



January 28, 2013

Ms. Heather Saul
Planning and Environmental Coordinator
220 East Market
Meeker, CO 81641

VIA EMAIL: Colorado_WROGEIS@blm.gov

Re: Joint Association Comments on the Draft White River Draft Resource Management Plan Oil and Gas Amendment and Environmental Impact Statement

Dear Ms. Saul:

On behalf of Public Lands Advocacy, Western Energy Alliance and West Slope Colorado Oil and Gas Association, following are comments on the Draft White River RMPA and EIS. In addition to the aforementioned trade groups, an ad hoc group of oil and gas energy producers active in the Colorado River Valley was formed to work together to review the DEIS and prepare these joint detailed comments on the DEIS. We request that each named party be recognized as a commenter in this public review process.

GENERAL COMMENTS

The Piceance Basin contains one of the nation's most significant reservoirs of natural gas. According to the Energy Information Administration (EIA), 10 of the Nation's 100 largest natural gas fields and 3 of its 100 largest oil fields are found in Colorado. Even more compelling, the Piceance Basin contains 5 of the top 50 natural gas fields in the United States in proven reserves. While it has been stated the Piceance Basin is likely to see 12 to 15 more years of continued gas development from known, proven reservoirs, and production is expected to last for 40 to 50 years beyond that. Located within the Piceance Basin, the White River Field Office has recognized that the study area has many areas with considerable potential for future oil and gas development. However, we object that BLM proposes to unjustifiably restrict access to existing leases, limit access to new leasing and apply excessive constraints and technical requirements on existing as well as future development.

We are concerned that BLM has chosen to limit its management options to those that are intended to encumber oil and gas development throughout the planning area, despite the fact that most of the area is currently under oil and gas lease. BLM's new management strategy will compromise industry's ability to develop the Piceance Basin because it dismisses advances in drilling and production techniques in favor of overregulation and duplication of state and federal regulatory programs. The removal of vast areas of land from leasing with standard or other reasonable stipulations will significantly restrict regional earnings, jobs, and tax revenue.

SECTION 1.1 – INTRODUCTION AND BACKGROUND

1.2.2 Need for the Action

“The BLM has determined that the level of oil and gas activities evaluated in the 1997 White River RMP has increased substantially. The BLM has determined it needs to update the 1997 White River RMP to reflect a greater Reasonable Foreseeable Development (RFD) Scenario developed in 2007, and an increase in APDs since 2001.”

COMMENT: BLM’s purpose and need statement for the DEIS is outdated, due primarily to the protracted timeframe required for completion of the analysis. This section indicates that BLM expects a significant increase in oil and gas development within the planning area, hence the need for an amendment and increased restrictions. However, current data show a notable decrease in such activity in the past few years. In fact, fewer than two new wells are presently being drilled in the planning area. Consequently, the new restrictions proposed in the DEIS are excessive because they are predicated upon a higher level of development than is likely to occur over the life of the plan.

RECOMMENDATION: We recommend that BLM reassess the purpose and need for the proposed amendment to the White River RMP. It is important for BLM to base its future management strategy on an accurate portrayal of future development over the next 15 to 20 years. As described above, reconsideration of the level of development would clearly lessen the purported need for increased restrictions.

Section 1.5 – Alternatives Considered but not Carried Forward for Detailed Analyses

“The following alternatives were considered as possible management approaches but were eliminated from detailed analysis because the BLM determined that they either did not meet the purpose and need for the RMPA/EIS (see Section 1.2), or were not practical or feasible alternatives due to technical, economic, and legal and policy considerations. These alternatives include: (1) Current Management using 1997 RFD Scenario, (2) Phased Development in the Piceance Basin, (3) Single Well Pads, (4) Reduced or Limited Pace of Oil and Gas Drilling, (5) Limit on Number of Well Pads or Wells, and (6) Limiting Cumulative Total Surface Disturbance.”

COMMENT: We support BLM’s decision to eliminate the above-referenced alternatives from consideration in the White River RMP Amendment. These alternatives are contrary to the agency’s multiple-use mission and would inappropriately limit reasonable future development in direct conflict with current law and regulations under the National Environmental Policy Act (NEPA).

INADEQUATE RANGE OF ALTERNATIVES

2.3 Alternatives Analyzed in Detail

“This section summarizes the four alternatives analyzed in detail in this Draft RMPA/EIS. These alternatives present a range of reasonable management actions that were analyzed to assist decision-makers and the public in understanding the potential environmental consequences of each alternative.”

BLM analyzed four alternatives in the plan amendment: Current Management, Protection, Preferred and Development.

COMMENT: Review of these alternatives reveals that there is minimal difference between the Protection Alternative and the Preferred Alternative. BLM's limited range of alternatives evaluated in the DEIS reflects a negative bias toward oil and gas. Fundamentally, the analysis is flawed because it fails to provide a baseline alternative upon which to build rational management alternatives for leasing, exploration and development activities.

RECOMMENDATION: Only by analyzing in detail an alternative that limits restrictions to those provided under standard lease terms and conditions would it be possible for BLM to effectively demonstrate that additional restrictions may be warranted. It is not adequate to simply predicate the Reasonably Foreseeable Development Scenario upon no special stipulation. It is necessary for the agency to consider this maximum development scenario with limited restrictions as a distinct alternative. The omission of such an alternative exhibits BLM's unwillingness to realistically determine the types of restrictions that may truly be warranted to protect the resource values in the study area. We recommend that BLM develop a new alternative designed to provide this information to the public in the Final Environmental Impact Statement (FEIS).

COMMENT: With the exception of the current management alternative, the remaining alternatives abrogate rights of lessees who currently hold leases within the study area. Both Alternatives B and C subject fluid mineral development in the Planning Area to excessive operational restrictions and timing limitations. For example, under Alternative B, BLM proposes to increase the use of no surface occupancy stipulations by 600,000 acres to 757,200 acres, out of a total 1,696,000 acres within the planning area. Both Alternatives B and C propose to utilize controlled surface use or timing restrictions on 100 percent of White River planning area. However, BLM has failed to provide any scientific justification for these draconian increases in restrictions.

RECOMMENDATION: We oppose both Alternatives B and C because they would severely reduce economic development of domestic energy supplies which will, in turn, radically harm the local tax base particularly in these difficult economic times. We strongly recommend that BLM analyze and adopt a new management alternative that will not unreasonably restrict access to existing and new leases by limiting the use of no surface occupancy stipulations, controlled surface use and timing restrictions to areas where their imposition is clearly justified through the use of unbiased scientific analysis. The absence of this information presents a fatal flaw in the current analysis and range of alternatives which must be rectified in the FEIS.

STATUTORY REQUIREMENTS

Energy Policy Act

Section 363 of the Energy Policy Act of 2005 requires federal land management agencies to ensure that lease stipulations are applied consistently and to ensure that the least restrictive stipulations are utilized to protect many of the resource values to be addressed. The DEIS ignores established BLM policy that states "*the least restrictive stipulation that effectively accomplished the resource objectives or uses for a given alternative should be used.*" Moreover, BLM has failed to demonstrate that less restrictive

measures were considered but found insufficient to protect the resources identified. A statement that there are conflicting resource values or uses does not justify the application of restrictions. Discussion of the specific requirements of a resource to be safeguarded, along with a discussion of the perceived conflicts between it and oil and gas activities must be provided. Clearly, an examination of less restrictive measures must be a fundamental element of a balanced analysis and documented accordingly in the FEIS.

Energy Policy and Conservation Act (EPCA)

In April 2003, the BLM directed field offices to comply with four Energy Policy and Conservation Act (EPCA) planning integration principles:

- 1) *Environmental protection and energy production are both desirable and necessary objectives of sound land management and are not to be considered mutually exclusive priorities.*
- 2) *The BLM must ensure appropriate accessibility to energy resources necessary for the nation's security while recognizing that special and unique non-energy resources can be preserved.*
- 3) *Sound planning will weigh relative resource values, consistent with the FLPMA.*
- 4) *All resource impacts, including those associated with energy development and transmission will be mitigated to prevent unnecessary or undue degradation (BLM 2003a)."*

Under EPCA BLM is required to identify impediments to oil and gas development. It was the intent of Congress that access to energy resources be improved as indicated in the Energy Policy Act and Conservation Act of 2000 and the Energy Policy Act of 2005. BLM recognized the intent of the both Phases I and II of the EPCA review when it issued Instruction Memorandum 2003-233, Integration of the Energy Policy and Conservation Act (EPCA) Inventory Results, into the Land Use Planning Process. Consequently, BLM Field Offices are now required to review all current oil and gas lease stipulations to make sure their intent is clearly stated and that stipulations utilized are the least restrictive necessary to accomplish the desired protection. Moreover, the IM directs that stipulations not necessary to accomplish the desired resource protection be modified or dropped using the planning process.

Instead, BLM has adopted an unpublished policy whereby multiple use activities, including oil and gas development, must be held subservient to other resource values considered in the planning process. Since the purpose of integrating the EPCA results into planning is intended to determine whether existing resource protection measures are inadequate, adequate or excessive, we recommend the WRFO reevaluate its management decisions accordingly and make requisite changes to the FEIS.

BLM is not only ignoring the requirements of EPCA, it is instituting excessive management objectives and measures that exceed legal requirements as demonstrated below:

COMMENT: Clearly, an examination of less restrictive measures must be a fundamental element of a balanced analysis and documented accordingly in the FEIS in a new alternative, as recommended above in these comments. Moreover, under EPCA BLM is required to identify impediments to oil and gas development. It was the intent of Congress that access to energy resources be improved as indicated in the Energy Policy Act and Conservation Act of 2000 and the Energy Policy Act of 2005. BLM recognized the intent of the both Phases I and II of the EPCA review when it issued Instruction Memorandum 2003-233, Integration of the Energy Policy and Conservation Act (EPCA) Inventory Results, into the Land Use Planning Process. Consequently, BLM Field Offices are now required to review all current oil and gas

lease stipulations to make sure their intent is clearly stated and that stipulations utilized are the least restrictive necessary to accomplish the desired protection. Moreover, the IM directs that stipulations not necessary to accomplish the desired resource protection be modified or dropped using the planning process.

It seems that BLM has adopted an unpublished policy whereby multiple use activities, including oil and gas development, must be held subservient to other resource values considered in the planning process. Since the purpose of integrating the EPCA results into planning is intended to determine whether existing resource protection measures are inadequate, adequate or excessive, we recommend the WRFO reevaluate its management decisions accordingly and make requisite changes to the FEIS.

RECOMMENDATION: When finalizing the White River RMPA, we urge BLM to ensure its compliance with the Energy Policy Act of 2005, Energy Policy and Conservation Act of 2000 ("EPCA"), the National Energy Policy, and Executive Order Number 13212 (66 FR 28357, May 18, 2001) by reducing rather than increasing impediments to federal oil and gas leasing and development. As currently presented, the BLM has failed to comply with this policy because it is proposing huge new impediments to domestic energy development, especially under Alternatives B and C. Clearly, an examination of less restrictive measures must be a fundamental element of a balanced analysis and documented accordingly in the FEIS in a new alternative, as recommended above in these comments.

VALID EXISTING RIGHTS

1.4.5 Planning Criteria and Legislative Constraints

BLM states in this section that *"the plan will be in compliance with the FLPMA (43 USC§1701 et seq.), as it pertains to BLM lands. Actions comply with all relevant laws, regulations, executive orders, and BLM policies and guidance"* and that *"the RMPA/EIS will recognize valid existing rights related to the use of the public land."*

COMMENT: According to the Federal Land Policy and Management Act, the Mineral Leasing Act and BLM's Planning Handbook, BLM does not have the authority to impose new stipulations on leases after they have been issued. Nor does BLM have authority to impose mitigation measures that exceed the terms and conditions of previously issued leases. In sum, BLM cannot deprive operators of their rights to develop their leases in accordance with the terms under which they were issued. BLM is limited to negotiating with holders of valid existing rights to comply with newly developed restrictions.

Despite the FLPMA authority identified above, the DEIS cited a wide variety of so-called "conditions of approval" that are, in our view, new lease stipulations. Approximately 73 percent of federal lands available for oil and gas leasing within the entire WRFO Planning Area have been leased, which includes 92 percent of the leasable acres within the Mesaverde Play Area (MPA). However, the DEIS failed to include protection of valid existing rights as a management goal under all alternatives. While BLM acknowledges that stipulations developed during this plan amendment process can only be imposed on newly issued leases, it is BLM's view that it can apply the very same restrictions on existing leases through the use of permit Conditions of Approval (COA), including prohibiting surface occupancy.

For example, in Section 2.2.1.2 – Allowable Uses and Management Action, BLM clearly states its intent to impose highly restrictive Conditions of Approval (COA) on permits in areas already under lease is tantamount to imposing new stipulations on existing leases. In so doing, BLM would be in clear violation of the terms of existing leases that do not already contain a No Surface Occupancy (NSO) stipulation or other highly restrictive stipulations. BLM's management authority is subject to valid existing rights as described in the Federal Land Policy and Management Act (FLPMA). Per FLPMA, BLM has no legal authority to impose new restrictions through COAs on applications for permit to drill (APD) if they would interfere or significantly alter the existing lease agreement which has been formally and publicly agreed upon.

RECOMMENDATION: We strongly recommend that BLM revise the proposed management strategies indicated in Alternatives B and C, to acknowledge the limitations on management of existing leases established by existing statute and BLM policy by developing a new alternative that recognizes its management limitations as dictated by FLPMA. In addition, this new alternative must acknowledge that when a lease is issued, it constitutes a valid existing right which cannot be unilaterally changed through the use of conditions of approval, including surface and timing restrictions beyond those identified in 43 CFR 3101.1.

REASONABLY FORESEEABLE DEVELOPMENT SCENARIO

"In 2007 the BLM prepared an updated RFD Scenario (BLM 2007) to project the maximum levels and types of industry activity, and the associated surface disturbance that could occur on all land ownerships in the WRFO Planning Area...the overall range of potential natural gas development activity within the WRFO for the period 2009 - 2028 could fall within a range of between 550 multiple well pads and 6,725 acres of associated disturbance and 2,556 multiple well pads and 31,257 acres of associated surface disturbance.

COMMENT: We are particularly concerned that the RFD is outdated because it fails to take into account the current pace of development. While the RFD indicates that BLM expects 95 percent of all future drilling activity to take place in the Mesaverde Play area (MPA), current data show a notable decrease in oil and gas development activity in the planning area since 2007. It is important for BLM to acknowledge the fact that fewer than two new wells are presently being drilled in the planning area in the Mesaverde Play area (MPA).

Additionally, we are also disturbed that the RFD fails to adequately acknowledge that other formations may be of interest for future development. As referenced above, the RFD speculates that 95% of all future drilling activity in the WRFO will take place in the MPA." BLM must also recognize that the Mancos Shale and Mowry Shale formations may also be of interest to industry. Due to the limitations of the RFD, many of these areas would be unavailable for lease under the current management alternatives because they are outside the area BLM identified as having high potential for development.

RECOMMENDATION: BLM needs to update the RFD not only to revise its future development scenario of natural gas but also to address the potential for development within the Mancos and Mowry Shale formations. Future leasing and development in these areas also need to be provided for in our recommended new alternative.

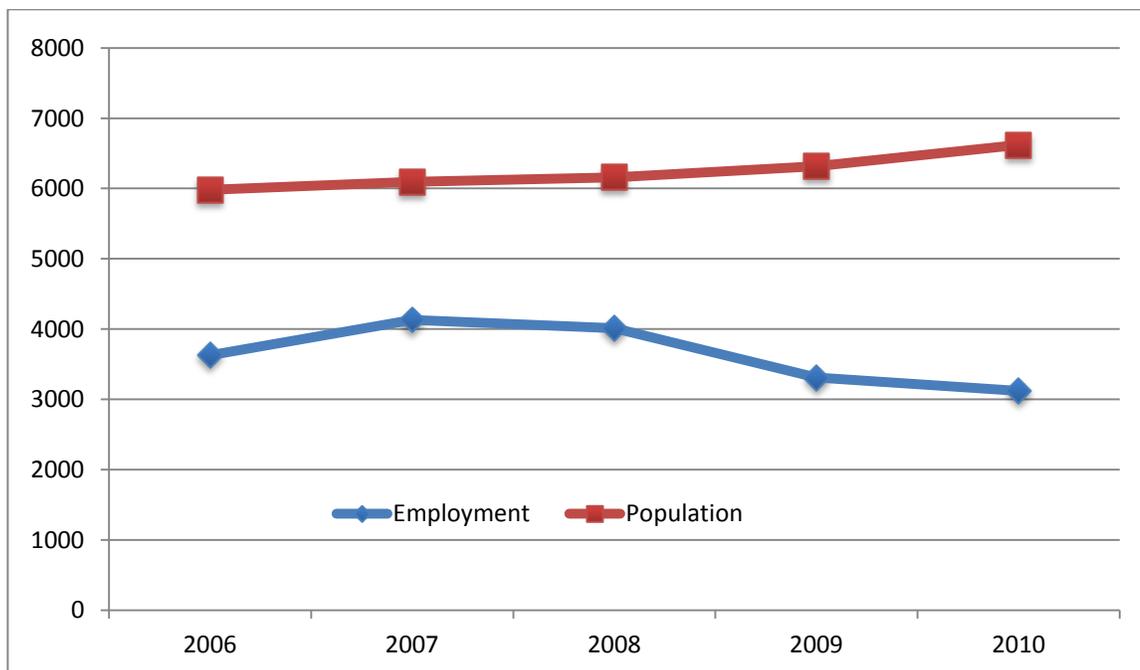
SOCIOECONOMIC/ENVIRONMENTAL JUSTICE SECTION

Outdated Employment Figures

The Affected Environment section of the Socioeconomic Assessment was prepared in 2008. As noted in the Preparer's Note on the title page (no page number) of Part One, Social and Economic Environment in Appendix G, Social and Economic Analysis Technical Report (SEATR) of the Draft RMPA/EIS... *"Since 2008, economic conditions in the study area (and elsewhere) have been substantially affected by the global and national economic recession...The pace of energy development in Northwest Colorado has also slowed substantially since 2008..."*

COMMENT: In Section 4.10 (Environmental Consequences) in the RMPA/EIS, the incremental employment and population estimates in the socioeconomic assessment are all calculated using 2010 levels as the base (see for example page 4-420). But the assessment does not acknowledge that employment in Rio Blanco County (the Primary Socioeconomic Study Area or PSSA) fell by 24 percent (1,008 jobs) between 2007, the peak employment year, and 2010 (see figure below).

Rio Blanco County Employment and Population: 2006 - 2010



Sources: Colorado Department of Labor, Quarterly Census of Employment and Wages; Colorado State Demographer's Office, Colorado Population Estimates by County

The implications of not describing the recent changes is that the reader isn't informed that the highest employment effects forecast for the PSSA under Alternative A (329 jobs by 2030) would only be 32 percent of the jobs lost in the county between 2007 and 2010. Under Alternative B (1,580 jobs by 2030), it would be almost 2025 before the PSSA employment again reached the 2007 level. Alternative C (the

Proposed Action), PSSA employment would not reach the 2007 level until sometime between 2015 and 2020. Alternative D (4,801 jobs by year 2030) would be the only Alternative under which PSSA employment would reach the 2007 level by 2015.

Although we have not conducted the same exercise for the Secondary Socioeconomic Study Area (SSSA – Garfield, Rio Blanco, Moffat and Mesa counties in Colorado, and Uintah County, Utah), there is little question that there were similar employment losses in those counties since the peak year.

These figures raise a number of questions. Was temporary housing and public infrastructure developed in the PSSA and SSSA counties and affected communities to accommodate all or a portion of the peak employment and population levels? Are portions of that infrastructure now underutilized and therefore available to serve future demands and lessen the future needs described in the assessment?

If employment levels that would accompany development would not reach the levels of the recent peak for a number of years, depending on the alternative selected, it is likely that counties and communities would have time to plan and fund infrastructure to accommodate the incremental employment and population growth.

RECOMMENDATION: In view of this substantial shortcoming in the analysis, it is critically important that BLM identify the effects of the recent slowdown in natural gas development in the PSSA and SSSA and assess the ability of housing and infrastructure to accommodate the growth that is forecast in the Alternatives.

Divergence of Employment And Population Statistics: PSSA

Section II, page 10

“Population growth tends to mirror employment trends.”

COMMENT: The population and employment statistics in the PSSA, which the SEATR uses as a base for comparing effects of employment and population for the development alternatives, diverged dramatically between 2007 and 2010 (see figure above). According to the statistics used in the SEATR, employment decreased by 24 percent during this period, while population increased by 9 percent. However, BLM has failed to provide an explanation for this significant divergence. Were many more of the oil and gas employees working in Rio Blanco County living in SSSA counties than anticipated in the socioeconomic assessment? Is there another source of growth in Rio Blanco County? These questions would seem to be important to the understanding of the ability of the PSSA to accommodate additional growth.

RECOMMENDATION: BLM is urged to update its employment and population statistics and to discuss the underlying causes of population growth in Rio Blanco County between 2007 and 2010. These statistics need to be revised taking into account how the recent changes affect the outdated assessment.

Pace and Timing of Development

COMMENT: Section 4.10.1.1 (Impacts Common to All Alternatives), page 4-418, the subsection on Impacts from Oil and Gas Development states, “Projected well development for each alternative is defined in the air quality analysis. *Management decisions related to some of the other resources could affect the pace and timing of oil and gas development because of their effects on the economics of energy development* (emphasis added).”

In contrast to the above statement, the subsection on Oil and Gas Development in Section 4.10.1.2 (Alternative A) on page 4-419, the RMPA/EIS states... “*In essence, the social and economic effects of each alternative are all directly or indirectly related to oil and gas development. **The BLM’s management actions, and reclamation, would independently have little or no quantifiable effect on social and economic conditions. This holds true for all alternatives considered in the analysis*** (emphasis added).” Further, the socioeconomic discussions under each of the alternatives state that... “*There would be no impacts to socioeconomic from other resource management actions* (emphasis added). These statements occur under Alternative A (page 4-426), B (page 4-435), C (page 4-444), and D (page 4-451).

The issue is confused further in the introduction to Section 4.10.1 (Social, Economic and Environmental Justice), page 4-414, which reads... “*The differences in the number of wells assumed in the air quality analysis for the alternatives are assumed to include the collective effects of differences among the management actions for each alternative in technological requirements, the TL stipulations, available acreages, and other management action requirements for oil and gas development. **However, the relationship between the individual and collective management actions under each scenario and the ultimate number of wells that would be developed is difficult to predict. To the extent that the actual timing and magnitude of well development under any of the alternatives differs from the estimates prepared for the air quality analysis, social and economic effects would differ from the estimates presented in this section*** (emphasis added).”

Clearly the resource management actions summarized in Table 2-1 through 2-23 in Chapter 3 (Alternatives) of the Draft RMPA/EIS would add to the cost of developing oil and gas resources in the WRFO. And, when coupled with the costs of implementing the Best Management Practices (BMPs) and Conditions of Approval (COA) summarized in Appendix B, these added costs would factor into oil and gas company development decisions, in turn affecting the actual timing and magnitude of well development in the WRFO. This is particularly true for periods of low natural gas prices and during the early years of any recovery in prices.

RECOMMENDATION: BLM has a duty to disclose to the affected communities and other stakeholders that the costs associated with the management actions, BMPs and COAs contained in the Draft RMPA/EIS will likely result in higher costs of development and may correspondingly delay and slow development in the WRFO, compared to other areas of the country. The BLM also has a duty to disclose how the costs of management actions would differ across the Alternatives. Based on these costs, leaseholders within the WRFO, particularly companies with leases on private or public lands with lower costs in other areas, would likely redirect their investment dollars elsewhere to achieve higher returns. Some such shifts and redeployment of resources are already evident during the current period of low natural gas prices. Again, these decisions would affect the actual timing and likely, the magnitude of development of oil and gas resources within the WRFO. As pointed out in the introduction to the

socioeconomic section, differences in timing and magnitude of development would result in different socioeconomic effects than the estimates presented in that section of the RMPA/EIS.

COMMENT: Affected counties, communities, occupational groups and interest groups, who rely in part on BLM Resource Management Plans to guide their own planning decisions, need to know how the BLM's management actions, required BMPs and COAs will affect development and correspondingly, affect their businesses, interests and economic and population growth in their counties and communities. In fact, one of the objectives of the land use planning analysis, as described in Appendix D (Social Science Considerations in Land Use Planning Decisions) of the BLM's Land Use Planning Handbook (H-1601-1) is to "Analyze the positive and negative economic effects of each alternative developed within the RMP on those communities and groups."

Appendix D of the Land Use Planning Handbook ranks effects on occupational and interest groups as one of the basic topics that should be addressed in a socioeconomic analysis, and cites oil and gas producers as an example of groups that should be addressed. The Draft RMPA/EIS analyzes positive and negative effects of drilling scenarios that were defined in the air quality analysis. It identifies potential effects on agricultural activity and employment, hunting and tourism activity and employment and non market values. But it does not assess the effects of the management actions, BMPs and COAs on the oil and gas industry, or how those measures might in turn affect the pace and magnitude of development and correspondingly affect socioeconomic conditions in the affected counties and communities.

RECOMMENDATION: In order to disclose these social and economic effects on affected counties, communities and occupational groups, the BLM needs to consult with the affected oil and gas operators to understand how the management actions, BMPs and COAs contained in the Draft RMPA/EIS would affect the pace and magnitude of development in the WRFO. The result of these consultations needs to be disclosed in the Final RMPA/EIS. Failure to disclose this information would mislead the public about the actual pace and magnitude of oil and gas development that could occur in the WRFO.

Structure of Alternatives

There are several issues related to the underlying structure of the alternatives and the associated assessment that could overestimate future growth and the associated effects on public facilities and services. Specific concerns/issues regarding the structure of the scenarios and assessment are discussed in our comments below.

COMMENT: Among the critical factors driving the socioeconomic assessment is the assumption of a linearly increasing pace of drilling over time, with the highest rate of new development activity and the associated levels of disturbance occurring in the year 2030, when approximately 100 rigs would be employed [1,661 wells/~16 wells per rig: from Table 4-105 and the 2007 RFD]. That assumption translates into an assumed level of new activity in 2030 that is more than 3 times the 2008 levels. It also translates into projections of steadily increasing demand for labor, housing, and public facilities and services. Although that scenario depicts one possible future, the history of oil and gas development suggests that it is also unrealistic, in that development tends to variable over time. The assumed linearly increasing pace of development yields a much different view of long-term socioeconomic effects than would an assumption of more rapid escalation in the number of wells drilled during the early years, such

that the pace in later years could be less than that assumed in the assessment. Such a scenario is probably as likely as that used in the assessment.

RECOMMENDATION: The EIS should do more to disclose the potential implications of an alternative assumption regarding the pace of development. For instance, what would be the impacts of assuming an increase to 1,250 wells per year (80 rigs) by 2017, with the additional wells reducing the number of operating rigs between 2025 and 2030? We understand that there are countless possible variations, but given that the peak effects described in the EIS occur in 2030, it is important that another perspective be provided. Note that an alternative development scenario that assumes a lower level of development in the final 3-to-5 years of the analysis period would carry-over to the assessment of disturbance and reclamation and the levels of disturbance that would remain at the end of the RFD period.

COMMENT: A further issue associated with the assessment based on linearly increasing activity is that the assessment doesn't adequately describe the diminishing strain that the incremental demands and growth represent as the underlying economy and public service capacity would grow over the next 15 to 20 years. For instance, a housing requirement of 75 new dwelling units a year would represent more of a challenge in a county/community of 5,000 than a county/community of 10,000 due to the expansion of the construction trades industry and construction supply outlets. The assessment doesn't address the diminishing share of total expenditures that the incremental public sector costs would represent of the overall budget as the overall fiscal base and service capacity expands. Finally, the number of future drillings rigs to be deployed in conjunction with the various alternatives reflects industry input regarding the expected reduction in average well completion times from one-month to 3 weeks. The number of rigs then serves as the driver for estimating future employment, apparently using a series of fixed "per well" employment coefficients. However, just as technological advances and the increased propensity for multi-well pad development has reduced the average length of time to drill and complete wells, future efficiencies are likely in many of the support services that will further reduce the average employment per well.

RECOMMENDATION: The EIS should disclose that the results presented for the out-years (2020 to 2030) likely represent an "upper limit"/worst-case depiction of future maximum impacts and that those effects are unlikely to occur.

Fiscal Assessment

COMMENT: There are multiple omissions and inconsistencies in the revenue projections presented in the Draft RMPA/EIS. Consequently, the assessment dramatically understates the fiscal benefits associated with Alternative C and D. Using information contained in the Draft RMPA/EIS to reconstruct the projections suggests that as much as 85% of the public sector tax and royalty revenues that would result from development of the oil and gas resources in the WRFO area are not recognized or reported in the DEIS. For instance, it is estimated that upwards of \$25 billion of the development that would be authorized under Alternative D is not reported in the Draft RMPA/EIS. The understatement arises from production estimates that appear lower than those presented in the RFD, non-reporting of significant revenues, and a failure to acknowledge the value of continuing production and tax revenues beyond 2031, even as the demands associated with the temporary workforce decline.

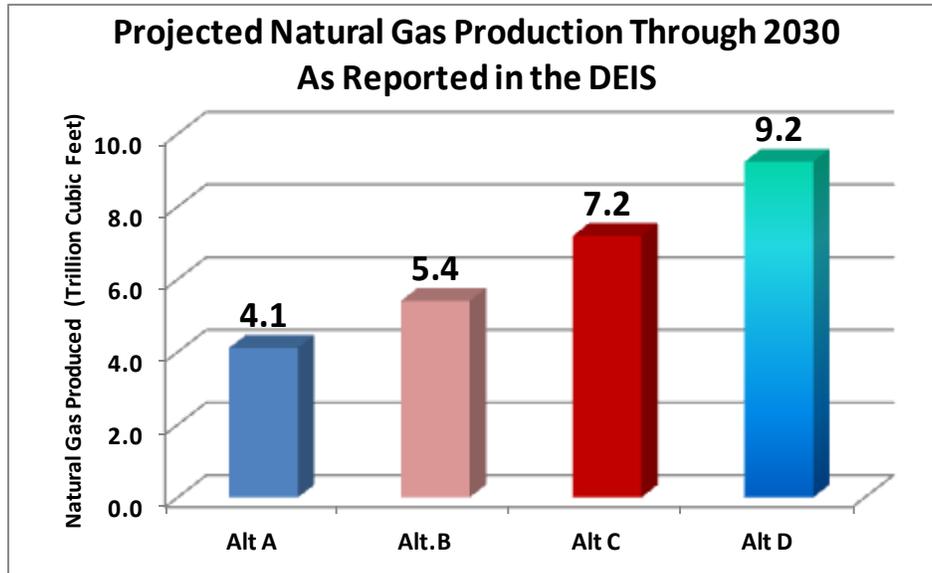
Although the magnitude of under-reported revenues would not be as large for Alternatives C and B, the issues identified below still apply. Specific concerns/issues regarding the fiscal assessment include the following (not presented in particular order of importance):

RECOMMENDATION: The fiscal analysis is essentially silent on the subject of sales and use taxes that would be generated by industry and worker spending in the region. Even though industry has certain exemptions from sales and use tax payments, such revenues can be substantial, and the large magnitude of these revenues and their significance to local government should be acknowledged.

The assessment should also note that unlike property tax revenues, sales and use tax revenue do not suffer from tax lag issues (see Section III, Pg. 13 of the SEATR) to the same extent as other revenues mentioned in the assessment and the relative generation of sales and use tax revenues associated with energy workers tends to be very high during the early stages of development. *[As a side note, Exhibit III-9 in the SEATR should be revised. As it presently exists, the leader line and labeling for "Revenues Received" suggests that the revenues are zero at a point in time that correlates to the end of the Infrastructure Need curve.]*

Charges for services, fees, and intergovernmental revenue transfers from other units of government are also important sources of revenue for Rio Blanco County and other local governments. Charges for services are in part a function of economic activity, and many fees and intergovernmental transfers are population-based. As a result, such revenues would be expected to increase over time with future development activity and population growth. Projecting such revenue is difficult and such quantification is not essential. However, the fiscal discussion doesn't address these revenues or the fact that the increases would be higher under Alternatives C or D. This information should be included in the Final RMPA/EIS.

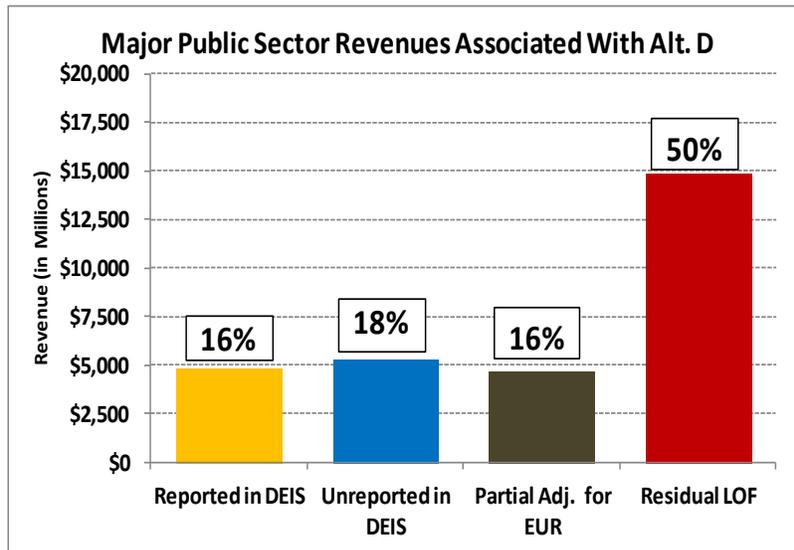
COMMENT: Neither Chapter 2 nor Section 4.10 of the Draft RMPA/EIS report the total projected production, production values, nor public sector revenues associated with the different alternatives. If, for example, the No Action Alternative were to be selected by the BLM, the incremental differences in production, value and revenues associated with Alternatives B, C and D would represent foregone energy resource production, tax revenues, and employment opportunities for the region, the state and the nation. Based on the information presented in the SEATR and Draft RMPA/EIS, the differences between Alternative A and Alternative C through 2030 (comparing tables 4-95, 4-98, 4-102, and 4-105) is more than 3 Tcf, and that between Alternative C and Alt B would be 2 Tcf; with both of those differences just through 2030. Over the productive life of the field the foregone production and economic benefits would be even greater (see following comments). Again this lack of reporting affects information of benefits that is important for the public, local governments, and the decision-maker to know. The Final RMPA/EIS should include this information.



Source: Based on information in Section 4.10, Draft RMPA/EIS

There appears to be one or more major inconsistencies between the 2007 RFD and the production and fiscal assessment presented in the SEATR and the Draft RMPA/EIS, the root of which appears to be in the computation of annual production associated with the assumed drilling program. As discussed above, summing the annual production values in Table 4-105 yields production of 9.2 Tcf during the forecast period. Yet the 2007 RFD analysis indicates projected production of 19.8 Tcf during the same period; the difference representing more than a 50% understatement/discounting of the fiscal benefits of Alternative D in the Draft RMPA/EIS – in particular the FMR and ad valorem taxes. Again, the differences are non-trivial, potentially amounting to an additional \$7 billion in FMR through 2030. To the extent that the difference represents a miscalculation based on the average annual production per well, a similar understatement would be associated with Alternatives B and C as well. Moreover, the public sector revenues generated from the additional production would help address the public expenditures needed to serve growth.

RECOMMENDATION: The production and fiscal estimates in the Draft RMPA/EIS should be reviewed and, if incorrect, the corrected figures should be presented in the Final RMPA/EIS. The revenue analysis should account for the fact that production and tax revenues from producing wells would continue beyond 2030. The 2007 RFD indicates an average estimated ultimate recovery (EUR) in excess of 1.6 Bcf per well. Applied to the total number of wells under Alternative D, that EUR yields total ultimate recovery of nearly 32 Tcf, compared to the 9.2 Tcf presented in Table 4-105. In other words, assuming the 32 Tcf is correct, the production and revenues reported in the Draft RMPA/EIS represents only a small portion of the projected total of that associated with activity that could be authorized under the oil and gas amendment. The additional revenues represent additional economic benefits associated with the BLM management actions outlined in the RMP and should be recognized. This could be done through the addition of another row in tables 4-95, 4-98, 4-102, and 4-105, as well as in a summary table in both sections 4.10 and Chapter. 2, or through the use of a figure such as that below, which illustrates the issue for Alternative D. In the case of Alternative D, Table 4-105 reports total revenue of approximately \$4.8 billion through 2030. However, over the productive life of the wells that would be authorized, the total revenues, based on the assumptions in the Draft RMPA/EIS and RFD, would be on the order of \$30-to-\$35 billion, 6 times the level reported.



Source: Based on information contained in the Draft RMPA/EIS and the 2007RFD

COMMENT: In addition to the possible underreporting issues associated with projected production described above, the presentation of severance taxes shown in the revenue tables is unclear. Unlike the reporting of FMRs, for which only the share allocated to DOLA are recognized (discussed in a following comment), the presentation of severance taxes appears to “double report” a portion of the revenues. Using the information presented in the Draft RMPA/EIS, Table 4-102 for example, the column labeled State Severance Tax appears to represent the total estimated taxes. The following two columns, labeled “DOLA Direct Distribution Revenue” and “DOLA Grant Revenue” appear to be allocations to those funds based on the allocation process summarized in Exhibit III-11 of the SEATR (Pg. III-16). That is not evident, such that a reviewer is likely to sum across the row to get an annual total, which would double-count those revenues. Furthermore, the estimates of severance taxes appear to be based on an average tax rate of 4.0%, with no allowances for county ad valorem tax payments shown in the last column. Is this correct? If so, the estimates of severance would be overstated (the magnitude of the overstatement would be minor relative to the under-reporting discussed above).

COMMENT: What does the column labeled County Property Tax Revenue represent? Does it include taxes accruing to the school districts or not? If not, this would be another instance of significant under-reporting.

RECOMMENDATION: Clarify whether or not the Property Tax Revenues reported include taxes accruing to school districts, and if not, revise the discussion to that they are included.

COMMENT: The potential tax lag issues described in the SEATR (see Section III, Pg. 13) and the assessment can be an issue in some instances and can apply to the need to increase staff as well as to capital facilities. However, the assessment fails to note that a common long-term benefit of energy development is that the expansion of the tax base often allows local tax rates to decline as an increased portion of the tax burden is shifted to industry, and also may allow increases in the level and quality of services provided to the public. Evidence of such shifts and enhancement exist in new/renovated hospitals, fire protection service, and community recreation facilities in many energy-resource

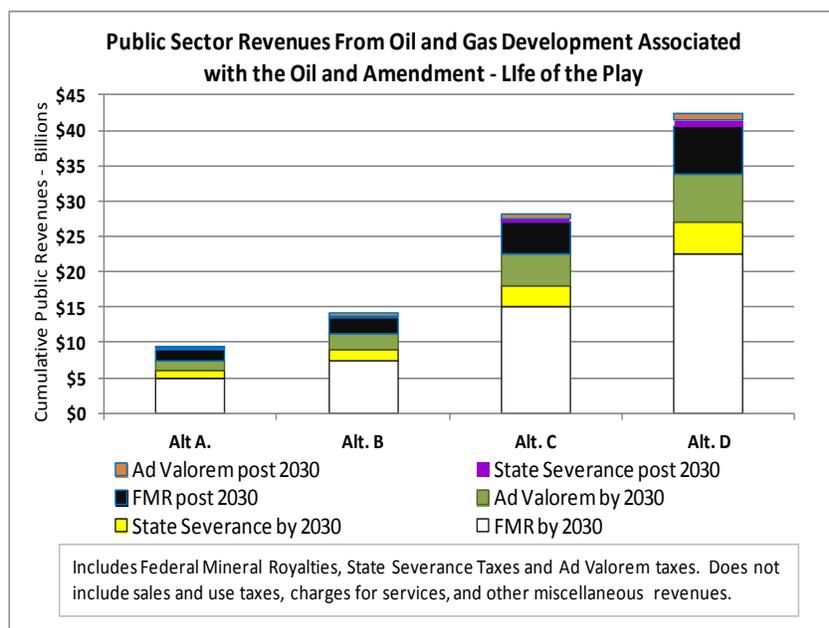
dependent communities in Colorado and the Rocky Mountain west. The enhancements of public facilities and services can be major benefits of resource development.

RECOMMENDATION: It is necessary for the Final RMPA/EIS to include a discussion of the long-term tax benefits to communities in energy development areas.

COMMENT: It is understood that the focus of the assessment is on the potential impacts in northwest Colorado. However, noticeably absent from the reporting of Energy Associated Revenue Projections, e.g., Table 4-105, in the Draft RMPA/EIS are the substantial monetary sums from Federal Mineral Royalties (FMRs) that would accrue to the U.S. Treasury and to support public primary and higher education and the Colorado Water Control Board. These sums are non-trivial. For example, for the year 2030, FMR to DOLA are projected at \$107.6 million. Unreported is the estimated \$180+ million (based on the information presented in the study) that would accrue to the State of Colorado, as well as the \$302 million accruing to the U.S. Treasury. Over the analysis period, the amount not reported exceeds \$5.6 billion. The failure to report these revenues dramatically understates the economic benefits that would result from higher levels of development – results that would be important for the public, local governments, and the decision-maker to know.

RECOMMENDATION: Detailed allocations of these other amounts aren't essential, but at a minimum the total unallocated FMR should be reported in another column in the tables. A total row, covering the cumulative revenues for the period 2010 to 2030 should be added to the table.

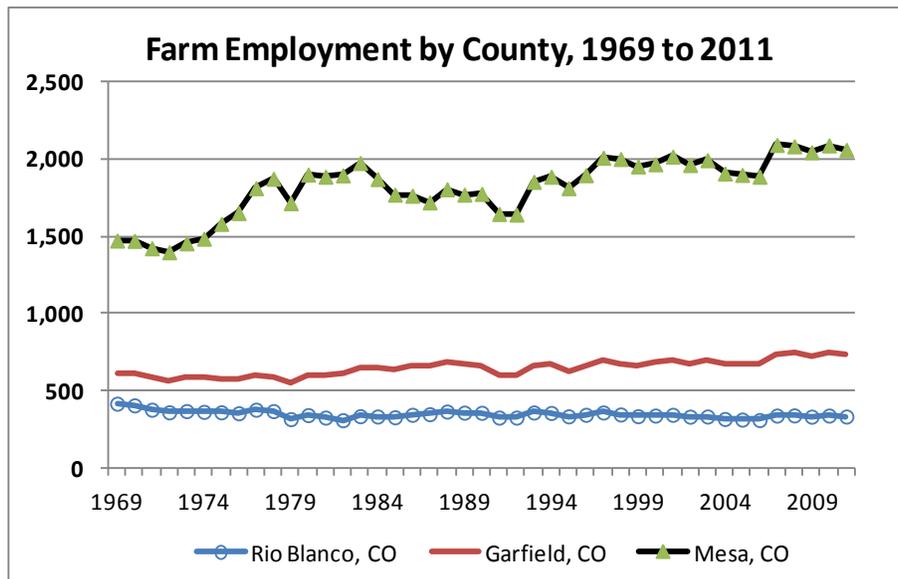
After the estimated tax revenue benefits are revised and/or verified, a summary table and figure should be developed summing the public sector revenues from all sources, by alternative. An example of a summary figure, using hypothetical values, is presented below. Presenting this information is essential to having the EIS adequately disclose the implications and differences between the alternatives.



COMMENT: By truncating the socioeconomic assessment at 2030, the last year of drilling under all of the alternatives, the Draft RMPA/EIS provides an incomplete perspective on the long-term effects of the activity authorized under the oil and gas amendment. Such effects would include some economic dislocation, such as declines in the number of drilling jobs, many of which would be held by temporary workers, and the secondary jobs in the SSSA. However, many long-term maintenance jobs will remain, as will tax revenues supported by ongoing production. The communities in the PSSA will have an expanded housing inventory, more modern infrastructure and the afore-mentioned production-related tax revenues. These would in turn constitute resources to support ongoing economic development initiatives and possible some of the potential future actions described in the cumulative section on socioeconomics (4.11.3.22) on page 4-497 of the Draft RMPA/EIS.

RECOMMENDATION: The socioeconomic assessment should extend beyond the 20-year drilling period because the social and economic effects authorized by the RMPA will extend beyond that period.

COMMENT: Although not critical to the ultimate conclusions of the assessment, the projected increase in agriculture employment in the PSSA and SSSA and the basis for that increase, particularly the doubling of such employment in the PSSA, draws attention. Such increases are counter to past trends in the region (see below) and many perspectives regarding future agriculture employment.



Source: U.S. Bureau of Economic Analysis, 2012.

RECOMMENDATION: The Final RMPA/EIS should document the reasons for the assumed increase in agriculture employment in the PSSA and SSSA.

COMMENT: The linear relationship between BLM's management goal for wildlife populations and future hunting levels is clearly stated as an assumption (see for instance pg. 4-419). However, the rationale supporting the assumed relationship between wildlife populations and the acres of disturbance, the affects of disturbance on game populations, and the affects of timing limitations and other BLM actions in mitigating those affects, appears to be lacking. For instance, under Alternative C only 3.4 percent of the mule deer range is developed at the end of the 20-year period, yet that level of development is

assumed to result in a 30 percent reduction in hunting levels. Our concern arises in that although the net economic effects of the estimated reduction in hunting (pg. 4-439) may not be significant, the assumed loss could trigger heightened opposition to Alternatives C or D based on public reaction to the perceived effects on quality-of-life/lifestyles/recreation loss of a 30 percent reduction where the losses are based not on analysis, but on assumption.

RECOMMENDATION: Again, it would seem reasonable for the BLM and the socioeconomic assessment to describe the impacts in terms such as *“potential reductions up to X percent at the end of the period, diminishing thereafter as drilling is completed and further reclamation occurs.”*

COMMENT: The assessment on future activity also overlooks underlying trends in hunter participation rates (generally declining) and the potential offsetting influence of regional and statewide population growth in maintaining levels of hunting and fishing activity, despite the declining participation rates. In fact, the recreation assessment suggests increases in recreational activity in the region due to project related growth, although that assessment also appears to assume that all recreational activity in the area is tied to the local population.

There are a number of errors or inconsistencies in the Draft RMPA/EIS – for example, Table 4-101, which presents projections of future oil and gas employment, should be presenting information on the effects on hunting employment based on the text on pg. 4-439. Table 4-104 also appears to be mislabeled based on the information presented.

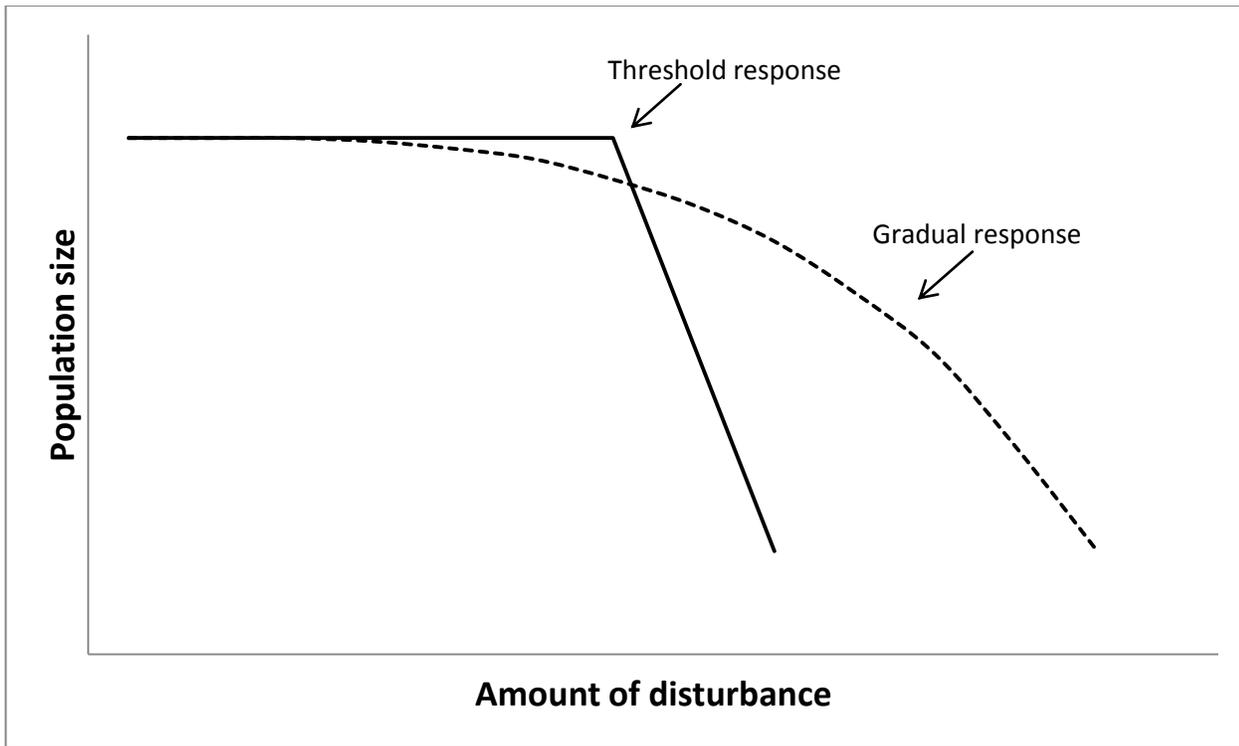
APPENDIX E – THRESHOLD AND TEMPORAL ANALYSIS

“Alternative C is similar to Alternative B in that both alternatives include development thresholds. Under Alternative C, the BLM’s management goal for big game habitat would be to manage big game habitat utility and suitability to sustain at least 70 percent (versus 90 percent in Alternative B) of CPW’s long-term population objective throughout active development. All seasonal big game ranges within the WRFO would be subject to timing limitations that could extend up to 90 days (versus 120 days in Alternative B) within established windows (presented in Table 2-4). Timing limitations would be applied through COAs for existing leases and through stipulations on new leases.”

RECOMMENDATION: We support that BLM has contemplated allowing activity to continue year round if certain wildlife thresholds are met. We hope the term “year-round drilling” is being used as a catch-all phrase for all activities associated with drilling, development, production and reclamation actions. As such, if this threshold concept is adopted, we urge BLM to adopt a policy of “Year Round Continuous Activity” rather than “Year Round Drilling.” It is critical for BLM to recognize that important industry activity is not limited to drilling. Other associated activities are also necessary such as wellpad and road construction, completing and producing the well, construction of ancillary facilities, as well as performing interim and final reclamation of a well site. This flexibility is essential in order to provide certainty to operators that they can carry out necessary activities efficiently and cost effectively.

Threshold Methodology

COMMENT: The scientific, biological basis for assigning a particular threshold is depicted below:



COMMENT: It is clearly evident that BLM has chosen not to use the scientifically validated biological threshold concept depicted above. Specifically, if the 70% or 90% 'threshold' is crossed, it is unlikely that BLM expects the population to follow the solid black line. The same holds true for any proposed set-back thresholds. Scientific literature does not support the notion that 30% or 10% reduction in the population represent science-based targets. We surmise that BLM decided it must "pick a number" as a target regardless of its basis.

Our question is why BLM is using any threshold methodology. As detailed in our following comments, it is scientifically questionable whether big game response to energy development is a threshold phenomenon at all. If energy development is 'bad' for big game (which also is questionable, see below), then it is more likely that the population response would follow the dashed line in the graph above. This holds true for BLM's poorly defined 'thresholds for collective and acute effects' which require a great deal of clarification before one can reasonably assess them from a biological perspective. While there is evidence that macro-invertebrate and other aquatic communities show threshold responses (Hildebrand et al. 2010, Baker and King 2010), there is no scientific evidence that wildlife, particularly big game, will respond the same way.

Following are several scientific findings¹ that demonstrate the threshold methodology utilized by BLM in the WRRMPA is inappropriate:

¹ **References**

- Baker, ME, and RS King. 2010. A new method for detecting and interpreting biodiversity and ecological thresholds. *Methods in Ecology and Evolution* 1:25-37.
- Dzialak, M.R., S.M. Harju, R.G. Osborn, J. Wondzell, L.D. Hayden-Wing, J.B. Winstead, and S.L. Webb. 2011. Prioritizing conservation of ungulate calving resources in multiple use landscapes. *PLoS ONE* 6(1): e14597.

- Frair et al. (2008) used simulation models to investigate thresholds of road density relative to elk population size. After a prohibitively complex analysis, they concluded *“our model indicated that road densities ≤ 0.5 km/km² yielded the highest probability of elk occurrence where elk were hunted (and sensitive to roads), but disassociating roads from foraging habitats or managing human access to roads may maintain effective elk habitat at substantially higher road densities”*.
- It has also been shown in research conducted in southern Colorado that elk avoided roads by 400 meters on average, but this avoidance was only apparent during the day time and elk showed no evidence of population decline or of abandoning their range at a road density as high as 7.6 km/km² (Dzialak et al. 2011).
- Eigenbrod et al. (2009) likewise investigated thresholds of road density, but this time looked at amphibians. They concluded, *“Our results show that most anurans are likely to have reduced abundances near motorways, but that both the extent of the effect of this type of road and the underlying relationship vary considerably between species”*.
- Hebblewhite (2011) reviewed 120 publications from 1970 to present that addressed energy development and big game in some capacity, stated that *“most studies used a weak observational approach in which impacts of development were inferred from correlations between levels of human activity and measures of ungulate responses”*. He further stated that *“readers who had hoped that a clear picture would emerge about how to mitigate effects of energy development on ungulates are probably disappointed, and this is perhaps the most important message from this chapter”*. He concluded that *“little scientific evidence exists to suggest that energy development will have population-level impacts on pronghorn, mule deer, or elk because rigorous and properly designed experiments have not been conducted.”*

COMMENT: We formally request BLM to provide scientific and technical details about its proposed use of “thresholds” including specific literature and scientific sources that support the agency’s threshold concept.

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- Eigenbrod, F, SJ Hecnar, and L Fahrig. 2009. Quantifying the road-effect zone: threshold effects of a motorway on Anuran populations in Ontario, Canada. *Ecology and Society* 14:art 24.
- Frair, JL, EH Merrill, HL Beyer, and JM Morales. 2008. Thresholds in landscape connectivity and mortality risks in response to growing road networks. *Journal of Applied Ecology* 45:1504-1513.
- Hebblewhite, M. 2011. Effects of energy development on ungulates. Pages 71-94 in *Energy development and wildlife conservation in western North America*. DE Naugle, editor. Island Press.
- Hildebrand, RH, RM Utz, SA Stranko, and RL Raesly. 2010. Applying thresholds to forecast potential biodiversity loss from human development. *Journal of the North American Benthological Society* 29:1009-1016.
- Lendrum, PE, CR Anderson Jr., RA Long, JG Kie, and RT Bowyer. 2012. Habitat selection by mule deer during migration: effects of landscape structure and natural gas development. *Ecosphere* 3:art 82.
- Van Dyke, F., A. Fox, S.M. Harju, M.R. Dzialak, L.D. Hayden-Wing, and J.B. Winstead. 2012a. Response of mule deer to habitat modification near natural gas development. *Wildlife Biology in Practice* 8:50-69.
- Van Dyke, F., A. Fox, S.M. Harju, M.R. Dzialak, L.D. Hayden-Wing, and J.B. Winstead. 2012b. Response of elk to habitat modification near natural gas development. *Environmental Management* 50: DOI: 10.1007/s00267-012-9927-1.

RECOMMENDATION: Clearly, the appropriate research has yet to be conducted. While physical thresholds of energy development may exist, the thresholds concept is far from tidy. BLM's use of the described threshold concept defies the biological threshold concept which indicates there is no likely expectation that populations will change significantly if the proposed cut-offs are exceeded. Moreover, it is highly questionable whether big game response to development is actually a threshold phenomenon because there is no documentation of drastic changes in big game populations associated with some development threshold in the published literature. Despite hundreds of papers addressing wildlife and energy development, the thresholds concept is defined by uncertainty and no solid scientific support for such targets exists. Therefore, we strongly recommend that BLM abandon the use of the threshold concept in the planning documents as it is scientifically invalid.

Moreover, BLM appears to use unsubstantiated claims upon which to base its proposal of a restrictive management policy to impose further constraints or burdens upon the oil and gas industry. It is apparent that BLM has limited its purported justification for new and burdensome constraints on the energy industry in Appendix G to those individuals who identify energy development as being associated with lower perceived quality of the hunting experience and a shift in the labor force away from agriculture and hunting. Using such perceptions to constrain or otherwise burden the energy industry is insupportable and must be removed from the FEIS because it is simply a ploy to provide support for this erroneous perception.

Habituation

RECOMMENDATION: A key discussion that does not appear in the draft WRRMPA is that of habituation. Big game species become accustomed to human activity. While this process is poorly understood, it certainly does occur. Following are cites from scientific research that has been conducted on the issue of habituation on big game and energy development in Colorado. We recommend that BLM fully consider the phenomenon of habituation when finalizing the WRRMPA and recognize that many of the constraints proposed in Alternatives B and C are unwarranted and should be eliminated from the final DEIS.

- Van Dyke et al. (2012a and 2012b) investigated the response of mule deer and elk to habitat modification within a natural gas field. They found that *"mule deer demonstrated the behavioral capacity to utilize forested openings near operating natural gas wells. Managing forage and habitat availability appears to have the potential to affect the type and degree of response by mule deer to such development"* (Van Dyke et al. 2012a). Similarly, in an investigation involving elk, they stated *"that elk possessed the behavioral capacity, over time, to exploit enhanced forage resources in the proximity of habitat modifications and human activity associated with maintenance of operating natural gas wells"*. In both instances, they carefully qualified their statements by acknowledging that their *"results do not demonstrate that all individuals responded similarly, nor do they demonstrate that a similar response would be seen during different stages of well development"*. Nonetheless, their results clearly show that mule deer and elk clearly exhibit the capacity to habituate and persist in a natural gas field where the industrial development footprint covered up to 0.62 km²/km². Lendrum et al. (2012), who investigated the response of migrating mule deer to ongoing development in Piceance Basin, found that *"deer selected areas closer to well pads in the most developed areas, which was contrary to our prediction. Our results differ from previous studies in which ungulates have been*

observed to avoid anthropogenic disturbances". They concluded that "behavioral tendencies toward avoidance of anthropogenic disturbance can be overridden during migration by the strong fidelity ungulates demonstrate towards migration routes. If avoidance is feasible, then deer may select areas further from development, whereas in highly developed areas, deer may simply increase their rate of travel along established migration routes".

2.3.4.1 MANAGED DEVELOPMENT APPROACH - FISH AND WILDLIFE – BIG GAME

GENERAL COMMENTS:

The species habitat delineations in the RMPA/DEIS go far beyond those identified by the Colorado Division of Parks and Wildlife (CPW). It is important that BLM provide justification for these discrepancies, particularly due to the fact that the State manages the species for which habitat is identified. In fact, in 2009 the Departments of Interior, Agriculture and Energy signed a Memorandum of Understanding (MOU) with the Western Governors' Association (WGA) in which the departments agreed to coordinate with states in the identification and uniform mapping of wildlife corridors and crucial habitat. This has not been performed for this RMP amendment. Moreover, we can find no reasoning or justification for BLM's maps to differ from those used by the State.

Such discrepancies are problematic for operators who work on both State and private lands that may be adjacent to BLM public lands because two separate processes could be required for the same project in circumstances when projects cross jurisdictional boundaries. We strongly recommend that BLM work closely with State agencies to eliminate the discrepancies in wildlife data and spatial representations utilized by BLM in the draft planning documents. Moreover, in view of the MOU adopted by the BLM and the Colorado Department of Natural Resources (DNR), it is reasonable for the BLM to adopt many of the resource data developed by the DNR, especially when it does not encroach upon BLM's management jurisdiction over Federal lands.

2.3.4.1 Alternative C - Year-Round Drilling and Timing Limitation Exceptions

COMMENT: We welcome BLM's efforts to consider granting exceptions to timing limitations and allow year-round drilling. However, as discussed above in these comments, we urge BLM to adopt a "Year-Round Continuous Activity" policy within the planning area. Year-round activities provide a number of significant benefits to the operator and the environment alike. Benefits to wildlife as a result of year-round activity include reduced truck traffic, fewer pads, and increased time for the commencement and completion of interim and full reclamation. New technologies like directional drilling, drilling multiple wells from single pads, liquids gathering systems, closed-loop drilling, advanced road construction, and remote telemetry can provide ample protections without the use of timing limitations. Year-round activity also significantly reduces development timeframes, which decreases impacts to habitat from heavy vehicle traffic associated with rig moves.

Nonetheless, as discussed previously in these comments, the threshold concept proposed by BLM in the RMPA/DEIS is not an appropriate tool for allowing for year-round activity to proceed. In addition we have concerns that year-round activity may be denied at any point in time if BLM's proposed thresholds are exceeded. We strongly urge BLM to fully acknowledge that operators need certainty that the agency will authorize year-round drilling and other activities for the life of each proposed project and not just a

limited portion of it, before they can commit significant financial investments in the planning area. As proposed, we are concerned that the threshold concept may also unreasonably limit the BLM's ability to make future management decisions in the planning area.

Of even greater concern is that thresholds may ultimately be exceeded on a cumulative basis from activities by others that are beyond the control of a particular operator. If year-round drilling is approved, BLM must assure each operator that they will be allowed to complete the entire drilling project, notwithstanding the actions of other operators that may result in an exceedance of a threshold in the area.

As stated earlier in these comments, we believe BLM's entire threshold concept is seriously flawed because it assumes impacts that have not been scientifically validated. In addition, the RMPA/DEIS fails to provide an adequate explanation of how BLM determined the thresholds, including the metrics used to define the acute and collective percentages for big game and sage-grouse habitat. Moreover, BLM has not explained how the baseline for disturbance for the thresholds will be determined. It is unclear if existing or disturbances caused by natural events, like forest fires, will be included in the percentages of acute and collective thresholds. Absent these explanations and the questionable utility of the threshold concept, we find the threshold concept to be arbitrary.

RECOMMENDATION: We support BLM's consideration of year-round activity, but recommend that BLM consider exceptions to timing limitations and year-round operations on a site- or project-specific basis, rather than through arbitrary thresholds. In addition, the RMPA/DEIS needs provide BLM with enough flexibility to approve projects on a site-specific basis if it is determined that the proposed project will have little or no impact on big game or sage-grouse populations, even though it occurs within a GMU or sensitive habitat.

Section 2.3.4 Alternative C – Timing Limitations

"Alternative C identifies approximately 1,696,000 acres of BLM oil and gas federal mineral estate open to leasing and subject to lease stipulations (see Appendix A), including NSO (387,600 acres) stipulations, CSU (400,400 acres) stipulations and timing limitations (1,696,000 acres)." White River RMPA/DEIS, p. 2-18.

COMMENT: We object to BLM's proposal that no federal mineral estate in the planning area will be open to leasing without highly restrictive lease stipulations and timing limitations. BLM seeks to apply NSO and CSU stipulations to nearly half of the federal mineral estate open to leasing and timing limitations to every acre of federal mineral estate open to leasing. The addition of stipulations and timing limitations to such a broad extent of the federal mineral estate in the preferred alternative of the RMPA/DEIS clearly fails to present a balanced approach in the planning process, which renders this alternative inadequate. As previously stated, BLM cannot legally add new timing limitations as conditions of approval that are inconsistent with the original stipulations on valid, existing leases without additional site- and project-specific analysis under NEPA.

RECOMMENDATION: We strongly urge BLM to reconsider the application of timing limitations to every acre of federal mineral estate open to leasing. Further, we caution BLM against using the RMPA to add

timing limitations as conditions of approval that are inconsistent with the original stipulations on valid, existing leases.

2.3.3 Alternative B – Thresholds

“Threshold limits may be incrementally adjusted by the BLM, in coordination with CPW, based on animal response or the influence of compensatory mitigation in meeting long-term population objectives, as determined through monitoring.” White River RMPA/DEIS, p. 2-14.

COMMENT: We oppose the language in the RMPA/DEIS that would permit BLM to revise certain aspects of the RMPA after it has been finalized and a Record of Decision has been issued without public involvement. We question BLM’s authority to make changes to the RMPA after it has been finalized without going through the NEPA process because such changes would be significant. We consider any incremental adjustments to the thresholds outlined in the RMPA/DEIS significant, which would require another amendment to the RMP.

RECOMMENDATION: BLM must remove this language before it finalizes the RMPA/EIS.

2.3.3 Alternative B – Offsite Mitigation

“Off-site mitigation would be required for any surface disturbance at a rate of 3 acres of mitigation for each acre of habitat disturbed. A mitigation fund would be established to receive industry contributions for wildlife-specific mitigation projects.” White River RMPA/DEIS, p. 2-14.

COMMENT: Requiring offsite mitigation for *any* surface disturbance is inconsistent with BLM policy, which requires that offsite mitigation may only be carried out on a voluntary, site-specific basis. It is inappropriate for BLM to set minimum compensatory mitigation requirements in the RMPA/DEIS. Offsite mitigation may not be an appropriate or applicable tool in all circumstances. In addition, BLM provides no scientific justification to require mitigation at a rate of 3 acres of mitigation for each acre of habitat disturbed.

RECOMMENDATION: BLM must clarify in the final RMPA/DEIS that it cannot require offsite mitigation for *any* surface disturbance, including oil and gas development. BLM must also provide scientific justification for utilizing a 3:1 mitigation scenario, should it choose to use that ratio in the final RMPA/DEIS.

2.3.3.2 Alternative B - Fish and Wildlife, Big Game

“A mitigation fund would be established to receive industry contributions for wildlife-specific mitigation projects.” White River RMPA/DEIS, p. 2-17.

COMMENT: A mitigation fund would be established to receive and carry over (i.e., across government fiscal years) industry contributions for wildlife-specific mitigation projects. The need for such a fund is highly questionable considering the fact that big game species are currently above the target population levels established by the Colorado Department of Parks & Wildlife.

RECOMMENDATION: We strongly recommend that BLM eliminate the mitigation fund because it is unwarranted and excessive.

2.3.4.2 – Fish and Wildlife, Big Game

“All seasonal big game ranges within the WRFO would be subject to timing limitations that could extend up to 90 days (versus 120 days in Alternative B) within established windows. Timing limitations would be applied through COAs for existing leases and through stipulations on new leases.”

COMMENT: These limitations exceed BLM’s authority to legally modify valid existing lease rights. According to the regulations at 43 CFR 3101.1, in order to be consistent with valid existing lease rights, BLM is limited to moving a location up to 200 meters and limiting access to a lease for up to 60 days.

RECOMMENDATION: BLM’s proposed expansion of timing limitations for big game species, particularly under Alternatives B and C, require full justification. BLM must also recognize that it cannot impose new timing restrictions on existing leases simply because a plan amendment has been prepared.

3.3.2.1 – Fish and Wildlife - Big Game

COMMENT: Despite ongoing oil and gas development in the planning area, big game herd populations are healthy and flourishing. The big game population tables in Chapter 3 (tables 3-16, 3-17, and 3-18) indicate that, with the exception of the Maybell pronghorn herd, CPW population estimates for elk, pronghorn, and mule deer herds are either above or within the CPW’s population objective ranges. In fact, some populations considerably exceed CPW’s objectives. BLM has proposed unnecessary restrictions on oil and gas development that do not correspond to the current status of big game populations in the planning area. Accordingly, the timing limitations, thresholds, and other restrictions on oil and gas development within big game habitats are unnecessary, unreasonable, and unjustifiable.

RECOMMENDATION: The BLM must eliminate the restrictions on oil and gas development, including acute and collective thresholds, in big game habitat given the health of big game herds in the planning area.

Table 2-5 Fish and Wildlife – Raptors

“Permitted land use activities within 1/4 mile of functional raptor nest sites (including woodland sites) or within 1/2 mile of the nests of special-status raptor species would be subject to relocation or design modifications to preclude, or reduce to acceptable levels, surface occupancy or use that reduces or deteriorates the extent and continuity of nest and foraging habitat.”

COMMENT: BLM intends to require relocation of a well site or design modifications if such activities are within 1/2 mile of the nests of special-status raptor species. These buffers significantly exceed the U.S. Fish and Wildlife Service’s (FWS) recommended restrictions for oil and gas activities around nests, which call for 200 meter (660 feet) buffers. The ½ mile buffer is unreasonable has not been justified in the RMPA/DEIS.

RECOMMENDATION: The FWS' NSO restrictions for special status are adequate and should be relied upon by BLM. Accordingly, the buffers in the final RMP need to be modified to comport with the FWS' recommendation of 200 meters (660 feet) around nests.

Table 2-6 – Fish and Wildlife – Grouse

COMMENT: BLM does not adequately describe how this planning effort will be impacted by ongoing national efforts to amend RMPs with additional protections for Sage-grouse. The RMPA/DEIS fails to clarify how the proposed restrictions for sage-grouse will be applied under subsequent national efforts to amend RMPs for sage-grouse.

RECOMMENDATION: BLM must clarify how the RMPA will be impacted by ongoing national efforts to revise RMPs to add additional protections for Sage-grouse. Further, BLM must recognize in the RMPA that protection measures for sage-grouse are subject to modification in accordance with BLM's subsequent amendment of the RMP to incorporate additional protection measures from a separate district-wide EIS for GSG management that is currently being developed by the Northwest Colorado BLM District Office.

COMMENT: BLM has failed to justify radical increases in the application of timing stipulations under Alternatives B and C. Moreover, we strongly oppose the application of the proposed timing restrictions on production activities. In so doing, BLM would eliminate valid existing rights by preventing the operator from economically developing their oil and gas resources. BLM has also failed to acknowledge the safety factors which would arise from such an action, which could leave the agency liable for any problems that stem from the restriction. In order to conduct safe and effective oil and gas operations, it is imperative that operators have, at a minimum, limited access to well locations year-round to perform inspections, maintenance and other obligatory operations.

RECOMMENDATION: It is crucial for BLM to recognize that certain inspection and maintenance activities must be conducted regularly. We strongly urge BLM to remove language regarding the application of timing limitations on production activities in the alternatives in the final RMPA.

COMMENT: Surface disturbing activities would be prohibited from April 15 through July 7 within suitable nesting/early brood habitat occurring within 4 miles of active and inactive leks, or in defined habitat parcels greater than 4 miles from leks that have supported nest/early brood functions within five previous years (152,500 acres). BLM has not substantiated the need for additional protections within 4 miles of a lek during the nest and brood rearing seasons.

RECOMMENDATION: BLM must consider the impact such a limitation will have on new and existing leases in the DEIS before incorporating it into the FEIS to ensure it is based upon sound science.

Table 2-7 Fish and Wildlife - Migratory Birds

COMMENT: We strongly oppose proposed restrictions in Alternatives B and C to seasonally prohibit activities in "higher quality habitat" from May 15 to July 15. Further, we are unable to fully evaluate the impacts of these restrictions because BLM has failed to provide maps of the purported "higher quality habitat" discussed in Table 2-7.

RECOMMENDATION: BLM must define and map “higher quality habitat” and provide in depth justification for these seasonal limitations for certain activities in those areas in the FEIS.

Table 2-8 – Fish and Wildlife – Fish

COMMENT: We are opposed to provisions in Alternatives B and C where BLM would seek agreements with State and privately owned or controlled water rights. It is inappropriate for BLM to attempt to acquire private property rights.

RECOMMENDATION: We recommend that BLM eliminate this language from Table 2-8 and support the State of Colorado’s on-going efforts to acquire in-stream flows.

Table 2-9 Special Status Animal Species

COMMENT: We oppose provisions in Alternatives B and C whereby BLM would seek agreements with State and privately owned or controlled habitat rights. It is inappropriate for BLM to attempt to acquire private property rights. BLM would consider acquisition, from willing landowners, of private mineral and surface estate with high black-footed ferret habitat value within ferret management areas and would apply applicable management provisions and lease notice and lease stipulations pertinent to oil and gas development activities.

RECOMMENDATION: BLM should eliminate this language from the FEIS.

Table 2-10 Special Status Plant Species

COMMENT: BLM’s proposed restrictions for special status plant species are unreasonable as they would preclude oil and gas development in any area that could contain a special status species. Further, BLM proposes to use the same restrictions for several plant species listed under the ESA as those that have only been proposed. Imposing the same restrictions on non-listed species as listed species is unjustified, excessive, and unnecessary.

RECOMMENDATION: BLM must eliminate the restrictions proposed for special status plant species and craft restrictions for non-listed plant species that are less restrictive than those for listed species.

EXCEPTIONS, WAIVER, AND MODIFICATION CRITERIA

Appendix A – Oil and Gas Leasing Stipulations and Lease Notices

“The RMPA serves as the vehicle for explaining to industry and the public the conditions under which exceptions, waivers or modifications of lease stipulations may be granted. All circumstances for granting an exception, waiver or lease modification must be documented in the RMPA.”

COMMENT: BLM has failed to adequately document how acute and collective thresholds are to be used in the planning area, as well as the specific conditions under which exceptions, waivers, or modifications of lease stipulations may be granted in conjunction with the thresholds.

RECOMMENDATION: We urge BLM to provide more specific information on the conditions under which exceptions, waivers or modifications may be granted in the final RMPA.

Timing Limitation Stipulations

BLM notes that an exception is “**A one-time exemption for a particular site within the leasehold; exceptions are determined on a case-by-case basis; the stipulation continues to apply to all other sites within the leasehold.** (Emphasis added.) On the other hand, BLM defines a lease modification as “**a change to the provisions of a lease stipulation, either temporarily or for the term of the lease. Depending on the specific modification, the stipulation may or may not apply to all sites within the lease hold to which the restrictive criteria are applied.** (Emphasis added.)

COMMENT: Industry is puzzled and concerned that BLM is proposing a higher standard for exceptions to lease stipulations, which are short-term, than for lease modifications, which can result in permanent changes to the stipulation.

While the criteria for exceptions and modifications may be essentially the same, two significant differences are cause for concern:

1. *BLM will require clustered development for TL-05 only for exceptions;*
2. *BLM will require CPW monitoring information for TL-05 modifications but not exceptions.*

Clustered development requires a considerable long-term investment by the operator. It is crucial for BLM to recognize this fact and adjust its requirements to provide the certainty needed by operators before such commitments can be made. We are concerned that operators’ sizeable investments would not be protected by a one-time lease exception whereas a lease modification could result in a longer-term adjustment to the lease stipulation(s) in question.

RECOMMENDATION: It would improve certainty for operators if clustered development is pursued only in situations where a lease modification would be granted or if an exception is granted for the life of the project. In so doing, operators would be provided more certainty by BLM that their investment will be for long-term activities rather than simply a single season. We also recommend that BLM reconsider both the criteria for and proposed use of exceptions and modifications for all the timing limitation stipulations presented in the draft RMPA.

COMMENT: It is vague how TLA exception and modification criteria will be utilized. Specifically, it is unclear whether only one criterion must be met in order to obtain an exception or modification or whether one or more criteria must be met.

RECOMMENDATION: BLM needs to clarify which criteria will be employed for which action. It is also important to provide timeframes for both exceptions and modifications. It would also be beneficial for BLM to adopt longer timeframes in situations where the agency would seek clustered development, regardless of which mechanism is used.

CULTURAL RESOURCES

Table 2-12 Cultural Resources

COMMENT: We object to the imposition of NSO stipulations in designated cultural resource areas because a CSU stipulation would provide the same level of protection without the necessity of the exception process in situations where it would be warranted. This approach would reduce the unnecessary paperwork and delay associated with the exception process.

RECOMMENDATION: BLM needs to eliminate the use of NSO stipulations in cultural areas, instead utilizing CSU stipulations.

4.6.1 Cultural Resources

COMMENT: BLM has significantly overstated the negative impact oil and gas operations have on cultural resources. Contrary to language in the RMPA/DEIS, activities associated with oil and gas development have historically increased the discovery and subsequent preservation of previously unknown historic and cultural resources. The Anasazi Heritage Center in Dolores, Colorado is a prime example of how industry has significantly contributed to the understanding of our cultural resources.

RECOMMENDATION: The BLM must recognize that oil and gas activities will actually result in the discovery and preservation of unknown cultural and historic resources and devise its management strategies accordingly.

VISUAL RESOURCES

Table 2-14 – Visual Resources

COMMENT: The visual restrictions proposed under the preferred alternative overlap with existing leases and development. In accordance with existing statutes and as interpreted by the Interior Board of Land Appeals (IBLA), we remind BLM that it does not have the authority to impose new visual constraints on pre-existing leases and development. As such, BLM is also prohibited from attempting to use conditions of approval to accomplish these new restrictions. We refer BLM to *Southern Utah Wilderness Alliance, et. al.*, 144 IBLA 70, 84-88 (1998) which has made it clear that BLM cannot impose visual resource objectives inconsistent with lease rights and that BLM must fully consider existing oil and gas operations and leases when developing VRM objectives during the planning process.

RECOMMENDATION: BLM's proposed VRM management restrictions under the preferred alternative are unnecessarily restrictive and would prohibit existing lessees and operators to develop projects that require rights-of-way or facilities within newly designated Class I and Class II areas that encroach upon lands where operators have already established valid existing rights. Moreover, it is not enough to allow for exceptions to be granted for temporary drilling rigs if semi-permanent structures would be prohibited. We recommend that BLM reconsider its visual objectives to ensure they do not compromise valid existing lease rights, ongoing projects and do not unnecessarily preclude future development in the planning area.

Map 3-21 Visual Resource Inventory Areas

COMMENT: BLM has failed to include maps of its VRM designations in the RMPA, including the Thornburgh/Battle of Milk Creek viewshed. Since it is evident BLM intends to apply stipulations or COAs to land use authorizations, permits, and leases to mitigate impacts on visual resources in these areas, it is imperative for industry to know where each VRM classification will be applied. It is currently impossible to fully evaluate the impact of VRM designations on existing and future oil and gas operations in the planning area.

RECOMMENDATION: BLM must provide maps of each VRM classification by alternative as well as full justification for each classification in the final RMPA. In addition, all restrictive VRM classes must avoid existing development activities as well as areas leased without special stipulations.

AIR QUALITY

GENERAL COMMENTS

As provided by law, the State of Colorado has accepted and already bears the responsibility to protect the quality of air throughout the State as primary implementers of the National Ambient Air Quality Standards (NAAQS). The Clean Air Act (CAA) section 107, 42 U.S.C., § 7416, requires “...*such State or political subdivision may not adopt or enforce any emission standard or limitation which is less stringent than the standard or limitation under such plan or section.*” Therefore, as part of the State’s delegated authority, its emission standards are as good as or more stringent than federal standards.

The State’s responsibility is realized through its delegated authority from the Environmental Protection Agency (EPA) through comprehensive regulations administered by the Colorado Department of Public Health and Environment (CDPHE). (In fact, the CDPHE recently issued regulations for oil and gas-related emissions.) The State regulations which require the oil and gas industry to attain and/or maintain the air quality are accomplished through oversight of oil and gas activities within the entire state, regardless of land ownership. Consequently, we strongly object to the proposal contained in the DEIS/RMP whereby BLM is seeking to promulgate additional air standards that obviously duplicate existing state and federal laws through additional agencies.

We recognize that BLM has authority under the Federal Land policy and Management Act (FLPMA) to “*manage lands in a manner that will protect the air quality and atmospheric values; and that BLM may manage the pace, place, density and intensity of leasing and development to meet air quality goals.*” However, FLPMA does not grant BLM the authority to establish a separate air quality program from the state to regulate air quality impacts. Such a program is only with the State’s purview and BLM’s proposal constitutes a complete duplication of effort and waste of diminishing federal revenues; such action will only result in confusion, conflict, and possible litigation.

Appendix J – Air Resources Management Plan

The oil and gas industry is willing to work with BLM to construct a reasonable plan to manage air resources within the planning area. However, as written the Air Resources Management Plan (ARMP) exceeds BLM’s authority over air quality and places undue burden on the industry and must be abandoned in the FEIS.

Importantly, there are several significant flaws contained in the Appendix which render it highly onerous and unacceptable to the operators.

General Conditions

“This ARMP may be modified as necessary...without maintaining or amending the RMPA/EIS.”

COMMENT: BLM’s Planning Handbook at H. Determining When to Update Land Use Plan Decisions through Maintenance Actions, directs, *“The BLM regulation in 43 CFR 1610.5-4 provides that land use plan decisions and supporting components can be “maintained” to reflect **minor changes** in data. Maintenance is limited to further refining, documenting, or clarifying a previously approved decision incorporated in the plan. Maintenance must not expand the scope of resource uses or restrictions or change the terms, conditions, and decisions of the approved plan.”* [Emphasis added]

RECOMMENDATION: We highly doubt that any change to the ARMP could be considered “minor” since any change would have the potential to significantly impact the components of the plan, not to mention oil and gas operators and other public land users within the study area, such as coal mining. We strongly recommend that BLM eliminate this statement from the FEIS and commit to all users that any change to the ARMP will be made public and that consultation with public land users prior to making any modification to an ARMP will be standard practice. We believe that such consultation can only be accomplished through a RMP amendment or revision, in accordance with the BLM’s Planning Handbook.

COMMENT: Item 6 indicates BLM will collect a wide range of data, including emissions, monitoring data development activities, and overall trends, and then under item 7 and 8 open up adaptive management strategies that may include reduced operations, reduced pace of development, and additional controls.

RECOMMENDATION: The point needs to be made that adaptive management strategies will be based upon specific triggers, such as actual monitored concentrations of ozone. Such triggers need to be clearly outlined in the FEIS. Specifically, the FEIS must clarify “what” will be used to initiate any of the management actions.

Monitoring

“BLM may require project proponents for oil and gas development projects to conduct pre-construction air modeling within or adjacent to proposed development areas. BLM’s stated purpose is to establish background concentrations of air pollutants, determine long-term trends in air pollutant concentrations, and to determine the effectiveness of air pollutant control strategies.”

COMMENT: BLM has failed to justify all such requirements in the DEIS. For example, BLM indicates it will require a project proponent to provide a minimum of one year baseline ambient air monitoring data for any pollutant of concern. This requirement of a year’s worth of monitoring data is excessive and, frankly, makes one question the efficacy of BLM’s entire ARMP. Moreover, no mention is made of the impacts these activities could have on the timing of oil and gas projects.

RECOMMENDATION: BLM must clarify in the FEIS how long such monitoring will be required and clearly explain its rationale why such monitoring is even necessary. BLM also needs to consider the fact that resulting operational delays could result in operators being unable to exercise their lease rights within

the timeframe of the lease. We are also concerned that BLM expects the oil and gas industry to conduct the time-consuming and expensive air quality monitoring projects because the agency has neither the funding nor the staff to conduct such an exercise. This is unacceptable to the industry.

Mitigation

COMMENT: BLM indicates it will require additional air emission control measures, apply mitigation to emission sources not regulated by CDPHE, reduce the pace or scale of development, project specific emission control measures as outlined in Table 1, and a contingency plan for reduced operations.

RECOMMENDATION: None of these proposed measures are within the expertise or authority of BLM and must be eliminated from the FEIS. We recommend that BLM instead work with CDPHE rather than devising a new, duplicative set of mitigation measures.

RECOMMENDATION: Following are additional recommendations related to Appendix J:

- The discussion must acknowledge the fact that if a winter-time ozone exceedance is observed, that modeling techniques may not be used to justify controls, due to the limitations of state-of-the art of the modeling technology.
- Given that ozone is generated by existing as well as future emissions, the actions could include, as an alternative, controls or operations at existing sites in lieu of reducing operations or controlling the new (permitted) sources. This approach allows operators to find the most effective means of reducing emissions, if necessary, while still achieving the goals to preserve air quality.
- Before establishing a control technology, or management activities under Appendix J, the modeling must establish whether the ozone that is generated is limited by NOx or VOC emissions in order for the strategy to have the desired effect on ozone levels.
- We recommend that the FEIS include a discussion of the implementation of state and federal permitting rules and how those rules would effectively implement the controls or operations included in the Plan. BLM needs to avoid overlapping reviews and approvals since they would impede implementation of an effective management Plan.

Air Resources Technical Support Document

"This Air Resources Technical Support Document (ARTSD) explains the data and methodologies used to analyze potential air quality impacts resulting from future oil and gas development in the Colorado Bureau of Land Management (BLM) White River Field Office Planning Area (WRFO). This effort included atmospheric dispersion and photochemical grid modeling to predict concentrations of specific pollutants in and around the WRFO. Specifically included in this document are descriptions of the following air resource and climate change assessment methods."

GENERAL COMMENTS

COMMENT: At several locations in the ARTSD, data are presented that predict an exceedance of a standard or indicate an impact that is above what are characterized as thresholds of impacts. There are acknowledged considerable conservative estimates built into the analyses, including estimates of actual emissions, source characterization, background data, and projections of RFD and RFFA.

RECOMMENDATION: In each instance where such an exceedance is predicted under these conservative approaches, the text needs to be enhanced to carefully frame the credibility of those data, along with the limitations in interpreting or using that information to judge impacts or limit operations. Without redoing the emissions or modeling efforts, the presentation must be improved by more carefully and accurately characterizing the limitations and usefulness of the data that are presented.

COMMENT: Industry provided numerous comments regarding the air quality analysis that was conducted for the Colorado River Valley Field Office (CRVFO) DEIS. The responses and interpretations regarding those comments may have an effect on the analyses for the WRFO air quality impacts. These include the reasons for “pairing” the individual alternatives for each study (why the pairings are selected and how the operations may be limited by such pairings).

RECOMMENDATION: As pointed out in those comments, the different emissions scenarios require clarification: the scaling-up approach for source groups among the alternatives; the local impacts including exceedances near high-emitting sources must be addressed, along with detail regarding the inherent inaccuracies in the peak impact data that were generated; the very low visibility impacts for all alternatives, except for Alternative A, in the CRVFO analysis; and how the comment on page 5-30 of the CRVFO analysis (Section 5.5.3.2) “*Oil and gas sources included in the WRFO emissions inventories were assumed to be subject to emission control based on management actions included in the WRFO RMP/EIS air quality analysis*” is reflected in the cumulative analysis that is presented here. Confirm that this statement does not directly obligate any actions in the WRFO Air Resources Management Plan.

2.3.3 Alternative Descriptions

COMMENT: Alternative A essentially imposes no special controls on upstream oil and gas emissions. This is used as a basis for comparison of impacts from the alternatives. During the time of the preparation of the ARTSD, the Environmental Protection Agency (EPA) promulgated a full array of standards for new upstream oil and gas sources that apply to all future new or modified sources (New Source Performance Standards, 40 CFR 60 Subpart OOOO). It is evident that no consideration for that regulation is included in the analysis, despite the fact that the standards were proposed in August 2011 and finalized in April 2012; nor is this rule applied to other oil and gas sources in the RFD category, or at sources not under control of the BLM.

RECOMMENDATION: It is crucial for the omission of the new EPA rule to be acknowledged and an estimate of the reduction in VOC emissions that are associated with implementation of the rule must be provided in the FEIS. It is essential that the analysis also provide some indication of the effect of this regulation on future projections of emissions of VOCs in particular, and how the results that are presented could be affected. See the assumptions about venting during completion and testing, controls on dehydration units, compressors, and tanks, in Table 2-3 of the ARTSD. Specific issues to address are:

- BLM fails to include an exemption for green completions that apply to specific categories (wildcat, delineation, and low pressure gas wells) or apply a phase-in until 2015. The federal regulation covers only natural gas wells, not wells that are drilled for oil.
- Storage vessels that emit less than 6 ton/year are exempted from controls under the federal rule, but no such categorization exists in the ARTSD or DEIS. BLM is silent on any exemption for mobile or skid-mounted temporary storage vessels, regulating isolated tanks, or the use of floating roofs that may be used as an option.
- The federal rule requires no-bleed or low-bleed pneumatic controllers that emit no more than 6 scfh/hour of process gas. It is not clear how the BLM requirement to control pneumatics would be interpreted or whether that control level is applied to the proposed alternatives or to the RFD sources.
- The federal standard applies to compressors at gathering sites, and further downstream, but not explicitly at “field sites” as mentioned in the BLM table. BLM must clarify the extent of the compressor controls that are required, to ensure they comport with EPA requirements.

EPA provided a detailed emissions and cost analysis in developing 40 CFR 60 Subpart OOOO, including the efficacy and benefit of adding controls on smaller sources. The FEIS needs to evaluate whether compliance with this air quality rule is equivalent to the BLM requirements (for Alternatives B, C, and D), or may be used in lieu of compliance with the BLM requirements. BLM’s analysis must also describe how the regulatory agency interactions and overlapping requirements would apply to state, federal (EPA on Indian Country lands), and BLM rule implementation.

COMMENT: The analysis includes a rough characterization of stack parameters for RFFA sources, noting that existing sources would be included in the background concentration that is assumed for the analysis. However, background data are taken from as far away as the Colorado Front Range (NO₂ in Colorado Springs, for example), and would not capture any background effect locally.

RECOMMENDATION: It is important for the air quality management plan to address adverse impacts, to clearly depict the emissions from “existing” local sources as well as total RFD sources. There is not a clear presentation of the relative magnitude of these emissions, especially if BLM is aiming at implementing a management strategy that constrains proposed development. It is necessary for both operators and BLM to understand if options to control other existing higher-emitting sources in lieu of controls on the WRFO future sources would meet the same air quality objectives as effectively or more effectively.

COMMENT: The setup of the near-field modeling includes a “gas plant” in the center of four separate producing well pad operations.

RECOMMENDATION: The installation of gas plants would be rare, and the likelihood of four producing pads in such close proximity (Figure 3-2) is extremely remote. Moreover, it unclear how the three-year average of the 98th or 99th percentile for NO₂, SO₂ or PM_{2.5} was actually calculated. Results generally show impacts that are within the standard, but the nature of how the analysis relates to the 3-year average needs to be clearly explained for 1-hour NO₂, 1-hour SO₂, and 24-hour PM₁₀.

3.2. Near-Field Assessment of Air Quality Impacts

COMMENT: On page 3-11, the near-field NO₂ impacts are assessed using Tier 2 engines, which presumably operate at any time during the year.

RECOMMENDATION: The modeled results shown in Table 3-5 are extremely conservative, which is stated but should be emphasized. Moreover, the results show that Tier 2 engines would still comply with the near-field air quality NO₂ standards, thereby obligating a discussion regarding why Tier 4 engines are mandated for the Alternatives after 2015.

4.0 Calpuff Far-Field (Non-Ozone) Analysis

COMMENT: Section 4 of the ARTSD addresses impacts on Class I areas and on impacts at Class II receptors that are not in the near-field analysis.

RECOMMENDATION: The discussion needs to include specific analyses of impacts that are near existing sites and are affected by existing sources, configurations, and operations that are not well characterized, especially since there are predictions of exceedances of the standards. CALPUFF modeling guidelines indicate that this model is generally not used for impacts at receptors that are within 50 km of the sources being evaluated. That factor and any impacts that are at receptors within 50 km of the modeled sources must be identified, particularly if those impacts approach or exceed standards or thresholds.

COMMENT: One of the important aspects of this analysis is to accurately characterize the differences in impacts among the alternatives being analyzed. On a regional (non-Class I) basis, the data are provided Appendix F Section 3.0, and the comparisons are not provided in the text of the ARTSD. For example, for the 1-hour NO₂ standard, the largest Class I impacts are at Flat Tops WA, but those differences range only from 0.76 to 1.66 µg/m³, within a standard of 189 µg/m³ and well below the standard even with the added background. Data are provided for the Class I and sensitive Class II areas, as well as the gridded Class II receptors that are not in “the high potential O&G development areas of WRFO and CRFFO.”

RECOMMENDATION: It is crucial for the FEIS to point out that the differences in impacts of alternatives on these receptors are minor. See Tables F-4 through F-15 for comparable conclusions for each of the pollutants’ impacts in Class I and sensitive Class II areas.

Tables F-4 through F-15

COMMENT: For the Class II receptors analyzed in Tables F-4 through F-15, the results also have been presented in Section 4 of the ARTSD and documented in detail in Appendix F. In areas where impacts are judged to reach more than 50% of the ambient standard, it is particularly important to understand the implications of the results, especially if impacts are projected above the standards, as is the case here. Importantly, the footnote in Appendix F, Table F-4 indicates that the calculated 3-year average of 1-hour NO₂ impacts could be based on different receptors for different years (although it is a single receptor for each individual year). This could vastly overestimate the impact, especially for the 1-hour standards, of the proposed operations. The statement in Section 4.3.1.1 of the ARTSD contradicts the footnote on Table F-4, regarding the receptor specification. This may be immaterial for some pollutants, but since

the background 1-hour NO₂ is crudely estimated using 1-hour data from Colorado Springs (See Table 3-1 of ARTSD), for any future management actions, the effect on this standard needs to be better estimated, and there are projections of different impacts among the alternatives that should not be used to evaluate the different Alternatives.

RECOMMENDATION: We recommend that BLM analyze each of the three receptors for each of the three years for Alternative C to calculate the extent of the overestimate of the impact on the 1-hour NO₂ standard.

Table 4-6

COMMENT: On Table 4-6 of the ARTSD and in the discussion of the cumulative impacts depicted in Figure 4-1 and discussed on page 4-17, the cumulative 1-hour NO₂ impacts on regional (non –Class I Areas) are predicted to be 462% of the standard. This is admittedly an over-prediction, but uses a weak characterization of how those impacts were calculated.

RECOMMENDATION: The text must explain (if accurate, from our reading of the approach) that these sources with exceptionally high impacts, above the standard, were not accurately characterized given that stack parameters were used to develop a single facility source characterization. Such modeling results must not be used in any further management actions until the details of these few sources and their more realistic impacts are developed.

BLM also needs to clarify whether this is the same impact that was addressed in comments on the CRVFO air quality technical analysis, from the scale-up of the emissions from the Exxon Mobil Enterprise Piceance Development Project Central Treating Facility.

Tables 4-8 through 4-11

COMMENT: For the 24-hour and annual PM₁₀ and PM_{2.5} impacts, Tables 4-8 through 4-11 show impacts above the standards in the “gridded Class II” areas for cumulative development, with the indication that this occurs under Alternative D.

RECOMMENDATION: It is essential for the text or tables to indicate quantitatively how this cumulative impact changes among the alternatives, rather than just Alternative D, if the results are to be used to compare impacts among alternatives. It may be prudent to depict results without adding the one emitting source that is admittedly poorly characterized. It is also necessary to clarify whether any of the alternatives have a “significant impact” at receptors where the 24-hour PM_{2.5} and 24-hour PM₁₀ exceedances are predicted; similar to what was done for annual PM_{2.5} and the annual PM₁₀. As was noted in comments on the CRVFO air quality technical analysis, CDPHE has obtained modeling results for the South Taylor mine area, showing impacts within the standards. We recommend that BLM merge the results of this more accurate modeling effort into the model results that are presented in the analysis.

4.3.2. Visibility

COMMENT: Visibility analyses focus on the highest impacts using the FLAG and the BLM method, using CALPUFF modeling approaches.

RECOMMENDATION: The limiting assumptions and approaches need to be elaborated in more detail in order to characterize the visibility results. In interpreting the results, the analysis also needs to describe or list wintertime exceedances, assumed background ammonia values during the winter, and other seasonal effects such as emissions that may lead to overestimating impacts using the approach. If wintertime meteorological conditions are the most adverse, a lower more realistic background ammonia concentration could lead to a substantial reduction in the incidence of visibility impacts above the thresholds.

COMMENT: Under the regional haze rule, the 98th percentile highest impact is used to assess impacts. See 40 CFR 51, Appendix Y, Paragraph III.A.3 Option 1.

RECOMMENDATION: We recommend that the visibility analysis focus more directly on the impacts from the proposed alternatives. Specifically, BLM needs to emphasize the fact that there are only two days of the 98th percentile visibility impacts above 1.0 dv, that this impact occurs in one year out of three and at only one Class I receptor area, and only for a portion of that area, and only for Alternative C. See Appendix G, Table G-17. The discussion also needs to address what pollutants and source groups are the major contributors (specifically how much is attributed to oil and gas NO_x emissions). Given the overly conservative approaches used in this analysis, the impacts to visibility at Class I areas are actually likely to be less than the modeled results.

COMMENT: On Page 4-34, the discussion confirms that the visibility impacts are conservatively estimated because emission decreases are expected to occur at existing sources in the RFFA inventory. Presumably these refer to the recently imposed Best Available Retrofit Technology requirements on regional power plants.

RECOMMENDATION: It's not clear from the emissions inventory whether all plants were included (Craig station is mentioned but not Hayden or the shut-down of Cameo). A more detailed discussion of the conservative assumptions (improved NO_x engine emissions and lower sulfur fuels) would be instructive in determining the results. The assumption of background ammonia is also critical to regional haze formation (nitrates and sulfates) and requires detailed discussion and validation in the FEIS. At a minimum, the limiting assumptions must be provided in the discussion.

5.0 Photochemical Grid Modeling Ozone Analysis

COMMENT: The detailed modeling for ozone includes an extensive review of existing data and a modeling effort that has significant limitations in predicting actual ozone levels. The final summary states that the WRFO operations will not cause or contribute to any exceedances of the 75 ppb ozone standard. However, some data and graphical information provided are not clearly interpreted to support this conclusion. The situation can be remedied by including text in the ARTSD that qualifies or limits the interpretation of the results, in a manner that is clearer and more direct than the text presented.

COMMENT: Modeling for ozone impacts is critical given that regional ambient levels have exceeded the current standard. The Gothic site (near Aspen, CO) is clearly the closest site that is included in the model performance evaluation for ozone.

RECOMMENDATION: Data in Tables 5-4 and 5-5 indicate that the model tends to over-predict the impacts at this site, and that factor should be emphasized. Additionally, the following corrections are needed:

- Correct the first paragraph in Section 5.7.2, as the ozone standard was not revised in 2010.
- Clarify Table 5-16, because it is unclear how the threshold <0 or $=1$ clearly divides the dates that are analyzed.
- In Table on page A-22 of Appendix A, there are some discrepancies in the calculations including the lb/hour-well for venting (16.73 lb/event, converted to lb/hour-well). It is not clear why completion venting and flaring should be the same for all alternatives, since the number of well completions would increase dramatically for Alternatives C and D.

COMMENT: The text in Section 5.7.4.3 discusses the model over prediction for specific days, and the graphics indicate significant levels above the standard. While the results need to be characterized carefully and accurately, there needs to be more discussion regarding why these impacts (the values shown) are not relevant to assessing WRFO sources. This is particularly true were comparisons to the Gothic and Shamrock monitors are quite good, but over-predictions in the Denver area are cited as the basis for accepting over-prediction.

Section 5.7.4.6 Time Series Plots Comparing Absolute Ozone Concentrations

COMMENT: The text in this section discusses the time series for nearby monitors, including Gothic.

RECOMMENDATION: The graphs in Figure 5-30 appear to contradict the discussion, which may lead to a misinterpretation of results. The basic ozone discussion needs a clear wrap up of impacts

CONCLUSION

In summary, we are extremely disappointed that the seven-year planning process has resulted in an unbalanced oil and gas RMPA DEIS with an extremely limited but highly restrictive range of alternatives. Industry is also very concerned BLM intends to abrogate valid existing rights, impose draconian and unjustified increases in restrictions, limit leasing in undeveloped shale formations, and proposes to create a new and duplicative Air Resource Management Program. In our view, BLM has failed to adequately address the needs of the oil and gas industry in what is clearly identified as an oil and gas amendment.

Rather than seeking ways to accommodate future development of extremely important domestic oil and gas resources while ensuring reasonable protection of other values, BLM has revealed either a distinct lack of understanding of the industry, its investments, its needs and the oil and gas development process or a mission to curtail future development at immense cost not only to the oil and gas industry but also to local communities, the State and the Nation.

The undersigned organizations do not support any of the alternatives analyzed in the DEIS. We strongly recommend that BLM revisit its proposed management approach by devising a new alternative for

inclusion in the FEIS that takes into full account industry's ability to mitigate impacts from their operations without resorting to the measures contained in all alternatives but Current Management. We also recommend that BLM revisit its analysis to ensure the assumptions contained therein are accurate based upon best available science and data.

We appreciate this opportunity to provide you with our views and concerns. We are more than willing to assist BLM in crafting a more reasonable, justifiable alternative that could be included in the FEIS. Please do not hesitate to contact us if you have any questions regarding our comments.

Sincerely,



Claire Moseley
Public Lands Advocacy



Spencer Kimball
Western Energy Alliance



David Ludlam
West Slope COGA

Cc: Helen Hankins – CO BLM State Director
Jim Cagney – Northwest District Manager
Kent Walter – White River Field Office Manager