk could see human activity. BLM used this information in its analysis of oil and gas in its Environmental Analyses for Williams Production Company (and oil and gas company), Carr Draw in 2009, 2010 and 2011 (BLM, 2010, 2011). The link for the 2009 analysis is: http://www.blm.gov/style/medialib/blm/wy/information/NEPA/bfodocs/pods/williams.Par.21794.File.dat/CarrDrawVaddII_EA.pdf.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

The DEIS discloses the potential for impacts to elk usage of sensitive habitat areas and behavioral responses to the degree possible. For example, see the assumptions listed in Section 4.7.1.3 and the impacts common to all alternatives in Section 4.7.3 of the DEIS. Due to the lack of site-specific proposals, however, it is impossible to be specific about the impacts on big game and sensitive habitat until potential project locations are known.

Comment:

Given that BLM indicates that "Sensitive habitat is typically considered the limiting factor for big game populations…" it would seem reasonable infer that changes in sensitive habitat would translate into changes in big game populations such as elk. When fish and game agencies set hunting regulations (length of seasons, number of permits, etc.), it generally uses information on animal populations to determine length of the season and number of permits to issue. Thus, one would expect there is a strong relationship between elk populations, the resulting elk harvest and associated changes in elk hunter days within the impact areas using BLM's data in the DEIS. Using the above as background, I will calculate by alternative: (1) the percentage changes in sensitive elk habitat presented in the DEIS by alternative; (2) convert percent changes in sensitive elk habitat to changes in elk harvest; (3) how changes in elk harvest change elk hunter days by alternative; (4) the changes in elk hunter days and associated non market values by alternative. This analysis is provided so that BLM can incorporate these results directly into their Final EIS.

The first step is to determine if there is an empirical linkage from elk harvest to hunter days in the DEIS study area. The data to test the whether the number of elk harvested influences elk hunter days utilized data from the DEIS (Table 3.13-4, years 2013-2009, updated to 2014 using Colorado Dept of Parks and Wildlife data). The data consisted of harvest and hunter days at the four Game Management Units (GMU's) identified in Table 3.31-4. A trend variable was included, as BLM noted, and the data suggested there was an upward trend in elk hunter days. A least squares regression was estimated and a statistically significant coefficient (1% level) of elk harvest on hunter days. The results indicate that each elk harvested results in 6.185 more hunter days. The overall explanatory power of the regression model is reasonably good with an adjusted R square of 70%, indicating that 70% of the variation in hunter days could be explained just by number of elk harvested and the trend. It should also be noted that the Trend variable indicates significantly increasing demand for elk hunting over the 2009-2014 time period. Thus the demand for elk hunting is likely to increase significantly at these Game Management Units in absence of reductions in habitat, and oil and gas leasing in Zone #3 will have an even larger impact in the future than at present. Table 1 – Multiple Regression of the Influence of Elk Harvest on Hunter Days, presents the least squares regression results.

The next step is to compare alternatives on the percent of sensitive elk habitat that is protected (as that determines long term elk population, and hence long term sustainable elk harvest) and how that changes by DEIS Alternative. While Table 2 (Percent of Elk Production Areas & Elk Summer Concentration Areas in Zone 3 Protected by Alternative NSO is No Surface Occupancy; Timing Limitation on season of O&G operation) was constructed from information in the DEIS, it provides a summary for Zone 3 that BLM should include in the FEIS, as it more clearly compares the effects of each Alternative on elk habitat than the current DEIS. As can be seen in this table, Alternatives #1 and #2 leave a great deal of sensitive habitat unprotected from oil and gas operations. Given BLM's statement that sensitive habitat is a limiting factor, and in the long run elk populations stabilize around the carrying capacity of their limiting habitat, long term elk populations and sustainable elk harvests would be expected to drop accordingly.

In order to calculate the number of hunter days with each alternative, the regression equation in Table 1 was applied using the percent of sensitive habitat protected with each alternative as the percent of current elk harvest (since sensitive habitat is the limiting factor to population, it is also the limiting factor for long run elk harvest). This is calculated as the relevant percentage (Alt #1=39%; Alt #2=41%; Alt #3=83%; Alt #4= 90%) times the regression equation estimated current elk harvest (specifically 33,798 acres of all four types of sensitive elk of habitat in Zone 3—the Thompson Divide area times .003699 which is the average elk harvest per acre of habitat from 2009-2013 from Table 3.13-4 in BLM DEIS1). The Trend variable was set at 10, to reflect the year 2018. This year was chosen to allow for equilibration of the elk population to the new level of Elk Production habitat. Table 3 – Elk Hunter Days in Zone 3 (Thompson Divide) by Alternative presents the results. As can be seen, there is a loss of about 472 elk hunter days from Alternative #1 compared to the estimated current number of elk hunter days in Zone 3 now. The decrease in elk hunter days gets smaller and smaller as the alternative protects more and more elk habitat.

Allowing any oil and gas leases, much less illegal ones, in the White River National Forest is not compatible with "White River National Forest is the most visited national forest in the nation encompassing 2.3 million acres of opportunities. With 12 ski resorts, eight Wilderness areas, 10 mountain peaks over 14,000 feet and 2,500 miles of trails, this forest is a place where you can press play on adventure and inspiration!" as stated on the USDA's web site.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

The detailed analysis recommended in the comment would be more appropriate to complete once the site-specific development proposals are available during the APD stage of permitting. Additionally, the BLM suggests that the commenter's estimate may yet overstate the potential elk hunting reduction since it appears to be based on an assumption that lost elk carrying capacity occurs for all of total unprotected acreage of the leases. The BLM disagrees with this assumption and instead contends that elk would likely continue to be able to access and graze (where forage is present) on nearly all the lease area except for the 48 acres of long-term disturbed areas occupied by the oil and gas facilities and infrastructure. Given the uncertainty inherent in the proposed method and future effects given unknown patterns of development, as well as the relatively small suggested level of change, BLM does not find the incorporation of the proposed method into the FEIS is necessary for a reasoned consideration and comparison of the effects under each alternative.

Comment:

The Thompson Divide area contains world-class hunting areas, and has been recognized by the Colorado Division of Wildlife (CDOW) as high-value habitat for a variety of species. The TDA contains crucial elk winter and summer range, migration route, and calving ground, and overlaps with some of the most sought-after big game management units (GMU) in Colorado. For example, GMUs 42, 43, and 521 generate more than 20,000 big game hunting licenses sales every year. According to CDOW's 2009 summary of wildlife values, undeveloped public lands in the Thompson Divide "provide high quality habitat for a variety of wildlife including: mule deer, elk, moose, black bear, lynx, native cutthroat trout, and variety of small mammals, and several raptor species." See Ex 2. Furthermore, CDOW's wildlife summary concluded that "gas development in the area is likely to be detrimental to mule deer and other wildlife. Potential negative impacts to deer include habitat fragmentation; habitat loss; increased vehicle traffic; noise, sounds and light pollution, leading to displacement of deer from traditional fawning grounds and summering areas and direct mortalities due to mortality strikes." The TDA contains one of the densest concentrations of inventoried roadless areas in the central Rockies. These include the East Divide/Four Mile Park, Baldy Mountain, Thompson Creek, Clear Fork and Huntsman Ridge Roadless Areas. These roadless areas and the undeveloped public lands that surround them make the Thompson Divide area invaluable to hunters and anglers throughout Colorado and the nation.

KESSLER, ZANE; THOMPSON DIVIDE COALITION

BLM Response:

The referenced information from CDOW on the Thompson Divide area was considered by the resource specialists who prepared this EIS. The potential impacts to wildlife resources are detailed in Section 4.7 and consideration of the economic impacts are considered in Section 4.17. Impacts to roadless areas are disclosed in Section 4.12.

A detailed analysis of site-specific impacts such as habitat fragmentation, habitat loss, vehicle traffic, etc., cannot be performed until the actual locations of proposed development are known.

Comment:

The high quality hunting and angling habitat contained in the areas being analyzed support a vibrant sportsmen and angling economy in the surrounding communities. Hunting and angling in the area supports over 2500 jobs and brings $137 million to local economies annually. The Proposed Action strikes the appropriate balance between protecting the fish and wildlife resources that support the sustainable local economies and allowing for responsible energy development in appropriate areas. Accordingly, we urge the BLM to adopt the Proposed Action in the FEIS and ROD.

BASKFIELD, TYLER; TROUT UNLIMITED

Comment:

Almost all residents of Carbondale benefit from close connections to the natural landscape of the Divide. These comments provide excerpts from IBLA declarations submitted by two of the Town's elected officials that are typical of the experience and perspective of their constituents. Trustee Katrina Byars has long visited and recreated on the Divide landscape including many of the lands covered by the Zone 3 leases. She has used these lands throughout her life and considers it to be her community's lifelong outdoor recreation area. Her use includes innumerable weekend camping trip with family, learning to fish, ladies only trips, hiking and taking pictures of fall colors with her children as a young mother, mountain biking, cross country skiing, snow-shoeing, bird watching, scientific studies, and aerial overflights. Mayor Stacey Bernet also holds a deep and heartfelt personal connection to the Divide spanning 36 years and going back to her childhood. Over the last 15 years, her recreational use includes having hiked, biked, camped, snow-shoed, Nordic Skied, snowmobiled and taken target practice in the Divide. As Carbondale shifted away from its coal mining past, Mayor Bernot has described how the Town has worked tirelessly and at great financial expense over the past three decades to rebrand, retool and recover from our economic decline when we stopped being a coal mining town. Primary industries now include tourism, recreation, ranching and health care; and the Town prides itself on pure drinking water and good air quality. Supporting local food production, ranching and recreation amenities inform the Town's decision-making. As long as the leases remain, concerns about a return to unhealthy and unpredictable "boom and bust" economic cycles will hang over the Town, reminding residents when the demise of coal mining took the town to the brink of economic collapse resulting in the decision to adapt, change and strive toward long-term sustainability on all levels.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

Comment:

Please save the Thompson Divide for all Americans! Please protect it from oil and gas drilling - saving its wild forests for future generations. It is the most frequented national forest for outdoor recreation in the country.

GRENEWITZ, TATJANA

Comment:

People come to Colorado from all over the world to visit our forests. We must preserve these forests for our children and their children. We can’t let our forests be ruined and degraded by oil and gas development which incidentally brings with it: Noise, lights, odors, degradation of environmental beauty, contamination of water, stress on wildlife, additional roads or expansion of existing small rural dirt roads, erosion and scaring of the land, traffic, toxic spills, increased forest fire potential, etc. Hunters, mountain bikers, dirt bikers, hikers, snow mobiles, snowshoers, skiers (back-county, alpine and cross country) family outings and camping are all affected by this invasion.

MARKUSON, JAMES

Comment:

The pristine and remote creeks in the area support ecologically significant populations of fish, including the endangered Colorado River cutthroat trout, and supports more than 10,000 annual fishing days. Hikers, mountain bikers, dirt bikers, horseback riders, campers and anglers all enjoy the area.

ZIMMERMAN, KATHLEEN; NATIONAL WILDLIFE FEDERATION

Comment:

The lands at issue represent one of the last great swaths of undeveloped mid-elevation forest land in Colorado. The Thompson Divide, for example, is home to a vast array of recreational opportunities that create and support long-term, sustainable jobs and a strengthened economy for local communities. Game Management Unit #43 is considered one of the best hunting units in the state, and along with #521, #42 and #421 generate more than 20,000 big game hunting licenses every year.

ZIMMERMAN, KATHLEEN; NATIONAL WILDLIFE FEDERATION

BLM Response:

While it assumed that recreation and recreation-oriented tourism may still occur with oil and gas development, Section 4.13.3.1 acknowledges that the quality and quantity of the recreation opportunities would likely change or diminish proportionately to the level of oil and gas development. Impacts would vary by alternative. Sections 4.13 and 4.17 further detail potential recreational and socioeconomic effects, respectively.

Comment:

As the BLM heard during Lease NEPA scoping, public comments and concerns during the WRNF process requested that the "FS should acknowledge the impact of oil and gas development on the recreation economy" and "FS should acknowledge the short-term economic nature of oil and gas leasing because the long-term costs outweigh these benefits." Public Concern 6-26 and 6-27. "Oil and gas leasing and subsequent development has the potential for altering existing recreational opportunities and experiences as a result of modifications to the Forest's setting characteristics." FEIS at 284; and see Public Concern 6-26 and 6-27, FEIS at 629; see also Comment Category 5: Recreation and Access to the National Forest for commenters concerns regarding recreational values and viewshed degradation concerns, FEIS at 621-24. "Residents share a 'sense of place' describing often unquantifiable values that attract people to these specific landscapes and communities. Sense of place in forest planning is an important factor that describes the ‘why’ people come to a place beyond their desired recreation activity and or scenery." FEIS at 290-91. BLM must recognize the importance of the concept of a sense of place in regard to recreational use and enjoyment, and corresponding quality of life and economic considerations. Only cancellation of the Zone 3 leases would safeguard place-based values and uses, the vision of local communities for their future economic vitality, and the importance of maintaining the existing natural character of the Divide.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

While it assumed that recreation and recreation-oriented tourism may still occur with oil and gas development, Section 4.13.3.1 acknowledges that the quality and quantity of the recreation opportunities would likely change or diminish proportionately to the level of oil and gas development. Impacts would vary by alternative. Sections 4.13 and 4.17 further detail potential recreational and socioeconomic effects, respectively.

Impacts to the community's 'sense of place' are detailed in Sections 4.13.3.1, 4.13.2.2, 4.17.2, 4.17.3.6, and 4.17.4.4. A reference to the WRNF FEIS acknowledgement of the importance of 'sense of place' to the community was included within Section 4.13.3.1 of the Draft EIS. Text has been added to further clarify this.

Comment:

As noted above BLM restricts its analysis of the effects of oil and gas development on recreation to acres of surface disturbance without looking at the spillover impacts visible or heard at wide ranging distances in an otherwise quiet area (especially Zone 3). Further BLM's statement that there is not much current recreation use and there are opportunities for site substitution (hence no changes in visitor spending or socioeconomic impacts), neglects the non-market values provided by Zone 3. It is the low visitor use levels that make Zone 3 especially a valuable recreation resource: the solitude and quiet. Many other areas in the WRNF's Sopris Ranger District have significant crowding. Substitution of displaced Thompson Divide visitors to those already crowded areas raises congestion costs imposed on other visitors in these other areas. In addition the recreation benefit to the Thompson Divide visitors is lower than the current situation if the Thompson Divide visitors substitute from less crowded areas (Thompson Divide—Zone 3) to more crowded areas. A well documented non market value of recreation is related to lack of crowding and congestion (Walsh, and Gilliam, 1982; Loomis and Walsh, 1997: 104-107). This lack of crowding and congestion is something that Zone 3 currently provides and would continue to provide with Alternative #4. Site substitution also usually involves higher travel costs to the substitute site than the current site. Therefore the higher travel cost for site substitution and loss of the non market value of solitude provided by Zone 3, (Thompson Divide) should be acknowledged by BLM in its Socioeconomic analysis and the references cited in this section should be incorporated into the FEIS.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

Both the recreation (Section 4.13) and socioeconomic analysis (Section 4.17) acknowledge that the lack of crowding and congestion are key components of the recreation value for the lease areas and particularly those located within the Zone 3 (the Thompson Divide). The noise impacts would be most prominent during construction. The extent of any noise impacts would generally be much lower during production and noise may be further attenuated by site-specific factors such as terrain and vegetation. Due to the low numbers of wells projected for Zone 3 resulting in fewer gas facilities under all alternatives, and the fact that these numbers would be spread over 20 years, the noise from development activities including vehicle traffic would be low in any one area.

The visual impacts are difficult to predict without knowledge of site-specific locations of future wells and ancillary facilities. As noted in Section 4.16 (Scenic Resources), visual impacts would be dependent on factors such as slope, aspect, terrain and vegetation in and around the site-specific location, as well as the amount of contrast between the natural and constructed landscape. Natural screening by terrain and vegetation may diminish impacts on a site-by-site basis.

Text in Section 4.13.4.1 details that even with stipulations in place, impacts to recreation could still be experienced as a result of a heightened level of industrial type activities associated with lease development, potentially causing some recreationists, particularly within the Thompson Divide to relocate to other recreational areas with a more natural setting. However, given these are relatively low use recreation areas and the potential impairment would be expected to be predominantly limited to areas in the vicinity of any project activities; the magnitude of adverse impact to recreation should be relatively minor as most of the area would continue to offer generally quiet and solitary recreation opportunities. Consequently the extent of resulting recreation substitution is expected to be negligible and if any does occur it is expected the it could be absorbed/accommodated elsewhere in WRNF or the region at other locations that are not at capacity. Specifically, there are a number of recreation areas adjacent to Zone 3, as detailed in Sections 3.13.4 and 4.13.4, which may serve as alternatives to those potentially displaced by development activities in the leasing zone. Furthermore, even if the relativity small number of any potentially displaced users did chose to relocate to more popular recreation areas any resulting added congestion cost to other visitors would be similarly limited.

Scenic Resources

Note: The comments are grouped together and sorted by the last name of the commenter, with the BLM response in a gray shaded box following the grouped comments within this category.

Comment:

It is also important to recognize that the Thompson Divide carries significant intangible effects that are difficult to quantify. This includes our values for an appreciation of its open spaces and natural beauty; for stimulus to the human imagination and spirit; for solitude, serenity, and spiritual renewal; and simply for the knowledge that places like this are wild and will remain that way forever.

COLWELL, FRANCIS

BLM Response:

Comment noted. References to the importance of 'sense of place' to the community were included within Section 4.13 (Recreation) and 4.17 (Socioeconomics) of the Draft EIS. Text has been added to further clarify this.

Comment:

The White River National Forest's 2014 Final Oil and Gas Leasing EIS ("WRFEIS") and December 2014 Final Oil and Gas Leasing EIS ("WRFEIS") indicate that cumulative effects from oil and gas development on the WRNF and surrounding areas will significantly impair visibility in the Maroon Bells/Snowmass Wilderness, which comprises the viewshed from all four ski areas. See WRFEIS at 103. Other air quality impacts, including winter ozone levels, as well as traffic impacts on the Highway 82 access from I-70 to the resort areas of Aspen and Snowmass Village, will also compromise the overall experience that makes our valley one of the most sought after destinations in the world. Should visitors begin to go elsewhere because oil and gas development has clogged our highways and polluted our air, the impact on Pitkin County's finances will be direct and serious. In a competitive international market, Colorado cannot be too careful about protecting the natural assets that attract our guests.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

Sections 4.13 (Recreation) and 4.15 (Scenic Resources) acknowledges that the quality and quantity of the recreation opportunities may change or diminish proportionately to the level of oil and gas development. Air Quality impacts are discussed in Section 4.2.

The CARMMS regional results presented in Table 4.2-5 do not indicate any significant air quality impact contributions for future Federal oil and gas development within the Field Office / Planning Area. Ozone contributions from the CRFVO (outside the Roan Plateau) do not amount to more than 0.2 ppb (not even 1 ppb) when the cumulative concentrations exceed the former NAAQS (75 ppb standard), thus is a minimal impact. The maximum source apportionment area contribution (2.6 ppb) is expected to occur when cumulative concentrations are below the NAAQS. Table 4.2-5 also shows that the maximum Planning Area contributions to PM cumulative concentrations are minimal with respect to Ambient Air Quality Standards (<= 1% of the applicable Standard). The minimal impacts to PM concentrations for future Federal oil and gas would occur due to the routine application of water or other dust suppressant to unpaved surfaces during construction or travel as a result of a BLM requirement or operator committed control measure. For the CARMMS Low and High Scenarios, a 50% dust control efficiency was applied for surface disturbing activities and 80% dust control efficiency was assumed for the CARMMS Medium scenario (Medium Scenario includes enhanced BLM control measures). The FLAG2010 analysis is not cumulative in the sense that it isolates the visibility impacts of the source grouping and compares them relative to natural background visibility. As described for the EIS analyses, quasi-cumulative oil and gas impacts presented are not project-specific but represent the visibility impacts for all Federal and non-Federal oil and gas in Colorado region (CARMMS Source Groups R and S) which encompasses much more future oil and gas development than could occur on the leases in the analysis area, therefore the number of days with impacts above 0.5 and 1.0 ddv should be interpreted as a very conservative upper limit for all scenarios / alternatives. The analysis for the 20% best and worst days is consistent with EPA's recommendations for Regional Haze Analysis and the use of the MATS tool mitigates the model biases and represents changes from the base year (2008) conditions and not relative to background "natural conditions". Just like visibility, the DATs are values that should be interpreted as limits to deposition for specific / actual proposed projects and the values presented in Table 4.2-12 encompass emissions from an entire state / region and for much more than one single project.

The EIS discloses CARMMS source apportionment AQRV impacts for CRVFO (outside Roan only) and there are no days with visibility impacts above 0.5 dv change for that source group. The WRNF leases for oil and gas development are a small subset of the entire oil and gas development in the CRVFO (outside Roan), so any potential future oil and gas development for the leases from the WRNF would represent a small contribution to potential impacts.

Comment:

While there was a Scenic Resource Analysis in the DEIS it appears focused on impacts to Scenic Resources only within the Thompson Divide area. However, a broader visual resource analysis may show that there would be the visibility of oil and gas drilling and production from various commonly used areas within and outside the Thompson Divide area. For example, it would be worth mentioning in the FEIS the potential visibility of oil and gas activity and disturbance from the heavily used McClure Pass area, from the top of the Sunlight Ski area, from Sunlight Peak, from Ridge Lakes trail and the Spring Gulch Nordic Area. The reasons for including the visual effects is that there are economic repercussions of replacing undisturbed natural landscapes with pockets of industrial activity. For example, Orens and Seidl (2004) found that even conversion of undeveloped land, open space, and ranch lands to tourism infrastructure and second homes may reduce winter tourism in Gunnison County (home of Crested Butte ski area) but as much as 40%. The adverse impacts of the reduction in visitation were on the order of $14 million annually and 350 jobs. While the absolute magnitude of the effects may be smaller for the Sunlight Ski Area and cross country skiing there (and Spring Gulch Nordic Area), the effects of visible oil and gas drilling and production is likely to have even larger percentage impacts on visitation than the visual impact of second homes. Ellingson, et al. (2006) found similar percentage reduction (50%) in summer visitors to Routt county (home of the Steamboat ski area that offers mountain biking and hiking during the summer) if ranch lands were converted to urban uses. Again, we would expect at least this much change in visitation with industrial facilities such as oil and gas drilling and production operations. There would be a resulting decrease in employment and non market values associated with losses in recreation use due to industrial development. At a minimum BLM should acknowledge the potential relative magnitude (e.g., percent changes) of economic impacts associated with Alternative #1 and #2 (citing these two studies), in order to provide a more balanced socioeconomic assessment of the potential economic losses associated with Alternatives #1 and #2.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

While it assumed that recreation and recreation-oriented tourism may still occur with oil and gas development, Sections 4.13 (Recreation) and 4.25 (Scenic Resources) acknowledges that the quality and quantity of the recreation opportunities may change or diminish proportionately to the level of oil and gas development. The availability for high value scenic areas for development is disclosed in Tables 4.15-3, 4.15-5, 4.15-8, and 4.15-11, and the stipulation coverage of leases closest to Sunlight Ski Area and Spring Gulch Nordic Area and others areas of local concern are disclosed in the analysis. However, visibility of oil and gas development activity from various locations would depend on site-specific factors such as slope, vegetation, aspect and topography. Impacts would be determined at a site-specific development stage and mitigation applied as appropriate. As such, a determination of the economic impact of lease development based on visibility considerations would be speculative.

Short-term Use; Long-term Productivity

Note: The comments are grouped together and sorted by the last name of the commenter, with the BLM response in a gray shaded box following the grouped comments within this category.

Comment:

I am a retired BLM Soil Scientist/Environmental Specialist with a comprehensive background in managing extensive public lands and their respective natural resources, This is a very critical point in time with the scientifically recognized negative environmental impacts continuously occurring due to global warming, extreme droughts and weather catastrophes. The worldwide burning of fossil fuels and the related release of greenhouse gases is directly adding to these rapid rises in global temperatures and related weather changes. Furthermore, the extensive expansion of wildfires is also being exacerbated by climate change. The ongoing resultant loss of native vegetative ecosystems and soil/water resources from these huge conflagrations is monumental. These, and many other major environmental and economic factors, are significant reasons to deny any new permits for oil and gas development on federal lands. Last but no least, there has been no proper environmental analysis (EIS, EIA) prepared for these proposed actions. Therefore, you are in violation of the requirements of the National Environmental Policy Act (NEPA) if you allow any additional oil and gas extraction on the public lands you administer without proper environmental documentation and public review!

RATLIFF, JOE

BLM Response:

This EIS serves as the environmental analysis of the 65 existing leases. Impacts to climate change and GHG emissions are discussed in Section 4.2. The current EIS recognizes that emissions of GHG will contribute to the cumulative concentrations of these gases thus contributing to climate change. With the current state of the science is not possible to know the specific impacts from the Proposed Action on climate change, however the BLM through adaptive management practices detailed in the Comprehensive Air Resource Protection Protocol (CARPP) considers mitigation with the objective to reduce air quality impacts. Table V1-1 in CARPP lists a series of reduction measures considered best management practices in reduction of emissions from oil and gas development. Many of these measures will effectively reduce GHG and thus their impact on climate change.

The BLM Colorado Air Resource will analyze submitted projects on a case-by-case basis to determine if it is feasible and reasonable to require additional mitigation to reduce or offset GHG emissions and to evaluate potential net GHG concentration changes due to reduction in CO_2 sinks (forests / vegetation) when more detailed information about actual proposed oil and gas development project locations and plans are known.

Socioeconomics

Note: The comments are grouped together and sorted by the last name of the commenter, with the BLM response in a gray shaded box following the grouped comments within this category.

Comment:

The four reports described below examine oil and gas development, public lands, and local economies. The reports were researched and published by Headwaters Economics. Although mentioned in the DEIS, the quality of analysis and the applicability of the findings were not adequately represented in the DEIS. It might be that the socioeconomics sections had already been largely drafted before the Cooperator information was submitted. Regardless of the reason, the FEIS and ROD need to acknowledge that socioeconomic considerations clearly favor protecting the Divide by cancelling the leases. This issue must be viewed in the context of continued intensive development elsewhere in the region, and the ever-increasing importance of protecting largely intact natural landscapes such as the Divide even as its value increases in proportion to the ever-shrinking number of such areas.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

Although not all four Headwaters reports were specifically cited in the DEIS, all were reviewed and considered in preparing the socioeconomic impact analysis. The DEIS determined that project itself is anticipated to have a limited impact on WRNF tourism and other economic activities. Consideration of the context of the contributing influences of future increased oil and gas development in the region is provided in the cumulative analysis (Section 4.17.4.4).

Comment:

Much of our region is comprised of federal lands, largely in the WRNF. Our economy is centrally based on the use of those lands as a recreational resource which serves local, state, national and even international populations. A recent study by Headwaters Economics documents how federal lands support above-average economic growth in western communities close to those lands. See Ex. 39. We certainly believe that principle is amply demonstrated in our communities.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

Although not cited in the DEIS, Ex 39 Headwaters Economics: West is Best, and other relevant studies during its were reviewed and considered during the socioeconomic impact analysis. As discussed in Section 3.17.3.4, the DEIS recognizes that tourism accounts for more than 7,000 jobs in Pitkin County and nearly 26,000 regionally.

Comment:

More seriously, any attempt to convert non-NSO leases to NSO leases, or otherwise retroactively modify lease stipulations, would constitute a breach of contract. See Mobil Oil, 530 U.S. at 619-620 (unforeseen changes to oil and gas leases made by the federal government exposes the United States to breach of contract claims); Amber Res. Co. v. United States, 538 F.3d 1358, 1367-76 (Fed. Cir. 2008). If the CRVFO is seriously considering cancelling 65 oil and gas leases it must also consider the social and economic effects and the burden on taxpayers. 40 C.F.R. § 1508.14; see 40 C.F.R. § 1508.8 (Effects that must be considered in NEPA analysis include "ecological ... , aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects may also include those resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial."); California Co. v. Udall, 296 F.2d 384, 388 (D.C. Cir.1961) ("The [MLA is] intended to provide wise development of these natural resources and to obtain for the public a reasonable financial return on assets that 'belong' to the public."). Additional analysis of the social and economic effects of cancellation of any or all of the 65 leases will allow the CRVFO to consider the effects on the American taxpayers who may be saddled with the financial responsibility if such actions ultimately constitute a breach of contract or a taking of the lessees' property. In light of the foregoing, the CRVFO lacks authority to impose NSO stipulations upon valid existing non-NSO oil and gas leases as suggested in Alternatives 3 and 4.

CAVANAUGH, JAMIE; WILLSOURCE MOUNTAIN STATES LEGAL FOUNDATION

BLM Response:

As stated in Section 1.4 of the DEIS, there is a need to “address the NEPA deficiency identified by the 2007 IBLA ruling on the appeal by the Board of Commissioners of Pitkin County that BLM must formally adopt NEPA analysis completed by the Forest Service or conduct a NEPA analysis of its own for issuance of oil and gas leases underlying WRNF lands”. The Secretary of the Interior has inherent authority, under her general powers of management over public lands, to cancel leases issued in violation of a statute or regulation. Boesche v. Udall, 373 U.S. 472 (1963) (the Mineral Leasing Act leaves unaffected Secretary’s traditional administrative authority to cancel a lease based on pre-lease factors); 43 CFR 3108.3(d) (the BLM has the authority to cancel a lease if “improperly issued”). The NEPA deficiency at lease issuance makes the leases voidable at the discretion of the BLM based on supporting remedial analysis. See Conner v. Burford, 848 F.2d 1441, 1451, 1454 (9th Cir. 1988) (indicating that leases issued without NEPA and ESA compliance were voidable by contemplating that BLM would later those address those procedural requirements and decide whether the leases should have been issued); Clayton W. Williams, Jr., 103 IBLA 192, 210-11 (1988) (characterizing as “voidable” any lease issued in violation of a procedural requirement, such as NEPA, which does not compel any particular decision).

BLM would not unilaterally modify leases, but if the leaseholder does not consent to new or modified stipulations, BLM may cancel leases. As stated in Sections 2.3.3, 2.3.4, and 2.3.5 of the DEIS, should leases be cancelled, subsequent BLM administrative actions including refunds of bonus bids and lease payments or judicial action may be necessary. Analysis of litigation costs or outcomes is beyond the scope of the EIS and is speculative since the outcome or terms are uncertain, and would involve considerations independent of the project.

The project's potential economic impacts to the taxpayers are outside the scope of the socioeconomic analysis due to the very large size of their economies compared to the potential local and regional economic impacts. In addition, any oil and gas activity displaced from WRNF may relocate to another location(s) in Colorado and/or federal properties. In that case, no measurable economic impact to the State and/or Federal government would be expected since project-related "lost" economic benefits may be recouped from the new location's development.

Comment:

This lease (West Mamm lease) was acquired as part of the Laramie Energy acquisition of Petrogulf Corporation in 2007. COC 67150 is communitized with federal leases COC 67149 (and COC 73256) under lease COC 73718. See BLM Communitization Agreement CO 922 (MK). See also WRNF Lease DEIS at 1-5. The communitized area ("CA") includes 160 acres of fee minerals and COC 67149 has fee surface. BLM receives 9.477611% of all production from the CA as royalty income. The communitized acres are described as: Township 8 South, Range 93 West, 6th P.M. Section 5: Lots 5-14, S/2N/2, NE/4SE/4, Tract 39 and that part of Tract 40 lying in Section 5 and Tract 41 Garfield County, Colorado containing 658.13 acres. There are six wells producing on this CA and each is operated by Laramie. Laramie has spent $21,147,304 to permit, drill and complete these wells and an additional $800,000 to construct a pipeline to take the produced gas to market. Laramie has the authorization to drill an additional 60 wells in Section 5 under the applicable spacing order and the BLM West Mamm Master Development Plan Environmental Assessment described below. BLM has also failed to disclose and analyze the anticipated costs of lease cancellation in Alternatives 4 and 5. In Alternative 3, BLM proposes to add stipulations to existing leases and if lessees refuse, to cancel the lease. In the case of West Mamm, lease cancellation would impact a producing lease with significant existing infrastructure. To cancel a producing lease, BLM would. Need to file a federal court action. 30 U.S.C. §§ 188(a) and 184(h)(l). BLM did not analyze the costs to litigate cancellation of producing leases and damages that must be paid. In the case of Laramie, while not conceding that BLM can do so, the cost of cancelling the West Mamm lease alone would exceed $22,000,000. BLM must calculate and disclose this information for each of the 65 leases in the WRNF Lease DEIS.

BOSWELL, ROBERT; LARAMIE ENERGY LLC

BLM Response:

As stated in Sections 2.3.3, 2.3.4, and 2.3.5 of the DEIS, should leases be cancelled, subsequent BLM administrative actions including refunds of bonus bids and lease payments or judicial action may be necessary. Analysis of litigation costs or outcomes is beyond the scope of the EIS and is speculative since the outcome or terms are uncertain, and would involve considerations independent of the project.

Comment:

Of Pitkin County's small population of approximately 16,000 people, for example, over 46 % are employed in the tourism business. Additionally, approximately 50 % of Pitkin County's land ownership is in the hands of part-time residents attracted to the activities and lifestyle of a rural mountain area. This portion of our population earns its income elsewhere and brings those dollars to our economy precisely because of its high quality of life. This enhances the favorability of the local business environment considerably. See Ex. 40 at 69 (2011 NWCCOG Study). Their investment in our local economy with second home and other activities substantially funds non-tourism industries such as construction and the public sector in a manner that tips the balance of the Pitkin County economy to one that depends on tourists and second home owners for well over 50% of economic activity. Likewise, in Glenwood Springs, tourism generates some $243.5 million in annual economic activity. See Ex. 2.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

The DEIS notes the important role of tourism to the regional economy and Pitkin County in particular (Section: 4.17.2). DEIS Section 3.17.3.4 reports that Pitkin County has an estimated total of 7,070 tourism related jobs related to tourism in 2013 which is comparable (approximately 4 percent less) that the commenter's stated tourism sector employment estimate of 7,360 jobs. The commenter's data source is unclear but the minor variance may be due to definition of the tourism sector and/or the data year. In any case, the variance in the employment estimates would not alter the DEIS's subsequent impact analysis or findings.

Comment:

BLM states as an underlying assumption that “[t]he 75 currently producing wells would either be abandoned after the decision is made in the ROD (assumed 2016) or once production has stopped (estimated 2026). As the action would be required in all alternatives at a similar future expense, these costs are not included in the analysis.” BLM’s assumption is inappropriate and skews its analysis. Any decision by BLM under the WRNF DEIS that would lead to the cancellation of a producing lease would require the operator plug and abandon a well; remove all infrastructure, including roads, well pads, and other ancillary facilities; and reclaim and revegetate all disturbed areas. It is inappropriate and unfair of BLM not to include the cost of these activities in its socioeconomic impacts analysis, notwithstanding operators may have to conduct these activities at some future time. Furthermore, BLM specifically states in the WRNF DEIS that any final decision by BLM would not authorize any on-the-ground activity—such as reclamation— and that any such activity would require additional site-specific NEPA analysis. See WRNF DEIS, at 2-59, 2-61. The requirement for additional NEPA at the reclamation stage is inappropriate, not typically required of operators, and would impose additional costs not analyzed by BLM. First, reclamation is included as an activity authorized by lease issuance, per the terms of any lease. See BLM Handbook H-3203-1, Appendix 3 (form lease document) (“To the extent consistent with leased rights granted, such measures may include, but are not limited to, modification to siting or design of facilities, timing of operations, and specification of interim and final reclamation measures.”). Second, any anticipated reclamation is typically already analyzed and documented in the site specific environmental analysis. For example, with respect to the Oxy Leases, Hells Gulch 2 EA analyzed the site-specific development on Lease Nos. COC66918 and COC66723. See Hells Gulch 2 EA; see a/so Hells Gulch 1 EA, at Section 2.1.16; Hightower EA, at Section 2.1.13. Section 2.1.16 of the Hells Gulch 2 EA describes "well abandonment and reclamation," which will be "performed in accordance with all applicable {Colorado Oil and Gas Conservation Commission], Forest Service, and BLM regulations." See Hells Gulch EA, at 26. Finally, Oxy also maintains a Forest Service-approved reclamation plan for each developed lease. In conclusion, the expectation of additional NEPA at the reclamation stage is inappropriate, particularly for the Oxy Leases. And, even if BLM intends to require such NEPA—which Oxy suggests it should not—BLM must include the cost of such NEPA in its socioeconomic impacts analysis here.

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

BLM Response:

BLM would not unilaterally modify leases, but if the leaseholder does not consent to new or modified stipulations, BLM ma y cancel leases. As stated in Sections 2.3.3, 2.3.4, and 2.3.5 of the DEIS, should leases be cancelled, subsequent BLM administrative actions including refunds of bonus bids and lease payments or judicial action may be necessary. Analysis of litigation costs or outcomes is beyond the scope of the EIS and is speculative since the outcome or terms are uncertain, and would involve considerations independent of the project.

The DEIS reference to require additional NEPA analysis refers to subsequent Application to Drill (APD) process. The APD process is necessary once the well site location and proposed operations are identified so that the surface managing agency and BLM can assess compliance with all regulatory and requirements, analyze environmental effects, identify any potential Conditions of Approval or other mitigation measures, and address any other agency requirements, and make a decision whether a permit should be approved, denied, or approved with conditions. The APD process is a standard element of the federal mineral development process and not a new requirement for the WRNF leases. While the cost of APD process can vary (i.e. depending on site conditions and other factors) allowances for environmental compliance and permitting expenses are included in the DEIS's well construction cost estimates.

Comment:

Impacts to our economy from development of these leases would not be limited to existing uses within the Thompson Divide. We anticipate impacts of even greater economic significance from the heavy volumes of industrial traffic and other off-site impacts that oil and gas development in the Divide would bring to the hearts of our communities. From diminished real property values along the Four Mile and Thompson Creek Road alignments to impaired tourism in Glenwood Springs, Carbondale and beyond, we expect those economic impacts will be serious and significant. In Glenwood Springs alone, for example, tourism generates some $243.5 million in annual economic activity. See Ex. 2.3

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

Comment:

the Headwaters Report entitled Impacts of Energy Development in Colorado With a Case Study of Mesa and Garfield Counties (November 2008) is of particular relevance. This exhaustively researched report specifically refutes certain outdated assumptions or unsubstantiated beliefs regarding the economic impacts of energy development in our region.
Available online at
http://headwaterseconomics.org/pubs/energy/HeadwatersEconomicsImpactsofEnergyCO.pdf.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

Comment:

This report provides quantitative estimates and references to the literature that provide more detail and evidence of non market economic benefits (e.g., recreation, hunting, and property values) of Alternative #4 and corresponding non market economic costs of Alternatives #1, #2 and #3. Incorporation of the analysis and references provided in this report into the FEIS would provide a more comprehensive analysis of the economic effects of Alternatives #1, #2, #3, #4 and #5.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

Comment:

A report titled, Energy Development and the Changing Economy of the West (September, 2008 - revised 06/24/09), concludes that energy development today takes place in a context that is very different from the 1970s. The principal sources of prosperity in the West are now related to modern services or knowledge-based economy, and retirement and investment dollars. Rather than simply serving as a repository of raw materials to be extracted, today's public lands play an important role by providing recreational opportunities and scenery that attract and retain a growing population and businesses increasingly free to choose their location. As a result, the relative economic importance of energy development has declined. Today, the public lands managed by the Forest Service and BLM play an important role in attracting entrepreneurs who can locate anywhere, retirees seeking towns with a high quality of life, and "amenity migrants" who choose where to live first, and then either find work or create business opportunities.

The body of literature documenting this phenomenon is large and growing. One detailed study, published in the journal Society and Natural Resources, found that counties in the West with wilderness, National Parks, National Monuments and other protected public lands set aside for their wildland characteristics, play an important role in stimulating economic growth – and the more protected the lands are, the stronger their positive impact on economic growth. The role that public lands play in providing a high quality of life helped many communities in the West grow and diversify in the 1990s. As one of the reports in the Energy and the West series shows, communities like Grand Junction, Colorado recovered well from the energy bust that occurred in the 1980s largely because it was discovered as a good place to live and retire.

[A] wealth of data illuminating the West's fundamental economic restructuring has become available. These data indicate it is important to consider the scale and compatibility of direct uses with the growing importance of non-use values such as the advantage of public lands as a setting that attracts and retains people and businesses. Figure 3 shows that activities normally associated with various uses of public lands-travel and tourism, mining (including oil and natural gas development), and the timber industry constitute approximately 7 percent of all jobs in the West (using 2006 numbers, the latest available). Ninety-three percent of employment, by contrast, has no direct link to the use of public lands. As a growing body of research has shown, many jobs in the West are in a mix of industries that are more likely to grow and thrive in a setting where public lands are attractive for recreation and as the scenic backdrop for communities. As a result, the balancing act of managing public lands. From an economic perspective, is not just between uses of the land but should also include consideration of much larger economic benefits associated with the non-use values of those lands. Report at 11-12. The conclusion of the Report emphasizes the research finding that recreational opportunities and quality of life are key economic drivers, and acknowledges the potential for energy development to compromise amenity values and environmental quality to the economic detriment of local communities.

The socioeconomics analysis in the DEIS appears to date to the 1970s, before social science documented the seismic socioeconomic shifts documented by this report. As mineral development in appropriate locations continues to provide welcome economic activity to some communities, the converse is also true. Leasing and development in inappropriate locations threatens the pillars of 21st Century economies built around diverse drivers including qualify of life and recreation uses that flow from protected landscapes. A Record of Decision cancelling the Divide leases will recognize this reality of today's rural West.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

Comment:

Currently, the primary monetary quantification in the BLM DEIS is related to oil and gas development. However, all the alternatives have an effect on big game habitat (hence hunting), visual resources, recreation resources, and property values. This report provides literature and examples of how the economic values of these other resources presented in this report can be incorporated into an economic analysis, included in the FEIS, and would provide additional support for Alternative #4 as the proposed action. This report will review BLM's socioeconomic analysis and show how it can be improved upon by referencing additional literature, and in some cases demonstrate how an improvement in analysis would show the relative magnitude of several types of economic benefits associated with Alternative #4. The goal of this report is to show that even a little more detail on the qualitative analysis of the economic benefits of Alternative #4 would show that the DEIS alternatives are not examples of the "environment versus the economy" as might currently be perceived by some, but rather a trade-off regarding the type of economic values that can be provided by National Forest lands in the Thompson Divide area.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

The DEIS socioeconomic analysis recognizes the importance of tourism to the region's economies (Section 3.17.3) and also the indirect and induced effects of project-related land use and economic activity changes (Section 4.17.3). Given the data limitations on the relationships between current and future WRNF land uses, resource changes and economic behavior, the DEIS analysis could not quantify the extent that the location and magnitude of proposed oil and gas development in WRNF would result in reduced tourism or property values. Consequently, the commenter's prediction of serious and significant economic impacts cannot be affirmed. NEPA requires that Federal Agencies' "provide full and fair discussion of significant environmental impacts" and "inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment" (40 CFR 1502.1). Qualitative and quantified socioeconomic effects have been disclosed in Section 4.17.3 and include a quantified regional economic impact analysis, which is used to estimate impacts on economic activity, expressed as projected changes in employment, personal income, or economic output. More importantly qualitative and non-monetized quantitative resource effects, that have non-market values, have been disclosed throughout Chapter 4. This is consistent with 40 CFR 1502.23 that states for "the weighing of the merits and drawbacks of the various alternatives need not be displayed in a monetary cost-benefit analysis and should not be when there are important qualitative considerations."

Comment:

The CRVFO relies on the flawed assumption that "[n]atural gas production for Alternatives 2 through 4 would be similar to Alternative 1." Draft EIS at 4.17-8. Alternative 1 reaffirms all 65 leases as issued, while Alternatives 3 and 4 would add NSO stipulations to all 65 leases. The CRVFO also states that NSO stipulations "could have adverse impacts on the future natural gas revenues due to higher costs of development compared to vertical wells and may have negative economic impacts for the region." Id. (emphasis added). It is a certainty that Alternatives 3 and 4 would adversely impact future oil and gas production. It is also likely that under NSO stipulations, lessees will be entirely prohibited from increasing natural gas production from any of the 65 leases. Because natural gas production will necessarily be greatly limited under Alternatives 3 and 4, WillSource requests that the CRVFO supplement its analysis of production and socioeconomic effects under each Alternative appropriately and limit its attempt to place retroactive stipulations on valid existing oil and gas leases.

CAVANAUGH, JAMIE; WILLSOURCE MOUNTAIN STATES LEGAL FOUNDATION

BLM Response:

Commenter contends that stipulations would adversely impact future lease productivity and prohibit "increasing natural gas production from any of the 65 leases." Feasibility assessment of the leases (together or individually) is outside the DEIS scope and purpose. As the DEIS states in 4.17.1.3: “The analysis is not forecasting outcomes (i.e., prices, production, or consumption) as such, but instead modeling regional economic impacts between the alternatives given the...specific and commonly applied assumptions.” Without detailed lease specific analysis, "baseline" locations and development cost analysis for multiple sites and configurations, it would consequently be speculative to attribute and estimate any net cost impacts from the stipulations for the undeveloped leases. Therefore no cost change assumption was adopted as a null hypothesis to minimize added analysis bias that would skew the findings of the comparative analysis of the alternatives socioeconomic impacts. This approach was considered most appropriate given the data limitations and best serve the analysis purpose to perform a comparative evaluation of the alternatives based on common and comparable assumptions unless specific information warrants otherwise. Large non-NSO areas of the leases remain available as potential well site development locations. Furthermore, since the stipulations were selected based on surface resource conflicts there may be limited (if any) expected correlation with the site's potential oil and gas productivity.

Comment:

Limitations in BLM’s DEIS understate the adverse economic effects of Alternatives #1 and #2 relative to Alternative #4. Additional documentation of the market and non market environmental effects of the alternatives are provided in the details of this report. Incorporation of the additional documentation in the FEIS would allow BLM to counter the impression given in the Socioeconomic analysis of the DEIS that the choice before them and society is “Environment versus the Economy”. Rather, Alternative #4 provides several types of economic benefits that can be better documented.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

Contingent valuation can be most appropriately used when location specific survey analysis is performed. Many economists' opinions vary on the validity of using a benefits transfer approach with contingent valuation findings to represent passive use / non-use values. These concerns include determining the appropriate non-regional population and extent that its values should be counted versus those of the regional population. There are also concerns that even small variances in per capita values can result in major changes in the resource valuation. As discussed in MC-2 Thompson Divide’s Contribution to Local Economies, commenter seems to presume that any oil and gas development would necessarily substantially diminish the area’s passive use values. While BLM acknowledges that natural areas may have considerable passive/non-use values, there remains major difficulty and disagreement in determining the extent that activities or physical changes to the areas should be represented as diminishing their values. Given the inability to represent marginal changes in these values, BLM that inclusion of Contingent Value estimates will provide little if any assistance to the DEIS's comparative evaluation of the project alternatives' socioeconomic impacts.

Comment:

Hi, my name's Jim Hawkins. I retired here with my wife and son 20 years ago and opened a bed and breakfast right on Four Mile road. My first comment to you folks is, from a very personal standpoint, your estimates of it looked like around an industrial truck every 10 minutes, 24 hours a day, driving by my bed and breakfast means we're out of business. That kind of impact is going to happen to a lot of people. Anybody that lives on the four mile quarter and sees it as the assumed hall route should know that their land values are going to drop straight down. Whatever they think they've got, their retirement home, whatever they have, go ask the people in [inaudible 29:30] , see what your land values are going to do. Don't for a minute think that the traffic going by us isn't going to have a severe impact. I could sit here and talk all night like the rest of the folks about watersheds and everything else. On a very personal level, it's going to affect our county, our population.

HAWKINS, JIM

BLM Response:

DEIS Sections 4.10 and 4.17.2 provide analysis of the project's potential transportation and related socioeconomic impacts. It should be noted that unlike the commenter's traffic impact characterization, traffic impacts would predominantly occur short-term during well construction work days and the majority of truck traffic would not be industrial trucks. Instead the majority of the traffic will be worker's personal vehicles to and from the worksite.

The DEIS acknowledges the potential for some negative real estate value impacts to property that experience increased noise, dust and/or congestion for those residents/individuals that consider the degree of the effects (both magnitude and frequency) substantially detract from the property's other qualities and amenities. However, quantitative estimates of any such potential socioeconomic impacts was not possible for the DEIS due to the unknown locations of future development locations and the inherent limitations quantifying the degree of impacts and their reasonable economic value for affected property owners.

Comment:

The prediction that Alternative 4 would reduce future total county revenue by $6 million is suspect. DEIS at ES-17. That prediction is premised on questionable assumptions, including that developing the Divide would not reduce local revenues from other economic sectors as predicted by Local Government Cooperators, and that deploying rigs and capital to explore for minerals under the Divide would not result in less drilling elsewhere. The basic RFDS assumptions listed at DEIS appear dubious with regard to Zone 3, or fail to support development.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

Given the data limitations on the relationships between current and future WRNF land uses, resource changes and economic behavior, the DEIS analysis could not quantify the extent that the location and magnitude of proposed WRNF oil and gas development would result in reduced tourism or property values. Per standard NEPA practice, the DEIS is primarily focused on the impacts attributable to the proposed actions. While this will include induced and indirect economic impacts from construction spending or government revenue from royalty payment, potential resource reallocation effects (i.e. from limited rigs and capital availability) would not be included except perhaps within the cumulative analysis if the resources are recognized as limited. Furthermore, the DEIS maintains that other oil and gas production in the region would be unconstrained by the project's proposed oil and gas development since that it represents a very minor (1 percent) proportion of the region's expected future oil and gas development activity (Section 4.17.4.4).

Comment:

BLM assumes that "[e]xact well locations are unknown. This analysis attributes future well locations corresponding with each lease's acreage within the different counties. As such, lease stipulations might impact the number of potential wells that could be drilled but are assumed to have no impact on expense of drilling or operations." See WRNF DEIS, at 4.17-3. This assumption is inaccurate and skews all related analyses. BLM has provided no support for the assumption that while "lease stipulations might impact the number of potential wells that could be drilled," the stipulations will have "no impact on expense of drilling or operations." And, in fact, Oxy's evaluation of the various stipulations lead to the opposite conclusion.

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

BLM Response:

Leaseholders will select their well site locations and configurations (subject to BLM guidelines and applicable stipulations). Feasibility assessment of the leases (together or individually) is outside the DEIS scope and purpose. As the DEIS states in 4.17.1.3: "The analysis is not forecasting outcomes (i.e., prices, production, or consumption) as such, but instead modeling regional economic impacts between the alternatives given the noted and common assumptions. Consequently, this analysis is not a prediction of the future but rather an evaluation and, where possible, an estimation of how the alternatives will each impact the regional economy given the specific and commonly applied assumptions." BLM consider it too be overly speculative to attribute, and furthermore estimate, any net cost impacts from the stipulations for the undeveloped leases without detailed lease specific analysis, "baseline" locations and development cost analysis for multiple sites and configurations. Therefore, a "null hypothesis" assumption of no cost change was applied to minimize any known added bias that would skew the findings of the comparative analysis of the alternatives socioeconomic impacts. This approach was considered most appropriate given the data limitations and best serve the analysis purpose to perform a comparative evaluation of the alternatives based on common and comparable assumptions unless specific information warrants otherwise. Large non-NSO areas of the leases remain available as potential well site development locations. Furthermore, since the stipulations were selected based on surface resource conflicts there may be limited (if any) expected correlation with the site's potential oil and gas productivity.

Comment:

I have about 22 years working on the public good, including some time as the Mayor of Aspen. I feel that, from that background, it gives me really strong credentials to say that this valley's economy is a recreational tourism-based economy. We have built that long and hard and carefully to avoid the types of booms and busts that other industries have. Whether it's been investment in open space or property tax mill levies and the public investment or whether it's been a sales tax...excuse me, that was the public of all Pitkin County, sales taxes for open space, these sorts of investments are to protect our wildlife and to protect our economy.

RICHARDS, RACHEL E; TOWN OF ASPEN

BLM Response:

The DEIS notes the important role of tourism to the regional economy and Pitkin County in particular (Section: 4.17.2). The DEIS also recognizes the important role that visitor and local use of the Thompson Divide and other WRNF areas contribute to the region's economies. The BLM acknowledges the past occurrence and potential for "boom bust" cycles in the leases' future oil and gas activity. However, it is speculative to apply any such variability in the socioeconomic analysis assumptions. Several changes in the region's economy and national energy market (e.g. natural gas's "flat" long term price projections and the wider availability of potential oil and gas development sites) may arguable suggest that energy prices may be comparatively less volatile in the future and thereby reduce the extent of any future boom-bust occurrences.

Comment:

The WRFEIS indicates that a total of 21 jobs and $1.27 million in labor income on an average annual basis can be attributed to oil and gas production from the WRNF's 85 existing wells. See WRFEIS at 267. This data appears to reflect the additional benefits of one new well outside of Pitkin County to an existing two jobs and $164,000 in annual labor income cited in the WRDEIS. See WRDEIS at 3-269. The WRFEIS lists slightly higher average annual employment numbers and labor income flowing from potential future oil and gas activities, though it does not explain the basis for such figures. See WRFEIS Table 77 at 271. If the assumption is predicated on steady drilling that takes place over an extended period of time, we find that assumption at odds with the documented boom-bust cycle of development that is evident most recently in the Piceance. Furthermore, as Dr. Wright's report notes, it is "highly unlikely" that wells drilled in the Thompson Divide will have similar production as those in the Piceance Basin. See generally supra Part III.A.; see also Ex. 9 at 7. Thus, BLM should not base assumptions on existing data from the Piceance. What seems more credible is to assume that there will be isolated large booms in the Piceance followed by long periods of time involving very little employment and revenue generation. While we understand that such a cycle is not inconsistent with the average figures presented in the WRFEIS, the cycle itself is of great socioeconomic consequence. We believe that focusing on the long-term effects better serves the future of our community. We prefer to avoid boom-bust cycles in favor of a more sustainable economy.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

Comment:

In the western areas of Pitkin County surrounding the communities of Carbondale and Redstone, the impacts to our local economy will be even more serious. In this area, our recreational and tourist-based economy is supplemented by flourishing agricultural operations that provide local food products to our valley and beyond. A recent study demonstrates that activities centered on the Thompson Divide generate some $30 million in economic activity annually, and support nearly 300 jobs statewide. See Ex. 1 at 9 of 34.Pitkin County has, through zoning and public acquisitions, prioritized preserving agricultural and recreational operations in this area for a number of reasons. First, these operations generate high-value local food and directly support the local economy. Second, preserving an agricultural and rural way of life attracts tourists who are drawn to the pastoral landscapes and outfitting opportunities provided by these operations. Third, preserving agricultural and other open lands advances wildlife conservation which in turn supports hunting-based economies that contribute some $23 million to the Pitkin County economy on an annual basis. It is no overstatement to say that the future of our rural, resort and recreation-based economies depends on preserving the clean air, clean water, and non-industrial rural character that attract our visitors. Traffic, air quality, and other impacts flowing from a decision to permit oil and gas development in the Thompson Divide will directly and adversely affect these pillars of our economy. While we recognize the importance of energy production, we strongly believe that protecting and promoting tourism, recreation, and other resort-based industries will better serve our economic future in Pitkin County. Simply put, we already have in place tremendously successful economic engines that depend upon clean air, clean water, and the rural character of our communities. We believe it is both unnecessary and shortsighted to authorize development that places those engines at risk. See, e.g., State of New Mexico v. Bureau of Land Management, 565 F.3d 583, 710 (10th Cir. 2009) ("Accordingly, BLM's obligation to manage for multiple use does not mean that development must be allowed…. Development is a possible use, which the BLM must weigh against other possible uses-including conservation to protect environmental values….").

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

Comment:

The leases at issue in the Thompson Divide are undeveloped, and the leased lands therefore remain in their pristine state, unchanged since BLM issued the leases in 2003. Thriving local economies depend on these lands staying that way. As described in a report prepared by BBC Research, the Thompson Divide area generates some 300 jobs and $30 million in economic activity on a sustainable annual basis. See Ex. 1. Oil and gas development in the Divide would curtail or eliminate many of the ranching and recreational uses giving rise to those economic benefits. It would also introduce incompatible industrial activities into a recreational mecca, fragment some of the best big-game habitat in Colorado, and threaten to pollute pristine watersheds with groundwater tables located just beneath the surface.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

Comment:

Inevitable adverse impacts of drilling to the local economy include the potential to reduce the positive contributions of an undeveloped Thompson Divide, and the downside of "boom and bust" economic cycles tied to commodity prices and other external factors. Many local businesses and significant levels of economic activities are dependent on protecting the Divide. The estimated 300 jobs tied to the existing Divide landscape is a very significant number in the region. These jobs and related economic activities are tied to sectors including hunting, outfitters, angling, wildlife watching, scenic tourism, climbing, hiking, biking, skiing, other forms of outdoor recreation, local foods, food co-ops, and retail.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

Comment:

The DEIS forecasts that almost all lost production would occur in Pitkin County. DEIS at 4.17-21. Pitkin's strong support for protecting the Divide is partly premised on the belief that protection is far superior for the local economy. While there is no shortage of existing leases and projected well locations in the greater region, landscapes such as the Divide are growing rarer by the day. Colorado's remaining intact natural landscapes are of equal and growing importance to the region's future and our economy by any measure. The Headwaters Reports support the widely held perception that these priceless natural landscapes are far more valuable to quality of life and the region's socio-economic health if shielded from inappropriate oil and gas development. The FEIS and ROD should reflect the reality that the "best case scenario" for lessees (aggressive development of the Divide) is perceived as a worst case scenario by Local Government Cooperators and the overwhelming majority of our constituents. While leaseholders would be free to pursue development elsewhere after being made whole in reimbursements, local communities are adamant in the conviction that there is only one Thompson Divide, and it absolutely warrants protection. The commitment to protecting the Divide from development drove the lease challenges resulting in the IBLA decision establishing that the Divide leases presently at issue were unlawfully issued, and establishing cancellation as the proper remedy for the Divide leases. Protection is timely and appropriate, given the absence of development or authorizations on the Zone 3 leases. The existing socio-economic analysis is sufficient to support alternatives that cancel the Divide leases, but inadequately analyzes the potential socio-economic impacts under development scenarios for the Zone 3 leases.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

Comment:

Sense of place arises from actual recreation use of an area and some from the scenic backdrop that these undeveloped lands provide to the surrounding communities. With respect to recreation use, BBC estimates that the grazing lands, wildlife habitat, fishing and other recreation within the Thompson Divide support about $30 million in economic activity and about 150 jobs.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

Comment:

The Thompson Divide is highly valuable to all Americans and should be protected from oil and gas drilling so that its wild forests live on for future generations. As the most frequented national forest for outdoor recreation in the country, nearby communities reap immense economic benefits from visitors to the White River National Forest.

FORM LETTER, MULTIPLE

Comment:

The 25 leases at issue in the Thompson Divide are undeveloped, and our local economy depends on these lands staying that way. As described in a report prepared by BBC Research, Thompson Divide area generates some 300 jobs and $30 million in economic activity on a recurring annual basis. As such, existing surface uses (recreation, hunting, fishing and grazing) in the Thompson Divide are a significant driver for our local economy.

GAMBA, MIKE; CITY OF GLENWOOD SPRINGS

Comment:

According to independent economic analysis, existing uses in the Thompson Divide area (hunting, ranching, (fishing and outdoor recreation) support nearly 300 jobs and $30 million in annual economic impacts for the communities that surround the Thompson Divide area. These jobs and a vibrant regional economy are now Jeopardized by an oil and gas play that independent mineral analysis found would “likely fail.”

HAGGERTY, JOANIE

Comment:

There are long term, stable businesses including ranches, recreational services, retail, restaurants, hotels, and others who cater to visitors to this beautiful area who will be negatively impacted by oil and gas development.

HARRINGTON, VIRGINIA

Comment:

My husband works on the Crystal River Ranch which holds grazing permits in the Thompson Divide area. These permits have been held by this specific ranch owner and previous ranch owner since at least the 1950's. As many as ten other families and individuals are employed by this ranch full time and depend on this income for their livelihood. There are others who do seasonal work. The ranch sells some of the beef to a local restaurant. Several of the ranchers with grazing rights in Thompson Divide are actively involved in building a strong local food movement and reduce the food miles traveled which can average from 1,500 to 2,500 from farm to table. This local market has been increasing each year. This helps to reduce overall dependence on oil and gas. Ranching and agriculture are important contributors to the local economy. Private ranch lands also provide habitat for wildlife, filtration for water and air, open space and scenic viewsheds. Ranching in the Roaring Fork Valley would be at risk due to permissive oil and gas development in Thompson Creek.
The ranch depends on its grazing permits on public lands to keep the ranching operation sustainable. Oil and gas development in the Thompson Divide area will have huge and unacceptable impacts on the grazing. Who will compensate grazing permittees/ranchers for the loss of forage and subsequent loss of income, that roads, pipelines, wells and well pads cause? All of the activities surrounding oil and gas drilling will make it very difficult to keep the cattle distributed according to the annual management plans. Cattle, people and wildlife need clean and abundant water. Water quality and availability will be negatively impacted by oil and gas development including groundwater which can become contaminated by fracking fluids. Noxious weed infestation will greatly increase with the disturbances oil and gas development brings and decrease the amount of forage.

HARRINGTON, VIRGINIA

Comment:

I am a farmer growing vegetables and raising meat for the valley and I know the effects of drilling and the risks it possess to our water and landscape.

JOHNSON, MERRILL

Comment:

Divide is home to hunting units that generate over 20,000 big-game licenses each year; summer range for thriving ranching operations; and one of the densest concentrations of inventoried roadless areas in the West. Surrounding communities depend heavily on agriculture and tourism, and independent economic analysis has shown that current uses in the Thompson Divide generate 300 jobs and $30 million each year in sustainable economic benefits.

KESSLER, ZANE; THOMPSON DIVIDE COALITION

Comment:

Ranching: The Thompson Divide area has provided valuable grazing areas for local ranched for more than a century, and it remains one of the strongest enclaves of traditional ranching culture in the West. Dozens of working ranches in the Crystal, Roaring Fork, and Colorado River Valleys rely on U.S. Forest Service grazing allotments within the TDA for their operational viability. These ranches also preserve thousands of acres of increasingly scarce winter range for deer and elk, and thus play an essential role in the larger ecosystem. Ranching operations make important contributions to the local economy and help to define the rural character of the area. Based on number of animal management units raised in the TDA, the immediate economic value of grazing in the Divide is at about $1.9 million per year. The full economic value, however, of the cattle supported by ranches with grazing on the Divide is about $11.2 million per year. See Ex 4. Drilling and industrial development within the Thompson Divide would fragment the landscape and negatively impact existing grazing activities in the area. In tum, drilling activities in the area would threaten the overall viability of dozens of working ranches on the periphery of the TDA.

KESSLER, ZANE; THOMPSON DIVIDE COALITION

Comment:

Existing uses in the Thompson Divide (Hunting, Ranching, Fishing and Recreation) generate 300 jobs and $30million annually, according to independent economic analysis.

KESSLER, ZANE; THOMPSON DIVIDE COALITION

Comment:

Economic concerns such as jobs and state revenue are meaningless when the sustainability of our environment is priority. Our fragile and precious ecosystem is the sane long-term view.

KINSEY-LOVE, RUBY

Comment:

Colorado is a popular outdoor recreational destination and the reason we retired in CO. Tourism means jobs and economic success. Destroying these places makes no sense.

MAINS, PHYLLIS

Comment:

The Thompson Divide matter to me because: Our business, Avalanche Ranch Hot Springs, depends on it.

OGILBY, MERIDETH

Comment:

The livelihood of so many Coloradoans are connected to this area through ranching, tourism, hunting, fishing, and recreation. The area provides a priceless scenic and pristine wilderness area for the many who cherish its remarkable environment. Protecting the Thompson Divide will help to ensure the long-term prosperity and healthy communities in western Colorado by preserving the Thompson Divide's plentiful wildlife and wildlife habitat, indispensable watersheds, clean water, clean air, rural and agricultural heritage, and recreational and sporting outdoor activities which helps this local community thrive. The area has been recognized by the Colorado Division of Wildlife as critical migration corridor for moose, lynx, deer, elk and mountain lions. Most importantly this area is one of the last great swaths of undeveloped-mid-elevation forest land in Colorado. Hikers, mountain bikers, horseback riders, campers, and anglers all enjoy this majestic wilderness area.

PETERSON, HENSLEY AND JAMES

Comment:

The livelihood of so many Coloradoans are connected to this area through ranching, tourism, hunting, fishing, and recreation. The area provides a priceless scenic and pristine wilderness area for the many who cherish its remarkable environment. Protecting the Thompson Divide will help to ensure the long-term prosperity and healthy communities in western Colorado by preserving the Thompson Divide's plentiful wildlife and wildlife habitat, indispensable watersheds, clean water, clean air, rural and agricultural heritage, and recreational and sporting outdoor activities which helps this local community thrive. The area has been recognized by the Colorado Division of Wildlife as critical migration corridor for moose, lynx, deer, elk and mountain lions. Most importantly this area is one of the last great swaths of undeveloped-mid-elevation forest land in Colorado. Hikers, mountain bikers, horseback riders, campers, and anglers all enjoy this majestic wilderness area.

PETERSON, HENSLEY AND JAMES

Comment:

I live in Paonia. I hunt, hike and fish in the Thompson Divide. My husband and I chose to move here because of what's here: elk and deer hunting, fishing, hiking, cross-country skiing within minutes of Paonia. We wanted to help maintain our health by being active all year, being able to raise our own food or buy organic vegetables and meat locally. The North Fork Valley's water supply comes from the Thompson Divide. Fossil fuel extraction in our watershed is not compatible with keeping our watershed safe, preserving wildlife habitat, hiking and skiing recreation.

STONE, MARILYN

BLM Response:

Many commenters affirmed the current importance of the Thompson Divide's natural qualities and resources for recreational users (i.e. hunting and hiking) and commercial businesses (such as ranching, outfitters and other tourist activities). BBC Research's 2013 Report "The Economic Contribution of the Thompson Divide to Western Colorado" was widely cited and its findings that 300 jobs and $30 million in annual economic activity can be attributed to its current use by visitors and local residents. These commenters generally expressed concerns that the Thompson Divide's natural resources would be seriously impaired, its attractiveness diminished and its ability to support businesses greatly reduced if the new well development proposed under Alternatives 1, 2 and 3 occurs.

As shown in Section 3.17.4, the DEIS considered and incorporated the BBC Report and other relevant economic studies in the socioeconomic analysis. The DEIS recognizes the important role that visitor and local use of the Thompson Divide and other WRNF areas contribute to the region's economies. The DEIS analyzed both employment and economic output for the region's key industry sectors (mineral extraction, tourism and agricultural) by their key industries on a county by county basis.

In many cases, commenters asserted an inherent incompatibility between oil and natural gas production and the current economic activities within the Thompson Divide. Furthermore, most seem to consider the land use incompatibility to be so great that it extends far beyond proximate uses such that the comparatively limited future well development in the area proposed under Alternatives 1, 2 and 3 would result in substantial economic losses to all the area's other economic activities. In contrast, the DEIS maintains that most of the land use incompatibility will be determined by the direct physical relationships between the proposed oil and gas production (both in terms of its facilities and activities) and the area's other economic activities. Consequently, the DEIS's impact analysis evaluated, and wherever possible quantified, the extent of potential land-use conflicts based on the well-pads and support infrastructures' expected footprint (including buffer zones).

As discussed in Section 4.17.2, future well construction activities are estimated to result in short term disturbance of a maximum of 892 acres with a long term disturbance and use loss of 387 acres. Given the relatively limited size of the future development within in the lease areas (and WRNF as a whole) and assessment of its major support activities (e.g. transportation), the socioeconomic analysis identified limited potential displacement or other impairment to the lease areas' existing land uses and economic activities.

Comment:

BLM assumes that the "existing 75 wells currently in production would continue to operate until 2026 under Alternatives 1 through 4." See WRNF DEIS, at 4.17-3. Consequently, "existing well production is only recognized as an economic loss under Alternative 5, which would cancel all well leases and close all 75 existing wells." See id. Assuming economic loss occurs only with respect to Alternative 5 is an erroneous assumption. The extensive stipulations imposed on certain of the existing leases, and particularly the NSO stipulations, will likely render a lease invaluable such that operators cannot economically pursue mineral extraction, and thus, minerals will be stranded even under those leases under Alternatives 1 through 4 that are not cancelled. See Section IV(C)(2)(a). Of most concern to Oxy is the significant increase in potential NSO limitations related to landscape hazards, slope stability, raptor breading, aquatic species, and water influence zones that were not included in the original Oxy Leases nor were they addressed in the 1993 EIS Oil and Gas Leasing. Any new NSO limitation will likely impact Oxy's access to minerals, and is especially damaging when there is already existing infrastructure in place. Inevitably, the value of a lease is greatly reduced with the increase of NSO limitations, effectively reducing the usable surface area of the lease. Additionally, the cost of moving infrastructure to avoid impacts associated with new stipulations in the post construction phase of operation is cost prohibitive.

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

BLM Response:

Section 4.3.4 has been revised to include a discussion of potential impacts to future and existing operations from the addition of NSO stipulations or lease cancellations, by alternative. The analysis notes that changes to lease stipulations that affect the ability, ease or cost in which operators may proceed with on-lease development and may also may affect long-term plans for development by reducing the ability to share roads and other infrastructure or a reducing the potential for economies of scale.

Comment:

Save the property values of the Four Mile Corridor and save businesses like ours. Teddy had it right....some things need; to be saved for the citizens that live on the earth.

HAWKINS, JIM AND SHARILL

BLM Response:

Sections 4.10 and 4.17.2 provide analysis of the project's potential transportation and related socioeconomic impacts. It should be noted that unlike the commenter's traffic impact characterization, traffic impacts would predominantly occur in the short-term during well construction work days and the majority of truck traffic would not be industrial trucks. Instead the majority of the traffic will be worker's personal vehicles to and from the worksite which would be comparable and to increased residents or recreational visitor use. The DEIS acknowledges the potential for some negative real estate value impacts to property that experience increased noise, dust and/or congestion for those residents/individuals that consider the degree of the effects (both magnitude and frequency) substantially detract from the property's other qualities and amenities. However, quantitative estimates of any such potential socioeconomic impacts was not possible for the DEIS due to the unknown locations of future development locations and the inherent limitations quantifying the degree of impacts and their reasonable economic value for affected property owners.

Comment:

BLM's socioeconomic analysis could better recognize economic research, statistical data, and modeling establishing the potential for significant adverse economic impacts to non·extraction based local economies from energy development on public lands that are highly valued for renewable resource values. The FEIS would benefit from addressing this issue and these concerns both qualitatively, as the Forest Service did in the WRNF FEIS and ROD; and quantitatively, by revisiting unlikely assumptions in the DEIS that appear to overstate the projected economic benefits of developing the Zone 3 leases, and understate the socioeconomic downsides of such development. If the BLM were to fail to respect the WRNF decision or carry the proposed action forward in the ROD, it needs to consider the results of an updated socio-economic model such as the Economic Profile System -Human Dimensions Toolkit.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

Comment:

The Mancos shale is about 4000 feet thick, underlies the entire Piceance Basin, and contains approximately 3000 Trillion cubic feet of natural gas; this is twice the volume of natural gas in the entire Marcellus shale, concentrated in just 5% of the surface area. Development of the Mancos shale gas resource will most likely be predominantly conducted via long horizontal wells drilled from pads, with as many as 50 wells per pad. The estimated gas in place in the Mancos shale averages more than 500 Billion cubic feet per square mile. In the 80,380 acres of leases subject to this EIS, there is likely to be more than 62 Trillion cubic feet of natural gas in the Mancos shale. Full development could provide for a recovery of more than 35% of this gas resource; and at an average gas price of $4 per MCF, with a 12.5% royalty rate, the value of the federal oil and gas minerals would exceed $11 Billion.

DOWNEY, ROBERT

Comment:

The Associations specifically contest the following assumptions and conclusions found in the DEIS socioeconomic analysis and the supporting RFDS:
"Each horizontal well is expected to produce 320 MMscf/yr.12" This is an inaccurate assumption, which equates to an expected daily production of 877 Mscf. As previously stated, the most recent horizontal completion in the area is SG Interest’s Falcon Seaboard #3 well, which has been producing between 6,000 Mscf and 7,000 Mscf per day, even while the well has been choked back. Production from tight formation completions does typically decline over the lifetime of the well, but the average productivity used in the DEIS still clearly understates the potential of what is now known to be an extremely productive formation.

LUDLAM, DAVID; COLORADO OIL & GAS ASSOC & WESTERN ENERGY ALLIANCE

Comment:

Much of BLM's analysis and supporters of BLM's actions thereunder assume that leases located near the Thompson Divide Area lack value, and as such, any modification or cancellation of the same would have no economic or other impact on industry. BLM's assumption is wrong, as evidenced by the recent discovery of "valuable and prolific" natural gas resources in the area. See West Slope COGA, "Prolific Thompson Divide Area Natural Gas Well Championed by Association" (Jan. 5, 2016), attached hereto as Exhibit C. The results of this discovery indicate that the Thompson Divide Area well is another "Mancos-shale mammoth." These recent results from well completions suggest that future development will be distinctly different from past development, due to the Mancos Shale, with the potential to dramatically increase production from the Subject Leases beyond original expectations. This discovery supports industry's position that the Subject Leases are in fact valuable-and the valid existing rights attached to that value cannot be dismissed.

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

Comment:

The Associations specifically contest the following assumptions and conclusions found in the DEIS socioeconomic analysis and the supporting RFDS: Direct county and local government agency revenues resulting from the future natural gas production in the lease area (i.e., federal mineral lease, severance and property taxes) are assumed to be comparable to the revenue generation rates from past regional natural gas production. This is an inaccurate assumption, because it is based on the previously discussed inaccurate assessment of production from horizontal well development, and the previously discussed inaccurately low estimate of what may constitute full development. Production has the potential to be significantly higher than in the past, and therefore county and local government revenues have the potential to significantly increase.

LUDLAM, DAVID; COLORADO OIL & GAS ASSOC & WESTERN ENERGY ALLIANCE

Comment:

The Mancos shale is about 4000 feet thick, underlies the entire Piceance Basin, and contains approximately 3000 Trillion cubic feet of natural gas; this is twice the volume of natural gas in the entire Marcellus shale, concentrated in just 5% of the surface area. Development of the Mancos shale gas resource will most likely be predominantly conducted via long horizontal wells drilled from pads, with as many as 50 wells per pad. The estimated gas in place in the Mancos shale averages more than 500 Billion cubic feet per square mile. In the 80,380 acres of leases subject to this EIS, there is likely to be more than 62 Trillion cubic feet of natural gas in the Mancos shale. Full development could provide for a recovery of more than 35% of this gas resource; and at an average gas price of $4 per MCF, with a 12.5% royalty rate, the value of the federal oil and gas minerals would exceed $11 Billion.

ROBINSON, BRAD; GUNNISON ENERGY LLC

BLM Response:

Several commenters stated the opinion that the DEIS's future oil and gas production estimates are too conservative and consequently under-represent the project's future government revenue payments. Other commentators contend that the DEIS's production estimates (specifically for wells with the Thompson Divide) are overly optimistic and that the future oil and gas production on those leases will prove to be economically infeasible.

As the DEIS states in 4.17.1.3: "The analysis is not forecasting outcomes (i.e., prices, production, or consumption) as such, but instead modeling regional economic impacts between the alternatives given on the noted and common assumptions. Consequently, this analysis is not a prediction of the future but rather an evaluation and, where possible, an estimation of how the alternatives will each impact the regional economy given the specific and commonly applied assumptions." Furthermore, feasibility assessment of the leases is also outside the DEIS scope and purpose. Both the size of the underlying mineral reserves and their recoverability are inherently difficult to estimate and only verifiable "a posteriori."

Average future production rates for the future wells were based on the performance of other comparable wells in the region. The production assumptions were selected to be a reasonable representation of the wells' potential future performance that were adequate for comparative analysis and evaluation of the alternatives' impacts on the regional economy. As such, the validity of the findings from the comparative analysis will generally be independent of the future accuracy of the specific performance assumptions. The DEIS assumes the majority of wells will be directional; as an example, Alt 1 assumes to have almost 400 (398.4) directional wells and 18 horizontal (Table C-1 in Appendix C). In addition, the production is assumed to be smooth over 20 years, for a total of 1.2 Bcf for directional well and 6.4 Bcf for Horizontal (Appendix C).

Comment:

The DEIS socioeconomics analysis overstates the potential benefits and understates the costs of allowing lessees to attempt to develop of the Zone 3 leases As BLM heard in scoping comments and throughout the Cooperator process, the Town and other local governments are concerned that oil and gas development in the Thompson Divide could adversely impact the Town's economy, its long-term vision for Carbondale's future, the health of local businesses, residents' quality of life, and public revenues. The Town remains concerned that the DEIS does not accord sufficient weight to the socio-economics of the 25 Divide leases. During the Cooperator process, the Town presented important social research findings from a leading regional think tank, the Headwaters Institute. The Headwaters reports and other sources support the wisdom of the Town's commitment to a diverse economy that recognizes the important role of undeveloped and protected adjacent federal lands to the community's ability to attract and retain residents, visitors and revenues based on tourism, recreation, agriculture, and amenity-based values. The research findings document potential risks from being overly dependent on energy development and boom-bust economic cycles. By letter dated January 15, 2015, Carbondale recommended that "BLM adopt the Forest Service's recognition that losing the natural character of the landscape would diminish residents' quality of life, and that BLM compare the socio-economic cost and benefits of keeping the Divide natural versus development scenarios." Since that letter and the Town's follow-up socio-economics letter dated April 29, 2015, the WRNF finalized its new FEIS and ROD that prospectively doses the Divide to oil and gas leasing and development. What remains is for BLM to cancel existing leases to effectuate the WRNF determination. Although the socioeconomic analysis in the DEIS reflects some of the Town's concerns, it fails to get to the heart of the matter. Some places are too special to drill, and the WRNF correctly recognized that that the portion of regional National Forests known as the Thompson Divide is such a place. The speculative benefits of leasing and development in such a landscape are far outweighed by the quantifiable and qualitative benefits of protecting this landscape, respecting its sense of place, and supporting the existing economic and quality of life drivers in this part of the analysis area. Cancellation of the 25 Divide leases is needed to accord the Divide the protection it needs at this time, as parties continue to seek legislative solutions to achieve permanent protection.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

The commenter expresses the concern that the DEIS both overstates the lease benefits (which the commenters considers speculative) and understates the costs of the future lease development proposed for the Thompson Divide under Alternatives 1, 2 and 3. The commenter seems to assume that there is an inherent incompatibility between oil and natural gas production and the current economic activities within the Thompson Divide. The commenter also seems to maintain that the Thompson Divide's natural resources would be seriously impaired, its attractiveness diminished and its ability to support businesses greatly reduced if the new well development proposed under Alternatives 1, 2 and 3 occurs.

In contrast, the BLM maintains that most of any land use incompatibility will be determined by the direct physical relationships between the proposed oil and gas production (both in terms of its facilities and activities) and the area's other economic activities. Consequently, the DEIS's impact analysis evaluated, and wherever possible quantified, the extent of potential land-use conflicts based on the well-pads and support infrastructures' expected footprint (including buffer zones). The BLM contends that the potential economic benefits of future lease development are not speculative and have been reasonably and conservatively quantified by the DEIS. The BLM also maintains that its economic analysis of the region's other industry sectors was also similarly reasonable, conservative and balanced. The DEIS notes the important role of tourism to the regional economy and Pitkin County in particular (Section 4.17.2). The DEIS analyzed both employment and economic output for the region's other key industry sectors (including tourism and agricultural) on a county by county basis. The DEIS also recognized and qualitatively evaluated both Thompson Divide's and more generally the WRNF's significant roles and contributions to the "quality of life" and "sense of place" for the region's residents and visitors.

Comment:

The exhaustive research and documentation informing the Headwaters reports support the Proposed Action. Carbondale's success in building a diverse, stable, resilient economy that is insulated from the boom and bust cycles that characterize energy development would be jeopardized by failing to cancel the Divide leases. Cancellation is supported by the large and growing body of work that documents the economic benefits to rural western communities of healthy, undeveloped, protected landscapes on neighboring public lands. Significantly, much of the research informing the Headwaters reports came from Garfield and Mesa Counties in Colorado. The attached Economic Impacts report provided by Professor John Loomis, PhD, further supports cancellation from the socio-economic perspective. Exhibit 2.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

The commenter seems to assume an inherent incompatibility between oil and natural gas production and the current economic activities within the Thompson Divide; i.e., that the Thompson Divide's natural resources would be seriously impaired, its attractiveness diminished and its ability to support businesses greatly reduced if the new well development proposed under Alternatives 1, 2 and 3 occurs.

In contrast, the BLM maintains that most of any land use incompatibility will be determined by the direct physical relationships between the proposed oil and gas production (both in terms of its facilities and activities) and the area's other economic activities. Consequently, the DEIS's impact analysis evaluated, and wherever possible quantified, the extent of potential land-use conflicts based on the well-pads and support infrastructures' expected footprint (including buffer zones). The BLM contends that the potential economic benefits of future lease development have been reasonably and conservatively quantified by the DEIS. The BLM also maintains that DEIS economic analysis of the region's other industry sectors was also similarly reasonable, conservative and balanced. The DEIS also recognized and qualitatively evaluated both Thompson Divide's and more generally the WRNF's significant roles and contributions to the "quality of life" and "sense of place" for the region's residents and visitors. In the course of DEIS socioeconomic analysis, the Headwater reports cited by the commenter were reviewed as well as other published research relevant to the analysis as referenced in Section 3.17. The cited Loomis report has also be thoroughly reviewed since it was provided to the BLM as part of the public comment review process for the preparation of the Draft FEIS.

Comment:

Property values are given only a qualitative analysis. However, median house price data in the region is readily available and is revealing of quality of life differentials associated with oil and gas drilling. According to www.city-data.com estimated median house/condo prices in Carbondale is $471,531 while in Rifle where oil and gas development is common it is $252,922. Economic models such as the hedonic property model (Taylor, 2003; Freeman, 2003) have established and demonstrated that house price differentials reflect the amenities and disamenities of an area. While not all the price differential is due to the presence of oil and gas development in Rifle, the hedonic property method would indicate that certainly some of the nearly $220,000 difference in house prices is related to the absence of oil and gas in Carbondale and the higher quality of amenities there (e.g., air quality, quiet, surrounding natural environment). Presence of an estimated 51 wells in Zone 3 (adjacent to Carbondale) and associated heavy truck traffic by Carbondale will certainly result in some diminution of what property values would have been in absence of these 51 wells. BLM should present these statistics on home prices, note there is an economic method to interpret the impact of Alternative #1 and #2 oil and gas developments on house prices, and especially to an area currently with a minimal oil and gas wells.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

The DEIS acknowledges that the area's natural landscape and setting contributes to its attractiveness and the sense of place experienced by its visitors and residents. However, it is very difficult to estimate the magnitude and sensitivity to change of a real estate value premium attributable to the area's natural setting (especially distinguished from the many other contributing area qualities and factors) without extensive, detailed and area specific studies and surveys. Comparison of median home prices have limited informative value if the areas have dissimilar housing inventory or other significant locational differences (e.g. access to job opportunities or other amenities). The DEIS analysis could not quantify the extent that the location and magnitude of proposed WRNF oil and gas development would result in reduced tourism or property values due to the data limitations on the relationships between current and future WRNF land uses, resource changes and users' economic behavior. Consequently, the commenter's prediction of serious and significant economic impacts cannot be affirmed.

Comment:

BLM generally acknowledges some of the effects analyzed by Headwaters in their series of reports that I reviewed (Headwaters, 2008; 2011). Headwaters (2011), indicates there are three effects of emphasizing oil and gas on an economy and community: (a) dependence on oil and gas for a large part of a county's income, results in relatively more variability in per capita income in an oil and gas dependent county, and in some cases long term decreases over time; (b) lower educational achievement. The availability of high paying oil and gas jobs may cause college age individuals to forego college. When the oil and gas boom is over, those without college education are unprepared for many jobs that require college degrees. This may be one of the factors leading to lower per capita incomes in a county over time; and (c) increased crime, hence higher law enforcement and social services costs. As succinctly stated by Headwaters (2011:1) "Long-term oil and gas specialization is observed to have negative effects on change in per capita income, crime rate and education rate". The BLM socioeconomic analysis mentions (c) but does not give much attention to long term income fluctuations and trends with oil and gas (a). Nor does BLM provide any detailed discussion of the long term effects of reduced educational attainment on long term economic viability of communities (b). A short discussion and citations to Headwaters reports would be appropriate.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

The DEIS concluded that there would be relatively limited impact on social service costs due to the project's relatively limited employment effects and project-related population growth. As a result, the BLM believes the potential for project-related adverse social effects (e.g. increased crime and decreased educational attainment) would be very limited. Note that oil and gas royalty payments are generally intended to help offset any public service costs from the project.

Comment:

Garfield County does not support an EIS scope that exposes the entirety of 65 existing leases to new assessment and reevaluation that is well beyond the bounds of the IBLA decision that was more narrowly focused on three leases. This approach will cause an unnecessary delay in the development of these existing leases resulting in the Joss of economic opportunity that will have the adverse effect of reducing employment and further eroding the local economic base. Tax revenues generated from the resources in the affected leases could easily reach $100s of millions for federal, state and local governments and special districts that underscore the impact of federal government decisions. The BLM should adopt an approach to the EIS that minimizes the already extraordinary delay in providing lease holders reasonable access to develop their leases. Importantly, we ask the BLM to conduct a thorough social-economic analysis that evaluates impacts to local governments and taxing districts and the potential for reducing their ability to provide services (fire protection, education, medical, etc.) to local communities. The scope of the analysis should specifically address the hardship for several potential decision outcomes such as the reduction of employment, loss of tax revenues (property and severance), a reduction in Federal Mineral Lease dollars, and potential refunds to current lease holders. As stated above, many of the 65 leases to be reevaluated within the EIS are part of larger existing Federal Units which dramatically increases the scope of this EIS. Therefore, decisions to place stipulations or perhaps cancel those leases have the potential to significantly harm vast tracts of developable mineral acreage well in excess of the 65 leases being evaluated in this EIS. Garfield County asks BLM to include analysis of socio-economic and other impacts that could occur if existing leases that are part of a Federal Unit are cancelled or if new stipulations make them economically unviable.

MARTIN, JOHN; GARFIELD COUNTY COLORADO

BLM Response:

As stated in Section 1.4 of the DEIS, there is a need to “address the NEPA deficiency identified by the 2007 IBLA ruling on the appeal by the Board of Commissioners of Pitkin County that BLM must formally adopt NEPA analysis completed by the Forest Service or conduct a NEPA analysis of its own for issuance of oil and gas leases underlying WRNF lands”.

The BLM believes that for all alternatives, the EIS has provided a level of analysis and detail sufficient to support reasoned conclusions of the impact caused by the proposed action and alternatives. The BLM considers whether or not to lease and under what conditions based on more general rather than site-specific analysis which at this stage would inherently be overly speculative. The RFDS informs the EIS at the appropriate scale for its analysis. The BLM maintains that its economic analysis of the region's other industry sectors was also similarly reasonable, conservative and balanced. As noted in Section 4.17, Socioeconomics, development of the leases would result in limited employment increases and are not expected to affect service demand under any alternative. In previous years, natural gas revenues have provided funding for new infrastructure improvements such as new hospital facilities that in turn result in emergency service benefits. The relative amount of proposed development by alternative is used as an indicator of risk to emergency services.

Section 4.3 has been revised to include a discussion of potential impacts to federal units from the addition of NSO stipulations or lease cancellations, by alternative. As stated in Section 2.3 of the DEIS, should leases need to be cancelled or lease stipulations be changed, subsequent BLM administrative actions (including refunds of bonus bids and lease payments or judicial action) would be necessary. BLM would not unilaterally modify a lease, but if the leaseholder does not consent to new or modified stipulations, BLM may cancel a lease. Analysis of litigation costs or outcomes is beyond the scope of the EIS and is speculative since the outcome or terms are uncertain, and would involve considerations independent of the project.

Comment:

These statements about the Thompson Divide area are an example of a larger western rural U.S. and U.S. wide pattern in rural areas. In particular, Headwaters (2011) concluded that "Amenities and quality of life are cornerstones of the long-term economic viability of these (western) rural regions". A thorough statistical analysis of the role of natural amenities and quality of life in economic growth in rural areas of the U.S. (published in American Journal of Agricultural Economics) found "Of particular interest is the general conclusion that all statistically significant amenity attributes are positively related to economic growth." (Deller, et al. 2001: 363). These authors go on to conclude that "Rural areas endowed with key natural resource amenities can manage those resources to capture growth more effectively. This may entail expansion beyond policies that have historically been focused on extraction of the resource base. Given the recreational uses of these resources, the future growth and development potential of many rural areas may be additionally tied to a range of tourism activities" (Deller, et al. 2001: 363). There is also a short-term vs long term trade off associated with relying on extraction of non-renewable resources as a significant part of an area's economy: in the short run while there is oil and gas to be extracted, there is a short run economic stimulus added to the economy. However, as the State of Alaska found after 20 years of the oil production in Prudhoe Bay, production begins to decline (Oil and Gas Journal, at http://www.ogj.com/articles/print/volume-98/issue-40/special-report/data-shows-steep-prudhoe-bay-production-decline.html) and it takes with it decreasing government revenues tied to oil. This short run versus long run trade off is noted by Headwaters (2013: 17): Our findings call into question the understandable, but mistaken assumption that long-term oil and gas development is a clear economic advantage for host communities. Our study does not question the idea that oil and gas activity can have a strong immediate positive impact on employment and income, but it does suggest there are negative effects when oil and gas extraction plays a major role in a local economy for a long-period of time. BLM should include a short discussion of the implications of Headwaters' two reports (2011) and (2013) and Deller, et al. conclusions findings to the trade-offs facing the Thompson Divide area.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

The DEIS socioeconomic analysis recognizes the important roles and contributions that the WRNF, and in particular the Thompson Divide, play in the region's socioeconomic terms of its tourism industry (Section 3.17.3.4) and also providing the amenity values (e.g. wilderness access, "sense of place" and other quality of life factors) that attract residents to the region. The DEIS also clearly identifies the direct, indirect and induced effects of project-related land use and economic activity changes (Section 4.17.3). The DEIS socioeconomic analysis reviewed and considered the cited Headwaters and Deller studies during its analysis. The BLM does not disagree with their general observations of the potential positive relationship and economic development potential for rural communities with high amenity values. The BLM also recognizes the potential of economic downturns for communities that are overly dependent on a single industry sector such as mineral extraction industries. However, the BLM maintains that there is no necessary trade-off in this case for the region's socio-economy specifically due to the limited extent of the project's oil and gas development. The socioeconomic analysis could not quantify the extent that the location and magnitude of proposed WRNF oil and gas development would result in impacts (e.g. reduced recreation, agriculture, property values, natural resource conditions etc.) that would result in adverse impacts that would outweigh the project's positive job and county revenue impacts. This may be partly due to data limitations on the relationships between current and future WRNF land uses, resource changes and economic behavior. However, the BLM also maintains that given the relatively limited physical resource impacts and proportion of the area used by the oil and gas operations (including its support infrastructure), based on the available information, it is too speculative to identify any significant diminishment of the Thompson Divide's existing amenity, recreation, and tourism use value (whether actual or perceived) or to attribute any resulting future visitor use reductions or adverse impacts to the regional economy.

Comment:

Colorado and other Rocky Mountain states are full of communities that rely on undeveloped federal lands as a mainstay of tourism, recreation, and quality of life-based economic activity. In this regard, the Thompson Divide to Carbondale is not unlike the Black Canyon of the Gunnison to Montrose; Mesa Verde National Park to Cortez; Canyonlands and Arches National Parks and adjacent BLM wildlands to Moab; or the Rocky Mountain Front to Lewis and Clark County, Helena, Missoula, and a host of other neighboring communities in Montana. The Rocky Mountain Front comparison is especially apt, as it is another federal landscape that was threatened by oil and gas development. Like the WRNF decision for the future of Thompson Divide, local land managers listened to communities in concluding that the Front warranted long-term protection based in large part on residents' strong identification with the landscape based on a "sense of place". Carbondale and other local jurisdictions would unequivocally suffer major socio-economic losses if the Thompson Divide were opened to energy development despite the broad support for protection expressed by local residents, businesses, and elected officials at the local, state, and federal level.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

Comment:

Nearby communities reap immense economic benefits from visitors to the White River National Forest.

GRENEWITZ, TATJANA

BLM Response:

The commenter contends that "Carbondale and other local jurisdictions would unequivocally suffer major socioeconomic losses if the Thompson Divide were open to energy development." The commenter seems to assume an inherent incompatibility between oil and natural gas production and the current economic activities within the Thompson Divide. This is presumably since its natural resources would be seriously impaired, its attractiveness diminished and its ability to support businesses greatly reduced by the new well development proposed under Alternatives 1, 2 and 3.

In contrast, the BLM maintains that most of any land use incompatibility will be determined by the direct physical relationships between the proposed oil and gas production (both in terms of its facilities and activities) and the area's other economic activities. Consequently, the DEIS's impact analysis evaluated, and wherever possible quantified, the extent of potential land-use conflicts based on the well-pads and support infrastructures' expected footprint (including buffer zones). The BLM contends that the potential impacts of future lease development have been reasonably and conservatively quantified by the DEIS. The BLM also maintains that DEIS economic analysis of the region's industry sectors was also similarly reasonable and conservative. The DEIS also recognized and qualitatively evaluated both Thompson Divide's and more generally the WRNF's significant roles and contributions to the "quality of life" and "sense of place" for the region's residents and visitors. As discussed in Section 4.17.3, the DEIS acknowledges that if major physical changes were to occur to the Thompson Divide's natural resource conditions, recreation and tourism use within the Thompson Divide could be reduced/displaced and result in adverse economic impacts. However the DEIS's other resource impact analyses (e.g. recreation, visual, wildlife and transportation) did not identify any significant and noticeable physical resources changes that would be expected to potentially influence Thompson Divide's visitor use. Consequently, the DEIS's socioeconomic impact analysis determined that the project's visitor use impact would be largely limited to the reduced recreational access and opportunities from user's exclusion from area surrounding the proposed oil and gas development. Given the relatively limited physical resource impacts and proportion of the area used by the oil and gas operations (including its support infrastructure) the DEIS maintains that it is too speculative to identify any other significant diminishment of the Thompson Divide's current recreation and tourism use value (whether actual or perceived) and attribute any resulting additional future visitor use reductions.

Comment:

These jobs in the ranching, tourism, and recreation businesses are just as real as oil and gas jobs, and they are no less important to the families who depend on them. Drilling the Thompson Divide would not compensate for job losses it would cause to our existing industries. The White River National Forest's 2014 Final Oil and Gas Leasing EIS (WRFEIS) indicates, for example, that the long-term return from production of the 85 existing wells on other areas of the Forest is 21 jobs and $1.27 million in labor income, with the recent addition of one well drilled outside of Pitkin County accounting for the vast majority of these benefits.4 (4 The White River National Forest's 2012 Draft Oil and Gas Leasing EIS (WRDEIS) noted that the existing 84 wells accounted for two jobs and $164,000 in annual labor income. WRDEIS at 3-269.) While we understand that drilling and completion of wells also results in short-term bursts of economic activity, such jobs and revenue are not are not sustainable. When the drilling companies move on, they often leave unemployment and economic displacement in their wake. We have been through the boom-bust cycles that go along with extractive economies, and have chosen a different path. There are many communities that welcome gas development and the jobs it produces. As a nation, and even on Colorado's western slope, we are fortunate to have plentiful supplies of natural gas—enough that we need not drill it everywhere. We do not believe anyone would seriously argue in favor of drilling Central Park or the National Mall just because people in New York and Washington use natural gas. Similarly, we do not find it appropriate to drill pristine areas like the Thompson Divide where drilling will do more economic and community harm than good. Colorado is known around the world for its spectacular mountain country. It is one of Colorado's most valuable economic assets. We are fortunate to live in the heart of this country, and have learned that careful stewardship of these lands will best serve our long-term economic and community interests.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

Comment:

Impacts to our economy from development of these leases, however, would not be limited to existing uses within the Thompson Divide. We anticipate impacts of even greater economic significance from the heavy volumes of industrial traffic and other offsite impacts that oil and gas development in the Divide would bring to the heart of our community. From diminished real property values along the Four Mile Road corridor to impaired tourism activities in downtown Glenwood Springs, we expect those economic impacts would be serious and significant. Tourism in Glenwood Springs, for example, generates some $243.5 million in annual economic activity.

GAMBA, MIKE; CITY OF GLENWOOD SPRINGS

BLM Response:

The DEIS's traffic and socioeconomic analyses did not find sufficient evidence to indicate that the project related traffic and tourism impacts would result in "serious and significant" economic impacts. The DEIS notes the potential for some adverse real estate value impacts. However, given the data limitations on the relationships between current and future WRNF land uses, resource changes and economic behavior, the socioeconomic analysis could not quantify the extent that the location and magnitude of proposed WRNF oil and gas development in would result in reduced property values

The DEIS socioeconomic analysis recognizes both the importance of tourism to the region's economies (Section 3.17.3.4) and the indirect and induced effects of project-related land use and economic activity changes (Section 4.17.3). The DEIS also noted the potential for some adverse real estate value impacts. However, the socioeconomic analysis could not quantify the extent that differences in the location and magnitude of proposed WRNF oil and gas development would result in reduced property values due to the data limitations on the relationships between current and future WRNF land uses, resource changes and economic behavior. The commenter also specifically identified Glenwood Springs as a community whose tourism economy might be adversely affected.

As discussed in Section 4.17.3, the DEIS acknowledges that if major physical changes were to occur to the Thompson Divide's natural resource conditions recreation and tourism use within the Thompson Divide could be reduced/displaced and result in adverse economic impacts. However the DEIS's other resource impact analyses (e.g. recreation, visual, wildlife and transportation) did not identify any significant and noticeable physical resources changes that would be expected to potentially influence Thompson Divide's visitor use. Consequently, the DEIS's socioeconomic impact analysis determined that the project's visitor use impact would be largely limited to the reduced recreational access and opportunities from user's exclusion from area surrounding the proposed oil and gas development. Given the relatively limited physical resource impacts and proportion of the area used by the oil and gas operations (including its support infrastructure) the DEIS maintains that it is too speculative to identify any other significant diminishment of the Thompson Divide's current recreation and tourism use value (whether actual or perceived) and attribute any resulting additional future visitor use reductions.

Comment:

BLM states that "[i]f a lease is cancelled, the underlying mineral resources would nonetheless remain and would be available for potential future extraction". See WRNF DEIS, at 4.17-3. This assumption is false. Under Alternatives 4 and 5, for example, certain leases would not only be cancelled, but would be closed to future leasing. Thus, in most cases, the underlying mineral resources would neither be accessible from another leasehold interest nor available for potential future extraction.

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

BLM Response:

The DEIS statement is intended to recognize that the mineral resources would be physically unchanged and remain potentially available for extraction if new technology can feasibility and cost-effectively comply with the stipulation requirements or federal land use policy changes.

Comment:

Residents pay a premium for housing in the Carbondale area compared to other areas closer to I-70 and to oil and gas communities (e.g., Rifle). There is a well developed literature in economics that suggests that a housing price premium is related to perceived quality of life in that area. Public comments on the WRNF Oil and Gas FEIS suggest that a significant part of that high quality of life is related to the Thompson Divide area.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

The DEIS's traffic and socioeconomic analyses did not find sufficient evidence to indicate that the project related traffic and tourism impacts would result in "serious and significant" economic impacts. The DEIS notes the potential for some adverse real estate value impacts. However, given the data limitations on the relationships between current and future WRNF land uses, resource changes and economic behavior, the socioeconomic analysis could not quantify the extent that the location and magnitude of proposed WRNF oil and gas development in would result in reduced property values.

Comment:

In light of BLM's current resource constraints, BLM would undoubtedly be forced to seek repayment of funds from the State of Colorado. See 30 U.S.C. § 191(a). Furthermore, BLM simply disregards the likely significant impacts to other BLM programs and resources that would undoubtedly suffer from BLM refunding operators monies owed. Given the overlap in management, this decision would likely impact the Forest Service budget and programs focused on management of the WRNF. BLM cannot lightly dismiss this financial burden affecting BLM, the State, and operators—and must account for it in any NEPA analysis. Such an obvious omission of failing to analyze the impacts of repayment of hundreds of millions of dollars-worth of FML revenues and damages is inappropriate, and renders BLM's socioeconomic impact analysis inadequate.

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

Comment:

The WRNF DEIS fails to analyze and discuss in any detail the potential impacts to the Colorado economy or the impacts to BLM resources resulting from cancellation of any or all of the Subject Leases. In its socioeconomic impacts analysis, BLM recognizes that the State of Colorado, Office Natural Resources Revenue, collects 49% of federal mineral lease (FML) revenues from oil and gas leases of federal government lands, including "rental of the mineral rights, bonus bids, and royalties once a site begins to produce oil and gas." See WRNF DEIS, at 3.17-22 (the Federal Government collects the remaining 51%). Upon receipt of this funding, "[s]tates distribute their lease revenues based on broad Federal guidelines. Generally priority is given to areas socially or economically impacted by mineral development. FML revenues are typically used for planning, construction or maintenance of public facilities. FML revenues also can be used to fund public service operations. FML revenues also are often retained in reserve funds for later use as future emergency budget funding during economic shortfalls. See id. In Colorado, the Department of Land Affairs ("DOLA") administers distribution of the FML funds. Forty percent of revenues are transferred to the county and municipal governments either by direct distribution or through DOLA grants and loans. With respect to the remaining 60% not distributed to county or municipal governments, DOLA pays those funds out to the school districts, the Colorado public school fund, Colorado Water Conservation Board, or other State Reserve funds. The following Table 1 (provided by the WRNF DEIS) provides a description of Colorado state's distribution of $72.4 million of FML funds throughout the state in 2012. In its socioeconomic impacts analysis, BLM recognizes that "[s]ome or all of the leases may be cancelled due to the new stipulations by BLM request or election by the lessee." See WRNF DEIS, at 4.17-5. While BLM states that "[a]ny repayment expense is expected to be paid by the BLM and State of Colorado but is not expected to be passed on to the counties," BLM does not provide any detailed analysis as to where those funds would specifically come from (particularly at the State level).

LUDLAM, DAVID; OXY - OCCIDENTAL PETROLEUM CORP.

Comment:

Finally, BLM has failed to disclose and analyze the anticipated costs of lease cancellations in Alternatives 4 and 5. It is reasonable for BLM to assume that SG and Ursa (and other lessees similarly impacted) will challenge any BLM decision to add new stipulations or cancel the Leases and seek damages for a breach of contract and takings. Recently, in dismissing challenges to the SG/Ursa lease suspensions, the IBLA made that assumption. Board of County Commissioners of Pitkin County, 186 IBLA 288, n. 11 ("The possibility (or likelihood) that Ursa and/or SG would challenge any decision to void or modify the Leases adds to the speculative and uncertain future of those Leases."). In Alternative 3, BLM proposes to add stipulations to existing leases and if lessees refuse, to cancel the lease. BLM does not analyze the possibility of lease relinquishment or lease cancellation, the costs to litigate cancellation of producing leases and damages that must be paid. The public can't adequately analyze the socio-economic costs of the Alternatives without such information. The BLM WRNF DEIS Alternatives analysis is contrary to the basic policy objectives of the federal minerals program in the MLA, FLPMA and MMPA, violates the NEPA requirement that the action agency consider an "adequate range of alternatives," and renders the NEPA analysis inadequate. Muckleshoot Indian Tribe v. U.S. Forest Serv., 177 F.3d 800, 813 (9th Cir. 1999) ("Although NEPA does not require the Forest Service to 'consider every possible alternative to a proposed action, nor must it consider alternatives that are unlikely to be implemented or those inconsistent with its basic policy objectives,' we are troubled that in this case, the Forest Service failed to consider an alternative that was more consistent with its basic policy objectives than the alternatives that were the subject of final consideration.") (internal citations omitted). Here, BLM's policy objective as directed by Congress in these three laws is to administer a federal oil and gas leasing program that fosters "private enterprise." Respect for lease contract rights is fundamental to that objective. BLM's Proposed Action would, instead, repudiate lease contract rights by rewriting and cancelling existing leases. Given that breach, BLM must address in its NEPA analysis the legal and policy precedent the agency is setting for the legal security of current and future federal leases when it takes the position that it can "change its mind" and unilaterally cancel or rewrite lease contracts years after issuance. The "rule of law" and the private development of fee and federal minerals has served the United States well - making our nation energy sufficient, economically strong and a leader in world energy technology. BLM should address the impact to future federal leasing and the country's energy security from the legal position it takes here that federal leases are no longer binding on the federal government.

SIMPSON, DON; URSA PICEANCE LLC

BLM Response:

The potential impact economic impacts to the State of Colorado and federal government were excluded from the socioeconomic analysis scope due to the very large size of their economies compared to the potential local and regional economic impacts. In addition, it may be considered likely that any oil and gas activity displaced from WRNF may relocate to another location(s) in Colorado and/or federal properties, in which case there would be no net economic impact to the State and/or Federal government, since any of the project-related "lost" economic benefits would be recouped from the new location. Similarly, any damage or compensation for "takings" is also highly uncertain and speculative, and is therefore also excluded from the socioeconomic analysis. As stated in Sections 2.3.3, 2.3.4, and 2.3.5 of the DEIS, should leases be cancelled, subsequent BLM administrative actions including refunds of bonus bids and lease payments or judicial action may be necessary. Analysis of litigation costs or outcomes is beyond the scope of the EIS and is speculative since the outcome or terms are uncertain, and would involve considerations independent of the project.

Comment:

As the economic regional center for western Colorado and eastern Utah, we support the multiple uses of BLM lands and resources. Oil and gas resource development in the region provides important economic benefits and impacts within Mesa County. Mesa County is the host community for Northwest Colorado's oil and gas workforce, and many of its vendors, suppliers and service companies. The DEIS states repeatedly: "Most new wells are projected to be developed in Mesa County, which is projected to have the greatest increase in employment and revenue from gas development.. .. " Yet, the DEIS consistently understates the socio-economic differences between the "No Action" and "Proposed Action" alternatives. The DEIS socio-economic impact analysis regards revenue from local sales and use tax as insignificant by attributing it only to workers' spending on taxable goods. Mesa County is home to most of the oil and gas service companies and associated businesses in the region. Such businesses pay significant sales and use taxes for equipment purchases, operations, maintenance, and other related uses. The FEIS must include a rigorous analysis of revenue from sales and use taxes paid by oil and gas industry.

PUGLIESE, ROSE; MESA COUNTY COLORADO

BLM Response:

Under Alternatives 1, 2 and 3, BLM estimates that the region's total sales and use tax revenues (including indirect and induced impacts) from both the natural production and royalty payments would average $2.12 million per year over the study period . The total sales and use taxes for Alternative 4 are estimated to average $1.99 million which would be $130,000 less than that gained under Alternatives 1, 2 and 3. Alternative 5 would result in a future total tax and use sales loss of $263,000 per year over the existing wells remaining useful life of ten years. During that period, Alternative 5's total future unrealized annual sales and use tax revenue is estimated to be total $2.38 million. Information on the projected sales and use taxes from the future oil and gas activity has been added to the FEIS's socioeconomic analysis.

Comment:

BLM quantifies the changes in county revenues in Chapter 4, Section 4.17 for Alternative #1 (BLM indicates Alternative #2 would be quite similar) and Alternative #4. BLM acknowledges that some of this revenue "may be expected to offset road improvements that might be necessary from the increased use of county roads by well construction traffic" (Page 4.17). However, this is observation is not carried through much of the remainder of the discussion of county revenues. It is not mentioned in the summary (pages 4.17-30 to 31). In addition, the concept of net tax revenue is not explicitly discussed. The current BLM analysis and summary indicates that relative to Alternative #1, Alternative #4 results in a "…decrease of approximately $5 million compared to the Alternative #1—No Action" (page 31). But no mention is made that there would also be a reduction in road maintenance, law enforcement or social services costs with Alternative 4. Thus, the actual net discretionary tax revenues lost to the counties from Alternative #4 is likely to be less than the $5 million, as there will be cost savings in reduced law enforcement, transportation improvements and maintenance and social services that would be required with Alternative #1. The reduced expenditures to the county with Alternative #4 should be mentioned in the FEIS. Finally, Headwaters (2008:3) notes that oil and gas tax revenues to the county are a volatile revenue source and "…the lag between the activities that create new demands and when property tax revenues are actually received makes it difficult to keep pace with surging service demands." These two points regarding tax revenues from oil and gas should be mentioned in the FEIS.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

Comment noted. BLM acknowledges that some proportional public service costs savings may occur under Alternative 4 (compared to Alternatives 1, 2 and 3) due to its reduced oil and gas development activity. However, the magnitude of the resulting potential cost savings for local public service providers could not be quantified since the type, extent and location of the service reductions cannot be determined. The FEIS's socioeconomic analysis has been amended to more clearly acknowledge the potential for cost savings for local public service providers under Alternative 4 compared to Alternatives 1, 2 and 3. Impacts from the Preferred Alternative may be slightly less but comparable to those expected under Alternative 4.

Comment:

Both the WRNF FEIS and BLM DEIS quantify truck traffic associated with leasing. BLM did this by alternative. However, BLM's analysis just mentions that the effect of the increased truck traffic with Alternatives 1, 2 and 3 has a negative impact to property values. Likewise, a benefit of Alternative 4 is the avoided reduction in property values. However, there is an existing literature identifies socio-economic costs associated with increased truck traffic. In particular, an article in the Road Engineering Journal (1997) http://www.usroads.com/journals/p/rej/9710/re971004.htm found that there was a systematic effect of truck traffic noise on property values. Large trucks in urban fringe areas resulted in a larger reduction in property values than in urban areas. This should be noted by BLM as a cost of Alternatives 1, 2, and 3 that is greatly reduced with Alternative 4 in Zone 3 (the Thompson Divide area). Thus, I would recommend BLM cite these studies in its Chapter 3 and 4 so BLM has something more than just professional judgment that increased traffic will reduce property values.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

The DEIS socioeconomic analysis recognizes the potential for transportation impacts to residents and roadway users along haul routes predominantly during periods when new well construction is occurring in the area (Section 4.17.3). However, only a minor proportion of the potential traffic increase will be by over-legal or heavy industrial vehicles. Approximately two thirds of trips would consist of light trucks that would be comparable/indistinguishable from increased residential and recreational trips (See WRNF O&G Leasing FEIS Transportation Specialist Report). The DEIS notes the potential for some adverse real estate value impacts although their magnitude could not be quantified. The DEIS's traffic and socioeconomic analyses did not find sufficient evidence to indicate that the project related traffic and tourism impacts would result in "serious and significant" economic impacts. The FEIS's socioeconomic analysis has been amended to more clearly acknowledge the potential for adverse property value impacts to residents along project access routes within the urban fringe and rural areas under Alternatives 1 through 4 and the Preferred Alternative.

It should be recognized that the cited analysis recommends property value impacts based on continuous increases in background noise levels above the establish noise thresholds. Furthermore, the report cites property value impacts for noise level increases above a 55 decibel threshold. As discussed in Section 3.16.3.5, although ambient noise levels within the lease area have not be measured the current background noise conditions are expected to be in the region of 40 decibels - far below the 55 decibel impact threshold. In addition, given the limited and intermittent incidence of project-related large truck traffic suggests that there would be no increase in continuous background noise levels that would exceed the study's identified 55 decibel threshold. This is consistent with the DEIS's traffic and socioeconomic analyses findings that there is insufficient evidence to indicate that the project related traffic and tourism impacts would result in "serious and significant" economic impacts to the local residents or region's economy.

Comment:

As noted by Dr. Loomis' Expert Economic Review, economic contributions to Carbondale from hunting and fishing are likely to be significantly greater than the DEIS currently projects. Exhibit 2. Outfitters, guides, and area businesses dependent on hunting and fishing could be seriously affected if oil and gas development on the disputed Divide leases decrease these uses and associated revenues.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

The DEIS socioeconomic analysis recognizes the importance of tourism to the region's economies (Section 3.17.3.4) and also the indirect and induced effects of project-related land use and economic activity changes (Section 4.17.3). The DEIS analysis could not quantify the extent that the location and magnitude of proposed oil and gas development in WRNF would result in reduced tourism use due to the data limitations on the relationships between current and future WRNF land uses, resource changes and economic behavior. Consequently, the commenter's prediction that proposed development would decrease area tourism that would result in serious adverse economic impacts to hunting and fishing dependent businesses cannot be affirmed.

Comment:

Our chapter promotes and supports over 60 farmers, orchardists, ranchers, agricultural businesses and winemakers of the North Fork Valley - all of which depend on good and clean water, air and soil. The North Fork Valley's scenic beauty and temperate growing season have attracted the largest concentration of organic and chemical-free growers in the state of Colorado. Our region has a long history of producing quality high-country, chemical-free food, with a well-deserved reputation that extends around the state and nationally. This history, coupled with the emerging consumer trend for organically crafted products has made this region increasingly known and marketable. The North Fork Valley has a forcefully developing market for agri-tourism, farm-stays, and agriculture-based education. Products from area farms supply markets and top restaurants in towns around western Colorado, including Aspen, Telluride and Crested Butte, and serves many Front Range communities, including Colorado Springs, Golden, Denver, Boulder, Longmont, and Fort Collins. The farms' customers have created relationships with the growers and forged a unique community that is the North Fork Valley. These relationships develop as our farmers have been able to furnish organic, high-quality fruits, vegetables, meat, dairy, wine and specialty products. Our farmers' commitment to quality and the stewardship of clean soil, water and air are crucial to consumers and their perception and choice to buy good and clean food. The potential for soil, air and water contamination as a result of oil and gas development could destroy our Valley's farms' ability to market their products as organic and safe - thereby losing their livelihood.

BRETT, JIM; SLOW FOOD WESTERN SLOPE

BLM Response:

Comment noted. Section 4.17 includes an analysis of impacts to agricultural economies. As discussed in Section 4.16.2.3, the lack of specific evidence linking oil and gas operations with contaminated water wells or other health risks does not preclude the fact oil and gas operations use and produce toxic contaminants that can adversely affect human health above certain levels of amount and duration of exposure. As with spills and other accidental releases on pads or during fluids transport, potential risks from groundwater-borne chemicals would be statistically related to the amount of oil and gas activity as well as proximity to sensitive receptors, public water supplies, etc. Risk of adverse impacts would vary by alternative.

Special Designations

Note: The comments are grouped together and sorted by the last name of the commenter, with the BLM response in a gray shaded box following the grouped comments within this category.

Comment:

As noted in the BBC's report on the Thompson Divide and Walsh, et al. (with regard to Colorado roadless areas) undeveloped land provides what today is called by BBC Passive Use Values and Walsh, et al. referred to as Preservation Values. The bulk of these values are the benefits that protection of these lands provide to just know they exist in their undisturbed state and will be handed down as a bequest to future generations.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

Alternatives 3 and 4 both include NSO stipulations for Colorado Roadless Areas. These alternatives were included in this EIS to match the USFS decisions regarding where oil and gas development should be located in the WRNF to meet the standards and guidelines of the WRNF Forest Plan based on best available science, and to provide a reasonable range of alternatives for analysis in the EIS as required under NEPA and the Council on Environmental Quality (CEQ) regulations.

Section 4.13.3.1 details the potential impacts to roadless areas from oil gas development including habitat fragmentation, natural appearing landscapes and loss of wilderness values. Impacts would vary by alternative.The BLM will select an alternative based upon the overall analysis of environmental impacts, socioeconomic considerations, other relevant factors, and the balance of agency statutory requirements and regulations.

Comment:

While there is some contention as to whether roads could be constructed in Inventoried Roadless Areas within the lease areas, we demonstrate a simple Benefit Transfer to calculate the Passive Use/Non Use Values (existence values to the current generation and bequest values to future generations) if these areas were disturbed. Here we present a worst case scenario of adverse effects to approximately 100,000 acres of Roadless acres within the impact area. BLM, using GIS, can refine the acreage estimate and refine my calculation of Passive Use/Non Use Values accordingly. Walsh, et al. conducted a contingent valuation method (CVM) survey of Colorado households to ask their willingness to pay (WTP) for preserving alternative quantities of Wilderness and roadless areas. WTP is a federally approved value for measuring non market values, and is used by agencies ranging from U.S. EPA (2000) to Office of Management and Budget (OMB, 1992; 2000). In the published journal article, Walsh, et al.'s Non Use Value (what the article calls Preservation Value) is:

WTP (per Household, 1980 $) = $9.17 +$4.1854(Millions of Acres) –.1919 (Millions of Acres Squared)

One of the acreages the survey asked Colorado households their WTP for was preserving 5 million acres of Roadless Areas as Wilderness to preserve these areas wilderness values. While Colorado only has 3.6 million acres of Wilderness, to be conservative we applied this equation assuming the WTP for 5 million acres as the baseline and calculated that value. We then subtracted from the 5 million acres the loss of 100,000 acres of Roadless acreage that might potentially be disturbed with Alternatives #1 and #2 (as noted BLM can use GIS analysis and refine the acreage used). The per household value updated from 1980 dollars to 2014 dollars for 5 million acres is $72.69. The per household value for 4.9 million acres is $72.03. Thus a loss of 100,000 Roadless Acres amounts to loss of $.66 per Colorado household. As Walsh, et al. noted Non Use values are pure public goods available to all Colorado households. Therefore Walsh, et al. generalized their values in the original published article to all Colorado households. Doing this for the loss of $.66 per household leads to a loss of $1.3 million annually. The loss in Passive Use/Non Use Value should be incorporated in the Socioeconomics section of the FEIS as an economic cost of Alternatives #1, #2, and #3 or $1.3 million of benefits for Alternative #4.The standard lease terms incorporate the 2001 Colorado Roadless Rule by reference, and so those protections would apply. But the lessees appear to be disputing this and asserting that their leases conveyed the right to build roads in Inventoried Roadless Areas. While this is incorrect, the analysis depicts what the impacts would be if road building is allowed.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

Contingent valuation is most appropriately used when a well-designed, up to date, and location specific survey analysis is available to accurately and precisely measure net present value and the variability of respondent willingness-to-pay. The Survey referenced is neither up to date as it was published in 1978 nor is it location specific as the report is based on direct interviews with 202 residents of Denver and Fort Collins. Due to appropriate valuation issues, there are concerns that attributing non-use values might over represent relative economic values between the alternatives. As discussed in responses to comments regarding the Thompson Divide's contribution to local economies (see Socioeconomic comments), the commenter seems to presume an incompatibility between oil and gas development and the WRNF's passive use/non-use value. Under Alternative 1, the DEIS estimates that there would be 48 acres of long term disturbance within Zone 3 and a total of 385 acres across all zones. If the future passive use/non-use impacts are limited to the areas of disturbance, then using the commenter methodology and assumptions the maximum (i.e. assuming full elimination of the area's passive use value) passive use/non-use loss for the WRNF would total less than $630 per year (i.e. 48/100,000 x $1.3 million). If a 50% passive use impairment rate is applied to a 4,800 acre area, an area 100 times that of the disturbed sites, the total passive use loss would be $31,000.

Comment:

Know that more than 50% of Colorado's roadless areas have the attributes that warrant the greatest degree of protection. We request you give the highest level of protection to these lands. Provide strict "No Surface Occupancy" stipulated to protect the entire area from any current and future oil and gas leasing and development. It must not allow any "linear construction zones" for pipeline, transmission lines, and telecomm facilities.

WEBER, ROBYN

BLM Response:

Section 4.13.3.1 details the potential impacts to roadless areas from oil gas development including habitat fragmentation, natural appearing landscapes and loss of wilderness values. Impacts would vary by alternative. Under all alternatives, roadless areas in Zone 1 would not be available for surface disturbance. Some alternatives include a No Surface Occupancy stipulation to roadless areas to protect against any surface disturbance, including linear construction zones (LCZs). The use of LCZs is restricted under the final Colorado Roadless Rule.

Comment:

Give the highest protections to Colorado roadless acres because: roadless areas protect watersheds and potable water for people, communities, and ecosystems.
• Give the highest protections to Colorado roadless acres because roadless areas protect healthy, viable species of predators. Predators are required in the environment because they make prey populations (e.g., deer, elk, etc.) stronger by culling out the weak and the old. This helps hunters and sportsmen. Predators control overpopulation and over-grazing of prey animals such as the current problems happening in Rocky Mountain National Park. Overgrazing is causing monocultures and reducing the diversity. Using predators to control overpopulation is the lowest cost solution.
• The Roadless Area Conservation Rule of 2001 was the result of the most extensive public process in the history of federal rulemaking — one that generated approximately 1.6 million comments, more than 90% of those in favor of protecting our Roadless heritage. I strongly supported this Rule.
• The federal courts have upheld the 2001 Roadless Area Conservation Rule which is now in effect nationally. It maintains current access for hunting, camping, fishing, hiking. Please do not jeopardize our valued recreation opportunities.
• Road construction should not be allowed in roadless areas, except for emergencies. The 2001 rule provides an adequate exception for emergency access to protect life and public safety.
• Roadless backcountry lands provide vital migration corridors, key habitat such as wildlife birthing areas, and other ecosystem benefits such as clean water for Coloradans.
• I want to safeguard Colorado's quality of life. In sum, roadless areas protect the land for people, economies, and ecosystems.

WEBER, ROBYN

BLM Response:

Section 4.13.3.1 details the potential impacts to roadless areas from oil gas development including habitat fragmentation, natural appearing landscapes and loss of wilderness values. Impacts would vary by alternative. Under all alternatives, roadless areas in Zone 1 would not be available for surface disturbance. The Colorado Roadless Rule does not affect the terms or validity of leases existing prior to the promulgation date of the final rule. See Chapter 4 for analysis on impacts to wildlife, recreation, and water.

Comment:

Our Colorado quality of life depends upon protected areas, including roadless areas, for clean potable water for people. Agriculture depends upon the land for production. Cities depend upon the land for tourism, which accounts for billions of dollars of state revenue, including the ski industry. Animals depend upon them to sustain healthy and viable populations. The balance between predator and prey is vital to our hunting, agriculture, and ranching industries by keeping meso-predators and prey populations in check. Roadless areas allow for nature forces such as fire to take place which also maintain healthy ecosystems and reduce threats such as the pine beetle.

WEBER, ROBYN

BLM Response:

Section 4.13.3.1 details the potential impacts to roadless areas from oil gas development including habitat fragmentation, natural appearing landscapes and loss of wilderness values. Impacts would vary by alternative. See Chapter 4 for analysis on impacts to water, socioeconomics, grazing, recreation, and wildlife.

Transportation

Note: The comments are grouped together and sorted by the last name of the commenter, with the BLM response in a gray shaded box following the grouped comments within this category.

Comment:

There will be transportation conflicts. None of the roads up there were built for oil and gas development. Those vehicles are big. The trips are numerous. There would be major conflicts.

ELLISON, SUSY

BLM Response:

Impacts related to increased traffic, amount of new roads, and improved road standards that occur with oil and gas development are described in Section 4.10. Section 4.16.2.3 addresses transportation safety impacts. Section 4.17.2 acknowledges various transportation impacts particularly related to increased traffic volumes and effects such traffic have on rural roads. Tables 4.10-2 through 4.10-10 disclose the traffic impacts along the potential haul route by alternative relative to each phase of oil and gas development. As stated in the first assumption in Section 4.10.1.3 of the Draft EIS, the designation of haul routes off of federal lands is not within BLM's authority. The analysis uses some of the most likely haul routes to compare alternatives, but the BLM cannot require use of one access road over another.

Comment:

While Highway 133 is not itself a Pitkin County Asset, the County has partnered with the Colorado Department of Transportation, Garfield County, GOCO and others to invest some $ 3.85 million to construct a 5.2-mile pedestrian and bicycle amenity known as the Crystal Trail. The Trail lies largely within CDOT's right of way for Highway 133 and parallels the traveled surface of the roadway. Highway 133 sees relatively little heavy truck traffic; the DEIS indicates, however, that oil and gas leasing on the WRNF will result in increased heavy truck traffic on the highway. Conversion of Highway 133 into an industrial corridor will diminish the value of the Crystal Trail as a recreational amenity, as exhaust and noise from heavy industrial traffic will detract from the rural environment users currently experience on the Trail.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

The potential indirect impact from any increase in oil and gas development traffic to users of the Crystal Trail that parallels Highway 133 is noted. Sections 3.13.4.1 and 4.13.4 have been augmented to include the Crystal Trail and potential impacts. Although truck trips listed by potential haul route (as shown in Tables 4.10-2 through 4.10-10) could create additional traffic on Highway 133, it is impossible to state the amount of traffic that could occur on Highway 133 that might indirectly impact the Crystal Trail users. Future proposed roads would undergo site-specific reviews and further NEPA analysis of impacts prior to approval of the road use plan and permits to drill.

Comment:

Specific studies analyzing hydraulic fracturing related truck traffic and accidents found "a statistically significant increase in accidents per well drilled."

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

Comment:

Muehlenbachs analysis of hydraulic fracturing related truck traffic and accidents (http://www.rff.org/files/sharepoint/Documents/Events/Seminars/140410-Muehlenbachs-presentation.pdf) found increased truck traffic associated with fracking wells in Pennsylvania resulted in a statistically significant increase in accidents per well drilled. A substantial portion of these accidents resulted in fatalities due to the size of the trucks involved in the accident. This adverse effect on safety should be noted in conjunction with Alternatives #1, #2 and #3. The avoidance of much of this adverse effect on safety with Alternative 4 should be acknowledged by BLM. I would recommend BLM cite these studies in its Chapter 3 and 4 so BLM has something more than just professional judgment that increased traffic will reduce property values.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

Muehulenbach's research finding supports the stated Transportation Safety and Worker Health and Safety analysis described in Section 4.16.2.3 of the DEIS. Section 4.16.2.3 of the DEIS has been revised to note these findings. Section 4.16.2.3 addresses transportation safety impacts. Section 4.17.2 acknowledges various Transportation impacts particularly related to increased traffic volumes and effects such traffic have on rural roads.

Comment:

In addition, every truck, every piece of equipment, every tanker with toxic drilling (and fracking) chemicals, every worker on every shift, every resource including drinking water for the workers, construction of the well pads themselves, all the drilling piping, construction of buildings for the well pad to operate from, etc., etc., etc. EVERY piece, part, and worker will have to go over the small town roads to reach I-70 for access in and out of the site. That route involves going over an antiquated bridge that is slated to be demolished and rebuilt during 2016-2017. This bridge (State Hwy 82) goes over 4 lanes plus the interchange ramps for I-70, the Colorado River, and an active rail road line. There is NO other way to get to and from the sites (from any direction or route) that could potentially be built up on Thompson Divide.

MOORE, J

BLM Response:

Impacts related to increased traffic, amount of new roads, and improved road standards that occur with oil and gas development are described in Section 4.10. Tables 4.10-2 through 4.10-10 disclose the traffic impacts along the potential haul route by alternative relative to each phase of oil and gas development. As stated in the first assumption in Section 4.10.1.3 of the Draft EIS, the designation of haul routes not on federal lands is not within BLM's authority. The analysis uses some of the most likely haul routes to compare alternatives, but the BLM cannot require use of one access road over another.

Section 4.16.2.3 addresses transportation safety impacts. Section 4.17.2 acknowledges various Transportation impacts particularly related to increased traffic volumes and effects such traffic have on rural roads. Future proposed roads would undergo site-specific reviews and further NEPA analysis of impacts prior to approval of the road use plan and permits to drill.

Comment:

Letter and Alternative Route Map dated November 24, 2014 with special attention given to the following excerpts: Garfield County knows that lease holders must be provided reasonable access to evaluate and perhaps develop their leases. We have completed a wide-ranging evaluation of current and potential County Haul Routes (See Map Attachment1) and recommend the following preferred Haul Route options be included as stipulations:
1) Alternative Route A, West Divide Creek. This route is the preferred route and provides access via Interstate 70 to the North along established and heavily utilized County Haul Routes, to Garfield County Road 344 (West Divide Creek Road} then along Mesa County Road 79 to the Pitkin County line.
2) Alternative Route B, Uncle Bob Mountain. Access via Interstate 70 to the North, along established County Haul Routes and Garfield County Road 345 to Mesa County, Haystack Gate and the Pitkin County line.
3) Alternative Route C, East Divide Creek. Access via Interstate 70 to the North, along established County Haul Routes and Garfield County Road 313 to Mesa County and Haystack Gate and the Pitkin County line.
4) Alternative Route D, Road Gulch. Access via historic east-west travel route as a connector between Garfield County Road 30 to the east and County Road 313 to the west.
5) Alternative Route E, Baldy Mountain. Access via Interstate 70 to the North, along established County Haul Routes and Garfield County Road 328 to the junction of Garfield County Roads 30 and 117.

MARTIN, JOHN; GARFIELD COUNTY COLORADO

BLM Response:

As stated in the transportation assumptions in Section 4.10.1.3 of the DEIS, “neither the Forest Service or the BLM have the authority to require operators to use designated haul routes not on federal lands…Mitigation needed at the time of development such as avoidance of sensitive locations, road relocations, or special inventories would be analyzed at the APD stage of permitting, and mitigation measures or permits for access would be implemented through the use of COAs.”

The second assumption states: “Any new roads or improvements to existing roads or other changes to the Forest Transportation System would be in conformance with the Forest Plan, Forest Service and other applicable regulations (including On-Shore Orders and WRNF Road Design standards) affecting road construction and use.”

Comment:

I looked at it and the traffic figures seemed unrealistic. I have read other EISs and generally they do not include any impacts to local people.

WAHL, ERIK

BLM Response:

Table 4.10-1 lists estimated traffic (by well) for the different phases of oil and gas development. The types of trucks and the timing of the traffic vary across the development phases. Heavy truck use occurs with the construction, drilling, completion, and reclamation work while smaller pick-up trucks are common with the operations and maintenance work. Traffic figures were based on estimates presented in the WRNF FEIS (2014) as well as the RFDS, which details the anticipated amount of lease development in the analysis area. The traffic numbers definitively indicate potential impacts to residents and other users of the potential haul routes identified in the various tables in Section 4.10 (see Tables 4.10-2 through 4.10-10). Future proposed roads would undergo site-specific reviews and further NEPA analysis of impacts prior to approval of the road use plan and permits to drill. Final adjustments in the traffic numbers have been made in the FEIS based on comments presented during the recent public meetings.

Comment:

Garfield County reminds the BLM of our position, as stated in our 2012 WRNF Oil and Gas Leasing DEIS comments and our Existing Lease EIS scoping comments, that County Road (CR) 117 (Fourmile Road) will not be utilized as a heavy haul route for new energy exploration activities. CR 117 was not constructed with the physical capacity to accommodate the significant volume and weights of vehicles commonly associated with O&G development. We will provide as-built engineering and materials data regarding CR 117 to BLM as needed.

MARTIN, JOHN; GARFIELD COUNTY COLORADO

Comment:

County Road 117 (Fourmile Road) will not be utilized as a haul route for new energy exploration. County Road 117 was not constructed with the physical capacity to accommodate the significant volume and weights of vehicles commonly associated with oil and gas development.

MARTIN, JOHN; GARFIELD COUNTY COLORADO

BLM Response:

Tables 4.10-2 through 4.10-10 disclose the traffic impacts along the potential haul route by alternative relative to each phase of oil and gas development. As stated in the first assumption in Section 4.10.1.3 of the Draft EIS, the designation of haul routes not on federal lands is not not within BLM's authority. The analysis uses some of the most likely haul routes to compare alternatives, but the BLM cannot require use of one access road over another.

Section 4.10.4.1 details specific concerns regarding CR 117. Section 4.16.2.3 addresses transportation safety impacts. Section 4.17.2 acknowledges various Transportation impacts particularly related to increased traffic volumes and effects such traffic have on rural roads. Future proposed roads would undergo site-specific reviews and further NEPA analysis of impacts prior to approval of the road use plan and permits to drill.

Comment:

The Town raised transportation, traffic, and public safety concerns in scoping and during the Cooperator process. Carbondale's concerns include road degradation, safety, school zones, and sensitive watersheds. If development were allowed in the Zone 3 leases, West Main Street could be used for access. The Town is unequivocally opposed to being used to access oil and gas development on these adjacent WRNF lands that should be protected to retain their natural values. The WRNF ROD (at 6) recognized the traffic-related concerns of both Carbondale and Glenwood Springs: "With an average of 70-150 truckloads per day to move a typical drill rig to a site, the communities of Glenwood Springs and Carbondale expressed their concern regarding safety and the ability for their roads to handle this type of traffic."

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

Comment:

According to data from the City of Glenwood Springs, there are significant safety and capacity issues within the City of Glenwood Springs that would be exacerbated by use of city roads to access CR 117 for significant new oil and gas development. The city can be contacted for a more detailed assessment of the following issues: 1) Insufficient capacity for North to West bound turn from SH 82 to 27th Street; 2) Pedestrian safety issues at the intersection of 27th Street, SH 82 and the Rio Grande Trail; 3) Poor sufficiency rating of existing 27th Street bridge; 4) Lack of bypass lane on south east leg of roundabout at 27th street and Midland Avenue; 5) Poor road condition of Midland Avenue from 27th Street to CR 117 junction; 6) Dangerous pedestrian access on Midland Avenue from 27th street to Cardiff Bridge Road; 7) Dangerous Midland Avenue school crossing at Mount Sopris Drive; 8) Dangerous and steep grade at intersection of CR 117 and Midland Avenue.

MARTIN, JOHN; GARFIELD COUNTY COLORADO

BLM Response:

Tables 4.10-2 through 4.10-10 disclose the traffic impacts along the potential haul route by alternative relative to each phase of oil and gas development. As stated in the first assumption in Section 4.10.1.3 of the Draft EIS, the designation of haul routes not on federal lands is not within BLM's authority. The analysis uses some of the most likely haul routes to compare alternatives, but the BLM cannot require use of one access road over another. Impacts related to increased traffic, amount of new roads, and improved road standards that occur with oil and gas development are described in Section 4.10. Section 4.10.4.1 details specific municipal concerns from the cities of Glenwood Springs and Carbondale. Section 4.16.2.3 addresses transportation safety impacts. Section 4.17.2 acknowledges various Transportation impacts particularly related to increased traffic volumes and effects such traffic have on rural roads. Future proposed roads would undergo site-specific reviews and further NEPA analysis of impacts prior to approval of the road use plan and permits to drill.

Comment:

Although current development proposals do not call for access along either Coal Creek Road or Thompson Creek Road, BLM meeting minutes indicate that SG's plans for buildout of the proposed Lake Ridge Unit will require such access. See Exs. 12-14. Those minutes indicate that SG wants to develop as many as 180 pads in the proposed Lake Ridge Unit, with a pad-spacing program of approximately 4 pads per square-mile section. If one assumes 4 wells per pad, which is generally consistent with the development program proposed at SG's Bull Mountain Unit—which the meeting minutes indicate is the model SG plans to emulate at Lake Ridge—this yields a total of 720 potential wells on the Lake Ridge Unit. See Exs. 12-14 (indicating "5 years to 180," "4 pads per section" and plans to replicate Bull Mountain); Ex. 15 (BLM Environmental Assessment on Bull Mountain Unit indicating development program of approximately 4 wells per pad). SG contests this figure, but refuses to provide its own; if one simply extrapolates from their practices at the Bull Mountain Unit, a figure of 52 pads and 208 wells results. In order to achieve that sort of spacing at Lake Ridge, or otherwise develop its eastern flank, SG will have to gain access along Thompson Creek Road and Coal Basin, because access from the Fourmile Park side is barred by a vast area of Inventoried Roadless Areas protected by the Forest Service's 2001 and 2012 Roadless Rules. The Roadless Rules prohibit road building in these IRAs. Thus Thompson Creek and Coal Basin are SG's only options to reach the eastern areas of its leases to achieve its pad spacing objectives. A recent Forest Service Transportation report corroborates this conclusion. See Ex. 16 at 42 ("Garfield County and Pitkin County roads in the Carbondale area not currently used for access could become access roads if available lands are leased or existing leases are further developed."). Oil and gas operations will have deleterious impacts on those roads. The attached report prepared by civil engineering firm SGM generally details these impacts. See Ex. 17 (SGM Report). Given the well figures involved, the added costs to the County for maintenance and improvement are likely to number into the millions of dollars.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

Tables 4.10-2 through 4.10-10 disclose the traffic impacts along the potential haul route by alternative relative to each phase of oil and gas development. As stated in the first assumption in Section 4.10.1.3 of the Draft EIS, the designation of haul routes not on federal lands is not within BLM's authority. The analysis uses some of the most likely haul routes to compare alternatives, but the BLM cannot require use of one access road over another. Section 4.16.2.3 addresses transportation safety impacts. Section 4.17.2 acknowledges various Transportation impacts particularly related to increased traffic volumes and effects such traffic have on rural roads. Future proposed roads would undergo site-specific reviews and further NEPA analysis of impacts prior to approval of the road use plan and permits to drill.

It should be noted that the well and pad numbers used for analysis are derived from the same RFDS used for the WRNF Final EIS and ROD USFS 2014). The leases considered in this EIS are not in the easy-to-drill areas, with less existing infrastructure and more federal/USFS permitting so the BLM does not expect full field development or development similar to established areas like Bull Mountain over the next 20 years. The impacts of developing the Lake Ridge unit would be reviewed and analyzed with a separate environmental document prepared and decided by US Forest Service personnel. Any decision regarding development of the Lake Ridge unit would occur under separate NEPA and is beyond the purview of this EIS.

Comment:

As the state of the drilling art advances, wells drilled per pad have increased tremendously. Today, it is not uncommon to see 20 wells drilled per pad. See Ex. 41 (CU). While we support consolidating wells and reducing pad numbers, traffic generation is primarily linked to well numbers, not pad numbers. Thus, it is not a sufficient response to the community's traffic concerns to simply say that impacts can be mitigated by clustering development on a small number of pads and imposing stipulations. Instead, the only way to ensure our economies are protected is to cancel these leases altogether.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

Tables 4.10-2 through 4.10-10 disclose the traffic impacts along the potential haul route by alternative relative to every phase of oil and gas development. Traffic impacts as analyzed in the DEIS are directly linked to the various truck trips generated during each development phase of a well, not a pad (as illustrated in Table 4.10-1). For multi-well pads with vertical or directional wells, 7 wells were used as a standard in the RFDS assumptions (Table 2-6). It is assumed that the pad would be constructed one time for a 7-well pad scenario, and the construction traffic related to that work (defined in a separate column in Table 4.10-1) would only occur in one construction period. While clustering of pads with multiple wells is certainly a way of mitigating impacts relative to some resources, it is agreed that the traffic numbers remain similar with or without clustering since the truck trips are generated for each developed well. Note that the range of alternatives considered includes consideration of lease cancellation.

Comment:

County Roads. Pitkin County owns and maintains roads throughout the territorial boundaries of the County. The County also maintains Forest Service roads pursuant to a contract with the Forest Service. See Ex. 11. The following discussion focuses on western areas of the County which will be affected by ratifying the subject leases and allowing future development of them. Such action will impact two road systems owned and managed by the County: (1) Coal Creek Road, and (2) Thompson Creek Road. It will also affect the County's maintenance of Forest Service roads in the Fourmile Park area.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

Comment:

Transportation. Pitkin County and the USFS cooperate regularly in the administration and maintenance of their respective road systems. For many years, the County has maintained WRNF roads within its territorial boundaries pursuant to agreement with the USFS. See Ex. 11. The attached report of SGM, a civil engineering firm, documents the well-understood impacts that oil and gas development traffic has on road infrastructure. See Ex. 17. Meanwhile, the costs of road reconstruction and maintenance are extremely high. Concern regarding these impacts is exacerbated by the inadequate bonds required in connection with oil and gas development on federal lands, and the complicated corporate structures of many operators. Traffic generation is often the single most important thing motivating those who appear at our public hearings. Proposals from SG Interests to develop the Thompson Divide via an access route that travels through the heart of the Glenwood Springs tourist district and along Four Mile Road has drawn universal condemnation from local citizens and elected officials. SG, however, insists that it is entitled to use this route and has implied that it will sure to get its way. The same access conflicts would arise in Carbondale if SG were to attempt to develop the eastern flank of its leases.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

Comment:

I am concerned about the increasing truck traffic that would be a part of oil and gas development in the Thompson Divide area. Four Mile road is already impacted. The Thompson Creek road goes directly through the middle of the ranch and other ranchlands as it winds its way to the forest. If oil and gas traffic were to use Thompson Creek Road, there would be tremendous impacts to existing uses. On any given day there are families and individuals walking, biking and running on this road. Cattle are being moved across and along the road by ranchers, families and employees on horseback. Recreational traffic is heavy both in the summer and winter on this road. Elk, deer, bear, fox and coyote are regularly seen crossing it. Adding service trucks and drill rigs to this mix increases the concern for safety of all who travel, recreate and move cattle along this road.

HARRINGTON, VIRGINIA

Comment:

I am concerned about the increasing truck traffic that would be a part of oil and gas development in the Thompson Divide area. Four Mile road is already impacted. The Thompson Creek road goes directly through the middle of the ranch and other ranchlands as it winds its way to the forest. If oil and gas traffic were to use Thompson Creek Road, there would be tremendous impacts to existing uses. On any given day there are families and individuals walking, biking and running on this road. Cattle are being moved across and along the road by ranchers, families and employees on horseback. Recreational traffic is heavy both in the summer and winter on this road. Elk, deer, bear, fox and coyote are regularly seen crossing it. Adding service trucks and drill rigs to this mix increases the concern for safety of all who travel, recreate and move cattle along this road.

HARRINGTON, TOM

Comment:

The Thompson Divide matter to me because: Every piece of equipment in and out of the site will have to use the Hwy 82/Grant Ave. Bridge stated for complete replacement. Plus traveling thru miles of fragile residential roads to and from site.

MOORE, J

Comment:

My Grandparents homesteaded on Four Mile road at what is now the Four Mile Bed and Breakfast. To imagine trucks going up that road daily just doesn't seem right. There are many homes right on the road, who's peaceful settings will be forever changed.

MUNK, STEPHANIE

Comment:

I live off Midland Avenue in Glenwood Springs, and I fear that despite the consensus of both the Glenwood City Council and the Garfield County Commissioners, that Four Mile will be the preferred access route of the leaseholders. This is unacceptable for many reasons, not the least of which are the noise disturbance, air quality impacts, road surface impacts and safety hazards from the high volume of heavy truck traffic through our residential neighborhoods. I understand that transportation corridors are beyond the scope of this EIS and not with the jurisdiction of the BLM.

ROEHM, GERRY

Comment:

The insane number of vehicle trips will destroy the small-town feel of Glenwood Springs, prematurely wear out the haul route roads and bridges through town and up 4 Mile Road and will destroy the air and sound quality along the route.

WANNER, RALPH

Comment:

The insane number of vehicle trips will destroy the small-town feel of Glenwood Springs, prematurely wear out the haul route roads and bridges through town and up 4 Mile Road and will destroy the air and sound quality along the route.

WANNER, PATRICIA

BLM Response:

Tables 4.10-2 through 4.10-10 disclose the traffic impacts along the potential haul route by alternative relative to each phase of oil and gas development. As stated in the first assumption in Section 4.10.1.3 of the Draft EIS, the designation of haul routes not on federal lands is not within BLM's authority. The analysis uses some of the most likely haul routes to compare alternatives, but the BLM cannot require use of one access road over another. Section 4.16.2.3 addresses transportation safety impacts. Section 4.17.2 acknowledges various Transportation impacts particularly related to increased traffic volumes and effects such traffic have on rural roads. Future proposed roads would undergo site-specific reviews and further NEPA analysis of impacts prior to approval of the road use plan and permits to drill.

Vegetation, Riparian and Wetlands, Special Status Species, and Noxious Weeds

Note: The comments are grouped together and sorted by the last name of the commenter, with the BLM response in a gray shaded box following the grouped comments within this category.

Comment:

I have seen the efforts of reclamation in areas of Garfield County and many are unacceptable. Areas are never returned to what they were prior to oil and gas drilling.

HARRINGTON, VIRGINIA

Comment:

Once drilling is started, there is no returning the area to its current pristine condition, at least not in our lifetime.

KERLER, HOLLIS

Comment:

Also my time as inspector and also as a geologist taught me that the lands will never be restored to their pre-development state. Show me one single reclaimed oil and gas development site in the U. S. where there is no indication the site was developed.

WANNER, RALPH

BLM Response:

As noted in Section 4.20.7, loss of habitat would be considered an irretrievable commitment of the resource until reclamation. The section notes that while some vegetation communities are expected to return to a native state within a relatively short period of time, other more sensitive habitats, such as sagebrush shrublands, may require up to 50 years or longer to return to native conditions.

Comment:

The existing leases fail to adequately protect the places I cherish, including the Thompson Divide, undeveloped aspen forest areas (some of the largest single organisms on the globe!), bountiful wildlife, and beautiful rivers and streams in a pristine watershed which is vital to lives of millions of people and livestock further downstream. Nor do they protect the populations of flora and fauna from living in the cloud of methane caused by fracking. They also fail to place the protection of the rare and site-specific species of both flora and fauna above the extremely destructive development and use of roads -- where there have never been any --through one of the marvels of our federal lands and watersheds.

SNYDER, TIFFINY

BLM Response:

Section 4.6 and 4.7 disclose the potential for surface disturbance in important plant and animal habitat. The potential for the surface disturbance in significant plant communities or wildlife habitat varies by alternative; however, an NSO stipulation for aspen in included under all alternatives.

Comment:

Anytime native vegetation is disturbed through surface disturbance, invasive weeds are often the first to take over. This degrades habitat, not only for wildlife, but for domestic livestock grazing on public land. Depending on the invasive weeds, it can increase the risk of wild fires also.

STONE, MARILYN

BLM Response:

Section 4.6 discusses risk of noxious weeds proliferation.

Comment:

Invasive weeds and vegetation interfere with land health and ecological goals for the region and agricultural activities including farming and ranching. The Town is concerned that well-meaning management plans and stipulations may look good on paper, but prove ineffective on the ground including reclamation targets. Oil and gas development on rugged, steep, mountainous, forested terrain with long winters and an abbreviated growing season poses an entire suite of environmental challenges that are not present at lower and flatter elevations.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

The potential for the spread of noxious weeds as a result of surface disturbance is disclosed by alternative in Section 4.6. As noted in Section 4.20.7, loss of habitat would be considered an irretrievable commitment of the resource until reclamation. The section notes that while some vegetation communities are expected to return to a native state within in a relatively short period of time, other more sensitive habitats, such as sagebrush shrublands, may require up to 50 years or longer to return to native conditions

Comment:

Forests should not have to withstand methane gas. Pine bark beetles were fostered by methane-heat-loading of the mountain air in winter.

RAMO, JOLIE

BLM Response:

The purpose of the NEPA process is to disclose potential project impacts. Impacts to climate change, with potential resulting impacts to biological systems, are discussed in Section 4.2. The BLM Colorado Air Resource will analyze submitted projects on a case-by-case basis to determine if it is feasible and reasonable to require additional mitigation to reduce or offset GHG emissions and to evaluate potential net GHG concentration changes due to reduction in CO2 sinks (forests / vegetation) when more detailed information about actual proposed oil and gas development project locations and plans are known.

Comment:

Forests remove carbon dioxide, a greenhouse gas, from the air and produce oxygen, which we breathe. They also provide habitat for wildlife. Please do your part to reverse climate change and extinction by protecting existing forests.

ANDERSON, CHRISTIN

Comment:

Forests are one of our nation's most valuable assets for purifying water, removing CO2 from the atmosphere and ameliorating warmer temperatures. It is your job as the BLM to be good stewards of these assets.

G, REV. MARILYN

Comment:

We are all connected in the web of life. Interfere with one piece of that web disrupts the web-includes plants, animals, minerals... Right now we know that there is an excess of carbon dioxide in the atmosphere. Plants (especially big plants like trees) counteract and balance that with emitting oxygen. These are facts, significant facts that need attention. Please consider this life saving role of these facts in balancing the web of life--I'm talking about human lives as well as all others. Thank you.

HALL, EILEEN

Comment:

The planet needs all the trees it can get. Destruction of this forest will accelerate climate change. Don't do it.

HORNSBY, JANET

Comment:

Trees eat CO2 and turn it into oxygen. Oil and gas extraction release C02 into the atmosphere in quantities too vast for remaining trees to eat. Our trees are precious for our climate, for our ecosystems, and for the enjoyment of humans. Don't take the regressive step of contributing to global warming by letting polluters destroy a pristine forest.

HYMAN, HARVEY

Comment:

Please protect this pristine forest from the fossil fuel industry. Trees are essential to helping fight climate change. More oil and gas leases will accelerate climate change.

JENSEN, JULIANNE

Comment:

Why can't they bulldoze wasteland where nothing of significance grows? There's always plenty of that, while rich vegetated land shrinks. We certainly can't save Mother Earth from a looming climate disaster if forests are being plowed under and seeded with concrete.

JONES, GARY

Comment:

Stop destroying the "lungs" of the planet. Forests are our greatest air filter, and should not be destroyed by corporate greed. Habitat for wildlife should be preserved for future generations. Keep your bulldozers out of our forests and keep your toxic fossil fuels in the ground!!

RAMEY, VIRGINIA

Comment:

The world cannot afford to destroy any of its trees. Trees produce oxygen and we are quickly destroying it through deforestation and chemical discharges into the atmosphere!

SHERWOOD, AMY

Comment:

Given the dangers of climate change, we must take note that the forest absorbs CO2 while cutting down the forest to produce oil and gas doubly increases CO2, first by removing the forest and then by producing fossil fuels. We need the forest more than we need the fossil fuels, if we want to prevent the worst disasters of climate change. Please remember that our military has called climate change one of the top threats to our national security. Given that the leases on the Thompson Divide were illegal to begin with, there is ample reason to cancel them immediately. Thank you.

SMARR, JANET

Comment:

We should be reducing our fossil fuel usage and the forests need to be protected. Forests absorb great quantities of CO2.

WALZ, KENNETH

Comment:

At a time when the world's focus is on the dire consequences of climate change it is insane to deal a double wallop. These land leases not only encourage more fossil fuel extraction, they will destroy wide swaths of forests that moderate the negative impact of the current dependency on fossil fuel.

WARDOWSKI, ANN

BLM Response:

The purpose of the NEPA process is to disclose potential project impacts. Section 4.6 discloses the potential amount of surface disturbance that would occur within forested areas by alternative. Section 4.2 discloses the potential impacts on air quality and climate change. The BLM Colorado Air Resource will analyze submitted projects on a case-by-case basis to determine if it is feasible and reasonable to require additional mitigation to reduce or offset GHG emissions and to evaluate potential net GHG concentration changes due to reduction in CO2 sinks (forests / vegetation) when more detailed information about actual proposed oil and gas development project locations and plans are known.

Comment:

The Colorado Division of Wildlife noted in comments dated June 30, 2010 that maintenance of water quality in the Crystal River and its tributaries is “essential” to the health of native cutthroat trout. See Ex. 27 at 6. The WRFEIS rates the Crystal as having Moderate-High Watershed Sensitivity. See WRFEIS Table 16 at 80. The Crystal is among the last free-flowing rivers in the state, and carves one of the most picturesque valleys in the mountain west. Pitkin County has invested tens of millions of dollars in property acquisitions and restoration activities to protect that valley from inconsistent development and degradation. The Crystal watershed provides drinking water to thousands of people and agricultural water to local farms and ranchland. The river provides recreational opportunities for fishermen, kayakers, and sightseers, and habitat for cutthroat trout, bighorn sheep, bald eagles, Lewis’s Woodpeckers, and rare plant species such as the stream orchid (Epipactis gigantea). The Forest Service has found the Crystal eligible for federal Wild and Scenic River designation. See Ex. 43.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

Impacts to water quality are discussed in Section 4.5. Impacts to aquatic resources are discussed in Section 4.8. Impacts to rare plant species, including stream orchid (Epipactis gigantea), are discussed in Section 4.6. As noted in Section 3.12.3.5, there are no Wild and Scenic Rivers or eligible sections within the Analysis Area, as the nearest eligible section is located at a distance of 1.2 miles. Impacts to Wild and Scenic River values would be determined during site-specific NEPA analysis.

Water Resources

Note: The comments are grouped together and sorted by the last name of the commenter, with the BLM response in a gray shaded box following the grouped comments within this category.

Comment:

Of equal concern is the potential impact on water resources. Water is the backbone of all developed nations. Without reliable water resources, a nation cannot thrive and basic health needs cannot be met. The future of water may be further compromised due to potential droughts and global warming. Oil and gas production must always take a back seat to the protection of our water. Fracking must be more closely examined. Fracking literally takes water out of the hydrological cycle forever. This is not to be taken lightly. With current droughts and global warming, we must not compromise our water sources. To date, we are talking about hundreds of billions of gallons of water loss and this is just the tip of the iceberg. To compound matters, this “lost” water becomes a threat in itself. When used for fracking, it essentially becomes toxic waste and can contain hydrogen sulfide, methane, toluene, benzene, possibly lead and a host of chemicals that are used to make water “slippery”. In a typical frack 24,000 to 230,000 pounds of chemicals are injected into each well. This toxic water is typically disposed deep into the earth in what is called “injection wells”. Of course, in a mountainous area (typical of National Forests), the potential for contamination of water resources from injection wells would increase dramatically. On a local level, we are in a high risk area for geothermal activity and earthquakes which would undoubtedly compromise the integrity of any stored toxic waste beneath the surface. (In addition, it is generally acknowledged that fracking can also initiate earth quakes.) The other alternative for disposing of toxic water is containment ponds which for obvious reasons is absolutely unacceptable in a National Forest. Massive blowouts of gas wells can occur as evidenced in 2011 by a blowup of a Chesapeake Energy Company well in Bradford County Pennsylvania. This was an on-shore version of BP in the Gulf.

MARKUSON, JAMES

BLM Response:

Potential water-quality impacts are assessed in Section 4.5. A column with water quality information in the form of TDS ranges was added to Table 3.5-3.

As discussed in Section 2.4.2, the BLM determined that limiting or disallowing hydraulic fracturing is not economically practicable or feasible (43 CFR 46.420(b)) and would not meet purpose and need (i.e., BLM's responsibilities under Mineral Leasing Act and the Mining and Minerals Policy Act to foster orderly and economic development of domestic resources and meet domestic energy needs). Hydraulic fracturing is described and discussed in Sections 2.7.1, 3.16.2, 3.16.3, 4.3.3, 4.5.2.3, 4.14.3, and 4.16. Geologic hazards, such as seismicity and induced seismicity, and geothermal energy are discussed in Sections 3.3.3.2, 3.3.3.3, and 4.3.3. Induced seismicity is an emerging concern with respect to oil and gas production. The vast majority of induced seismicity incidents involving oil and gas production activities that have been felt on the surface are related to underground injection of produced water and very few incidents have been attributed to hydraulic fracturing (Ground Water Protection Council [GWPC] and Interstate Oil and Gas Compact Commission [IOGCC] 2015). As Section 4.3.3.1 of the DEIS describes, the magnitude of the micro-seismicity that is induced by hydraulic fracturing is very small. Only in rare cases have hydraulic fracturing-induced epicenters been felt by persons. Incidents that are thought to have been attributed to hydraulic fracturing have occurred in diverse locations including Ohio, Oklahoma, British Columbia, and the United Kingdom and the magnitudes were in 2.0 to 3.0 range.

Wastewater disposal is evaluated in Sections 4.5.2, 4.14, and 4.16.

Comment:

The Draft EIS Chapter 3 .5 (p. 3.5-21) states that for total dissolved solids (TDS), "Seventy percent of the samples [in the Thomas and McMahon 2012 report] exceeded the USEPA secondary drinking water standard of 500 mg/L." However, it is not the secondary drinking water standard that defines the TDS threshold for identifying potentially usable aquifers. The Safe Water Drinking Act (SWDA) identifies Underground Sources of Drinking Water (USDWs) as those aquifers with TDS concentrations below 10,000 mg/L. Only nine of the groundwater samples included in the Thomas and McMahon 2012 compilation exceeded 10,000 mg/L, and therefore the vast majority of the sampled wells appear to meet the TDS portion of the SDWA definition as potential USDWs. USDWs are subject to protection under the SDWA unless an aquifer exemption has been granted. Consistent with the SDWA, usable waters are defined by Onshore Order No. 2 as "those waters containing up to 10,000 ppm [mg/ L] of total dissolved solids," which must be reported, protected and/or isolated under Onshore Order No. 2. Usable waters and geothermal resources need to be known to determine casing and plugging and abandonment (P&A) requirements. Table 3.5-3 (p. 3.5-18) identifies formations, geologic composition, hydrologic unit, and well yield of hydrologic units in the Piceance Basin. We recommend including water quality data (TDS range, at a minimum) in this table for each aquifer, identifying which aquifers qualify as potential USDWs under the Safe Water Drinking Act (i.e. those with TDS up to 10,000 mg/L).

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

The paragraph was intended to summarize water quality, not to characterize the potential for USDW. A column with water quality information in the form of TDS ranges was added to Table 3.5-3.

Comment:

The following are additional recommendations on ways to ensure groundwater protection: Include a discussion of any requirements for disposal or recycling of produced water. The Draft EIS notes that produced water is "generally" disposed of off-site (p. 4.5-20), and that "up to" 100% hydraulic fracturing fluids were recycled in 2013 (p. 4.5-14). Are there any requirements or incentives to continue these practices?

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

The main incentive for recycling of fracturing flow back water is economic. As water demands increase for a variety of reasons, the costs would only increase. Regarding the disposal of produced water, the regulations require that it be disposed in a manner that is protective of the environment and the incentives to comply are avoidance of the consequences (economic, civil and criminal penalties) of violating the regulations and damaging the reputation of the company.

Comment:

The following are additional recommendations on ways to ensure groundwater protection: Include a discussion regarding any limits on groundwater use. The Draft EIS states "acquisition of fresh water from commercial sources for hydraulic fracturing and other drilling and completion stages would supplement local groundwater sources to minimize consumptive use and the resulting groundwater depletion (USFS 2014a, p. 144) 1" (p. 4.5-16).

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

Limitations to groundwater use generally involve availability and cost. Haulage distance from source to point of use is a major cost component. This would be further considered in the site-specific NEPA analysis when a proposal is received.

Comment:

The Draft EIS states that "there is a low risk of depletion of groundwater resources by oil and gas drilling because fresh water for drilling is obtained primarily from surface water sources" (p. 4.5-14) implying that some freshwater comes from elsewhere (e.g. groundwater, or trucked in from offsite). In regard to cumulative impacts to groundwater, we recommend adding the following to the Draft EIS: 1) The document reports 46,000 acre-feet of groundwater use from Piceance Basin aquifers in 1995 (p. 3.5-21). If the information is available, we recommend identifying how many wells are associated with this estimate, and how it scales up or down for present-day well volume and water use per well or pad. Additionally, we recommend the Final EIS include groundwater withdraw projections for each alternative, and how cumulatively that can affect the groundwater table locally and regionally. 2) Since wetlands act as water purifiers, groundwater could be degraded as a result of drawdown. We recommend including in the Final EIS a discussion on how cumulative groundwater drawdown may affect wetlands, and what volume of water could be extracted before wetlands are impacted.

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

Compared to surface water, groundwater represents a small portion of oil and gas freshwater use, as shown in Figure 6-5 of the United States Environmental Protection Agency's (USEPA's) case study (referenced in the DEIS as USEPA 2015c). Figure 6-5 shows clearly that even during the peak of gas drilling (2008), groundwater accounted for a small fraction of freshwater sourced for hydraulic fracturing. As such, it is uncertain that such a modeling effort, whether regional or local in scope, is necessary or even possible in order to quantify potential impact. Lowering of alluvial groundwater levels (and potential impacts to wetlands) could occur during periods of low flow, but these effects would be difficult to attribute to oil and gas, especially since agriculture uses much more water than oil and gas. Table 2-10 of the EIS identifies the relatively low amount of fresh water needed for well development (a portion of which would be from groundwater sources). As noted in Section 4.5.2.5 of the EIS, the oil and gas industry's reliance on surface water resources and recycling of fracturing fluids and/or produced water rather than the use of fresh groundwater resources would result in little cumulative impact on groundwater availability.

Comment:

Water. Because the WRFEIS discussed surface and groundwater separately, these comments track that organization. Colorado water law recognizes, however, that the two systems are often connected. Groundwater contaminated with natural gas, for example, has been observed bubbling to the surface of West Divide Creek in Garfield County. See Ex. 24 at 3 (Study describing, among other things, how an estimated 100 million cubic feet of gas and associated hydrocarbons from Encana Schwartz 2-15B well contaminated creek). The hydraulic connection between ground and surface water means that impacts to groundwater may also lead to impacts to surface water, and vice versa. According to a Colorado Oil and Gas Conservation Commission (COGCC) report from Dec. 2014, 759 spills were documented in 2014, including seven that entered surface waters of the state. See Ex. 46 at 16-17. It should be noted that COGCC's data compilations are limited to reported spills above a certain threshold.

Surface Water. Oil and gas drilling poses risks to surface water in a number of different ways. See WRFEIS at 76. Well operations can impair streams through contamination of tributary groundwater with hydrocarbons, fracking fluids and other industrial wastes; more detail on this vector is contained in the groundwater discussion below. But surface water impairment can result as well from wastewater disposal pits, well pad and site runoff, construction of new roads, and vehicle mishaps. While mitigation measures included in stipulations may aspire to control these risks, realities are much messier: accidents happen, some operators cut corners, and underfunded federal, state and local agencies are entirely unable to provide meaningful oversight and enforcement. A Forest Service study and PowerPoint from the Fernow Experimental Forest emphasizes the fact that accidents will happen, that pits leak, and that agencies should expect the unexpected when it comes to oil and gas development. See Exs. 25-26. The study points out that the unexpected impacts are likely to be the most problematic.

A highly publicized March 2013 spill contaminating Parachute Creek illustrates threats to soils as well as surface, ground and drinking waters. See Ex. 47. Relevant to concerns about detection, containment, emergency response, and safety for potential development of the disputed Divide leases is reporting that a "cattleman who runs a herd along the creek said such spills are common and often remain secret[.]" Id. For the Parachute Creek spill, at least "60,648 gallons of hydrocarbon material and 5,418 gallons of oil" were recovered. Id. The Denver Post referenced a review finding that "60 percent of the spills reported since January 2011 by five major operators (555 of the total 985 spills reported) occurred within 1,500 feet of surface water and that more than 30 percent occurred within 500 feet." Id. Oil and gas development also affects surface waters in light of the large amounts of waters required to stimulate unconventional wells. The WRFEIS attempts to address this issue, estimating that each well drilled will use .77 acre feet of water, though it fails to fully analyze these impacts to other water users. See WRFEIS at 566. BLM should incorporate the WRFEIS analysis of this impact, particularly in light of the pristine quality of surface waters in the Thompson Divide, the lack of water available for appropriation, and the additional impacts on road infrastructure caused by hauling water into the Divide.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

As noted in Section 1.1.1 of the DEIS, the BLM has incorporated as much of the Forest Service's new NEPA analysis of future oil and gas leasing on the WRNF as possible into the DEIS. The BLM was a cooperating agency on the WRNF EIS and the Forest Service is a cooperating agency on this DEIS.

Section 3.5.6.1 identifies potential sources of groundwater contamination, including tributary connections with surface waters. Section 4.5.1.1 acknowledges the interconnectivity of groundwater and surface water as an issue and notes that it is addressed in general terms.

Surface-water impacts from land disturbance (roads, well pads, etc.), potential leaks and spills, and water consumption, among other things, are generally addressed in Section 4.5.1.3. Accidental spills of hydrocarbons, fuels, or chemical additives used in the well drilling and completion process on the surface, as well as subsurface contamination of groundwater from drilling and completion, are generally addressed in Section 4.5.2.3. Hazardous materials and human health and safety (transport and storage of hazardous materials, produced water, spill and release data, solid waste, water contamination, emergency services, etc.) are discussed in Section 4.16.

However, note that in order to assess potential risks to water resources, a main assumption of the DEIS is that operators would comply with all applicable laws and regulations, such as the Clean Water Act, and CDPHE and COGCC rules and regulations.

As shown in Table 2-5, the DEIS assumes the use of 0.77 acre-feet of fresh water for drilling each vertical/directional well and 3.22 acre-feet of fresh water for drilling each horizontal well. The assumed water use for well completions is 6.44 acre-feet for each vertical/directional well and 77.3 acre-feet for each horizontal well. Water used for well completions is assumed to comprise at least 80 percent recycled water and no more than 20 percent fresh water. The analysis in Section 4.5.1.4 provides an estimate of the percentage of proposed fresh water use by alternative to the water currently allocated to "Industrial" use water rights in the region.

As noted in Section 2.4, the BLM has determined that additional design features and best management practices (BMPs) not incorporated into an action alternative are either regulated by other agencies or more appropriately considered during the Application for Permit to Drill (APD) process, after operators submit a site-specific plan of operations for evaluation. During the APD process, potential resource issues would be identified at the onsite review. The site-specific environmental analysis at the APD stage may identify mitigation measures to be attached to the approved permit as conditions of approval (COAs).

Comment:

The Colorado Division of Wildlife noted in comments dated June 30, 2010 that maintenance of water quality in the Crystal River and its tributaries is "essential" to the health of native cutthroat trout. See Ex. 27 at 6. The WRFEIS rates the Crystal as having Moderate-High Watershed Sensitivity. See WRFEIS Table 16 at 80. The Crystal is among the last free-flowing rivers in the state, and carves one of the most picturesque valleys in the mountain west. Pitkin County has invested tens of millions of dollars in property acquisitions and restoration activities to protect that valley from inconsistent development and degradation. The Crystal watershed provides drinking water to thousands of people and agricultural water to local farms and ranchland. The river provides recreational opportunities for fishermen, kayakers, and sightseers, and habitat for cutthroat trout, bighorn sheep, bald eagles, Lewis's Woodpeckers, and rare plant species such as the stream orchid (Epipactis gigantea). The Forest Service has found the Crystal eligible for federal Wild and Scenic River designation. See Ex. 43.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

As noted in Section 1.1.1 of the DEIS, the BLM has incorporated as much of the Forest Service's new NEPA analysis of future oil and gas leasing on the WRNF as possible into the DEIS. The BLM was a cooperating agency on the WRNF EIS and the Forest Service is a cooperating agency on this DEIS.

Section 3.8.4.3 identifies cutthroat trout populations and their conservation populations within the Crystal River watershed. Section 4.8 evaluates potential impacts to aquatic resources, including multiple stipulations concerning cutthroat trout. Section 4.5.1.3 describes the impacts identified in the WRNF Final EIS, and makes note of the watershed sensitivity of Zone 3. Section 3.5 identifies: the water quality beneficial use classification of the streams draining east towards the Crystal River; the designation of North Thompson Creek and its tributaries as outstanding waters; Thompson Creek and its tributaries on the State's monitoring and evaluation list for elevated iron concentrations; source water areas and protections; and water use. The Crystal River and tributaries are recognized as part of Zone 3, which is described in Section 3.5.3 and evaluated in Section 4.5 for potential impacts to water resources. Recreation is described and evaluated in Sections 3.13 and 4.13. Vegetation, terrestrial wildlife, and aquatic resources are described in Sections 3.6, 3.7, and 3.8, respectively. Potential impacts to habitats and species are assessed in Sections 4.6, 4.7, and 4.8, respectively. In Section 4.12.1.2, "Impacts to segments of Thompson Creek and Crystal River that are eligible for Wild and Scenic River Designations" is identified as a scoping issue. However, as noted in Section 3.12.3.5, there are no Wild and Scenic Rivers or eligible sections within the Analysis Area, as the nearest eligible section is located at a distance of 1.2 miles. In addition, impacts to Wild and Scenic River values would be determined during site-specific NEPA analyses.

Comment:

Tributaries of the Crystal also require protection from future development. Coal Creek already suffers from degraded water quality due to historic coal mining and unstable soils. See WRFEIS at 78. Its sediment loads in turn degrade water quality in the Crystal. Development in this watershed would introduce new impacts from erosion and contamination, and contravene longstanding efforts to restore Coal Creek and reduce downstream impacts on the Crystal River.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

While the DEIS recognizes Coal Creek as a tributary of the Crystal River, the environmental consequences of the alternatives actions are analyzed in a general manner. A site-specific environmental analysis would be performed at the Application for Permit to Drill (APD) stage, which may identify mitigation measures to be attached to the approved permit as conditions of approval (COAs). Coal is discussed in Section 3.3; soils are discussed in Section 3.4 and 4.4; and water resources are discussed in Sections 3.5 and 4.5.

Comment:

Thompson Creek, including North, Middle, and South branches, is a pristine watershed with usable groundwater, good stream health, and the most favorable conditions for aquatic life in the broader area. The WRFEIS indicates that Outlet Roaring Fork River, which includes Thompson Creek, has High Watershed Sensitivity, meaning it is among those watersheds most susceptible to degradation from oil and gas development. See WRFEIS at 81; see also WRFEIS Table 15 at 79. Thompson Creek provides habitat for Colorado River cutthroat trout, lynx, and elk. It is eligible for Wild and Scenic designation, flows through a BLM designated Area of Critical Environmental Concern and boasts striking sandstone fins and stunning views. It also includes a CNHP-identified Potential Conservation Area because of exceptional biodiversity. The Thompson Creek watershed is prized by recreationalists, naturalists, and hunters. Like Gunnison and Garfield Counties, we believe that this watershed, like the rest of the Thompson Divide, should be protected from future oil and gas leasing.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

As noted in Section 1.1.1, the BLM has incorporated as much of the Forest Service's new NEPA analysis of future oil and gas leasing on the WRNF as possible into the DEIS. The BLM was a cooperating agency on the WRNF EIS and the Forest Service is a cooperating agency on this DEIS. In Section 4.5.1.3, the Outlet Roaring Fork River is included in a list of watersheds identified as having the highest aggregate sensitivity to potential future surface disturbance impacts on the National Forest associated with oil and gas exploration and development. The designation of North Thompson Creek and its tributaries as outstanding waters is noted in Section 3.5. Terrestrial wildlife and aquatic resources are described and evaluated in Sections 3.7, 3.8, 4.7, and 4.8. Potential conservation areas are identified in Section 3.6. Recreation is described and evaluated in Sections 3.13 and 4.13.

Comment:

Pristine Watersheds: This undisturbed area of backcountry also provides clean water in more than 15 different watersheds in the region. These include tributaries of the Crystal, Gunnison, and Colorado rivers, and gold medal trout waters on the Roaring Fork River. The pristine and remote creeks in the area support ecologically significant populations of fish, including the endangered Colorado River cutthroat trout. According to a Colorado Division of Wildlife (CDOW) report issued in April of 2009, "The cold water streams of the Thompson Divide provide great fisheries habitat and recreation opportunities ... Of particular importance are the headwaters of North and Middle Thompson Creeks which contain viable populations of Colorado River native cutthroat trout (CRN). Furthermore, the Middle Thompson Creek is especially noteworthy because of the large, isolated population that exists without invasive non-native trout near Middle Thompson Park. That population has been sampled and identified as a genetically pure strain of CRN." See Ex 2. In 2009, TDC commissioned a yearlong analysis of baseline water quality in the TDA. See Ex 3. The report was conducted by Dr. Robert E. Moran, Ph.D., of Michael-Moran Assoc., LLC, in partnership with the Roaring Fork Conservancy. The analysis included intensive surface and ground water testing in the Thompson Divide area, and incorporated several major components: water quality, field data analysis, sediment and aquatic insect analysis. Water quality sampling and flow measurement for the analysis were conducted at four surface water and four ground water sites in the Fourmile Creek and Thompson Creek Watersheds in the TDA and were selected to be representative of potential impacts from proposed oil and gas drilling and development activities. Samples were collected between late September 2009 and late August 2010, during all seasons to represent the range of normal hydrologic conditions. The ground and surface waters sampled during this baseline study indicated that watersheds within the Thompson Divide are presently uncontaminated by any human activities.

KESSLER, ZANE; THOMPSON DIVIDE COALITION

BLM Response:

Recreation is evaluated in Sections 3.13 and 4.13. Livestock grazing is evaluated in Sections 3.14 and 4.14. Water resources are discussed in Sections 3.5 and 4.5, including reference to the study conducted by Dr. Moran. Aquatic resources are assessed in Sections 3.8 and 4.8.

Comment:

The DEIS recognizes that Carbondale's source water protection plan (SWPP) has a 5-mile radius quantified as the standard for protection of water supplies. The Town's SWPP and the substantial overlaps with the Zone 3 leases is found at Figure 3.5-6. Zone 3 watersheds and stream reaches in the Thompson Divide are discussed at DEIS 3.6·16. As the DEIS recognizes, "[t)hese SWPPs cover the majority of the eastern side and central portions of the leases and analysis area surrounding Zone 3 (see Figure 3.6·6)." ld. Figure 3.6-4 establishes that the Divide leases are replete with wetland or riparian areas that would be threatened by development. The obvious conclusion to be drawn from the maps is that these leases would never have been offered had the Town's concerns been known by the responsible federal agencies prior to the lease sale. Because the Town received no notice of the proposed lease sale, it was unable to protect its watershed at the time. That oversight can be corrected by adopting Alternative 4. The Town appreciates BLM's analysis and its recognition that the Thompson Divide is replete with outstanding water resource values and special designations. Carbondale's policy is consistent with and supported by the State of Colorado. According to the Colorado Department of Public Health and Environment, Water Quality Control Division, Source Water Assessment and Protection Project Integrated Source Water Assessment And Protection (lswap) Project Plan (August, 2007): In the case of municipal water systems that have surface water sources and ground water sources under the influence of surface water, the Colorado Department of Public Health and Environment recommends that these water systems at least consider an area 5 miles upstream of their intake as their source water protection area. This minimal area is consistent with the protection area that state statute (C.R.S §31-15·707(l)lb)J allows for municipalities. Due to the changing regulations and determination of true ground water supply verses ground water under the influence of surface water, the Town has placed the 5-mile distance as a conservative measure to protect this supply.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

Comment noted. Impacts to source waters are disclosed by alternative in Section 4.5.1.4.

Comment:

Reg. 33 further provides: Roaring Fork Segment 10b: The Commission adopted an Outstanding Waters (OW) designation for this segment based on evidence presented by Trout Unlimited showing that the criteria of 31.8(2)a has been met for these waters. In addition to meeting the water quality requirements of 31.8(2)a, these waters support Colorado River cutthroat trout, including key conservation populations in North and Middle Thompson Creek. The Colorado River cutthroat trout is listed as a species of concern in Colorado and is subject to a conservation agreement to prevent potential federal Endangered Species Act listing. The Commission notes that the outreach undertaken by Trout Unlimited as proponent of this designation helps to demonstrate broad support for the conclusion that these waters constitute an outstanding natural resource and that the additional protection provided by this designation is appropriate. The Commission understands that existing land uses, including grazing, are in place in these watersheds. The evidence demonstrates that these existing land uses are compatible with the OW designation since the current high level of water quality has been attained with these uses in place. It is the Commission's intent that this OW designation should not be used to establish additional permit requirements for existing uses within this area. Reg. 33 at 128-29; available online at https://www.colorado.gov/pacific/sites/defaultffiles/33_2014%2812%29.pdf The State found that existing uses are compatible with the designation. Oil and gas development, however, would present unacceptable risks. The FEIS should be informed by Source Water protection standards and programs, the Outstanding Waters designations and potential threats from oil and gas development on the disputed Divide leases to these programs. Protecting the watershed requires inclusion of tributaries and ephemeral draws associated with the main streams and creeks in the

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

Section 3.5 identifies source water areas and protections, as well as outstanding waters designations (North Thompson Creek and its tributaries). The Crystal River and tributaries are recognized as part of Zone 3, which is described in Section 3.5.3 and evaluated in Section 4.5 for potential impacts to water resources. The impact indicators used for the surface-water analysis include, but are not limited to, Colorado Source Water Assessment and Protection (CSWAP) sensitivity zones, Colorado Oil and Gas Conservation Commission (COGCC) Rule 317B water supply protection zones, local Source Water Protection Plans (SWPPs), and outstanding waters use classification.

Comment:

Additionally, in Section 3.5.3 of the Draft EIS, it is unclear if there are any impaired waterbody segments in Zone 3. Please clarify the status of impaired segments in this area. Similarly, we recommend the waterbody segment identification numbers be added to Appendix A, Table A-1, as well as a link to the most recent CDPHE Integrated Report (2012).

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

Clarification has been added to Section 3.5.3 that there are no impaired streams within the Zone 3 lease areas, but that Thompson Creek downstream from the Zone 3 leases is being monitored for iron concentrations as depicted on Figure 3.5-6 and listed in Appendix A, Table A-1. A reference to CDPHE 2012 is included in Table A-1.

Comment:

SECTION 4.5.1.3 PAGE 4.5-5. In the last paragraph of this section you quote the WRNF leasing EIS which describes the sensitivity analysis used by the USFS to apply some indication of risk by land type to ground disturbing activities. You mention that the M5R and M6R clusters fall largely within your analysis area and that M6R has the highest sensitivity to disturbance. This discussion ends here without any particular emphasis or direction. Does this mean that all of the analysis areas in Zones 1-4 essentially share the same inherent risk based on land type? In other words, risk from the inherent characteristics of the landscape doesn't appear to discriminate between alternatives. Is that actually the case?

WEINHOLD, MARK; WRNF

BLM Response:

The EIS text in Section 4.5.1.3 has been augmented to include a description of the applicability of the "clusters" to the EIS zones.

Comment:

The following are additional recommendations on ways to ensure groundwater protection: Require additional dedicated water quality monitoring wells up and down gradient of production and disposal wells, particularly in areas supporting municipal water supplies.

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

See Section 3.5.1.3 (page 3.5-13) for a discussion of Colorado's Source Water Assessment and Protection (CSWAP) Program and COGCC Rule 317B. Also see Section 2.4.7 (Alternatives Considered but Eliminated from Detailed Study; Requirements for Monitoring of Existing Sites) (page 2-66).

Comment:

Within the discussion regarding the analysis of potential anthropogenic changes to watersheds, the Draft EIS briefly mentions "ecological clusters", specifically M5R and M6R (p. 4.5-5). There are no other locations in the document where these are discussed. Please define what ecological clusters are and describe their relationship to the analysis in the Final EIS.

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

Additional clarification was added in Section 4.5.1.3 to relate the USFS 2014 analysis to this EIS.

Comment:

Understanding known impacts within existing lease zones would help identify how, specifically, risks to groundwater can be minimized. The Draft EIS states "potential impacts to groundwater resources from the proposed development would include contamination of the groundwater with produced water, drilling mud, and petroleum constituents. With proper construction practices, drilling practices, and BMPs, no significant adverse impact to groundwater aquifers is anticipated to result from future oil and gas development" (p. 4.5-16). We recommend clarifying what the existing federal and state regulations are, and if they are sufficient to protect groundwater resources within these specific lease zones.

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

A paragraph was added on Section 4.5.2.3 to identify the rules and regulations under which oil and gas operations are conducted that would lessen the risk of contamination. Compliance conducted under a vigorous regulatory program would lessen the risk of impacts.

Comment:

The Draft EIS quotes the 2014 WRNF Oil and Gas Leasing Final EIS/Draft ROD, identifying that "Where specific groundwater resources exist. .. Disposal of wastewater into the subsurface will not be allowed." We recommend including a map identifying the location of known groundwater resources in the Final EIS.

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

Section 3.5.6 of the DEIS discusses the groundwater analysis area. Table 3.5-3 displays the hydrogeologic units of the Piceance Basin. Figure 3.5-7 shows the locations of groundwater wells. Figure 3.5-8 is a map of aquifer sensitivity.

Comment:

Water is and will continue to be one of the major concerns of Colorado, the western states and the southwest. The Colorado Water Plan and WOTUS are testaments to this. I have questioned representatives of the oil and gas industry regarding the amount of water used in oil and gas development including fracking and what water can be recycled and have not gotten a definitive answer. I have learned that the water use is quite significant. Ranchers and agriculture are increasingly being pressured to decrease water usage for a myriad of other consumptive and non-consumptive uses and the threat to the viability of agriculture is a huge concern to me. Oil and gas drilling could also lead to potential contamination of watersheds and deterioration of air quality, in turn leading to increasing health issues for people and animals. These are serious concerns and incidents have previously occurred in other areas in Garfield County. Thompson Divide is a tributary to the Crystal River which provides water to Carbondale and water to the ranch I live on.

HARRINGTON, VIRGINIA

Comment:

I have questioned representatives of the oil and gas industry regarding the amount of water used in oil and gas development including fracking and what water can be recycled and have not gotten a definitive answer. I have learned that the water use is quite significant. Ranchers and agriculture are increasingly being pressured to decrease water usage for a myriad of other consumptive and non-consumptive uses and the threat to the viability of agriculture is a huge concern to me. Oil and gas drilling could also lead to potential contamination of watersheds and deterioration of air quality, in turn leading to increasing health issues for people and animals. These are serious concerns and incidents have previously occurred in other areas in Garfield County. The Thompson Divide area waters are tributary to the Crystal River which provides water to Carbondale and water to the ranch I live on.

HARRINGTON, TOM

Comment:

My main concern is water usage. If fracking is allowed the water use/waste of fresh water is irreversible. We are valuing oil more than drinking water. There isn’t an alternative to fresh water but there is an alternative to oil and gas.

HORDE-BROWN, BARB

BLM Response:

As shown in Table 2-5, the Draft EIS assumes the use of 0.77 acre-feet of fresh water for drilling each vertical/directional well and 3.22 acre-feet for drilling each horizontal well. The assumed water use for well completions is 6.44 acre-feet for each vertical/directional well and 77.3 acre-feet for each horizontal well. Water used for well completions is assumed to comprise at least 80 percent recycled water and no more than 20 percent fresh water. Table 2.8 shows the relative use of fresh water and recycled water by alternative. The analysis in Section 4.5.1.4 provides an estimate of the percentage of proposed fresh water use by alternative to the water currently allocated to “Industrial” use water rights in the region. Potential impacts to air quality, water quality, aquatic resources, and human health and safety are discussed in Sections 4.2, 4.5, 4.8, and 4.16.2, respectively, of the DEIS.

Comment:

As outlined in our scoping letter dated May 15, 2014 we continue to recommend consideration of a No Surface Occupancy (NSO) setback of 500 feet from private wells. This setback is an effective health and environmental protection tool because it provides an opportunity for released contaminants to attenuate prior to reaching a water supply well. It may also afford an opportunity for a release to be remediated before it can impact a well, or for an alternate water supply source to be secured. We note that a number of states including Colorado and North Dakota have adopted a 500-foot setback from occupied dwellings (and by default, the associated domestic well).

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

Alternative 3, 4, and the Preferred Alternative incorporate additional NSO and CSU stipulations designed to protect a variety of resources. As noted in Section 2.4 of the DEIS, the BLM has determined that additional design features and best management practices (BMPs) not incorporated into an action alternative are either regulated by other agencies or more appropriately considered during the Application for Permit to Drill (APD) process, after operators submit a site-specific plan of operations for evaluation. Per Rule 604, the Colorado Oil and Gas Conservation Commission (COGCC) requires a 500-foot setback from a building unit.

Comment:

To that end, going back about six years now, Thompson Divide Coalition basically hired us to conduct some very in depth water quality studies of the water resources in the Thompson Divide area. We did a couple of studies over a number of years. The gist of the result of these studies is, as we all know, it's very, very high water quality, very healthy streams and rivers and groundwater in those areas Ultimately, one large thing that came out of this was through some partnership with Trout Unlimited, we actually were able to go to the State Water Quality Control Commission and get three reaches of Thompson Creek listed as outstanding waters through the State of Colorado, which is one of the highest levels that a stream can receive in those areas.

RUDEAU, CHAD; ROARING FORK CONSERVANCY

BLM Response:

Amidst other details, Section 3.5 of the DEIS identifies the water quality beneficial use classification of the streams draining east towards the Crystal River, the designation of North Thompson Creek and its tributaries as outstanding waters, and Thompson Creek and its tributaries on the State’s monitoring and evaluation list for elevated iron concentrations.

Comment:

Table 3.5-1 in the Draft EIS does not include the Colorado Department of Public Health and Environment (CDPHE) waterbody segment identification numbers. These numbers directly link CDPHE water quality and impairment status to the waterbody segments. We recommend including the identification numbers, impairment status, and cause of impairment (if known) in Table 3.5-1.

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

Table 3.5-1 lists subwatersheds, not stream segments. Figures 3.5-5 and 3.5-6 depict stream segments and their impairment status. Appendix A contains a listing of surface waters located within the analysis area, along with the state's waterbody segment identification numbers. These numbers directly link CDPHE water quality and impairment status to the waterbody segments.

Comment:

The designation of certain stream stretches in the Thompson Divide as Outstanding Waters by the State of Colorado, Department of Public Health and Environment, Water Quality Control Commission is noted at DEIS 3.5-16. According to the State of Colorado: Roaring Fork Segment 10b: The Commission adopted an Outstanding Waters (OW) designation for this segment based on evidence presented by Trout Unlimited showing that the criteria of 31.8(2)a has been met for these waters. In addition to meeting the water quality requirements of 31.8(2)a, these waters support Colorado River cutthroat trout, including key conservation populations in North and Middle Thompson Creek. The Colorado River cutthroat trout is listed as a species of concern in Colorado and is subject to a conservation agreement to prevent potential federal Endangered Species Act listing. The Commission notes that the outreach undertaken by Trout Unlimited as proponent of this designation helps to demonstrate broad support for the conclusion that these waters constitute an outstanding natural resource and that the additional protection provided by this designation is appropriate. CDPHE designation at 15. The CDPHE designation lists the stream miles covered by the Outstanding Waters designation: Roaring Fork River 10a and 10b: The following waters were moved from existing Segment 10 to a new Segment 10b: Mainstem of North Thompson Creek, including all tributaries and wetlands, from the source to the White River National Forest boundary (39.316522,-107.305749}. Mainstem of Middle Thompson Creek, including all tributaries and wetlands, from the source to a point immediately below the confluence with the South Branch of Middle Thompson Creek (39.295749, -107.308788). These waters were split into different segments to facilitate the adoption of an Outstanding Waters designation for Segment 10b.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

Comment:

RFC places a strong emphasis on using defensible, sound science to guide decisions regarding the health of water resources and encourages the BLM to do the same. To that end, RFC has conducted three baseline studies of water resources in the Thompson Divide region. These studies, commissioned by Thompson Divide Coalition, were released in 2010, 2011, and 2013.1 The BLM acknowledged the 2011 study in the Draft EIS. Together, these three studies compile a significant amount of data indicating that “the baseline waters (within the Thompson Divide) are healthy, uncontaminated and support significant populations of benthic aquatic organisms" Based on data from these studies and the presence of native strains of Colorado River Cutthroat Trout, the CDPHE has designated three reaches of Thompson Creek as Outstanding Waters.

LOFARO, JR, RICHARD J; ROARING FORK CONSERVANCY

BLM Response:

Section 3.5 of the DEIS recognizes Thompson Divide water quality and outstanding waters designations by the Water Quality Control Commission of the CDPHE.

Comment:

Section 4.5.1.4 page 4.5-6: In this table and those following, I was initially thrown off by the intermixing of the word 'zone'. There was some mental cross-pollination on my part between CSWAP zones and the zones you used to define your project area.

WEINHOLD, MARK; WRNF

BLM Response:

Clarification has been added to Section 4.5 throughout, specifically to provide definitive terminology between source-water protection zones and lease zones.

Comment:

SECTION 4.5.1.4 PAGE 4.5-5. In table 4.5-2 check consistency between these summary numbers and those in the following tables. In particular, it appears that the '77' figure under alternative three should be 7 based on table 4.5-5, and the '66' figure under alternative 4 should be 100 based on table 4.5-6.

WEINHOLD, MARK; WRNF

BLM Response:

The values in Table 4.5-2 were corrected.

Comment:

The following are additional recommendations on ways to ensure groundwater protection: Provide a discussion outlining production and disposal well P&A requirements.

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

Please see DEIS Section 2.7.1.6; Well Abandonment and Reclamation for a discussion of these issues.

Comment:

Groundwater. The science concerning risks to groundwater from unconventional hydrocarbon recovery is still evolving. Though many in the industry attempt to offer assurances that hydraulic fracturing and other resource recovery techniques are safe, a growing number of studies indicate that fracking and other practices pose a serious threat to groundwater in certain circumstances. Groundwater contamination can take many years to make itself known, and even longer to reverse. If ever there were a resource to justify the “look before you leap” purposes of NEPA, groundwater is that resource. A Duke University team has concluded that hydraulic fracturing fluids and hydrocarbons themselves may, following operator exploration and stimulation activities, migrate into subsurface drinking water sources both through natural faults and through pre-existing historical wells. See Ex. 28-29. An AP study of state contamination data has also revealed widespread reports of contamination. See Ex. 30. In addition, numerous reports document “frack-hits” resulting in producing wells being overwhelmed by nearby fracturing operations and resulting in geysers of contaminants. See Ex. 31 (stating that, in New Mexico alone, 103 individual wells were known to be affected by “downhole communication incidents.”) Studies in Garfield County similarly document increasing hydrocarbon and contaminant incidence in groundwater connected with nearby oil and gas drilling. See, e.g., Ex. 32.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

In Section 4.5.2.3, potential groundwater contamination is recognized. While hydraulic fracturing is discussed, well integrity problems appear to pose a greater risk of causing groundwater contamination. A paragraph was added to Section 4.5.2.3 to identify the rules and regulations under which oil and gas operations are conducted that would lessen the risk of contamination. A well bore diagram was also added to the text in Section 4.5.2.3. While risk cannot be eliminated with rules. it can be managed through regulatory compliance.

Comment:

The document states that "The effects of sedimentation on aquatic species would range from adverse effects on species behavior and physiological functions or important activities such as spawning and reproduction" (Waters 1995). It is unclear if a sediment load analysis has been completed for the Draft EIS. Please clarify. If a sediment load analysis has not been done, we recommend completing one and including in the Final EIS applying any necessary BMPs or mitigation measures that will be used to reduce sediment transport. A sediment load analysis would be a valuable addition to the analysis because there is considerable surface disturbance associated with oil and gas development and erodible soils can represent a significant nonpoint source which can impact water quality. Runoff can introduce sediments, as well as salts, heavy metals and other pollutants into surface waters. To ensure sufficient information is included about the potential impacts of soil disturbance, the EPA recommends including an estimate of erosion rates for each alternative in tons per year based on amount of surface disturbance, soil types, topography and slope. This information will allow an evaluation of the sufficiency of mitigation to avoid significant sedimentation.

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

Because there is no specific proposal for oil and gas development and therefore amounts and locations of potential future surface disturbance are not known, a credible sediment load analysis cannot be performed as part of this EIS. Erosion and sedimentation are primarily recognized as impacts in Sections 4.2, 4.4, 4.5, 4.6, 4.8, and 4.10. Several best management practices (BMPs) are discussed or were incorporated through assumptions for preventing offsite erosion and sedimentation, thereby reducing potential effects to water quality and aquatic resources. Specific examples of the BMPs that would be used to prevent offsite movement of soils and limit the potential effects of sedimentation and turbidity have been added to Section 4.5.1.3.

Comment:

The Draft EIS points out that "some of the domestic wells [from the Mamm Creek area] showed elevated levels of nitrate, selenium, and fluoride, but Thyne (2008) concluded that these constituents were not related to oil and gas activities in the area." In the same report, Thyne demonstrates that increased solute concentrations in groundwater samples were delineated by increasing thermogenic methane and chloride. Thyne concludes that " drilling and production activities are the cause," explicitly correlating impacts with oil and gas operations in the Mamm Creek area. In another study, Albrecht (2007) 1 notes increased benzene, thermogenic methane, iron and manganese indicate impact from drilling fluids and methane gas.

McMahon and others (2010) also demonstrate direct correlations between oil and gas operations and groundwater contamination in the Mamm Creek area.

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

The text in the Section 3.5.6.2 was revised to: “Some of the domestic wells showed elevated levels of nitrate, selenium, and fluoride; but none of the three inorganic contaminants appeared related to petroleum activities at the time (Thyne 2008). Selenium, fluoride, and nitrate are not contaminants usually associated with oil and gas activities, these constituents are more often related to other sources. Elevated selenium concentrations in waters are more likely to be associated the Mancos Shale (Sares 2000). Fluoride is a common natural contaminant in groundwater in Colorado and nitrate is associated with agricultural activities (Matheson and Bowden 2011). However, in the Mamm Creek Field study, solute concentrations of methane and chlorides that were either below regulatory standards or not regulated, were above natural background concentrations.

Section 3.5.6.1 of the DEIS identifies potential sources of groundwater contamination in general. potential groundwater contamination is discussed in Section 4.5.2.3.

Comment:

The following are additional recommendations on ways to ensure groundwater protection: Include a detailed wellbore diagram demonstrating construction requirements.

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

A well bore diagram has been added to Section 4.5.2.3.

Comment:

Figure 3.5-7 identifies the locations of existing groundwater wells. The document notes that the most productive aquifers in the leased zones are alluvial (valley) aquifers and that "bedrock aquifers are used less for water supply" (p. 3 .5-17). It also identifies that "most, if not all, of the aquifers supplying drinking water are alluvial aquifers" (p. 4.5-13). It is not clear whether the Draft EIS is saying the few drinking water wells within the leased zones are primarily alluvial, or that wells in the entire basin are primarily alluvial. We note that URS (2006) demonstrates a majority of domestic wells in the region at the time of publication were non-alluvial Wasatch formation wells (48 alluvial; 388 Wasatch). Additionally, Papadopulos (2008) states that a "large majority of water supply wells are completed in the Lower Tertiary Wasatch Formation." With these studies in mind, regionally, it appears that a significant portion of domestic wells rely on bedrock aquifers. Please provide clarification regarding groundwater sources for wells within the leased zones.

STROBEL, PHILIP S; U.S. ENVIRONMENTAL PROTECTION AGENCY

BLM Response:

The study areas for the Papadopulos (2008) and URS (2006) reports were essentially the Mamm Creek gas field. The groundwater description covers the entire vicinity of Lease Zones 1, 2, and 3 (see Figure 3.5-7). While individual well records in that area were not reviewed to define the aquifers for all those wells, the assumption that most water wells in the vicinity are alluvial wells is a reasonable assumption given the aquifers represented in the U.S. Geological Survey data repository (Thomas et al. 2012, Table 1). It is of interest that most of the sample points (wells) shown on Table 1 don’t have a designated aquifer. Given that, the bullet item at the top of page 4.5-13 was modified since it cannot be established which aquifer provides the most drinking water.

Comment:

During the Cooperator process, the Town submitted the following documents providing important new information which represents some of the best available science regarding the potential for adverse environmental impacts under the development scenarios for the Divide leases. 1) Girard, Carlin E., The Effects of Oil and Natural Gas Development on Water Quality, Aquatic Habitat, and Native Fish in Streams along the Wyoming Range. M.S., Department of Zoology and Physiology (University of Wyoming), May 2015. 2) Koshmrl, Mike, "Stream suffers oilfield fallout: Elimination of cutthroat among findings of new Wyoming Range study," Jackson Hole News & Guide, May 13, 2015. The Koshmrl study appears to have been omitted from the References section of the DEIS. That oversight should be rectified in the FEIS. The News & Guide article summarizes the full study and thesis. The subject streams drain the east slope of the Wyoming Range 80 miles south of Jackson. In sum, oil spills in the Dry Piney Creek watershed were found to be connected to localized extirpation of rare populations of one of the few remaining distinct populations of Colorado River cutthroat trout, among numerous other negative indicators of ecological health. The research paper compares streams in the densely drilled Dry Piney drainage (a highly developed disturbed site) which has 15 times more development than the nearby South Beaver creek drainage (relatively undeveloped reference site). See Attachment 1 at 40. The study includes the following discussion: The study streams flow east along the Wyoming Range in southwest Wyoming. They are tributaries to the Upper Green River, which flows south from the Wind River Range, and along the eastern front of the Wyoming Range. We compared habitat metrics, and fish occurrence and relative abundance across a range of oil and gas development densities, from relatively undeveloped (reference sites) to highly developed (disturbed sites). Our reference sites are in the South Beaver Creek Drainage and our disturbed sites are in the Dry Piney Creek and Fogarty Creek Drainages (Figure 2· 1). The developed sites are overlaid by the LaBarge Oil and Gas Field. This has been the site of oil and gas development since the 19 O's and is currently being redeveloped to take advantage of new techniques such as hydraulic fracturing. The Dry Piney Creek and Fogarty Creek drainages originate on Deadline Ridge at 3048 m, flowing east towards the Green River, at 2225 m. Dry Piney Creek is aptly named, as it loses water in a downstream direction, but perennial springs are found throughout its headwaters'. Fogarty Creek is a major tributary that flows from the north into Dry Piney Creek. Primarily, the Dry Piney and Fogarty Drainages were summarized independently. Five streams in the disturbed drainages currently contain two species of fish: mottled sculpin (*Cottus bairdi*), and mountain sucker (*Catostomus platyrhynchus*). Historical records and anecdotal evidence show that Colorado River cutthroat trout *(Oncorhynchus clarki pleuriticus*) were present historically (Kern et al., 2006). Both brook trout (*Salvelinus fontinalis*) and Colorado River cutthroat trout have been stocked in the Dry Piney and Fogarty Drainages, with cutthroat stocking ending in 2006, and brook trout stocking ending at an unknown date prior to 2006 (Hilda Sexauer, Wyoming Game and Fish Department, Pinedale Office).

We also sampled four streams in the South Beaver Drainage, which is directly adjacent and similar to the Dry Piney and Fogarty Drainages. South Beaver Creek has an intact native fish assemblage, including Colorado River cutthroat trout, mottled sculpin, mountain sucker and speckled dace (*Rhinichthys osculus*). [. . .] Energy development density in South Beaver is low compared with the Dry Piney and Fogarty Drainage (Figure 2· 1). Koshmrl at 40-41. The News and Guide article summarizes the research findings. [Girard's] research found that the Colorado River strain of cutthroat trout had been wiped out of the drainage, that another native species of sculpin was barely present and that by other measures Dry Piney Creek and its tributaries had been compromised by the Labarge Oil and Gas Field. "We found that streams within the developed drainages had degraded ecological conditions," Girard wrote in his thesis, "as indicated by the lack of sensitive macroinvertebrates, less willow cover along stream banks, predominantly run habitat and increased proportions of fine sediment. "In contrast, reference streams had consistently good water quality, intact macroinvertebrate communities, more riparian vegetation, more pool and riffle habitat and higher proportions of gravel," he wrote of nearby South Beaver Creek -a drainage to the north of Dry Piney Creek with much less oil and gas development.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

The impacts noted in the reference study are discussed as potential effects of oil and gas development are under Water Resources and Aquatic Resources, Sections 4.5 and 4.8, including applicable references. The Girard 2015 reference has been added to these sections; however, the Koshmrl article that summarizes Girard's scientific study has not been included because it is not a peer-reviewed paper that represents the best available science. A site-specific environmental analysis would be performed at the Application for Permit to Drill (APD) stage, which may identify mitigation measures to be attached to the approved permit as conditions of approval (COAs).

As noted in Section 4.5, "Hydraulic fracturing has occurred in Colorado since 1947. Nearly all active wells in Colorado have been hydraulically fractured." . . . "Well integrity problems rather than hydraulic fracturing appear to pose a greater risk of causing groundwater contamination."

Comment:

There are no ground water coverage stipulations for Alternative 1 & 2 and only limited stipulations for Alternative 3 & 4. We can't just leave the fate of the quality of our groundwater up to the hope that operators will comply with federal and state requirements.

WANNER, PATRICIA

Comment:

There are no ground water coverage stipulations for Alternative 1 & 2 and only limited stipulations for Alternative 3 & 4. We can't just leave the fate of the quality of our groundwater up to the hope that operators will comply with federal and state requirements.

WANNER, RALPH

BLM Response:

A paragraph was added to Section 4.5.2.3 to identify the rules and regulations under which oil and gas operations are conducted that would lessen the risk of contamination. A well bore diagram was also added to the text in Section 4.5.2.3. While risk cannot be eliminated with rules, it can be managed through regulatory compliance.

Comment:

Industry has long argued that hydraulic fracturing processes pose little or no threat to groundwater. Those assertions are being challenged by ongoing investigations now being conducted by the COGCC. "During 2013, thermogenic methane was detected in two domestic water wells; these two water well cases are currently under investigation to determine the likelihood that a nearby oil and gas well was the source of this gas." Ex. 48. This indicates that surface storage and transportation of fracking fluids are not the only threats to surface and groundwater: underground operations may also pose significant risks.

The WRFEIS's DRASTIC model indicates that groundwater in the Thompson Creek area is characterized by high hydraulic conductivities and is among the most likely to experience adverse effects from future oil and gas development. See WRFEIS at 98. Thompson Creek also has favorable ratings for usable groundwater. See id. at 93. The BLM letter to SG Interests documents that the Grand Hogback in this area is a recharge zone for numerous aquifers. See Ex. 33 at 2. Thus, as with surface water and so many other high-risk resources in the Thompson Divide, groundwater protection points strongly towards closing this area to oil and gas development.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

A paragraph was added to Section 4.5.2.3 to identify the rules and regulations under which oil and gas operations are conducted that would lessen the risk of contamination. A well bore diagram was also added to the text in Section 4.5.2.3. While risk cannot be eliminated with rules, it can be managed through regulatory compliance.

Wildlife, including Special Status Species

Note: The comments are grouped together and sorted by the last name of the commenter, with the BLM response in a gray shaded box following the grouped comments within this category.

Comment:

The USFS Region 2 Sensitive Species list is mentioned at 3.7.2, 3.7.6.2, and shown in table 3.7-11. This list seems more appropriate than USFWS or BLM lists. The Regional Forest SS list is also addressed in the FSM 2670, which BLM references in this EIS. Four species from the R2 SS list are especially dependent on this area, Boreal owl, Flammulated owl, Northern goshawk, and Western purple martin. Unfortunately, Boreal owl and Western purple martin are barely mentioned in the document. Martins in particular need to be addressed. Two of the most important areas in the world for them are the pure aspens in the Buzzard and Muddy Creek area, just south of this area, and the Flat Tops to the north. They are known to nest in parts of the area covered by this EIS and almost certainly are in other areas with nearly pure aspen stands adjacent to open country. (Information on Western purple martins is from my own experience with Rocky Mountain Bird Observatory in nearby areas, and from Kingery, et al. Colorado Breeding Bird Atlas, and Ryder, et al Birds of Western Colorado Canyon and Mesa Country.)

DAY, BILL

BLM Response:

A terrestrial biological evaluation (BE; see USFS 2014e) for Forest Service Sensitive Species was prepared to support the 2014 Final EIS for Leasing on the WRNF and was incorporated into the Draft EIS by reference. The BE provides natural history, habitat requirements, background information, and an impact analysis on the Forest Service terrestrial sensitive species analyzed in this EIS, including the boreal owl (*Aegolius funereus*) and purple martin (*Progne subis*).

Comment:

CPW's remains concerned about a 45 day gap in protection for elk production (the period between May 1 and June 15), the deficiency was identified and communicated to BLM prior to the Draft document being published. After reviewing the Draft the gap remains a concern we would like to resolve. BLM believes that the 45 day gap in protection can be addressed by applying an administrative "Standard Lease Term" (SLT) 60 day timing limitation (at DEIS 4. 7-23). CPW has some concern with BLM's solution to the problem and believes there are shortcomings by using the SLT process. CPW is concerned that the SLT solution (applying the SLT Timing Limitation (TL) on a case by case basis) could be lost over time since the life of the planning document is 20 years or more and the application of the SLT depends on staff knowing that it should be applied to certain oil and gas lease parcels in mapped elk production habitats. Over the 20 year life of the plan BLM and CPW staff will change and institutional memory will be lost. An additional shortcoming of using the SLT solution is that it will likely cause a drop off in communication between BLM and CPW over time. Currently, wildlife related lease stipulations allow for exceptions, waivers or modifications; CPW and BLM have a long-standing understanding that both parties will consult to evaluate the merit of a request for a lease stipulation exception, waiver or modification when requested by an oil and gas operator. This opportunity to discuss individual adjustments to an oil and gas well pad will likely be lost through the application of the SLT CPW offers the following solution to address the gap in timing protection for alternative 3 or 4 or for the preferred alternative which may be a combination of alternatives. CPW believes that a resolution to the timing gap in elk production can be resolved by assuring CPW that the 60 day SLT timing limitation will be applied to the leases identified in the BLM's EIS and that CPW will have an opportunity to consult with BLM and the operator should the operator request any change, exemption, waiver, or modification to the SLT. The assurance can be accomplished by including a new footnote in the FEIS Alternative Table, the Terrestrial Wildlife Resource section for Alternatives 2, 3 and 4 which states that "The BLM will notify and consult with CPW upon receipt of an APD located in Elk Production Habitat. CPW and BLM staff will conduct a site visit to evaluate the applicability of the SLT 60 day TL to the permit". CPW has discussed this issue numerous times with the WRNF staff and the Colorado River Valley BLM staff in efforts to resolve the concern without requesting stipulations inconsistent with the FS Oil and Gas EIS. CPW believes that the footnote language can resolve our concern, but it must be formalized in the FEIS.

VELARDE, RON; COLORADO PARKS AND WILDLIFE

BLM Response:

A timing stipulation is not necessary for the surface managing agency to prohibit new surface disturbing operations for periods of less than 60 days (43 CFR 3101.1-2). As noted in the comment, the 60-day SLT timing limitation can be applied to the leases identified in the EIS at the discretion of the USFS, as the surface manager. BLM has elected not to include this change within the alternatives as it is already within the range considered (which includes full cancellation of the subject leases). In addition, the USFS would take the lead, via the SUPO, in determining the final need for such a delay and would be able to consult with CPW on a site-specific basis.

Comment:

I will give BLM the benefit of the doubt that they did include the behavioral impacts to these sensitive habitats they alluded to and not just include physical impacts to habitat (page 4.7-7 of the DEIS). However, BLM needs to clarify whether they did or did not include the indirect behavioral effects like the WRNF did, when BLM finalizes its FEIS.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

The WRNF Final EIS (USFS 2014a), which was incorporated by reference, measured behavioral disturbance impacts by evaluating road density and terrestrial wildlife habitat effectiveness (see Section 4.7.3). In this EIS, the BLM has acknowledges the potential for behavioral disturbance and has evaluated the stipulation coverage under each alternative (Section 4.7.4) as a measure of the extent to which behavior disturbance would be avoided; however, actual impacts would not be known until location and extent of developments are proposed.

Comment:

Figure 3.7-7 depicts significant habitat for the federally threatened Canada lynx habitat across the Divide. Crystal West provides 9,365 acres of denning habitat and Divide Creek 7,174 acres. DEIS 3.7-31 Table 3.7-9. Zone 3 leases encompass 3,327 acres of denning habitat in Crystal West and 2,245 acres in Divide Creek. The presence of at least 100 acres of habitat in leases 706 (582 acres), 707 (139 acres), 708 (910 acres), and 709 (351) and the abundance of habitat in the vicinity of the leases presents a compelling argument to fully cancel these four leases if this habitat lies outside the acres that would be cancelled under Alternative 4 as currently formulated. DEIS Table 3.7-10 at 3.7-32. Fragmentation is a serious threat to lynx recovery and population health. Carbondale originally argued the need to protect lynx habitat in the Divide in the IBLA case filed in 2004. The failure to adequately analyze or protect lynx habitat was among the grounds for remanding those Divide leases in the 2007 IBLA decision. The documentation of significant lynx habitat on these leases in the DEIS indicates that, like the leases remanded by IBLA and subsequently cancelled by BLM in 2007, they were issued in violation of the Endangered Species Act. Board of Commissioners of Pitkin County. 173 IBLA at 186-87 (2007).

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

Comment noted and changes to the analysis have been be made in Section 4.7.4.3 to better explain the protections in place regarding lynx. Under the Preferred alternative, a large portion of lynx habitat would fall under the cancelled leases. Under Alternatives 3 and 4, there would be an NSO stipulation for all known locations of federally listed TEPC species and species' specific habitats with mapped GIS coverage. The stipulation extends to proposed or designated critical habitats and occupied and habitat necessary for the maintenance or recovery of species listed under the ESA (including proposed and candidate species) or by the State of Colorado as threatened or endangered. Additionally, under this stipulation, if a TEPC species is removed from the Federal ESA listing, this stipulation would continue to apply for 5 years post de-listing to satisfy USFWS monitoring requirements. Other requirements will apply if the species remains classified as Forest Service sensitive, threatened or endangered by the State of Colorado, or is otherwise protected (USFS 2015e; Appendix A, pg. 9).

The TEPC NSO includes all mapped priority Canada lynx habitats (USFS 2015e; pg. 50). Therefore, under Alternative 3, 100 percent NSO coverage within all zones would be afforded to Canada lynx priority habitats [2,306 acres of denning habitat in Zone 2 and 5,572 acres of denning habitat in Zone 3 (Table 3.7-10)]. The TEPC NSO would not extend outside of the Zone boundaries, but mapped Canada lynx priority habitats would receive the same amount of coverage from all other NSOs as detailed under Alternative 1, in Table 4.7-11. Additionally, as stated in Section 4.7.1, Analysis Assumptions, implementation-level actions would be further assessed at an appropriate spatial and temporal scale and level of NEPA analysis. Additional field inventories would likely be needed to determine whether special status species could be present in the project area. All permitted activities that could affect federally threatened or endangered species would be required to undergo ESA Section 7 consultation with the USFWS, and would need to be mitigated to ensure that those species would not be adversely affected on a project-specific basis or at a cumulative level.

Additionally, as stated in Section 4.7.1, Analysis Assumptions, implementation-level actions would be further assessed at an appropriate spatial and temporal scale and level of NEPA analysis. Additional field inventories would likely be needed to determine whether special status species could be present in the project area. All permitted activities that could affect federally threatened or endangered species would be required to undergo ESA Section 7 consultation with the USFWS, and would need to be mitigated to ensure that those species would not be adversely affected on a project-specific basis or at a cumulative level.

Comment:

The Colorado Division of Wildlife—now known as Colorado Parks and Wildlife—has long emphasized the importance of wildlife habitat in the Thompson Divide. The area serves as significant habitat for moose, bear, lynx, and numerous other terrestrial wildlife species. In a comment letter of June 30, 2010, CPW described the Thompson Divide as "without question the 'elk factory' of this area," and stated that "[i]t is crucial to maintain the undisturbed qualities of this area in order to maintain elk production and health." See Ex. 27 at 4. CPW noted that the area is well defined summer range that provides security for both elk and mule deer. DPW also noted in its comments dated June 30, 2010 that maintenance of water quality in the Crystal River and its tributaries is "essential" to the health of native cutthroat trout, see id. at 6, which are prevalent in the Divide. Similarly, in a Wildlife Summary that CPW prepared for the Thompson Divide Coalition in 2009, it characterized the Thompson Divide as containing high quality habitat for all of the above-referenced species, including areas of extreme importance for elk and mule deer. It notes that lynx have been documented in the area and are likely to use it more frequently as their populations increase. The 2009 Summary also characterizes the streams of the Thompson Divide as containing "great fisheries habitat and recreational opportunities." See Ex. 37, passim. An updated CPW analysis from 2013 reiterates the multiple species that development will detrimentally impact, and the fact that the Thompson Divide is a refuge and incubator area for wildlife that are stressed by existing development in areas surrounding the Divide. See Ex. 49. Presumably for these reasons, CPW District Wildlife Manager John Groves has stated his opinion that oil and gas drilling should be kept out of the Divide. See Ex. 38 at 6. We share that view.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

Comment noted. Section 4.7 of the EIS includes a quantification of the potential impacts to all CPW mapped sensitive big game ranges that overlap with the lease boundaries and areas outside the lease boundaries, but within the big game analysis area by alternative. The same analysis is completed for mapped habitats for the Canada lynx and greater-sage grouse. Impacts to the cutthroat trout and other fisheries within the analysis area are analyzed in Section 4.8 and impacts to water resources are discussed in Section 4.5.Impacts to recreational activities are discusses in Section 4.17, Socioeconomics.

Comment:

The leases that will be cancelled under Alternative 4 are almost entirely comprised of Elk Production Area (13,523 acres), Elk Summer Concentration Area (18,063), and Elk Winter Range (2,112). Healthy elk herds are an essential element of the Divide ecosystem. Hunting and wildlife watching make them a pillar of the local economy. This habitat warrants protection. Dr. Loomis' Expert Report addresses the economic importance of elk and threats from drilling. See Exhibit 2 at pages 6-13.

CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

Comment noted. Section 4.7 of the EIS includes a quantification of the potential impacts to all CPW mapped sensitive big game ranges that overlap with the lease boundaries and areas outside the lease boundaries, but within the big game analysis area by alternative. This EIS is looking at the potential effects of a leasing decision on wildlife and not on implementation level actions, such as drilling. BLM acknowledges indirect impacts such as those described as behavioral disturbances within the WRNF FEIS (2014), including change of use in habitats and loss of habitat effectiveness based on the evaluation of road densities, and incorporated them by reference using the WRNF OG EIS which takes a more in depth look at these types of impacts. Incorporating by reference is in compliance with and encouraged by DOI regulations (43 CFR 46.120 and 46.135) and the BLM NEPA Handbook. Once a known development location is brought forward, it will be possible to analyze impacts at a site specific level such as in Ex. 2 that was referenced by the Commenter. Impacts to the local economy based on hunting are addressed in Section 4.17, Socioeconomics.

Comment:

Mule deer populations have declined by 50 percent across the West. Although energy development is not the only impact, the roads built and well pads reduce habitat acreage. In addition, behavioral avoidance of roads and human activity by big game represent a greater habitat loss (Sawyer et al. 2006, 2009a; Walston et al. 2009). We need information on how to mitigate for impacts not more impacts to species already in decline.

STONE, MARILYN

BLM Response:

Comment noted. Section 4.7 of the EIS includes a quantification of the potential impacts to all CPW mapped sensitive big game ranges that overlap with the lease boundaries and areas outside the lease boundaries, but within the big game analysis area by alternative. The amount of USFS designated stipulation coverage to reduce impacts to wildlife resources was analyzed under each alternative within the EIS.

This EIS is looking at the potential effects of a leasing decision on wildlife and not on implementation level actions. BLM acknowledges indirect impacts such as behavioral responses and incorporated them by reference using the WRNF OG EIS (2014) which takes a more in depth look at these types of impacts. Incorporating by reference is in compliance with and encouraged by DOI regulations (43 CFR 46.120 and 46.135) and the BLM NEPA Handbook. Once a known development location is brought forward, it will be possible to analyze impacts at a site-specific level such as in those references supplied by the Commenter. Mitigation would be developed as appropriate during the site-specific APD stage.

Comment:

Each lease has its own individual impact on wildlife movement patterns and population viability. Again, those impacts radiate outwards from each parcel; wildlife is impacted by the roads and vehicles, by noise, and by the increase in human traffic. These impacts are cumulative. This is an important area for both large and small mammal and bird populations. These populations will feel the impact as the wells proliferate.

ELLISON, SUSY

BLM Response:

Section 4.7 of the EIS includes a quantification of the potential impacts to all CPW mapped sensitive big game ranges that overlap with the lease boundaries and areas outside the lease boundaries, but within the big game analysis area by alternative. Section 4.7.3 discusses general impacts to all wildlife and includes a reference to the WRNF EIS (USFS 2014a) which analyzes impacts to wildlife from oil and gas in greater detail. Additionally, all alternatives would have a variety of wildlife specific lease stipulations that would protect all wildlife species that overlap with habitats covered by those stipulations. Mitigation would be developed as appropriate during the site-specific APD stage.

Comment:

Wildlife. Pitkin County, GOCO and other agencies have invested tens of millions of dollars in preserving private lands in the Crystal Valley and Thompson Divide areas, in large measure to promote the health of wildlife populations in our region. Given the extent to which Pitkin County has put its money where its mouth is on this issue, the County has serious concerns about the impairment of wildlife habitat on nearby federal lands. The WRFEIS contains a suitable description of impacts to wildlife from oil and gas development, and we will not reiterate that list of impacts here. See WRFEIS at 192-98. Others have similarly documented such impacts. See, e.g., Ex. 18 (Cornell Veterinary School Study). The length of the WRFEIS section discussing impacts to wildlife is, however, telling—it identifies a wide range of threats to a long list of species. It comes as little surprise that introducing an industrial use into pristine habitat threatens serious adverse effects like those the FEIS details. The focus on road impacts is of particular concern; a recent USFS map prepared to depict road improvements associated with existing leases held by SG Interests demonstrates the extent to which new roads will accompany oil and gas development, even in areas where road networks already exist. See Ex. 36.

CHILD, STEVE; PITKIN COUNTY BOARD OF COMMISSIONERS

BLM Response:

This EIS is looking at the potential effects of a leasing decision on wildlife and not on implementation-level actions. BLM acknowledges indirect impacts such as those described as behavioral disturbances within the WRNF FEIS (2014a), including change of use in habitats and loss of habitat effectiveness based on the evaluation of road densities, and incorporated them by reference using the WRNF OG EIS which takes a more in depth look at these types of impacts. Incorporating by reference is in compliance with and encouraged by DOI regulations (43 CFR 46.120 and 46.135) and the BLM NEPA Handbook. Once a known development location is brought forward, it will be possible to analyze impacts at a site specific level such as in Ex. 18 and 36 that was referenced by the commenter.

Comment:

I don’t want to live in a world without diverse wildlife. Independent research in Wyoming has shown repeatedly that loss of habitat and habitat fragmentation from roads and energy development hurts wildlife populations and interferes with migration routes. Wildlife needs roadless areas where they can be undisturbed. Physiological monitoring shows a stress response even in animals that seemingly tolerate traffic and human presence.

STONE, MARILYN

BLM Response:

Under Section 4.7.3, Impacts Common to All Alternatives, the 2014 Final EIS for Leasing on the WRNF is referenced and addresses the potential physical impacts of oil and gas development including habitat loss, habitat degradation, habitat fragmentation and isolation, interruption of wildlife movement corridors, and wildlife mortality resulting from vehicle collisions.

Comment:

Water is the key to life, how will you or a company from Houston, TX repair a whole ecosystem once an accident occurs and waste and contaminants enter the water? Where are the numbers that show how much economic loss will occur if an accident occurs and streams are polluted? It's probably not quantifiable because there isn't an equation to show loss of wildlife and consequences stemming from an accident.

MEREDITH, BRETT

BLM Response:

Section 4.16.1.4 provides pipeline incident rates and produced water spill rates by alternative. Potential risks from groundwater-borne chemicals would be statistically related to the amount of oil and gas activity as well as proximity to sensitive receptors, public water supplies, etc. Risk of adverse impacts would vary by alternative. Section 4.3.1.3 has been revised to include typical BMPs that might be incorporated at the site-specific development stage to minimize impacts to surface water quality.

Comment:

Review and support the recommendations developed by the science-based organization, Wild Connections.

WEBER, ROBYN

BLM Response:

Comment noted. However, without more specific information on the recommendations from Wild Connections, a response is not applicable. Stipulations identified in this EIS are based on BLM, USFS, USFWS, and CPW requirements and recommendations.

Comment:

BLM notes in Chapter 3 on terrestrial wildlife: Big Game Analysis Area: The big game analysis area consists of the Game Management Units (GMUs) that are crossed by the lease boundaries. Sensitive habitat is typically considered the limiting factor for big game populations, therefore additional focus will be given on these areas (e.g., winter range, transition range, migratory corridors, fawning and calving areas and summer range) within the GMUs." BLM DEIS page 3.7-1. Based on this section, it would seem there is a strong and direct relationship between impacts to sensitive habitat and big game populations. This is especially true for elk, since Area 3 (Thompson Divide area) provides thousands of acres of sensitive elk habitat. Specifically, Zone 3 contains 13,523 acres of what BLM calls Production Area, 18,063 acres of Summer Concentration Area, 100 acres of Severe Winter Range and 2,112 acres of Winter Range for a total of 33,798 acres of sensitive habitat (Page 3.7-17). Only 7% of the Elk Production Areas are covered under No Surface Occupancy (NSO) in Alternative #2 and only 41% have Timing Limitation (Page 4.7-22). Thus, Alternative #2 does not provide protection for 20,000 acres of Sensitive Elk habitat. Alternative #1 leaves even more elk habitat unprotected. However, these 20,000 acres of sensitive elk habitat may underestimate the total elk habitat at risk. In particular, it is not clear whether BLM is focusing just on the area of surface disturbance associated with the leases (as the focus is on No Surface Occupancy—NSO), and not the broader area of elk avoidance of sights and sound of human activities associated with oil and gas wells. BLM notes (DEIS page 4.7-7) that the WRNF did look at behavioral disturbance as well as physical impacts. This is appropriate because as noted by Sawyer, et al (2006: 396) in an article on a less human sensitive species than elk (mule deer) and natural gas fields in Wyoming, "Changes in habitat selection appeared to be immediate (i.e., year 1 of development), and no evidence of well-pad acclimation occurred through the course of the study; Lower predicted probability of use within 2.7 to 3.7 km of well pads suggested indirect habitat losses may be substantially larger than direct habitat losses". It is not completely clear in the BLM DEIS that BLM included these behavioral responses. It is not unusual for BLM to estimate these indirect habitat losses beyond just the surface disturbance. BLM, in the Buffalo Field Office of BLM in Wyoming, developed maps and analysis that showed the elk avoidance areas beyond those of just surface disturbance from oil and gas. In particular elk avoided habitat areas from where elk could see human activity. BLM used this information in its analysis of oil and gas in its Environmental Analyses for Williams Production Company (and oil and gas company), Carr Draw in 2009, 2010 and 2011 (BLM, 2010, 2011). The link for the 2009 analysis is:
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CHIROPOLOS, MIKE; TOWN OF CARBONDALE

BLM Response:

This EIS is looking at the potential effects of a leasing decision on wildlife and not on implementation-level actions. BLM acknowledges indirect impacts such as behavioral responses and incorporated them by reference using the WRNF OG EIS which takes a more in depth look at these types of impacts. Incorporating by reference is in compliance with and encouraged by DOI regulations (43 CFR 46.120 and 46.135) and the BLM NEPA Handbook. Once a known development location is brought forward, it will be possible to analyze impacts at a site specific level such as in the example EA that was referenced by the commenter.

As the surface landowner, USFS has determined that an elk production Timing Limitation is not necessary since they will have the opportunity to apply additional protections as Conditions of Approval in conjunction with Colorado Parks and Wildlife at the implementation level.

Comment:

One of the most incredible things that hits you when you see, especially the contrast between Thompson Divide and the Piceance Basin, is a tremendous amount of fragmentation. Delia just mentioned fragmentation as being one of the problems that wildlife have. It's probably one of the most difficult problems for wildlife to, especially the larger species, to overcome. They can't move from one area to another without going through this fragmented habitat. It's not simply the oil pads. It's all of the miles of pipeline corridors and roads that go along with that. For that reason, I support Alternative 5, because I think we have to preserve a place without fragmentation.

EMMERICH, JOHN

Comment:

Current research has already indicated that opening roads in isolated regions is a hazard to various bird populations and there not enough evidence available to indicate how fracking might be a negative effect on the fauna and flora. Why can't people think ahead and use other alternative energy sources.

THALL, RICHARD

BLM Response:

Under Section 4.7.3, Impacts Common to All Alternatives, the 2014 Final EIS for Leasing on the WRNF is referenced and addresses the potential physical impacts of oil and gas development including habitat loss, habitat degradation, habitat fragmentation and isolation, interruption of wildlife movement corridors, and wildlife mortality resulting from vehicle collisions.

Comment:

None of the alternatives provide adequate measures to conserve these fish and wildlife values. Even under Alternatives 3 and 4 which attempt to incorporate new direction from the Forest Service, the DEIS often relies on non-wildlife related stipulations to provide protection for vital big game habitats, including winter ranges and production areas. See DEIS at 4.7-24 to 4.7-32. Fish and wildlife habitat should be conserved by design not by accident. These stipulations may be waived without regard for the fish and wildlife values at risk.

ZIMMERMAN, KATHLEEN; NATIONAL WILDLIFE FEDERATION

BLM Response:

As discussed in Section 4.7 of the EIS, wildlife stipulations vary by alternative. Each alternative represents a course of action that addresses issues and concerns to varying degrees. The BLM will select an alternative based upon the overall analysis of environmental impacts, socioeconomic considerations, other relevant factors, and the balance of agency statutory requirements and regulations. The basis for alternative selection will be specified in the ROD. Section 101(b) of NEPA outlines the six substantive elements, which include attaining “the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences” and “…approach the maximum attainable recycling of depletable resources” (42 USC § 4331 (b)(3) and (6)). In order to comply with NEPA, the BLM must evaluate which alternative best meets the needs of the public, the environment, and the recovery of oil and gas resources as required by law.

Comment:

Thompson Divide and surrounding areas are relatively low in elevation compared to the neighboring mountains. If major long term development occurs, it will, without a doubt, affect the surrounding wildlife. We already see how the growth of the valley has required a fence on both sides of Highway 82, to keep the wildlife off the roads. I can envision another fence along highway 133. If Thompson Creek, or surrounding areas, are developed, we are basically cutting off the winter range from the summer range.

CHACOS, ERIC

BLM Response:

Under Section 4.7.3, Impacts Common to All Alternatives, the 2014 Final EIS for Leasing on the WRNF is referenced and addresses the potential physical impacts of oil and gas development including habitat loss, habitat degradation, habitat fragmentation and isolation, interruption of wildlife movement corridors, and wildlife mortality resulting from vehicle collisions. Impacts to wildlife from developments such as fencing would be analyzed at the site specific stage, and mitigation developed as appropriate.