STATE OF COLORADO

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Bill Ritter, Jr.
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BLM Oil Shale and Tar Sands Draft Programmatic EIS
Argonne National Laboratory
9700 S. Cass Avenue
Argonne, IL 60439

Re: *Draft Oil Shale and Tar Sands Resource Management Plan Amendments to Address Land Use Allocations in Colorado, Utah, and Wyoming and Programmatic Environmental Impact Statement (DES 07-60)*

To Whom It May Concern:

As the Governor of the State of Colorado, and in coordination with the Colorado Department of Natural Resources, Colorado Department of Public Health and Environment, and Colorado Department of Local Affairs (Departments), I respectfully submit the following comments regarding the Department of the Interior, Bureau of Land Management's (BLM) *Draft Oil Shale and Tar Sands Resource Management Plan Amendments to Address Land Use Allocations in Colorado, Utah, and Wyoming and Programmatic Environmental Impact Statement* (Draft PEIS). The Draft PEIS raises important issues for Coloradans, and all Americans, with respect to energy supplies, environmental protection, socioeconomic impacts, and national security. If BLM were to authorize a commercial oil shale industry in Colorado, such a development would likely constitute the largest industrial development in the State's history with enormous implications for all of Northwest Colorado and for the State itself.

For Colorado, there is much at stake in the outcome of this program. Colorado recognizes the importance of the oil shale resource to the country. In our uncertain world, a reliable, sustainable domestic oil-based resource is increasingly important. But equally important, from Colorado's perspective, is protection of the State's exceptional environment including our air quality, water quality, vegetation and soil resources. Northwest Colorado is blessed with a remarkably diversified economy in which agriculture, tourism, recreation, hunting & fishing, natural gas & mineral development, retirement communities, and their economic drivers co-exist in a relatively balanced and supportive way. Within the Piceance Basin, Colorado is beneficiary of some of the nation's most important wildlife resources, including robust elk populations and the largest migratory mule deer in North America. These wildlife treasures, the envy of other states, have gradually evolved and grown over the past century to the exceptional levels of today. The importance of the State's wildlife resources is not something Colorado takes for granted.

Similarly, Colorado is very mindful of the potential impacts of oil shale development on Colorado's water resources. The State is rapidly approaching full allocation of its Colorado River entitlements where Colorado will enter a new period of trading and sharing water between different users. If oil shale were to consume vast quantities of water, there would be corresponding impacts to the State's agricultural, recreational, and other energy sectors on the West Slope, the Front Range and even along the Eastern Plains. Hence, the State is very concerned that the water implications of this industry be understood prior to decisions regarding commercialization.

Therefore, the State places great importance on a thoughtful, comprehensive PEIS, whereby federal, state and local decision-makers will have the necessary tools in hand to evaluate what type of federal program makes the most sense at this point in time. Based on our evaluation of the Draft PEIS and the information in hand, it is premature for the BLM to make any decisions that allocate federal land to a commercial leasing program through its resource management plans or otherwise.

BLM must gain critical answers to many questions before any commitment to commercial leasing occurs. Equally important, BLM must similarly gain answers to such questions before any rules and regulations for commercial oil shale development can or should be finalized. Absent obtaining these answers, BLM and Colorado run the serious risk of development that will have tremendous adverse impacts on Colorado.

The State continues to believe that the best course of action is to see the research and development program authorized by BLM developed, tested, and monitored so the answers can be forthcoming. Colorado is host to five of the six federal research and development sites and we are confident these programs will yield the necessary information upon which rules and regulations and commercial leasing can be based.

<u>Importance of Northwest Colorado</u>

Northwest Colorado is blessed with diverse, exceptional natural resources and a vibrant, diversified economy. For starters, it is the home to world-class hydrocarbon resources, holding trillions of cubic feet of clean-burning natural gas which are currently undergoing an unprecedented and historically unanticipated gas development boom. In 2006, natural gas and other energy-related development accounted for 15 percent of direct and secondary employment in the region. Similarly, the region has one of the most important oil shale deposits in the world, as described below.

The region also supports superlative wildlife resources. The Piceance Basin is home to the largest migratory mule deer herd in North America, a robust migratory elk population, one of only six greater sage-grouse populations in Colorado, populations of Colorado River cutthroat trout, and a host of other wildlife species. These wildlife resources have been built up over millennia and are of long-term statewide and national economic, ecological, and aesthetic importance. Colorado's future is reliant on these resources remaining strong and healthy.

In the last twenty years, the region has developed a growing recreational tourism industry as well as a vigorous hunting and fishing community. In 2006, approximately 17,000 jobs were found to be supported by the tourism industry for the region including Moffat, Rio Blanco, Garfield, and Mesa counties, representing about 15 percent of the jobs in the area. About 20 percent of the tourism jobs in Northwest Colorado are in the outdoor recreation segment -- or about 3,400 jobs.

The region also sustains a healthy agriculture industry, a vibrant and long-standing ranching tradition, and growing retirement communities. Employment in the agriculture and ranching industries contribute between 6 percent and 15 percent of all base jobs in the counties in this region. Retirees comprise 13 percent of the population in the region and their spending supports 11 percent of the basic jobs.

As a result of its abundance of natural resources, Northwest Colorado is experiencing extraordinary growth in population and associated challenges. Housing costs in the region, roughly 35 percent below comparable Denver metropolitan area costs just six years ago, now often match or exceed Denver-area prices. Housing affordability is a significant challenge to these local communities, and the capacity of local communities to absorb growth is already largely consumed. Many workers are housed in hotels and motels rather than conventional housing. Many of the conventional resources available to local governments to meet infrastructure needs, like aggregates and construction materials, are being diverted to the gas patch. Much of the transportation infrastructure in these communities is in disrepair and is being severely stressed by growth pressures. The costs to repair infrastructure will require up-front financing, before revenues become available from traditional sources such as severance taxes, property taxes, sales taxes, and federal royalties.

This region is thus vitally important to Colorado's future. It is in a precarious balance in the face of extraordinary pressures precipitated by possibly the largest industrial development in the history of the state. Everything state and federal policy makers do with regard to Northwest Colorado must protect the resources, values, and diverse economies and interests found there, and we cannot simply think of this region as an area to be sacrificed for any one purpose.

A Rational Approach to Oil Shale Development

Northwest Colorado is also home to extraordinary oil shale resources, among the richest in the world, yielding 25 gallons of oil or more per ton of rock and estimated to hold nearly 500 billion barrels of recoverable shale oil, which is more than double the proven reserves of Saudi Arabia. Successful development of this resource could provide a substantial new source of domestic oil for the United States, which would have positive implications for our national energy policy and national security. Demand for oil is rapidly increasing while additions to reserves are in decline, both domestically and globally. The United States currently imports considerable quantities of oil from unstable regions and regimes whose interests may conflict with ours.

Remarkable as Colorado's oil shale resource is, however, it has remained in the ground since its discovery over a hundred years ago. Past attempts at development have failed due to a number of challenges -- technical, economic, and environmental -- that have yet to be addressed, notwithstanding significant investment over the last 40 years by both government and industry. Given the significant oil shale resource and exigent national energy interests, Colorado is committed to seeing ongoing oil shale research and development move forward. Colorado officials have assisted BLM in reviewing applications for federal research and development leases, and the State currently hosts five of the six federal research and development leases issued in 2006. If successful, these research and development projects could set the foundation of a subsequent commercial oil shale industry.

Therefore, Colorado maintains that a prerequisite to federal oil shale leasing, regulation, and development is the development of information that will allow us to address historic challenges. Construction has not yet begun on the federal research and development leases, and these projects are critical in showing that new proposed technologies work, that they can be utilized economically, and that they will not have unacceptable impacts on Colorado's environment and communities.

Colorado is committed to working with the federal government and industry on oil shale efforts going forward. But this requires a thoughtful approach -- economically, environmentally, and socially -- rather than a rush to premature leasing and regulatory decisions. Yet another boom and bust cycle for energy development will be dire for Northwest Colorado, a region that retains considerable skepticism and frustration over the collapse of the oil shale boom of the 1970s. Another failed attempt at oil shale development could preclude development of this nationally significant resource for decades. Sound public policy requires allowing research projects to yield information that will answer crucial questions and allow the industry to proceed with public support, and Colorado will roll up our sleeves to work with other stakeholders to ensure that this happens.

As set forth more fully below and in the attached technical comments from the Departments, the approach set forth in the BLM's Preferred Alternative is misguided and unacceptable. The BLM proposes to open nearly 2 million acres of federal oil shale resources to potential oil shale development, yet it lacks information about the technologies that would be used or their impacts on the environment. Colorado recommends selection of Alternative A, which would allow activities on federal research and development leases to continue and potentially expand to commercial leases. Under this alternative, 223,860 acres in the White River Resource Area's Piceance Basin would continue to be available for future oil shale leasing under existing BLM plans.

Because proven development technologies do not yet exist, the BLM cannot reliably analyze likely effects on water resources or air quality, impacts on local communities, energy requirements, or impacts on wildlife resources, and this information is critical to making sound land-allocation decisions in compliance with the law. The BLM also failed to consider adequately the cumulative impacts of its proposed land allocation decisions, and this important analysis will be impossible when performing lease-by-lease reviews as the BLM proposes. There is simply no substitute for doing a thorough, comprehensive analysis at the programmatic stage that might set the framework for later individual leases. The BLM also proposes, without analysis, to do away with long-standing carrying capacity thresholds for the protection of communities, the environment, and wildlife resources. Given the information missing from the BLM's analysis, a decision to make 360,000 acres available for oil shale leasing is ill-advised.

Similarly, the BLM lacks the information necessary to finalize any comprehensive set of rules and regulations for oil shale development. These regulations will establish environmental-protection standards, set royalty rates and address bonding, establish standards for diligent development, determine the allowable size of leases, and make myriad other important decisions that will directly and significantly affect how oil shale development proceeds. Until the basic answers are derived from the research and development program, establishing the rules for commercial leasing is premature.

Again, Colorado supports the research and development approach and pledges its continued support of that effort. Once data is available from the research and development projects, it is possible that land allocation decisions can be made and regulatory requirements can be developed. But making land available or promulgating regulations in the absence of underlying data from the research and development projects is reckless and will lead to long-term and significant negative impacts on Colorado.

DISCUSSION

The State of Colorado has consistently urged that federal oil shale leasing, regulation, and development be based on solid, reliable results that will emanate from the research and development leases. Such development could provide a substantial new source of domestic oil for the United States, but it must proceed in a reasoned and responsible manner. The process must take into account what has been learned from 100 years of efforts to develop this important resource, what we know and do not know about current proposed technologies, and the various changes in the environmental and social landscape of the region. Colorado is home to five of the federal research, development, and demonstration (RD&D) leases issued in 2006. The State supports an oil shale program in which research and development activities provide information that may inform commercial regulatory and leasing decisions. Because oil shale development will likely utilize untested technology with potential long-term impacts to Colorado's communities and the environment, the State has consistently opposed plans to commercialize leasing or production of federal oil shale resources prior to a meaningful evaluation of the results of the RD&D projects.

For these reasons, Colorado cannot support the BLM's selection of Alternative B – making 1,991,222 acres available for application for oil shale leases in the three-state region, including 359,798 acres in Colorado – as the Preferred Alternative in the Draft PEIS. As more fully set out below, Colorado recommends that the BLM adopt the **Alternative A** as the Preferred Alternative in the Final PEIS. Under this alternative, activities on federal research and development leases could continue and potentially be expanded to commercial leases, and 223,860 acres in the White River Resource Area would remain available for future oil shale leasing.[1] Colorado further recommends that the BLM explicitly commit to preparing a supplemental PEIS at a later date, when adequate information, including information from the RD&D leases, is available, prior to proceeding with the establishment of commercial oil shale regulations and subsequent offering of commercial leases.

Decisions about land allocations, regulatory requirements, financial assurances, taxation structures, and leasing should not be made until land managers and the public can reliably predict and understand the impacts that are likely to result from those decisions. Because the information necessary to develop that understanding does not yet exist, making any federal oil shale resources available for application for commercial oil shale leases is premature. It is highly probable that no production from the RD&D leases will occur within the next six years, and commercial oil shale production is not anticipated before 2020.

[1] BLM White River Resource Area, Record of Decision and Approved Resource Management Plan at 2-6 (July 1997).

Below are Colorado's summary comments about the BLM's management approach in the Draft PEIS. Supporting detailed technical comments from state officials with significant expertise regarding the potential for oil shale development's impact to Colorado's air and water quality, wildlife, communities, and quality of life are attached. From a regulatory standpoint, Colorado recognizes that there are several areas of complimentary jurisdiction and analysis. For instance, water quality issues arise in the technical comments of several Divisions, highlighting both the importance of this issue and the cross-cutting nature of the concerns raised by the possibility of oil shale development. As noted in the technical comments, the Draft PEIS identifies many significant concerns and contains several major deficiencies that must be remedied in the Final PEIS and before the BLM signs a Record of Decision (ROD). These include:

- The Piceance Basin contains unique or irreplaceable habitats for a host of wildlife species such as leks for greater sage-grouse, movement corridors for big game species, winter range for North America's largest migratory mule deer herd, and streams containing native cutthroat trout. The primary concern for wildlife due to oil shale development is the overall loss and fragmentation of this valuable wildlife habitat, the feasibility of reclamation of disturbed areas, and the damage that would accrue to wildlife populations. The detail provided in the Draft PEIS is insufficient to allow for an accurate or complete assessment of the cumulative impacts to wildlife habitats and populations that will occur from commercial-scale oil shale projects.

- The amount of water that may be available for oil shale development is a significant concern, as is the impact oil shale development poses to the State's entitlements under the Colorado River Compacts. We are also concerned about the impacts of oil shale development on existing instream flow segments in and adjacent to the leased land and any potential increases in flooding as a result. Finally, we are concerned about the interactions between oil shale development and the Colorado River Salinity Program and the Upper Colorado River Recovery Implementation Program. Oil shale development has the right to benefit from these programs, but adverse impacts must be minimal.

- The BLM's socioeconomic analysis did not address statutory and regulatory oversight relative to the licensing, inspection, and enforcement of labor camps (man camps), retail food establishments, wholesale food firms, schools, childcare, mobile home parks, public accommodations (hotels/motels) and campgrounds.

- There is tremendous uncertainty of what the environmental impacts will be on both surface water and ground water quality due to commercial shale extraction operations. The PEIS does not address the impacts of additional growth on water and wastewater infrastructure in nearby communities. The PEIS also does not address potential impacts of water withdrawals on flows upstream of wastewater facilities, and the concomitant reduction in permit limits that might result for these facilities.

- The PEIS does not present sufficient data to assess potential degradation of the human environment and resulting health impacts to the affected public, potentially resulting from direct or indirect exposure to contaminated media. Scientifically defensible conclusions about potential risks and health impacts cannot be developed until detailed RD&D results are available to better characterize the potential for community exposure and the toxic potential associated with different development alternatives, based on technology-specific processes and fate and transport characteristics.

• The Draft PEIS fails to document or consider the large amount of information about baseline air monitoring being conducted in Colorado. The BLM must discuss this monitoring and commit to conducting the monitoring studies needed in the future to assess baseline air quality conditions. This would include, for example, monitoring in both the Piceance Basin and the Flat Tops Wilderness Area. Further, there is no emissions or operating data from any of the five RD&D leases.

• All diversions and use of water must be done in compliance with Colorado Water Law. This will require all necessary approvals from the Colorado Water Courts, the Division of Water Resources and other governmental agencies, and gaining such approvals will require applicants to address all relevant technical concerns. The Draft PEIS fails entirely to acknowledge or discuss the need to comply with Colorado Water Law.

• There is no information about potential levels of Mercury, Ozone precursors, and Hazardous Air Pollutants occurring from oil shale development. This deficiency must be resolved prior to a Record of Decision.

• There is no discussion of the air quality impacts of the additional energy development for electricity generation that is an integral part of future commercial shale development on regional air quality levels (both for visibility and public health). If there is significant additional energy needed to develop this resource, then the impacts must be identified and disclosed in the BLM's PEIS.

• The Draft PEIS is woefully inadequate in assessing the needs and impacts of an industrial complex significantly greater than the infrastructure that exists today. While commercial oil shale development decisions will not be made until the 2012-2014 time frame (with commercial production around 2020), the same lead time will be required to develop water treatment and storage and power plants or networks to support such a commercial oil shale industry.

Preferred Alternative

The State of Colorado recommends that the BLM abandon its intention to make large areas of Colorado available for application for commercial oil shale leasing, and instead adopt Alternative A as the Preferred Alternative in the Final PEIS.

Colorado recognizes that oil shale development may offer potential to supplement the nation's energy supplies. Colorado's goal is that commercial oil shale development be done right – in a manner that avoids unacceptable and irreparable impacts on Colorado's land, air, water, wildlife resources, and communities and that minimizes those adverse environmental and socioeconomic impacts that would result from such development through front-end planning and financing and long-term monitoring and mitigation. According to the Draft PEIS, the lands the BLM proposes to make available for oil shale leasing in Colorado would result in production of 16 billion barrels of oil. Draft PEIS at 2-22. Elsewhere, however, the Draft PEIS concedes that "[f]uture production levels are unknown at this time," and that its discussion of impacts would necessarily be limited to "potential impact-producing factors." *Id.* at 4-2.

In view of the substantial adverse environmental impacts that could result from commercial oil shale development, and given the lack of reliable information and analysis to meaningfully assess likely impacts at this time, the only defensible alternative is Alternative A.

BLM argues that "the amendment of land use plans to designate lands as available for application for commercial leasing would have no impact on the environment" since the actual decision whether to issue leases would be made at a later date. Draft PEIS at ES-5. This is an inconsistent argument that inherently undermines the value of this document. In summarizing a comparison of "Potential Environmental Impacts" of the three alternatives on various resources – water resources, air quality, land use, wildlife, socioeconomics, etc. – the BLM repeatedly states that each resource "would not be impacted by land use plan amendments." *See* Draft PEIS at 2-55 to 2-84. Yet, in other places BLM indicates that the result of this action will "facilitate" or "make possible" commercial oil shale development. Draft PEIS at E-5 and 6-36. BLM cannot have it both ways. The bottom line is that the great uncertainty that currently exists about the potential impacts of commercial oil shale development means that any change to the current applicable Resource Management Plans relative to oil shale development is premature and insupportable – and not without consequences on the land, resources, communities, and economy.

Selection of the Alternative A would still allow activities on the five federal RD&D leases to proceed, and these leases could still potentially be converted to commercial production. Because concrete environmental and technological information is necessary to make long-term policy and land-management decisions, Colorado supports the RD&D efforts underway. Making additional lands available for application to lease prior to the results of these projects will foreclose the necessary comprehensive analysis of the direct, indirect, and cumulative environmental impacts from commercial oil shale in conjunction with non-oil shale activities planned or currently underway. In addition, oil companies own substantial holdings of oil shale in the Colorado's Piceance Basin.[2] Though the BLM acknowledges that 14 companies owned private oil shale lands in 1979, *see* Draft PEIS at 3-207, the Draft PEIS fails entirely to acknowledge the development potential of private oil shale holdings. Without substantially more information about the technologies to be used, their effects on the environment, the potential for oil shale development activities on private land, and the ability to effectively mitigate potentially significant environmental and socio-economic impacts, it is imprudent to allocate any additional federal lands as available for commercial oil shale leasing at this time. It is necessary to await the results from the RD&D projects before making additional federal oil shale resources available for application for commercial lease. Similarly, the results of these tests are necessary to inform the scope of rules and regulations for a commercial leasing program.

If planning for and implementation of oil shale development efforts are not done responsibly and thoughtfully in the first instance, there is a greater risk that development will be delayed, and that any development that does occur will have unacceptable impacts. More specifically, BLM's preferred alternative would subject a substantial portion of Colorado to uncertain impacts that are likely to be significant, and this will erode public and political support for the fledgling industry.

As noted by the RAND Corporation in Congressional testimony last year, the knowledge base about the economic, technical, and environmental feasibility of oil shale development is not yet adequate to support the formulation of a commercial oil shale leasing program.[3] This

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2 Federal lands overlie only about 80% of the estimated in-place oil shale resources, leaving 20% in private hands. *See* Bartis, *et al.*, "Oil Shale Development in the United States: Prospects and Policy Issues," RAND Corporation (2005) at 9.

3 Senior Policy Researcher James T. Bartis, RAND Corporation, "Policy Issues for Oil Shale Development," testimony before House Committee on Natural Resources, Subcommittee on Energy and Mineral Resources, April 17, 2007, available at http://www.rand.org/pubs/testimonies/CT279.

testimony noted that while a number of companies are making appreciable investments in oil shale research, "none of these firms has gathered technical information adequate to warrant a decision to invest hundreds of millions, if not billions, of dollars on first-of-a-kind commercial oil shale plants." RAND testimony at 3. The RAND Corporation found that "industry is years away from establishing commercial viability." *Id.*

Because industry is currently unable to commit its substantial resources to large-scale oil shale development, it is likewise premature for the BLM to select any alternative that would make federal oil shale lands available for application for commercial lease or to adopt leasing regulations at this time.

Missing Information

The decision to make federal lands available for application for commercial lease is "intended to facilitate the establishment of a long-term program of commercial [oil shale] leasing." Draft PEIS at ES-5. This program, in turn, would lead to development activities utilizing untested technology to convert kerogen to shale oil, with unknown potential long-term negative impacts to Colorado's environment, public health and welfare, wildlife, and communities. The BLM concedes that "impacts on specific resources located within the 1,991,222 acres [as provided in the Preferred Alternative] cannot be quantified at this time because key information about the location of commercial projects, the technologies that will be employed, the project size or production level, and development time lines are unknown." Draft PEIS at 6-36.

This finding triggers further information-disclosure requirements, according to regulations implementing NEPA. Because the information on oil shale impacts is essential to a choice as to whether to make land available for application for commercial oil shale leases yet cannot be obtained because it does not yet exist, the BLM is required to assess the relevance of the incomplete information and provide a summary of existing credible evidence relevant to the evaluation. 40 C.F.R. § 1502.22. The BLM, however, fails in the Draft PEIS to assess the relevance of the missing information on likely impacts of the oil shale development activities it is facilitating, and it provides only a general summary of the existing information. The BLM thus appears to dismiss the missing information as not necessary in assessing the propriety of making nearly 360,000 acres of federal oil shale resources available for application for commercial oil shale leases in Colorado.

Given the paucity of information concerning the likely impacts of commercial-scale oil shale development, as well as the contradictory interpretations of NEPA requirements, Colorado continues to support the RD&D approach as a way to obtain an important part of the missing information that is required to make a reasoned choice among the various land management and policy alternatives. Colorado will continue to oppose any commercialization plan that calls for commercial leasing, or for the promulgation of leasing regulations, prior to a meaningful evaluation of the RD&D projects and proper NEPA analyses.[4]

In order to be able to perform a meaningful environmental impact analysis and to reach a reasoned and informed decision regarding the feasible and appropriate scope of commercial oil

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[4] *See* Colorado Statement on Unconventional Fuels, Task Force on Strategic Unconventional Fuels, America's Strategic Unconventional Fuels, Volume I at I-79 (Sept. 2007), *available at* http://www.unconventionalfuels.org/images/Volume_I_ IntegratedPlan_Final_.pdf.

shale development, BLM needs to proceed now to develop the information needed to fill the information gaps that limit the effectiveness of the current PEIS analysis. For example, needed information includes:

a. Baseline air quality monitoring;
b. Baseline ground and surface water quality monitoring;
c. Baseline wildlife monitoring and specific conservation measures for deer, elk, sage grouse, and Colorado River cutthroat trout;
d. An analysis of the availability of water supplies;
e. An analysis of options for meeting power demands for oil shale development in a manner consistent with Colorado's renewable energy standard;
f. Paleoseismic studies of faults within the oil shale basin;
g. A thorough realistic housing analysis incorporating local constraints including buildable land and infrastructure; and
h. Baseline data for community infrastructure capacity that can be used to assess what additional infrastructure will be required to support oil shale development.

Cumulative Impacts

The BLM proposes to make large areas of Northwest Colorado available for application for commercial oil shale leasing, without conducting the required analysis of the cumulative impacts of doing so. While the BLM claims in the Draft PEIS that it will study the cumulative impacts of proposed oil shale development projects when it receives an application for a commercial lease, the proper time to evaluate the regional cumulative impacts of a new oil shale leasing program is at the PEIS stage. In 2007, the Colorado General Assembly unanimously acknowledged that comprehensive planning of energy development on a basin-wide scale should be performed in order to adequately assess cumulative impacts. *See* HB07-1298, *codified at* C.R.S. § 34-60-128(3)(d)(II).

The BLM is proposing to make hundreds of thousands of acres open to application for oil shale leases, which could lead to multiple applications for large-scale oil shale projects. Logistically, the BLM simply cannot analyze the cumulative impacts of this decision when performing NEPA review on a project-specific, piecemeal basis in response to an individual application for a commercial lease. For example, an accurate assessment of cumulative impacts would be impossible where there are multiple applications under review simultaneously, at various times of review, and without knowing the number and size of projects that will be proposed in the future. The BLM has provided no assurance that it will be able to perform an adequate comprehensive review of cumulative impacts for each individual application prior to consideration and review of additional applications.

It is important to understand the social and environmental circumstances present in Colorado today, as the analysis of cumulative impacts required by NEPA and requested herein is not merely an academic exercise. The State of Colorado is currently experiencing an unprecedented energy boom in many portions of our state. In particular, the areas that the BLM proposes to make available for application for commercial oil shale leases are experiencing rapid natural gas development. In Colorado's Piceance Basin, the BLM proposes to make 359,798 acres available for application for commercial oil shale leasing. Draft PEIS at 2-27. In this same area, the BLM is analyzing a change to management plans that could allow over 17,000 new natural gas wells to be drilled over the next twenty years.[5] In addition, the areas the BLM proposes to make available for application for oil shale leasing are seeing increased tourism and recreation opportunities. In 2006, approximately 17,000 jobs were found to be supported by the tourism industry for the region including Moffat, Rio Blanco, Garfield, and Mesa Counties, and tourism as a whole represents about 15% of the jobs in the area. Past research on segments of the tourism industry found that about 20% of the tourism jobs in Northwest Colorado came from the outdoor recreation segment -- or about 3,400 jobs. In the Piceance Basin's Game Management Unit 22, there were 4,582 deer and elk hunters in 2006.

Any oil shale leasing on top of this existing network of energy development and changing land uses will put significantly more pressure on an already fragile ecosystem and public temperament, and it will further stress the system that provides the goods and materials for infrastructure needs driven by the current demands.[6] Furthermore, the inherent limitation of the oil shale industry may be in the existing environmental standards for the area. The proposed gas development, under current leasing schedules, coupled with other current industry-based activities in the area, may leave only a small increment under existing environmental performance standards for oil shale. The limit may not be land, may not be economics, but rather the air and water quality standards themselves. This cannot be determined without a detailed cumulative analysis.

Thus, it is vitally important to the Departments and to the State of Colorado that the BLM proceeds cautiously and moves forward thoughtfully with the development of a commercial oil shale leasing program that truly looks at the cumulative impacts in a programmatic way. As the epicenter of the developable oil shale resource in the United States, Colorado has much to gain if this resource is developed responsibly, and much to lose if the risks are not assessed and managed appropriately.

A Programmatic Environmental Impact Statement is intended to provide a meaningful analysis of the impacts of an overall program, prior to proceeding with project-by-project approvals. *See Kleppe v. Sierra Club*, 427 U.S. 390 (1976) ("[W]hen several proposals for coal-related actions that will have cumulative or synergistic environmental impact upon a region are pending concurrently before an agency, their environmental consequences must be considered together."). Because of the absence of information to allow a meaningful assessment of the potential impacts of commercial oil shale development at this time, the Draft PEIS does not satisfy its intended purpose. Therefore, BLM should explicitly commit to preparing a supplemental PEIS at a later date, when adequate technical information is available and the agency is committed to conducting the necessary cumulative impacts analysis, prior to proceeding with commercial oil shale regulatory and leasing actions. Only in such a document may the BLM perform the analysis of cumulative impacts required by NEPA and demanded by responsible public policy.

Carrying Capacity Thresholds

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5 *See* Reasonable Foreseeable Development Scenario for Oil and Gas Activities in the BLM White River Field Office: Rio Blanco, Moffat, and Garfield Counties, Colorado, Executive Summary at 3, *available at* http://www.blm.gov/rmp/co/whiteriver/documents/RFD_Executuve_Sumnmary.pdf.

6 *See* DNR Executive Director Russell George on behalf of Governor Bill Owens, testimony before Senate Committee on Energy and Natural Resources, Oil Shale and Oil Sands Resources Hearing, April 12, 2005.

Recognizing the importance of resources in the oil shale region and the threat posed by large-scale oil shale development, the BLM's 1987 RMP for the Piceance Basin set "Critical Carrying Capacity" thresholds for oil shale development for air quality, annual growth rate of communities, wildlife, and water quality.[7] The Piceance RMP provides for continual monitoring of oil shale development in relation to the carrying capacity thresholds, and mandates that "[a] project exceeding any one of the thresholds will not be leased or approved as proposed." These carrying capacity management decisions were specifically incorporated when the BLM adopted a new RMP for the White River Resource Area in 1997: "The oil shale management decisions developed in the Piceance Basin Resource Management Plan (March 1985) are carried forward as decisions in this document (See Map 2-6)."[8]

Because the areas of the Green River Formation are relatively sparsely populated, boom and bust cycles associated with oil shale could have disastrous effects on the communities, stressing existing infrastructure with increased population and associated needs. Recognizing this, the 1987 Piceance Basin RMP set a carrying capacity threshold of 5-15% annual growth rate in communities. Because of the potential for significant effects on wildlife habitat from oil shale development, the Piceance RMP imposed a carrying capacity threshold for wintering mule deer. The RMP imposed on the BLM the obligation to preserve the habitat needed to maintain 24,900 mule deer (24,650 AUMs). This figure was found to be 83% of the actual wintering Piceance Basin herd of 30,000 on all lands, and to represent the minimum acceptable herd size agreed to by BLM and Colorado Division of Wildlife (CDOW) in 1987. The Piceance RMP also found that "[s]tringent wildlife habitat mitigation" could be imposed instead of prohibiting leasing, depending on actual site-specific and cumulative impacts to mule deer, although it neglects to set out any potential mitigation measures.

In the Draft PEIS, the BLM describes the carrying capacity of a system as being "the maximum level of activity that can be sustained within a specific area without significant, detrimental impact." Draft PEIS at 2-53. Nonetheless, and without analysis, the BLM appears to propose doing away with the carrying capacity thresholds for Colorado oil shale lands entirely. Though the BLM acknowledges that development of an oil shale lease "would represent a loss of habitat for these species and potentially a reduction in carrying capacity in the area," Draft PEIS at 4-72, it again relies on future, site-specific NEPA reviews to consider impacts. It states that "programmatic alternatives do not explicitly consider carrying-capacity thresholds nor propose that commercial leasing levels be constrained in the future by these thresholds." Draft PEIS at 2-53.

While the Departments cannot say with certainty that the numeric standards in the Piceance Basin and White River RMPs for carrying capacities continue to be the proper thresholds, the concept of carrying capacity thresholds should not be disregarded lightly. These carrying capacity thresholds have been in place for over two decades, imposing objective standards to guard valuable and imperiled public resources from the cumulative impacts of unchecked oil shale management decisions. Given that the BLM is here effectively deferring an analysis of cumulative impacts to the site-specific leasing stage, the carrying capacity thresholds are even more important. The BLM's apparent proposal to jettison these standards without any analysis of the impacts of doing so ignores the work of BLM and the State of Colorado through the years on the issue.

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7 BLM, White River Resource Area, Piceance Basin Resource Management Plan Record of Decision at 2-3, 2-6 (May 1987).

8 *See supra* note 1, *at* 2-6.

In the Final PEIS, the BLM should analyze data on the current populations of wintering mule deer and elk and update, if necessary, the number that must be supported for the benefit of the species. Likewise, the BLM should assess the likely socioeconomic impact of a significant new industry in the oil shale region, in conjunction with the current localized natural gas industry. The agency should also reevaluate the carrying capacities for air and water quality in order to assess whether they are currently adequate to protect these vitally important public resources.

The BLM's anticipated leasing regulations

The Draft PEIS attempts to address the BLM's proposal to amend resource management plans to allow for potential oil shale lease applications, as opposed to any regulations for such lease applications or a leasing program. However, the BLM has indicated that it expects to later promulgate such regulations pursuant to section 369(d)(2) of the Energy Policy Act of 2005. During recent stakeholder meetings, the BLM has also indicated that it intends to issue an Environmental Assessment (EA) in conjunction with such leasing regulations. Colorado is concerned that such an approach will not comply with NEPA.

It appears that the BLM's leasing regulations will address such critical issues as the leasing process, bonding, royalty rates, fair market value, and bonus bids. Such regulations would thus set in place factors that will directly and significantly affect how oil shale development proceeds. As such, promulgation of such regulations would constitute a "major federal action significantly affecting the quality of the human environment," and would require preparation of an EIS and signing of a Record of Decision prior to adoption. *See* NEPA § 102(C), 42 U.S.C. § 4332(2)(C).

According to the BLM, "Actions whose impacts are expected to be significant and which are not fully covered in an existing EIS must be analyzed in a new or supplemental EIS. An EIS should also be prepared if, after or during preparation of an EA, it is determined that the impacts of a proposed action are significant." *National Environmental Policy Act Handbook and Department of the Interior NEPA Guidance Manual 516, BLM Handbook H-1790-1*, at p. I-2.

While an EA may be used to decide whether to prepare an EIS, such an interim step is not necessary here. An agency need not prepare an EA if it prepares an EIS. *See* 40 CFR § 1501.3(a). Congress and the BLM have already determined that an EIS is appropriate for the BLM's proposed leasing program. Moreover, the BLM's Draft PEIS amending resource management plans repeatedly makes clear that due to missing and incomplete information, the BLM cannot adequately assess the potential impacts of commercial oil shale leasing at this time. There are thus serious questions as to how a NEPA analysis for leasing regulations (particularly a mere EA) could adequately tier off of, or otherwise rely on, the current Draft PEIS amending resource management plans.

Preparing draft leasing regulations without the benefit of data from the RD&D projects that these regulations would address will make any conclusions and recommendations premature, incomplete, and possibly irrelevant. While the State of Colorado will have to await the BLM's publication of draft leasing regulations before providing further comment, Colorado wants BLM to know in advance the test to which the State will put such proposals.

Conclusion

Thank you for this opportunity to comment. The State of Colorado believes that the issues discussed above and in the attached technical comments must be addressed in the Final PEIS.

We look forward to continuing to work cooperatively with BLM to ensure that the significant challenges associated with oil shale development are addressed in a thorough and protective manner.

Sincerely,

Bill Ritter Jr.

Bill Ritter, Jr.
Governor