

Herby

STATE OF COLORADO

Bill Ritter, Jr., Governor

DEPARTMENT OF NATURAL RESOURCES

# DIVISION OF WILDLIFE

AN EQUAL OPPORTUNITY EMPLOYER

Thomas E. Remington, Director

6060 Broadway

Denver, Colorado 80216

Telephone: (303) 297-1192

wildlife.state.co.us



*For Wildlife  
For People*

November 6, 2009

Thane Stranathan  
Uncompahgre Field Office  
2465 South Townsend Ave.  
Montrose, CO 81401

**Re: Bull Mountain Geographic Area Plan (Natural Gas Wells) Scoping Notice**

Dear Mr. Stranathan:

The Colorado Division of Wildlife (CDOW) thanks you for the opportunity to comment on the SG Interests (SG) proposed Bull Mountain Unit gas well development. CDOW is concerned with the proposed density and extent of development in the Bull Mountain Unit as the area provides high quality habitat for a variety of species, and contains important wintering habitat for big game. As you are aware, the scale of the proposed development is unprecedented for this relatively pristine area. Impacts to wildlife, especially cumulative impacts, may be far reaching. We are concerned about the potential long-term displacement of big game from areas proposed for development, and how that might affect the overall carrying capacity of the adjacent habitats and long-term population trends for big game in the area. We are also concerned about the potential loss of remote and primitive hunting opportunities within and immediately adjacent to areas proposed for development. These issues should be thoroughly evaluated and disclosed in your NEPA document.

Due to the extent of private lands overlying Federal minerals in the Bull Mountain Unit and the scope of this project, we encourage you to contact the Colorado Oil and Gas Commission (COGCC) during your scoping process for NEPA. COGCC recently implemented new regulations governing oil and gas development, with particular emphasis on protection of wildlife resources and water quality. Your original October 2008 scoping notice for this project indicated that the proponent would be working with BLM to prepare a Geographic Area Plan. We support that approach. In order to fully address cumulative impacts and streamline permitting for individual facilities, we encourage you to coordinate with COGCC to ensure that your process also meets the minimum requirements of a Comprehensive Drilling Plan or Wildlife Mitigation Plan under COGCC's new regulations.

As part of CDOW's efforts to work with COGCC to minimize the impacts from oil and gas development on wildlife resources, we have developed a set of wildlife best management practices (BMPs) for oil and gas development activities. These BMPs are intended to help oil and gas companies avoid and minimize impacts to wildlife resources by incorporating consideration of these resources into early planning and siting of facilities and infrastructure. They also contain guidelines for operations and reclamation, and include species-specific recommendations to avoid impacts. We have attached a copy of our BMPs that apply specifically to Gunnison County.

We encourage the applicant and the BLM to review the attached BMP document and incorporate as many of the recommendations as possible into planning this development. Note that Gunnison sage grouse, bighorn sheep,

pronghorn, and Gunnison's prairie dogs are not known to occur in the proposed project area, but they are included in the BMP document because of their occurrence in other parts of Gunnison County.

If you have any questions regarding these comments or the attached BMP document, please contact District Wildlife Manager Kirk Madariaga at (970) 527-4419.

Sincerely,



J Wenum  
Area Wildlife Manager, Gunnison

cc: CDOW- Spezze, Area File, Energy File  
COGCC – Thom Kerr  
Gunnison County

STATE OF COLORADO

Bill Ritter, Jr., Governor  
DEPARTMENT OF NATURAL RESOURCES  
**DIVISION OF WILDLIFE**

AN EQUAL OPPORTUNITY EMPLOYER

Thomas E. Remington, Director  
6060 Broadway  
Denver, Colorado 80216  
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[wildlife.state.co.us](http://wildlife.state.co.us)



*For Wildlife  
For People*

June 30, 2010

USDA Forest Service  
Paonia Ranger District  
ATTN: Gunnison Energy MDP  
P.O. Box 10030  
Paonia, Colorado 81428  
[comments-rocky-mountain-gmug-paonia@rs.fed.us](mailto:comments-rocky-mountain-gmug-paonia@rs.fed.us)

RE: Gunnison Energy MDP

Dear Forest Supervisor:

The Colorado Division of Wildlife (CDOW) has reviewed the Notice and Opportunity to Comment dated June 7, 2010, related to the Uncompahgre and Gunnison National Forests (GMUG) proposal to authorize Gunnison Energy Corporation's (GEC) Master Development Plan (MDP) for 16 natural gas wells from four multiple-well drill pads. We appreciate your staff's early coordination with us on this MDP, and the opportunity to highlight our concerns.

CDOW acknowledges the Operator's efforts to decrease the development's footprint and habitat impacts by planning to consolidate and co-locate facilities to the extent practical, and by locating pad sites on north facing slopes to decrease winter habitat loss for big game.

The three well pads located off of FS 851 are located in an elk winter concentration area. We recommend restricting construction, drilling, and completion activities at these pad sites between December 1 and April 15 to avoid displacement of wintering elk to nearby areas. The area also is frequented by black bears and has been subject to human-bear conflicts in the past. CDOW recommends that GMUG and the Operator educate employees about human-bear conflicts and require the use of bear-proof storage containers and trash receptacles at these locations.

The cumulative level of oil and gas development in the West Muddy Creek watershed is becoming a significant concern to CDOW. The proposed MDP is adjacent to the 19,645-acre, 150 well plan of development being prepared by SG Interests (SG) for the Bull Mountain Unit. It is also near the 16-well Comprehensive Drilling Plan completed by GEC in 2009. Although the operators in the area continue to explore additional oil and gas zones at various depths to determine their economic viability, there are proven oil and gas resources in the West Muddy Creek watershed based on existing development patterns. Cumulative impacts to wildlife resources from the existing development patterns should be evaluated in a more comprehensive analysis of oil and gas development in the West Muddy Creek watershed prior to authorizing significantly expanded development.

CDOW appreciates your staff's early coordinating with us, and the opportunity to highlight our concerns associated with this MDP. We look forward to continued coordination with your staff on this project.

Sincerely,



J Weatum  
Area Wildlife Manager

Cc:  
CDOW: Tom Spezzo, Kirk Madariaga  
USFS: Liane Mullson



## COLORADO PARKS & WILDLIFE

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300 New York Avenue • Gunnison, Colorado 81230  
970 641 7060 • 970 641 7883  
wildlife.state.co.us • parks.state.co.us

August 10, 2012

USFS Paonia Ranger District  
PO Box 1030  
N. Rio Grande Ave.  
Paonia, Colorado 81428

**RE: SG Interests Federal 11-90-9 #3 APD scoping comments**

Dear Mr. Broyles,

Colorado Parks and Wildlife (CPW) has reviewed the US Forest Service (FS) scoping Notice and Surface Use Plan for SG Interests proposed Federal 11-90-9#3 Gas Well Application Permit to Drill (APD). CPW attended an onsite of the proposed well location on April 27th, 2012 with representatives from SG, FS, Colorado Oil and Gas Conservation Commission (COGCC), and members from the Gunnison County Planning Commission. CPW submitted written comments to the COGCC for this proposed location on May 4<sup>th</sup> 2012. Our comments below reflect those recommendations.

**Background Information**

The proposed location is within an area mapped as Elk Winter Concentration Area. As outlined in CPW's April 20, 2012 comments to BLM regarding development of the Bull Mountain Unit (see Attachment), this winter concentration area is geographically isolated, making it very important for big game populations in the Muddy Creek Area. Elevation increases north, west, and east that make these adjacent areas largely inaccessible to big game during winter months. This proposed location is approximately 1.5 miles from the Federal Bull Mountain Unit on a south facing slope that is heavily utilized by wintering big game animals. Potential displacement of big game from this area could have significant negative ramifications for big game populations and recreational hunting opportunities in the area due to the limited availability of additional big game wintering habitats (see Figure 1 in attached CPW Bull Mountain Unit Comments).

Critical winter habitats are known to be a limiting factor on big game populations in western Colorado and other high mountain areas of the western United States (Sawyer et al. 2009, Bishop et al. 2009, Bartman et al. 1992). Recent research clearly documents that the ongoing human disturbance associated with oil and gas production and maintenance activities continues to displace big game long after drilling activities have ceased (Hebblewhite 2008, Sawyer et al. 2006, 2009, Sawyer and Neilsen 2010). These residual adverse impacts to wildlife occur from reduced habitat effectiveness regardless of site specific Conditions of Approval or Best Management Practices implemented by the

STATE OF COLORADO

John W. Hickenlooper, Governor • Mike King, Executive Director, Department of Natural Resources  
Rick D. Cobles, Director, Colorado Parks and Wildlife  
Parks and Wildlife Commission: Robert W. Bray • Chris Castellan • Jeanne Horne  
Bill Kane, Vice-Chair • Gasper Pasmone • James Pribyl • John Singletary, Chair  
Mark Smith, Secretary • James Vigil • Orson Wingfield • Michelle Zimmerman  
Ex-Officio Members: Mike King and John Salazar

operator to reduce impacts, and do not address the cumulative impacts of increasing well pad density and ancillary facilities (roads, pipelines, compressors, etc.) on the effectiveness wildlife habitats in the area.

#### Site Specific Concerns

CPW is concerned that the proposed location will unnecessarily fragment wildlife habitat and exacerbate functional habitat loss due to the additional direct and indirect habitat loss, and long-term human disturbance associated with drilling, production, and maintenance of this facility. We discussed several alternate locations for the facility that would avoid and minimize impacts to wildlife by reducing the length of the access road and pipeline, including several areas south of road 265A, an area adjacent to Gunnison Energy's existing storage yard (apx 1400ft southwest), and an area approximately 500 ft west of the proposed location (Alternate Location #1).

Any of the alternate locations identified would minimize disturbance and habitat fragmentation to wintering big game as compared to the proposed location. All of the alternate locations would decrease the access road and pipeline disturbance, and consolidate facilities and human activities near existing facilities and roads. In addition, Alternate Location #1 is over a small ridge, and would utilize topographic features to maintain a seclusion area for wintering big game. Based on the vegetation and topography, we estimate that the proposed location would impact a minimum of 40 additional acres of critical winter range as compared to Alternate Location #1. In 2003, a permit was issued by the COGCC at Alternate Location #1. This previously permitted well location avoids and minimizes impacts to wildlife more than the proposed location.

CPW requests that the FS quantitatively analyze the direct and indirect disturbances associated with these alternate locations as part of your NEPA evaluation. We encourage the FS to analyze the functional habitat loss and fragmentation associated with the proposed location, access road and pipeline using established avoidance and displacement distances for big game as summarized below by Hobbblewhite (2008).

Table 1. Summary of ungulate studies showing avoidance of roads and well sites, averaging results across seasons and habitat types.

*Author	Species	Avoidance Buffer (m)	
		Roads	Wells
Gillan (1981)	Elk	1200	500
Edge (1982)	Elk	500	1000
Rost (1988)	Elk	200	n/a
Dyer et al. (2000)	Caribou	250	1000
Sawyer et al. (2005)	Mule deer	2700	n/a
Powell (1988)	Elk	2000	2000
Frair (2005)	Elk	200	n/a
Ward (1986)	Elk	2000	n/a
Average		1131	1125

\*Adapted from Hobbblewhite 2008

### **Recreational Hunting Opportunity and Economic Impacts**

Due in large part to plentiful big game populations, Gunnison County received economic benefits of approximately \$53.1 million in 2007 from hunting and fishing activities that support an estimated 615 jobs (BBC Research and Consulting 2008). These economic benefits from hunting and fishing recreational activities are a sustainable annual source of economic benefit for Gunnison County only if wildlife populations, and particularly big game populations, are maintained and quality hunting opportunities continue to exist. CPW recommends that the FS consider in its NEPA analysis the economic impacts from lost recreational hunting opportunities as oil and gas development expands in the Muddy Creek Area.

Existing big game populations and recreational hunting opportunities in and adjacent to the Bull Mountain Unit may be maintained during oil and gas exploration and development by relocating facilities that will have disproportionate impacts on wintering animals, incorporating additional limitations on the overall density of surface facilities, and by providing quality, unimpacted, replacement critical winter habitats where necessary to offset unavoidable losses of limiting winter habitats.

### **Cumulative Impacts**

As stated in our comments on the Bull Mountain Unit and our Form 2A comments to COGCC for this facility, CPW recommends that SG, BLM, and FS consider incorporating this location into a comprehensive wildlife mitigation plan that addresses the cumulative impacts from all proposed oil and gas development in the area, including the Bull Mountain Unit and surrounding leases. The infrastructure proposed in the Bull Mountain Unit and the facilities currently being developed on private lands in the area will be used to recover the gas resources at the proposed location. As such, these are connected actions under Council on Environmental Quality (CEQ) guidelines that should be addressed in a single NEPA document. It is much more difficult for CPW to recommend effective measures to avoid, minimize, and mitigate impacts to wildlife when connected actions are processed piecemeal without a transparent development plan. Per CEQ guidelines, actions are connected if they:

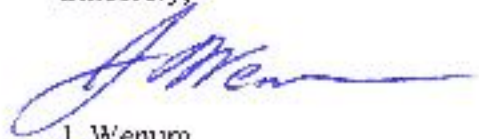
*(i) automatically trigger other actions which may require environmental impact statements, (ii) cannot or will not proceed unless other actions are taken previously or simultaneously, (iii) Are interdependent parts of larger action and depend on the larger action for their justification. (40 CFR 1508.25)*

### **Conclusion**

CPW appreciates the opportunity to coordinate with FS staff on this proposed well location to address our concerns. We are becoming increasingly concerned with the level of development in the Muddy Creek Areas and potential impacts to wildlife. We encourage the FS to evaluate the alternative locations we recommended for this well to minimize impacts to wildlife, and to consider this well part of the larger development.

being undertaken by the oil and gas operators in area. Mitigation to address the impacts to wildlife from additional oil and gas development will only be effective with careful landscape-level planning that addresses improving and conserving habitat while limiting additional impacts and habitat fragmentation. CPW staff will continue to work with BLM, FS COGCC, local governments, and the operators to look for opportunities to offset the impacts from oil and gas development in the Muddy Creek Area.

Sincerely,



J. Wenum  
Area Wildlife Manager-Gunnison  
Colorado Parks and Wildlife

cc: T. Spezze, SW Region Manager  
Jon Holst, SW Region Energy Liaison  
Scott Wait, SW Region Senior Terrestrial Biologist  
John Alves, SW Region Senior Aquatic Biologist  
Kirk Maduriaga, DWM Paoma



## Literature Cited

- Bartman, R. M., G. C. White, and L. H. Carpenter. 1992. Compensatory mortality in a Colorado mule deer population. *Wildlife Monographs* 121, Supplement to the *Journal of Wildlife Management*.
- BBC Research & Consulting. 2008. The economic impacts of hunting, fishing and wildlife watching in Colorado (Final Report). 24 pp.
- Bishop, C. J., G. C. White, D. I. Freckly, B. E. Watkins, and T. R. Stephenson. 2009. Effect of enhanced nutrition on mule deer population rate of change. *Wildlife Monographs* 172, Supplement to the *Journal of Wildlife Management*. 28 pp.
- Hebblewhite, M. 2008. A literature review of the effects of energy development on ungulates: Implications for central and eastern Montana. Report prepared for Montana Fish, Wildlife and Parks, Miles City, MT. 125 pp.
- Lutz, D. W., J. R. Heffelfinger, S. A. Tessmann, r. S. Gamo, and S. Siegel. 2011. Energy development guidelines for mule deer. Mule Deer Working Group, Western Association of Fish and Wildlife Agencies, USA. 27 pp.
- Sawyer, H. and R. Nielsen. 2010. Mule deer monitoring in the Pinedale Anticline Project Area. Pinedale Anticline Planning Office (PAPO), Pinedale, WY. 19 pp.
- Sawyer, H., Kauffman M.J., and R.M. Nielson. 2009. Influence of well pad activity on winter habitat selection patterns of mule deer. *Journal of Wildlife Management* 73:1052-1061.
- Wyoming Game and Fish Department. 2008. Recommendations for development of oil and gas resources within crucial and important wildlife habitats. Internal Document. Cheyenne, Wyoming. 237 pp.



**COLORADO**

**Parks and Wildlife**

Department of Natural Resources

Area 16 Office  
300 W. New York Ave  
Gunnison, CO 81230

24 April 2015

BLM Uncompahgre Field Office  
Attn: Thane Stranathan  
2465 S. Townsend Avenue  
Montrose, CO 81401  
[blm\\_co\\_ufo3160@blm.gov](mailto:blm_co_ufo3160@blm.gov)

**RE: 3160 (CO-S05) 2015-029EA, Scoping for Dual Operator 25 Well-5 Pad Project**

Dear Mr. Stranathan,

Colorado Parks and Wildlife (CPW) has reviewed the Bureau of Land Management (BLM) scoping notice for the proposed Gunnison Energy LLC (GE) and SG Interests I. Ltd (SG) proposed 25 well – 5 pad project. CPW staff have visited several of the locations for the proposed facilities and discussed our wildlife-related concerns with BLM, USFS, GE and SG staff. In some instances, CPW has submitted previous comments on these locations and proposed facilities. A description of previous comments from CPW is provided below and the actual comments outlining CPW's concerns are included for your reference:

**SG Federal 11-90-15-2:** CPW submitted comments to Gunnison County on 7 May 2008 when this pad was newly proposed (Attachment 1);

**GE Federal 11-90-8-H3:** CPW submitted comments to the USFS a GE Master Development Plan that included this facility on 30 June 2010 (Attachment 2);

**SG Federal 11-90-9-3:** CPW submitted written comments to the COGCC for this proposed location on 04 May 2012 and again on 22 October 2014 (Attachment 3). In addition, in March of 2013, CPW reviewed the USFS NEPA documentation for this facility, including the Conditions of Approval (COAs) designed to minimize impacts to wildlife and mitigate proposed increases in road densities that reduce functional habitat value for a variety of species – including big game. This review is reflected in CPW's 22 October 2014 comments to COGCC (Attachment 3).

#### **Wildlife Issues to Consider for the Proposed Development Area**

Four of the five proposed pad locations are within or adjacent to a CPW-mapped elk winter concentration area. As outlined in CPW's comments to BLM regarding development of the adjacent Bull Mountain Unit, this winter concentration area is geographically isolated, making it very important for big game populations in the Muddy Creek drainage and surrounding area (see Figure 1). Elevation increases north, west, and east that make these adjacent areas largely inaccessible to big game during winter months. Potential displacement of big game from this area could have significant negative ramifications for big game populations and recreational hunting opportunities in the surrounding area due to the limited availability of additional big game wintering habitats.



Critical winter habitats are known to be a limiting factor on big game populations in western Colorado and other high mountain areas of the western United States (Sawyer et al. 2009, Bishop et al. 2009, Bartman et al. 1992). Recent research clearly documents that the ongoing human disturbance associated with oil and gas production and maintenance activities continues to displace big game long after drilling activities have ceased (Hebblewhite 2008, Sawyer et al. 2009, Sawyer and Neilsen 2010). These residual adverse impacts to wildlife occur from reduced habitat effectiveness regardless of site specific Conditions of Approval or Best Management Practices implemented by the operator to reduce impacts, and do not address the cumulative impacts of increasing well pad density and ancillary facilities (roads, pipelines, compressors, etc.) on the effectiveness of wildlife habitats in the area.

CPW is concerned that the proposed pad locations and access routes will unnecessarily fragment wildlife habitat and exacerbate functional habitat loss already occurring in the surrounding area due to the development of the adjacent Bull Mountain, Deadman Gulch, and Iron Point Units. The additional direct and indirect habitat loss and long-term human disturbance associated with drilling, production, and maintenance of these proposed facilities will further reduce the functional value of wildlife habitat in the area. We encourage the BLM to analyze the functional habitat loss and fragmentation associated with the proposed pad locations, access roads and pipelines using established avoidance and displacement distances for big game as summarized below by Hebblewhite (2008).

Table 1. Summary of ungulate studies showing avoidance of roads and well sites, averaging results across seasons and habitat types.

*Author	Species	Avoidance Buffer (m)	
		Roads	Wells
Gillan (1981)	Elk	1200	500
Edge (1982)	Elk	500	1000
Rost (1988)	Elk	200	n/a
Sawyer et al. (2005)	Mule deer	2700	n/a
Powell (1988)	Elk	2000	2000
Frair (2005)	Elk	200	n/a
Ward (1986)	Elk	2000	n/a
	<b>Average</b>	<b>1257</b>	<b>1167</b>

\*Adapted from Hebblewhite 2008

### **Recreational Hunting Opportunity and Economic Impacts to Consider**

Due in large part to plentiful big game populations, Gunnison County received economic benefits of approximately \$53.1 million in 2007 from hunting and fishing activities that support an estimated 615 jobs (BBC Research and Consulting 2008). These economic benefits from hunting and fishing recreational activities are a sustainable annual source of economic benefit for Gunnison County only if wildlife populations, and particularly big game populations, are maintained and quality hunting opportunities continue to exist.

CPW recommends that BLM consider in its NEPA analysis the economic impacts from lost recreational hunting opportunities as oil and gas development expands in the project area and surrounding Bull Mountain, Deadman Gulch, and Iron Point Units. Existing big game populations and recreational hunting opportunities in and adjacent to the project area may be maintained during oil and gas exploration and development only by relocating facilities that will have disproportionate impacts on wintering animals or recreational opportunities, incorporating limitations on the overall density of surface facilities to maintain functional habitats, and by providing quality, unimpacted, replacement critical winter habitats where necessary to offset unavoidable losses of limiting winter habitats.

### **Cumulative Impacts that May Compound Impacts within the Project Area**

CPW recommends that BLM evaluate the proposed locations through a through a Master Development Plan or similar planning tool that provides a means to addresses the cumulative impacts to wildlife from all proposed oil and gas development in the area, including the Bull Mountain, Deadman Gulch, and Iron Point Units. The infrastructure in the Bull Mountain and Deadman Gulch Units and the facilities currently being developed on Federal and private lands in those areas will be used to recover the gas resources at the proposed pad locations. As such, these are connected actions under Council on Environmental Quality (CEQ) guidelines that should be addressed in a single NEPA document. It is much more difficult for CPW to recommend effective measures to avoid, minimize, and mitigate impacts to wildlife when connected actions are processed piecemeal without a transparent development plan. Per CEQ guidelines, actions are connected if they:

*(i) automatically trigger other actions which may require environmental impact statements, (ii) cannot or will not proceed unless other actions are taken previously or simultaneously, (iii) Are interdependent parts of larger action and depend on the larger action for their justification. (40 CFR 1508.25)*

There are no CPW-approved Wildlife Mitigation Plans to address landscape-scale impacts from these proposed facilities or impacts occurring in the adjacent Bull Mountain, Deadman Gulch, or Iron Point Units. With this in mind, we encourage the BLM to consider these proposed pads and wells as part of the larger development being undertaken by the oil and gas operators in the area, and to consider that impacts to wildlife from these facilities may be compounded by adjacent development activities. Efforts to avoid, minimize, and mitigate the impacts to wildlife from additional oil and gas development will only be effective with careful landscape-level planning that considers nearby development activities and addresses improving and conserving functional habitat on a scale that is meaningful for wildlife (Lutz et al. 2011, Wyoming Game and Fish Dep. 2008).

### **Conclusion**

CPW appreciates the opportunity to coordinate with BLM staff on these proposed well locations to address our concerns. As summarize above and stated in the our previous comments for facilities in this area (see attachments), we are becoming increasingly concerned with the level of oil and gas development and potential landscape-scale impacts to wildlife populations and recreational hunting and fishing opportunities in the area. CPW will continue to work closely with BLM staff to look for opportunities to avoid, minimize, and mitigate impacts to wildlife and wildlife-related recreational opportunities. If you have any questions, please contact CPW Southwest Region Energy Liaison Jon Holst at (970) 759-9588.

Sincerely,

J. Wenum  
Area Wildlife Manager  
Colorado Parks and Wildlife

xc: P. Dorsey, SW Region Manager; Jon Holst, SW Region Energy Liaison; Scott Wait, SW Region Senior Terrestrial Biologist; John Alves, SW Region Senior Aquatic Biologist

## Literature Cited

- Bartman, R. M., G. C. White, and L. H. Carpenter. 1992. Compensatory mortality in a Colorado mule deer population. *Wildlife Monographs* 121, Supplement to the *Journal of Wildlife Management*.
- BBC Research & Consulting. 2008. The economic impacts of hunting, fishing and wildlife watching in Colorado (Final Report). 24 pp.
- Bishop, C. J., G. C. White, D. J. Freddy, B. E. Watkins, and T. R. Stephenson. 2009. Effect of enhanced nutrition on mule deer population rate of change. *Wildlife Monographs* 172, Supplement to the *Journal of Wildlife Management*. 28 pp.
- Hebblewhite, M. 2008. A literature review of the effects of energy development on ungulates: Implications for central and eastern Montana. Report prepared for Montana Fish, Wildlife and Parks, Miles City, MT. 125 pp.
- Lutz, D. W., J. R. Heffelfinger, S. A. Tessmann, r. S. Gamo, and S. Siegel. 2011. Energy development guidelines for mule deer. Mule Deer Working Group, Western Association of fish and Wildlife Agencies, USA. 27 pp.
- Sawyer, H. and R. Neilsen. 2010. Mule deer monitoring in the Pinedale Anticline Project Area. Pinedale Anticline Planning Office (PAPO), Pinedale, WY. 19 pp.
- Sawyer, H., Kauffman M.J., and R.M. Nielson. 2009. Influence of well pad activity on winter habitat selection patterns of mule deer. *Journal of Wildlife Management* 73:1052-1061.
- Wyoming Game and Fish Department. 2008. Recommendations for development of oil and gas resources within crucial and important wildlife habitats. Internal Document. Cheyenne, Wyoming. 237 pp.



**COLORADO**

**Parks and Wildlife**

Department of Natural Resources

Area 16 Office  
300 W. New York Ave  
Gunnison, CO 81230

21 February 2017

USDI Bureau of Land Management  
Attn: North Fork Mancos MDP  
2300 River Frontage Road  
Silt, CO 81652  
[blm\\_co\\_si\\_mail@blm.gov](mailto:blm_co_si_mail@blm.gov)

**RE: DOI-BLM-CO-N040-2017-050-EA; NORTH FORK MANCOS MASTER DEVELOPMENT PLAN FOR OIL AND GAS EXPLORATION AND DEVELOPMENT, GUNNISON AND DELTA COUNTIES, COLORADO**

Dear Mr. Crocket:

Colorado Parks and Wildlife (CPW) has reviewed the Proposed Action prepared by Bureau of Land Management (BLM) for the proposed Gunnison Energy LLC (GEC) North Fork Mancos Master Development Plan (NFMMDP). The 34,906 acre NFMMDP Area is immediately adjacent to the rapidly developing 19,670 acre Bull Mountain Unit, which already has 30 permitted and 18 active gas wells, and is proposed to see an additional 146 gas wells over the next six years (BLM 2016; Figure 1).

CPW's mission is to perpetuate the wildlife resources of the state, to provide a quality state parks system, and to provide enjoyable and sustainable outdoor recreation opportunities that educate and inspire current and future generations to serve as active stewards of Colorado's natural resources. CPW appreciates the opportunity to collaborate on the siting of oil and gas infrastructure as early in the permitting process as possible in order to avoid unnecessary impacts to park and wildlife resources and outdoor recreation opportunities. Providing CPW an opportunity to participate alongside the BLM and USFS in the initial discussions with an operator on a Master Development Plan is consistent with our joint MOU concerning oil and gas permitting in Colorado (Attachment 1).

#### **Concerns Regarding Loss of Outdoor Recreation Opportunities**

The NFMMDP Area provides high quality big game hunting and fishing opportunities in a relatively remote and undeveloped setting. Due in large part to plentiful big game populations and opportunities to hunt on big game on both public and private lands, Delta and Gunnison counties received combined economic benefits of approximately \$80.9 million in 2007 from hunting and fishing activities that support an estimated 912 jobs (BBC Research and Consulting 2008). These economic benefits from hunting and fishing recreational activities are a sustainable annual source of economic benefit for Delta and Gunnison counties only if quality hunting opportunities continue to exist.

Quality big game hunting opportunities depend on both the availability of relatively undeveloped areas to pursue big game and healthy big game populations. The majority of the NFMMDP is summer or transition range for both elk and mule deer; however, it also contains



over 8,000 acres of a large mapped winter concentration area for elk and approximately 2,100 acres of critical winter range for mule deer (Figure 2). A significant portion of the NFMMDP is mapped as a moose concentration area and smaller portions are mapped as elk production areas. Development in these mapped areas is likely to have a disproportionate impact on these species and decrease opportunity, quality experiences, and capacity of the Forest to meet the expectations of the public for backcountry, primitive, and semi-primitive areas preferred by dispersed recreationalists, including hunters.

The elk winter concentration area that extends into the NFMMDP is geographically isolated from other wintering areas for elk (Figure 2). This geographic isolation limits the ability of big game animals to shift their distribution in response to disturbances associated with and oil and gas development. The Elk Data Analysis Unit (DAU) E-14 encompasses 2,477 square miles and includes several Game Management Units (GMUs). The Muddy Creek winter concentration area is approximately 39 square miles in size - approximately 1.5 percent of the entire DAU. Despite being a geographically isolated and comprising only 1.5 percent of the entire DAU, aerial count data gathered since the 1980s within the Muddy Creek Area indicate that the area typically winters up to 10 percent of the elk from the entire DAU.

CPW is concerned that the incremental build-out of the NFMMDP will cumulatively add to impacts already occurring to big game populations from existing and approved gas development in the area. In 2016, CPW biologists documented record low numbers of big game in the adjacent Bull Mountain Unit. In addition, CPW has received numerous complaints from landowners, outfitters, and sportsmen regarding low big game numbers and lost hunting opportunities in this developing area. The BLM has acknowledged that residual unavoidable adverse impacts to big game increase dramatically when well pad densities exceed one pad/mile<sup>2</sup>, and that these impacts occur from reduced habitat effectiveness *regardless of the use of Timing Limitation Stipulations on drilling activities or other site-specific Best Management Practices designed to reduce impacts* (BLM 2012). This scenario is currently playing out in the Bull Mountain Unit.

Beginning in 2009, CPW specifically asked BLM to address adverse impacts to big game populations and hunting opportunities in the Bull Mountain Unit from increasing well density (Attachment 2). This request was coupled with a recommendation that BLM consider offsetting direct habitat loss and loss of habitat quality through implementation of measures that compensate for this loss, including habitat replacement (through conservation) and/or implementation of specific projects designed to raise the carrying capacity of remaining habitats. This recommendation was not incorporated into the Bull Mountain Unit Master Development Plan Final EIS and these unavoidable adverse impacts are ongoing and unmitigated (BLM 2016).

#### Recommendations to Address Loss of Outdoor Recreational Opportunities:

- 1) CPW recommends avoiding construction, drilling, and completion activities or use of roads to support these activities during the period August 15 to December 1 annually, throughout the NFMMDP area, to avoid adverse impacts to big game hunters and hunting opportunities.
- 2) As development progresses, CPW recommends advanced planning to place roads and well pads such that well pad densities do not exceed one pad/mile<sup>2</sup> and road densities do

not exceed ½ mile of road/mile<sup>2</sup>. If either of these density thresholds is exceeded, CPW recommends implementing meaningful mitigation projects that offset the loss of functional habitat through habitat replacement or habitat improvement. CPW staff are available as needed to assist BLM and USFS staff with planning roads and well pads to minimize impacts.

3) CPW appreciates GEC's commitment to avoid construction, drilling, or completion activities or use of roads to support those activities, during the period December 1 to April 30 in areas mapped as winter range, severe winter range, or winter concentration areas for deer, elk, or wild turkeys (Proposed Action p. 39). In addition, due to the limited effectiveness of seasonal timing limitations as well pad densities increase, CPW recommends that the BLM, USFS, and the applicant avoid placing new facilities in these mapped habitats to the extent practical.

#### Concerns Regarding Impacts to Non-game Species

The NFMMDP area contains habitat for a variety of non-game species, including migratory birds and birds listed by USFWS as Birds of Conservation Concern. The area is known to contain active nest colonies of purple martin, a USFS sensitive species and Management Indicator Species. This species is also listed as a Priority Species by the Colorado Partners in Flight Plan (Wiggins 2005). Colonial nesters may be disproportionately impacted by removal of nesting habitat or impacts to active nesting colonies. The proposed Federal 1190 #20 well location and access road is located in an area modeled by the USFS as purple martin habitat (BLM 2016). CPW is concerned that this proposed well location and access road may impact nesting purple martins and suitable nesting habitat for this species.

The NFMMDP area also contains known habitat for northern goshawk, a BLM sensitive species. This species may nest in spruce-fir or aspen forests within the NFMMDP area, but has shown a strong preference for nesting in mature aspen-dominated stands (USFS 2005). Goshawks show high fidelity to nesting territories and suitable nesting habitat is known to be a limiting factor for goshawks (Reynolds et al. 1992). For these reasons, CPW is concerned that impacts to individual goshawk nests or nesting territories in the NFMMDP area may have disproportionate impacts to this species.

#### Recommendations to Address Impacts to Non-game Species, including Migratory Birds:

1) CPW appreciates the GEC's commitment to survey for migratory bird nests prior to beginning construction activity and avoidance of active nests (Proposed Action p. 39). Due to the sensitive status of purple martin and the limited availability of suitable nesting habitat for this species, CPW also recommends avoidance of inactive purple martin nest trees, snags, and standing cavity trees in aspen-dominated woodlands that provide potential nesting habitat.

2) GEC has committed to survey for active raptor nests within 0.25 mile of proposed well pads or road/pipeline construction areas prior to initiating construction, drilling, or completion activities during the nesting season. In order to avoid impacts to nesting raptors, CPW recommends that BLM and applicant follow CPW's *Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors*, which requires a survey distance and buffer zone of 0.5 mile (rather than 0.25) for some raptor species, including northern goshawk (CPW 2009). In addition, due to the limited availability of suitable nesting



habitat for northern goshawks in this area, and high site fidelity to nests and nesting territories, CPW recommends avoidance of both active and inactive northern goshawk nest sites.

### Concerns Regarding Impacts to Aquatic Species

The proposed pad location for DGU 1289 #20-23 is adjacent to Coyote Gulch and Deadman Gulch, two intermittent tributaries to the West Fork of Muddy Creek. The West Fork of Muddy Creek is home to bluehead sucker, a species of conservation interest to CPW. Map 7 of the Proposed Action (map for DGU 1289 #20-23) indicates that a gathering line and access road will be constructed crossing both Deadman and Coyote Gulches. CPW is concerned that construction across these intermittent tributaries could adversely impact bluehead sucker.

In addition, the NFMMDP Area includes portions of the Clear Fork of Muddy Creek watershed (in the Trail Gulch Federal Unit) that CPW has identified as strong candidates for cutthroat restoration. This project is in the feasibility stage, but would restore cutthroat trout to all tributary streams upstream of the Clear Fork Muddy Creek/Gooseberry Creek confluence, including June Creek, Baldy Creek, Jones Creek, Trail Gulch, North Twin Creek, Second Creek and Basin Creek (Figure 3). In addition to the proposed restoration project, there are Conservation Populations of Colorado River cutthroat trout in Rock Creek and South Twin Creek within the Clear Fork Muddy Creek watershed. CPW is concerned that future development could jeopardize this proposed restoration or impact these conservation populations.

### Recommendations to Address Impacts to Aquatic Species:

- 1) CPW recommends that construction of the access road and gathering line for the 1289 #20-23 take place outside of the time frame when bluehead suckers are spawning and their juveniles are rearing (May 1 through July 15), and that any in-channel construction occur outside of the timeframe where there is water in these two streams to avoid impacts to bluehead sucker and washing sediment downstream into the West Fork of Muddy creek.
- 2) CPW recommends that any future development proposals within the Clear Fork of Muddy Creek watershed be coordinated closely through CPW to avoid impacts to existing conservation populations of Colorado River cutthroat trout and to avoid impacts to planned cutthroat restoration efforts.

### Concerns Regarding Incremental Development and Cumulative Impacts

CPW has provided recommendations to project proponents, BLM, and the USFS for impact avoidance, best management practices, and mitigation of impacts from numerous individual gas well development proposals in the Muddy Creek Area since the early 2000s. We have also commented on a number of more recent multi-well proposals and Master Development Plans:

- 2008 GEC 16 well Hotchkiss Federal Comprehensive Development Plan (CDP)
- 2010 GEC 16 well Master Development Plan on USFS lands
- 2011 GEC Centralized Waste Management Facility Amendment 16 well Hotchkiss CDP
- 2015 GEC/SGL 25 well Master Development Plan
- 2009-2015 SGL 146 well Bull Mountain Unit Master Development Plan

The NFMMDP will add an additional 35 wells. CPW continues to recommend that BLM and USFS evaluate the impacts from these combined developments, including the reasonably foreseeable 13 pad future development described in the Proposed Action, through a single NEPA document that thoroughly evaluates the cumulative impacts and broad landscape-scale change associated with oil and gas development in the area. Some of the infrastructure and facilities built for previous projects will be used to recover the gas resources at the proposed pad locations discussed in this NFMMDP and will likely be used to support future development. As such, these are connected actions under Council on Environmental Quality (CEQ) guidelines that should have been addressed in a single NEPA document. Per CEQ guidelines, actions are connected if they:

- (i) Automatically trigger other actions which may require environmental impact statements, (ii) cannot or will not proceed unless other actions are taken previously or simultaneously, (iii) Are interdependent parts of larger action and depend on the larger action for their justification. (40 CFR 1508.25)

CPW recommends that BLM's NEPA analysis incorporate a robust discussion of the anticipated impacts of increasing oil and gas activity and route density in the NFMMDP Area and adjacent Bull Mountain Unit, particularly since much of the infrastructure used by oil and gas is open year round to facilitate production activities. This discussion is necessary to properly disclose the impacts of the development on wildlife resources and outdoor recreation opportunities and to identify effective mitigation measures to offset those impacts.

### Conclusion

CPW appreciates the opportunity to coordinate with BLM on the proposed NFMMDP. We remain concerned with the level of oil and gas development and landscape-scale impacts to wildlife populations and recreational hunting and fishing opportunities in the area. These impacts, if left unmitigated, impair CPW's ability to achieve its mission and result in degraded opportunities for the public to enjoy dispersed recreation on public lands. CPW will continue to work closely with BLM staff to avoid, minimize and mitigate impacts to wildlife and wildlife-related recreational opportunities. If you have any questions, please contact CPW Southwest Region Energy Liaison, Jon Holst at (970) 375-6713.

Sincerely,

*Jon Holst*

*for*

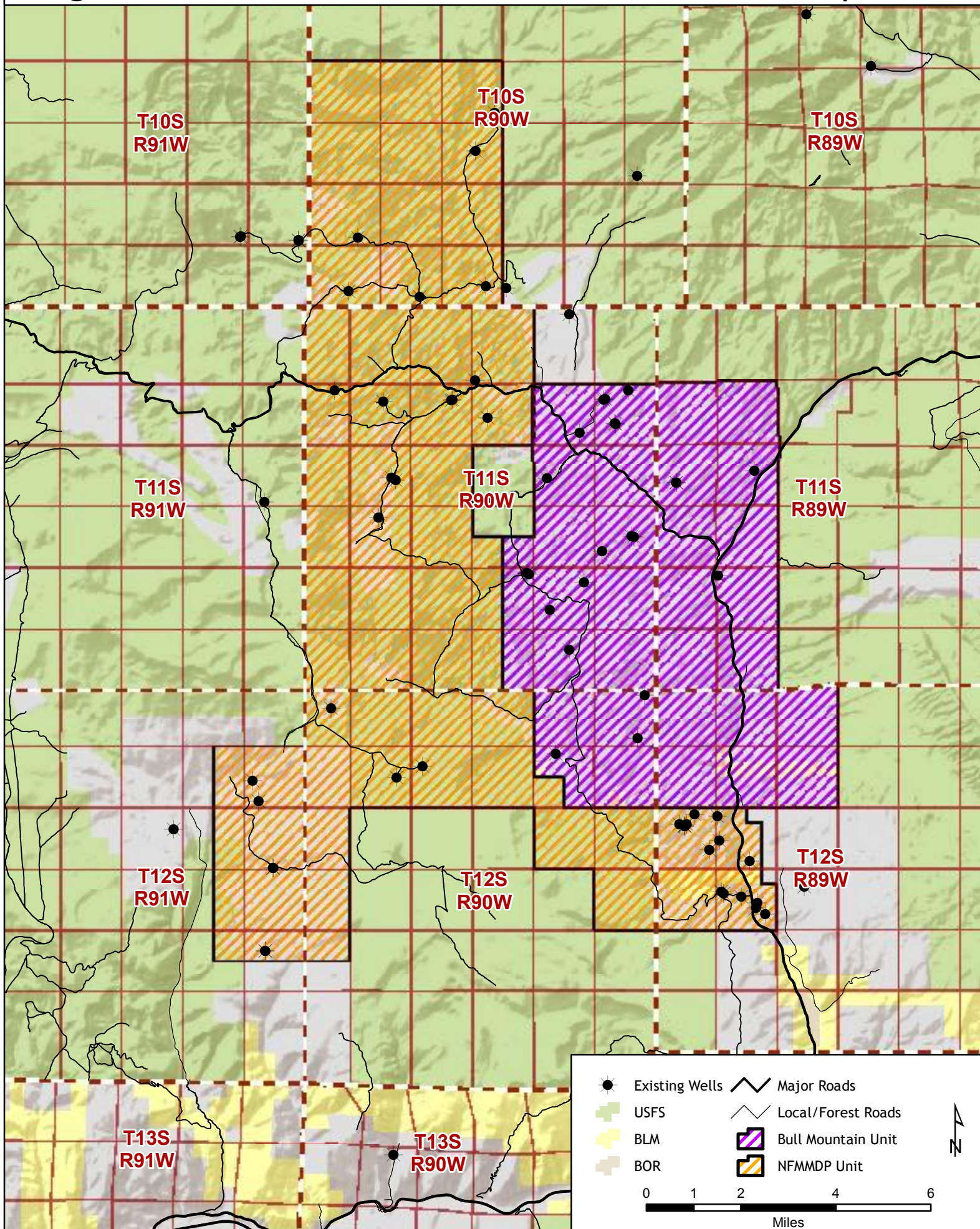
J. Wenum  
Area Wildlife Manager  
Colorado Parks and Wildlife

xc: P. Dorsey, SW Region Manager; Jon Holst, SW Region Energy Liaison; Scott Wait, SW Region Senior Terrestrial Biologist; John Alves, SW Region Senior Aquatic Biologist, Brian Magee SW Region Land Use Coordinator

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# Figure 1: NFMMDP & Bull Mountain Units - Development



**Memorandum of Understanding Among  
Bureau of Land Management, Colorado State Office,  
U.S. Forest Service, Rocky Mountain Region, and  
Colorado Oil and Gas Conservation Commission**

**Concerning Oil and Gas Permitting  
on BLM and NFS Lands in Colorado**

This MEMORANDUM OF UNDERSTANDING is hereby made and entered into by and among the Bureau of Land Management, Colorado State Office (BLM); United States Forest Service, Rocky Mountain Region (USFS); and the Colorado Oil and Gas Conservation Commission (COGCC), together referred to as the Parties.

**A. Introduction**

On December 11, 2008, the COGCC adopted amendments to its Rules of Practice and Procedure (COGCC Rules), 2 C.C.R. 404-1. On May 30, 2009, COGCC Rule 201A was amended to provide that unless otherwise specified, the amendments would become effective on July 1, 2009 on federal land in Colorado.

**B. Purpose**

The Parties have enjoyed a successful working relationship in regulating oil and gas exploration and production on federal lands and minerals, and desire and expect that relationship to continue.

The Parties enter into this MOU to provide for efficient and effective oil and gas permitting on BLM and NFS lands in Colorado. This MOU clarifies the Parties' respective roles and responsibilities in permitting and administering oil and gas operations on federal lands and minerals administered by the BLM and the USFS in Colorado.

**C. Authorities**

The authorities to enter into this MOU are the Federal Land Policy and Management Act, 43 U.S.C. §§ 1701, *et seq.*; the Forest Service Organic Act, 16 U.S.C. § 551; and the Colorado Revised Statutes, including the Oil and Gas Conservation Act, 34-60-101 *et seq.*, C.R.S.

This MOU is not intended to supersede existing state or federal law, rule, regulation, or pre-existing MOU, including, without limitation, the MOU signed by COGCC and BLM on August 22, 1991, as amended. Nothing in this MOU will be construed as affecting the authorities of the participants or as binding beyond their respective authorities.

**D. Reservations**

This MOU is entered into without prejudice to, and without waiving, any jurisdiction or other rights, powers and privileges of any of the Parties thereto.

**E. Party Contacts**

<b>PARTY</b>	<b>DESIGNATED OFFICIAL</b>	<b>PRINCIPAL CONTACT</b>
<b>BLM</b>	State Director Bureau of Land Management Colorado State Office 2850 Youngfield Street Lakewood, Colorado 80215-7093 303-239-3700	Chief, Branch of Fluid Minerals
<b>USFS</b>	Regional Forester U.S. Forest Service Rocky Mountain Region 740 Simms Street Golden, Colorado 80401 303-275-5350	Program Manager, Leasable Minerals
<b>COGCC</b>	Director Colorado Oil and Gas Conservation Commission 1120 Lincoln Street, Suite 801 Denver, Colorado 80203 303-894-2100	Permit Manager

**F. Administration**

**1. Principal Contacts**

Attachment 1 identifies the name and contact information of the Principal Contacts set out above. Upon any change to the name or contact information of a Party's Principal Contact, such Party will communicate the new Principal Contact's name and contact information to the other Parties and Attachment 1 will be updated accordingly.

**2. Coordination Meetings**

The Parties will hold coordination meetings twice a year to discuss implementation of this MOU. Prior to the meeting, each Party's Principal Contact will identify and circulate to the other Parties any matters to be discussed at the meeting.

**3. Rights of Enforcement Among the Parties, or by Non-Parties**

This MOU is not a final agency action by any of the Parties, and is not intended to, and does not create, any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity, among the Parties, or by any non-party.

**G. Definitions**

For purposes of this MOU, the following definitions apply:

1. **APPLICATION FOR PERMIT TO DRILL or APD** means BLM Form 3160-3 (Application for Permit to Drill or Reenter) or COGCC Form 2 (Application to Drill, Deepen, Re-Enter, or Recomplete and Operate).
2. **BLM LANDS** mean lands in which the surface and/or the oil and gas estate is owned by the United States of America, and administered by the BLM.
3. **COMMISSION** refers to the Colorado Oil and Gas Conservation Commission.
4. **COGCC** refers to the staff of the Colorado Oil and Gas Conservation Commission, unless otherwise specified.
5. **CONDITIONS OF APPROVAL or COA** means provisions or requirements under which an Application for a Permit to Drill, a Sundry Notice, or COGCC Form 2 or 2A is approved.
6. **CONSULTATION** refers to the process described in the COGCC Rules, unless otherwise specified. *See, e.g.* Rules 303, 306, and 1202.
7. **DAYS** means all calendar days, including holidays, unless otherwise specified.
8. **MASTER DEVELOPMENT PLAN or MDP** means the optional process described in Section III.H of Onshore Order No. 1.
9. **NATIONAL FOREST SYSTEM LANDS or NFS LANDS** means lands, waters, or interests therein administered by the U.S. Forest Service.
10. **NOTICE OF STAKING or NOS** means the optional process described in Section III(C) of Onshore Order No. 1.
11. **OIL AND GAS LOCATION** means a definable area where an operator has disturbed or intends to disturb the land surface in order to locate equipment or improvements used or installed at an oil and gas location for the exploration, production, withdrawal, gathering, treatment, or processing of oil or natural gas, as provided in the COGCC 100-Series Rules.
12. **OIL AND GAS OPERATIONS or OPERATIONS** means exploration for oil and gas, including the conduct of seismic operations and the drilling of test bores; the siting, drilling, deepening, recompletion, reworking, or abandonment of an oil and gas well, underground injection well, or gas storage well; production operations related to any such well including the installation of flow lines and gathering systems; the generation, transportation, storage, treatment, or disposal of exploration and production wastes; and any construction, site preparation, or reclamation activities associated with such operations, as provided in the COGCC 100-Series Rules and C.R.S. § 34-60-103(6.5).

13. **ONSHORE ORDER NO. 1** refers to the Rule and Preamble published in the *Federal Register* on March 7, 2007, 72 Fed. Reg. 10328, *et seq.*, that governs approval of operations on federal oil and gas leases.
14. **OPERATOR** means any person who exercises the right to control the conduct of oil and gas operations on BLM or NFS lands, as provided in the COGCC 100-Series Rules, or who meets the definition in 43 C.F.R. § 3160.0-5.
15. **STATE CONSULTATION CONTACTS** means the COGCC, any local government designee within whose jurisdiction an oil and gas location is to be constructed who has indicated to the COGCC the desire to consult on the oil and gas location according to COGCC Rule 306.b, the Colorado Division of Wildlife (CDOW) where the proposed oil and gas location would trigger consultation under COGCC Rule 306.c, the Colorado Department of Public Health and Environment (CDPHE) where the proposed oil and gas location would trigger consultation under COGCC Rule 306.d, and the surface owner where the owner of the surface estate is not the United States of America.
16. **STIPULATION** means a provision that modifies standard federal lease rights and is attached to and made a part of a federal oil and gas lease.
17. **SUNDRY NOTICE** means BLM Form 3160-5 and/or COGCC Form 4.
18. **SURFACE OWNER** means the responsible federal agency having jurisdiction over the surface estate for lands where the surface estate is owned by the United States of America.

**H. Locations and Operations on BLM or NFS Lands and Federal Leases**

The Parties will advise operators that they are responsible for complying with all applicable laws and regulations, including the COGCC Rules.

**1. Contacts**

The Parties will compile and make available a list of contacts for purposes of consultation and coordination under this MOU.

**2. Permitting**

**a. Pre-Application for Federal APD or MDP**

The Parties will advise operators to identify and incorporate applicable standards and practices contained in the COGCC Rules into a federal APD, MDP, or other authorization related to oil and gas operations so long as such state standards or practices are at least as stringent as comparable federal standards or practices, in order to minimize the potential for multiple reviews.

The Parties will advise operators to provide the BLM, and USFS for operations on NFS lands, with a list of the State Consultation Contacts at the time the operator files an



application or formal proposal for an oil and gas location(s) with the BLM, or USFS for operations on NFS lands, by including such information on the federal NOS, APD or MDP.

The BLM, or USFS for operations on NFS lands, will furnish the list of State Consultation Contacts to the COGCC along with location coordinates or legal land description of any formally proposed oil and gas location.

**b. Consultation at Onsite Inspections and on MDPs**

The BLM, or USFS for operations on NFS lands, will include COGCC in scheduling any onsite inspection on a federal APD or NOS and COGCC will invite State Consultation Contacts to attend the onsite inspection once it is scheduled in accordance with Onshore Order No. 1. Additionally, the BLM, or USFS for operations on NFS lands, will work with COGCC to offer State Consultation Contacts the opportunity to participate in initial discussions on an MDP or other application for an authorization related to oil and gas operations. The COGCC will provide the BLM, or USFS for operations on NFS lands, with a list of the State Consultation Contacts notified of an onsite inspection or initial discussions.

The Parties will advise State Consultation Contacts to submit recommendations to BLM, or USFS for operations on NFS lands, within a reasonable amount of time after the onsite inspection to facilitate their NEPA review. The Parties acknowledge that Onshore Order No. 1 allows the BLM to issue a federal APD after 30 days of posting if an onsite inspection has occurred, the application is deemed complete, and NEPA review has occurred.

**c. Permit Applications**

The Parties will advise operators to file a federal APD concurrently with a COGCC Form 2A, along with any other application(s) or form(s) required by the Parties.

Where the operator, the BLM, or USFS for operations on NFS lands, and any State Consultation Contacts agree to design features or conditions of approval for oil and gas operations as a result of the onsite inspection and subsequent discussions, the Parties will advise operators to incorporate these features into the federal APD (or amended APD) or MDP so that they are part of the “proposed action” analyzed by the BLM and/or USFS pursuant to NEPA, as well as the action proposed in the COGCC Form 2A.

The COGCC will encourage operators to attach to its COGCC Form 2A any forms or attachments completed for its federal APD (or amended APD) or other relevant federal permits and to identify on the Form 2A where the information required for the COGCC Form 2A may be found therein, pursuant to COGCC Rule 303.d.(3).

**d. Permit Review**

The BLM, or USFS for operations on NFS lands, will provide the State Consultation Contacts timely access to all public comments it receives. Likewise, the COGCC will

provide the BLM, or USFS for operations on NFS lands, timely access to all public comments it receives.

During review of permits, the Parties may confer, as necessary, to identify, discuss, and work to resolve any potential concerns that may be addressed by conditions of approval on a federal APD, MDP, or COGCC Form 2 or 2A.

**e. Other Permitting Matters**

Notwithstanding the foregoing, where the process for BLM, or USFS for operations on NFS lands, approval provides substantially equivalent notice, comment, and consultation procedures as those called for in COGCC Rules 305 and 306, the COGCC Director may, through variances, exempt an oil and gas location from the Form 2A process set out in the COGCC Rules.

The COGCC will advise any party with standing under COGCC Rule 503 who seeks a hearing before the Commission on approval of a COGCC Form 2A to seek concurrent resolution from the BLM Colorado State Director or USFS Regional Forester, where applicable.

**f. COGCC Comprehensive Drilling Plans and federal MDPs**

The COGCC staff will, upon request of the operator, place a federally approved MDP on the Commission's hearing agenda for approval as a Comprehensive Drilling Plan under COGCC Rule 216 so long as State Consultation Parties and any non-federal surface owners had an opportunity to consult and offer recommendations on the MDP.

**3. Changes to Terms of BLM, USFS, or COGCC Approvals**

The Parties will advise operators requesting any change to terms of a federal authorization related to oil and gas operations, including conditions of approval, or COGCC Form 2A or other permit, to file such request concurrently with the BLM, and USFS for operations on NFS lands, and COGCC. The Parties may confer on any such request for a change to authorization terms.

**I. Other Matters**

**1. Enforcement**

Where the COGCC has reasonable cause to believe that an oil and gas operation on BLM or NFS land violates a provision of the Oil and Gas Conservation Act, its Rules, an order of the Commission, or a permit issued by the COGCC, it will notify the BLM, or USFS for operations on NFS lands, before taking action. The COGCC will consider any enforcement action by the BLM, or USFS for operations on NFS lands, in determining how to proceed with its own action.

## **2. Waste Management**

### **a. Generally**

Consistent with current federal and state practices, the Parties will advise operators that waste generated by their operations must be handled, treated, stored, transported, or disposed of in accordance with applicable federal, Colorado, and local laws, regulations, and orders.

### **b. Exceptions**

The Parties will advise an operator seeking an exception from a federal or state practice or standard regarding waste management to file a Sundry Notice or other applicable request with both the COGCC and the BLM.

Upon receipt of such a Sundry Notice or request, the COGCC and BLM, and USFS for operations on NFS lands, will coordinate on consideration of the Sundry Notice or request.

## **3. Importance of Planning**

In the interest of achieving long-term resolution of issues, the Parties will endeavor to participate in each others' planning processes, where applicable. The BLM and USFS will consider COGCC input concerning COGCC standards and practices when revising or amending land use plans or any leasing availability decisions, where applicable. Likewise, the Commission will consider BLM or USFS input concerning BLM or USFS standards and practices when adopting Rules or orders.

## **J. Information Disclosure**

Any information furnished pursuant to this MOU will be subject to disclosure to the extent allowed under the Freedom of Information Act (5 U.S.C. § 552), the Privacy Act (5 U.S.C. §552a), and/or the Colorado Open Records Act (C.R.S. § 24-72-201 et seq.).

## **K. Similar Activities**

This MOU in no way restricts the Parties from participating in similar activities with other public or private agencies, organizations, and individuals.

## **L. Effective Date, Duration, and Amendment**

This MOU takes effect upon the signature of all the Parties thereto, and it shall remain in effect for ten (10) years from the date of execution. This MOU may be extended or amended upon written request of any, and written concurrence of all, of the Parties.

**M. Separate Activities and Resources**


Each of the Parties will handle its own activities and utilize its own resources, including expenditure of its own funds, in implementing this MOU. Each Party will carry out its separate activities in a coordinated and mutually beneficial manner.

**N. Obligation of Funds**

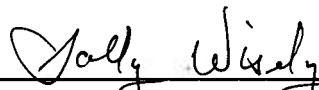
Nothing in this MOU shall obligate any Party to obligate or transfer any funds. Specific work projects or activities that involve the transfer of funds, services, or property among the Parties will require separate agreements and be contingent upon the availability of appropriated funds. Such agreements must be independently authorized by appropriate Colorado or federal authority. This MOU does not provide that authority. Negotiation, execution, and administration of each such agreement must comply will all applicable federal and Colorado statutes and regulations.

**O. Authorized Representatives**

By signature below, each of the Parties certifies that it is authorized to act in its respective areas for matters related to this agreement.

  
\_\_\_\_\_  
**David Neslin, Director**  
Colorado Oil and Gas Conservation Commission

30 June 09  
Date

  
\_\_\_\_\_  
**Sally Wisely, Colorado State Director**  
Bureau of Land Management, Colorado State Office

7/1/09  
Date

  
\_\_\_\_\_  
**Rick Cables, Regional Forester**  
U.S. Forest Service, Rocky Mountain Region

7-10-09  
Date

**Memorandum of Understanding Among  
Bureau of Land Management, Colorado State Office,  
U.S. Forest Service, Rocky Mountain Region, and  
Colorado Oil and Gas Conservation Commission**

**Concerning Oil and Gas Permitting  
on BLM and NFS Lands in Colorado**

**ATTACHMENT 1:  
Principal Contacts**

**Jamie Sellar-Baker**

303-239-3753

Jamie\_sellar-baker@blm.gov  
Acting Chief, Branch of Fluid Minerals  
BLM Colorado State Office

**Melody Holm**

303-275-5094

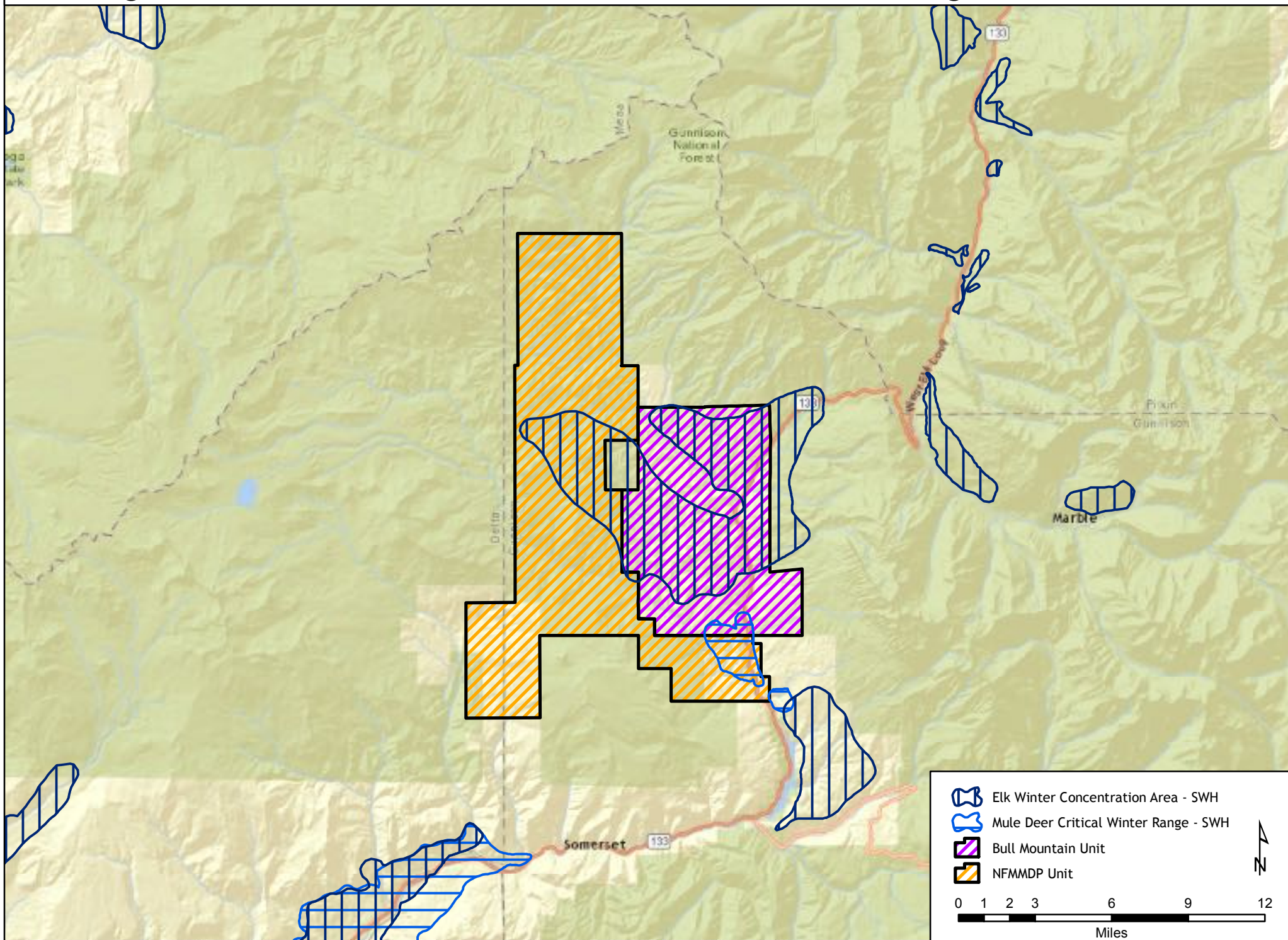
mholm@fs.fed.us  
Program Manager, Leasable Minerals  
USFS Rocky Mountain Region

**Thom Kerr**

303-894-2100 x5127

thom.kerr@state.co.us  
Permit & Technical Services Manager  
Colorado Oil and Gas Conservation Commission

# Figure 2: NFMMDP & Bull Mountain Units - Winter Big Game Habitat





## COLORADO PARKS & WILDLIFE

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6060 Broadway • Denver, Colorado 80216  
 Phone (303) 297-1192 • FAX (303) 291-7109  
[wildlife.state.co.us](http://wildlife.state.co.us) • [parks.state.co.us](http://parks.state.co.us)

415 Turner Drive  
 Durango, CO 81301

24 April 2012

BLM Uncompahgre Field Office  
 Attn: 3160 BMMDP  
 2465 South Townsend Ave.  
 Montrose, Colorado 81401  
 Fax: (970) 240-5368  
 Email: [coufo-oil-gas@blm.gov](mailto:coufo-oil-gas@blm.gov)

**RE: Bull Mountain Unit Master Development Plan Preliminary Environmental Assessment (DOI-BLM-CO-S050-2009-0005) and Finding of No Significant Impact**

Dear Ms. Sharrow,

Colorado Parks and Wildlife (CPW) has reviewed the draft Bureau of Land Management (BLM) Environmental Assessment (Draft EA) and draft Finding of No Significant Impact (FONSI) for the SG Interests Bull Mountain Unit Master Development Plan (BMMDP). CPW submitted scoping comments to BLM for this Draft EA on November 6, 2009. These scoping comments are attached for your records (Attachment 1 – CPW Bull Mountain MDP Scoping Comments).

Our comments below reflect our scoping comments and how the issues raised in our comments have or have not been addressed in the Draft EA and FONSI. In our scoping comments, we specifically asked BLM to address our concerns regarding impacts to wintering big game populations in the Bull Mountain Unit and the potential loss of remote and primitive hunting opportunities in the area. We also encouraged BLM to contact the Colorado Oil and Gas Conservation Commission (COGCC) to ensure that the BMMDP meet the minimum requirements of a Comprehensive Drilling Plan or Wildlife Mitigation Plan per COGCC's rules. This recommendation was meant to streamline permitting for SG Interests (SG) and avoid duplicative process by the State of Colorado once the BLM's BMMDP was completed.

Beginning in 2009, CPW staff and COGCC staff made several attempts to engage BLM and SG on this EA in order to promote the idea of incorporating a Wildlife Mitigation Plan (WMP) into the EA and FONSI. No coordination on the methodology of the wildlife analysis for the EA or other meaningful opportunity for input was provided to CPW or COGCC staff by BLM, SG, or their consultant contractors during preparation of

STATE OF COLORADO

John W. Hickenlooper, Governor • Mike King, Executive Director, Department of Natural Resources  
 Rick D. Cables, Director, Colorado Parks and Wildlife  
 Parks and Wildlife Commission: David R. Brougham • Gary Butterworth, Vice-Chair • Chris Castilian  
 Dorothea Farris • Tim Glenn, Chair • Allan Jones • Bill Kane • Gaspar Perricone • Jim Pribyl • John Singletary  
 Mark Smith, Secretary • Robert Streeter • Lenna Watson • Dean Wingfield  
 Ex Officio Members: Mike King and John Salazar

the EA. CPW staff and SG met just prior to release of the Draft EA regarding the possibility of completing a WMP, but CPW was not provided the Draft EA until it was released to the public in March of 2012. In addition, CPW, SG, and BLM met several times regarding a WMP for this project after release of the Draft EA, but we were unable to reach agreement on the contents of a WMP prior to the close of BLM's 30-day comment period. We've highlighted below the concerns raised in our scoping comments that have not been addressed adequately in the Draft EA and FONSI. We've also included general comments on the Draft EA.

### **Development Impacts to Big Game Populations**

The Bull Mountain Unit provides wintering habitat for both mule deer and elk. The Unit contains 19,673 acres of elk winter range, including 11,813 acres of elk winter concentration areas and 4,960 acres of elk severe winter range. The Unit also contains 4,613 acres of mule deer winter range, including 404 acres of mule deer critical winter range. The Bull Mountain Unit contains the vast majority of critical and severe winter habitats for big game populations in the region due to elevation increases north, west, and east of the Unit that make these areas largely inaccessible to big game during winter months (Figure 1). Thus, potential displacement of mule deer and elk from critical and severe winter habitats within the Unit has significant negative ramifications for big game populations in the area due to the limited availability of these habitat types in areas surrounding the Unit.

Critical and severe winter habitats are known to be a limiting factor on big game populations in western Colorado and other high mountain areas of the western United States (Sawyer et al. 2009, Bishop et al. 2009, Bartman et al. 1992). These habitats are so important in Colorado that CPW recommends limiting the density of surface facilities in these habitats to one well pad (or less)/mile<sup>2</sup> to maintain existing big game populations. This recommendation is consistent with those made by other state fish and game agencies in the Rocky Mountain Region (Wyoming Game and Fish Department 2008, Lutz et al. 2011). The BLM recently acknowledged that residual unavoidable adverse impacts to ungulates increase dramatically when well pad densities exceed one pad/mile<sup>2</sup>, and that these impacts occur from reduced habitat effectiveness regardless of the use of Timing Limitation Stipulations on drilling activities or other site-specific Best Management Practices designed to reduce impacts (see BLM August 2012 Lease Sale Draft EA, p. 64).

These recommended limitations on the density of surface facilities and conclusions regarding unavoidable adverse impacts are supported by recent research documenting that the ongoing human disturbance associated with oil and gas production and maintenance activities continues to displace big game long after drilling activities have ceased (Hebblewhite 2008, Sawyer et al. 2006, 2009, Sawyer and Neilsen 2010). The analysis in the Draft EA suggests that detectible impacts to big game populations are not

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expected due to drilling activities occurring primarily during the summer construction season and human activity levels decreasing after all the projected wells in the Unit are drilled (Draft EA pp. 80-88). This analysis runs contrary to the best available information and recent statements by BLM recognizing that the use of Timing Limitation Stipulations on drilling activities are ineffective at mitigating impacts to big game once the density of oil and gas facilities exceed one pad/ mile<sup>2</sup>. The analysis in the Draft EA does not adequately acknowledge long-term post-drilling displacement of big game from developed areas exceeding this surface facility density, or address post-drilling population declines in and adjacent to these areas.

The Draft EA notes that the most severe impacts to big game populations will occur from indirect impacts (Draft EA p. 80-88). The EA notes that “over 27% of mule deer winter ranges in the Unit may see some level of diminished effectiveness due to the nearby presence of roads and pad sites,” and that due to 17.7% - 54% of the Unit seeing reduced habitat effectiveness for elk, “elk densities would be lower, or at least, elk would be significantly redistributed in some areas, with elk seeking habitats away from facilities and higher use roads” (Draft EA p. 80, 81-82). We generally agree with these statements, although we feel that the level of indirect impacts to both mule deer and elk were underestimated and understated in the Draft EA.

CPW disagrees with the conclusions in the Draft EA regarding no detectible impacts to mule deer or elk populations in the area from the proposed development. These conclusions are not supported by the underlying indirect impact analysis contained in the Draft EA and Biological Evaluation (BE) that document up to 54% of critical winter habitats in the Unit being impacted from development (BE p. 221). The BE also predicts displacement of big game, reduced big game densities, lower over-winter weights, and reduced calf and fawn survivorship (BE p. 197, 221). We view these impacts as significant. In addition, the Draft EA does not place the projected impacts to big game in an appropriate context given the lack of available or unimpacted critical winter habitats for big game near the Unit (Figure 1).

The analysis in the Draft EA describes a general loss of habitat effectiveness for big game in the Bull Mountain Unit due to increased development, but it does not clearly address the relationship of road and well pad density to increased indirect impacts and unavoidable adverse impacts. BLM recently recognized the need for compensatory mitigation (habitat replacement) to offset impacts to big game where surface facility densities exceeding one well pad/mile<sup>2</sup> (see BLM August 2012 Lease Sale Draft EA).

Both the Proposed Action and Alternative 1 will result in well pad densities exceeding one pad/mile<sup>2</sup> and road densities exceeding 0.5 mile/mile<sup>2</sup> throughout the Bull Mountain Unit. CPW encourages BLM to incorporate into the Draft EA compensatory mitigation to address what will otherwise be significant unavoidable adverse impacts to big game within the Bull Mountain Unit and surrounding area. Compensatory mitigation for the

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BMMDP will only be effective with careful landscape-level planning prior to development that addresses improving and conserving habitat while limiting additional impacts.

### **Best Management Practices (BMPs)**

The EA notes in many places that “adherence to applicable BMPs listed in Appendix C would minimize potential impacts.” Appendix C describes BLM policies related to BMPs, but does not include specific BMPs or outline the applicability of specific BMPs to the proposed development. Appendix C does include a list of potential Conditions of Approval (COAs) for APDs, but notes that the list is a “master list” that *may be used* when considering APDs for approval.

CPW is unable to determine with any degree of certainty the degree of impacts to specific wildlife resources without knowing how the COAs listed in Appendix C will be applied to proposed facilities. For example, will COA #107 related to seasonal restrictions in big game winter concentration and severe winter ranges be applied uniformly on federal leases (as we would strongly recommend)? COA #107 contains subjective criteria for exceptions and waivers that are likely to vary based on individual BLM staff interpretations. CPW suggests making these criteria more objectively quantitative (similar to conditions-based closures that rely on snow depth), or at a minimum, incorporating local CPW staff into the decisionmaking process for exceptions and waivers.

### **Reclamation of Shrubland Communities**

The Draft EA states that “post development, temporarily impacted areas would likely take 2 to 4 years to reclaim to vegetated community types, but more mature shrubland communities may take 30 years to reclaim. . .” (Draft EA p. 74). The EA also notes that “over 10 years or so, most of the cleared pipeline corridors and other temporary use areas in sagebrush-dominated habitats would begin to support smaller sagebrush plants. However, in some circumstances where landowners choose to plant non-native grasses and forbs, the recovery of sagebrush plants in these temporarily disturbed acres may take much longer due to competitive exclusion of sagebrush” (Draft EA p. 65). CPW agrees with these statements regarding reclamation of shrubland habitats, and specifically sagebrush habitats. Note that these statements are contrary to several statements in big game sections that suggest that browse opportunities for big game on pipeline disturbed areas would return over 2 to 3 years (Draft EA p. 81).

### **Raptor Nesting Activities**

The EA suggests that “raptor surveys should occur to identify potential nesting activities” (EA p. 65), but we found no commitment in the EA or appendices to conduct pre-

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construction raptor nest surveys or to avoid active raptor nests. In order to minimize impacts to nesting raptors throughout the Unit, CPW recommends pre-construction raptor nest surveys for activities planned to occur during the nesting season (February – July), and avoidance of active raptor nest sites with new construction and drilling activities. Specific recommendations on appropriate avoidance buffers can be found in CPW’s Recommended Buffer Zones and Seasonal Restrictions for Raptors in Colorado (Klute 2009).

### **Endangered Colorado and Gunnison River Fishes**

The Draft EA notes in several sections that “net water depletions are expected to be much lower given SG’s water augmentation plan.” In order to provide meaningful comments on the effects of water depletions on Endangered Colorado and Gunnison River fishes and fisheries in general, the EA needs to include a more thorough description of SG’s augmentation plan and how it will alter the timing and quantity of flows in project area streams.

### **Greenback Cutthroat Trout**

The Draft EA states that “water depletions may have impacts to greenback habitats, but no realized effects to greenback trout would be anticipated” (Draft EA, p. 89). A more complete description of impacts to greenback habitats from water depletions is needed in the Draft EA to understand this statement. The Draft EA describes “replacement of existing culverts with more fish-friendly culverts” as part of the Proposed Action (Draft EA p. 89), but that commitment does not appear elsewhere in the EA, in Appendix C, or under the description of the Proposed Action. In addition, in some cases more “fish-friendly culverts” may promote adverse impacts through hybridization of previously isolated stream segments.

In order to avoid the fine-sediment mobilization into area creeks from the Proposed Action, Alternative 1, and other reasonably foreseeable developments in the area, CPW suggests that BLM require boring of stream crossings (rather than low-flow crossings) in potential greenback habitats, and apply a 300-ft. buffer restricting construction of new facilities adjacent to these habitats.

### **Fencing and Netting of Oil and Gas Pits**

Fencing and netting of reserve (cuttings) pits and other oil and gas production pits is necessary to prevent bats, migratory birds, and other wildlife from accessing potentially contaminated cuttings and fluids. The Draft EA notes this risk for bats and big game, but does not accurately describe the risk for migratory birds. The Draft EA notes that the current practices used by the operator do not include uniform fencing and netting of reserve pits to exclude wildlife (Draft EA, p. 77). CPW strongly suggest that BLM

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require the operator to fence and net all oil and gas pits potentially containing fluids, including reserve pits and cutting pits. Appendix C contains an optional COA (#52) that should be uniformly applied to these facilities.

### **Conclusion**

CPW appreciates the opportunity to comment on BLM's EA for the BMMDP. Although we are pleased with BLM's recent efforts to coordinate with our staff since release of the Draft EA, the concerns we raised during scoping for this project have not been addressed adequately in the Draft EA and FONSI. The mitigation measures, BMPs, and potential COAs outlined in the Draft EA and FONSI are not adequate to effectively address potentially significant impacts to wildlife resources, particularly big game resources, within the Bull Mountain Unit.

Due in large part to plentiful big game populations, Gunnison County received economic benefits of approximately \$53.1 million in 2007 from hunting and fishing activities that support an estimated 615 jobs (BBC Research and Consulting 2008). These economic benefits from hunting and fishing recreational activities are a sustainable annual source of economic benefit for Gunnison County only if wildlife populations, and particularly big game populations, are maintained and quality hunting opportunities continue to exist.

Existing big game populations and recreational hunting opportunities in and adjacent to the Bull Mountain Unit may be maintained by relocating facilities that will have disproportionate impacts on wintering animals, incorporating additional limitations on the overall density of surface facilities, and by providing quality, unimpacted, replacement critical winter habitats. CPW staff will continue to work with BLM, COGCC, landowners in the area, and the operator, to look for opportunities to implement these strategies offset the impacts from this proposed development. If you have any questions, please contact Jon Holst, SW Region Energy Liaison, at (970) 759-9588.

Sincerely,

J. Wenum  
Area Wildlife Manager  
Colorado Parks and Wildlife

xc: T. Spezze, SW Region Manager; Jon Holst, SW Region Energy Liaison; Scott Wait, SW Region Senior Terrestrial Biologist; John Alves, SW Region Senior Aquatic Biologist

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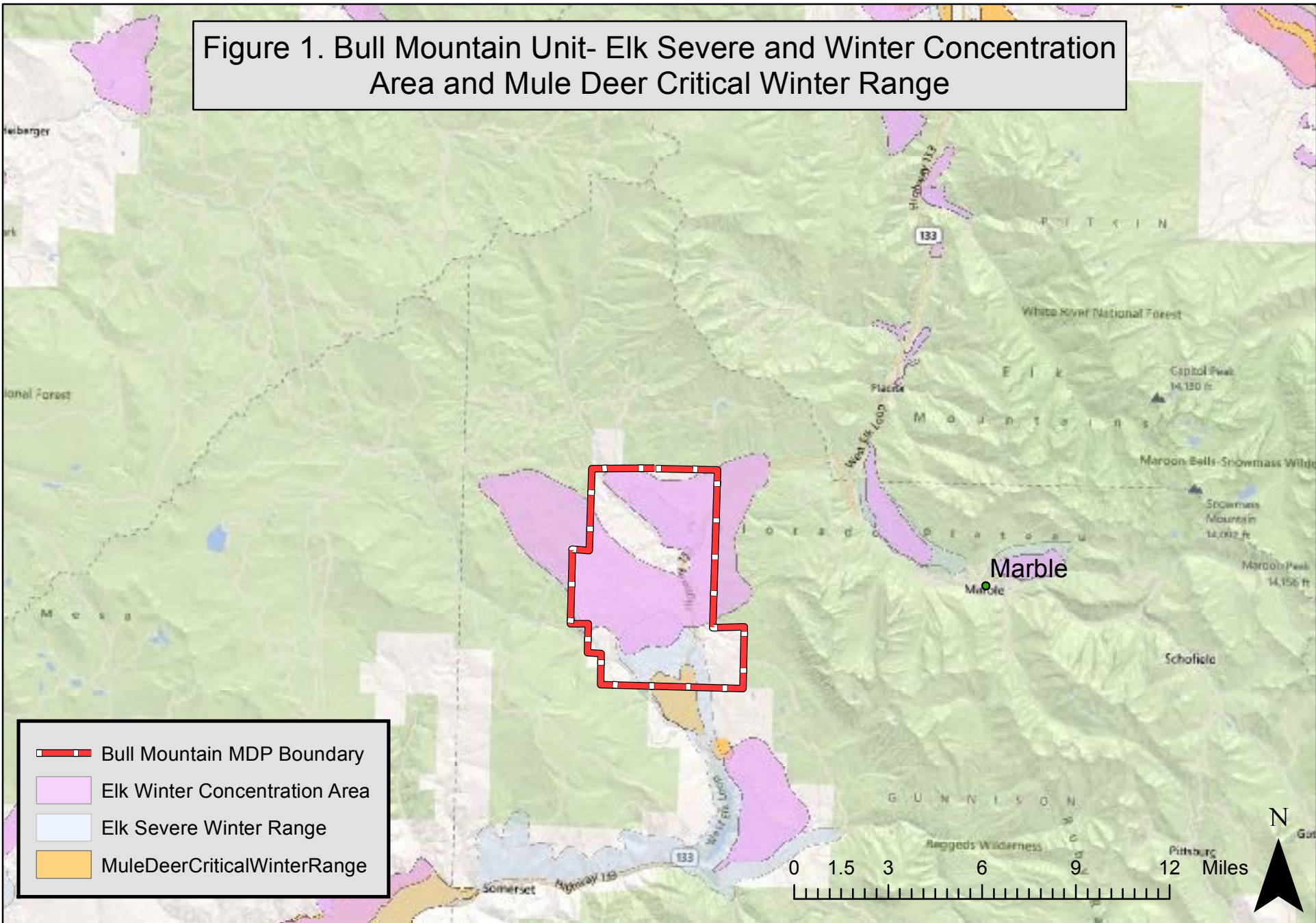
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Figure 1. Bull Mountain Unit- Elk Severe and Winter Concentration Area and Mule Deer Critical Winter Range



11/11/09

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Bill Ritter, Jr., Governor  
DEPARTMENT OF NATURAL RESOURCES  
**DIVISION OF WILDLIFE**

AN EQUAL OPPORTUNITY EMPLOYER

Thomas E. Remington, Director  
8060 Broadway  
Denver, Colorado 80218  
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*For Wildlife  
For People*

November 6, 2009

Thane Stranathan  
Uncompahgre Field Office  
2465 South Townsend Ave.  
Montrose, CO 81401

**Re: Bull Mountain Geographic Area Plan (Natural Gas Wells) Scoping Notice**

Dear Mr. Stranathan:

The Colorado Division of Wildlife (CDOW) thanks you for the opportunity to comment on the SG Interests (SG) proposed Bull Mountain Unit gas well development. CDOW is concerned with the proposed density and extent of development in the Bull Mountain Unit as the area provides high quality habitat for a variety of species, and contains important wintering habitat for big game. As you are aware, the scale of the proposed development is unprecedented for this relatively pristine area. Impacts to wildlife, especially cumulative impacts, may be far reaching. We are concerned about the potential long-term displacement of big game from areas proposed for development, and how that might affect the overall carrying capacity of the adjacent habitats and long-term population trends for big game in the area. We are also concerned about the potential loss of remote and primitive hunting opportunities within and immediately adjacent to areas proposed for development. These issues should be thoroughly evaluated and disclosed in your NEPA document.

Due to the extent of private lands overlying Federal minerals in the Bull Mountain Unit and the scope of this project, we encourage you to contact the Colorado Oil and Gas Commission (COGCC) during your scoping process for NEPA. COGCC recently implemented new regulations governing oil and gas development, with particular emphasis on protection of wildlife resources and water quality. Your original October 2008 scoping notice for this project indicated that the proponent would be working with BLM to prepare a Geographic Area Plan. We support that approach. In order to fully address cumulative impacts and streamline permitting for individual facilities, we encourage you to coordinate with COGCC to ensure that your process also meets the minimum requirements of a Comprehensive Drilling Plan or Wildlife Mitigation Plan under COGCC's new regulations.


As part of CDOW's efforts to work with COGCC to minimize the impacts from oil and gas development on wildlife resources, we have developed a set of wildlife best management practices (BMPs) for oil and gas development activities. These BMPs are intended to help oil and gas companies avoid and minimize impacts to wildlife resources by incorporating consideration of these resources into early planning and siting of facilities and infrastructure. They also contain guidelines for operations and reclamation, and include species-specific recommendations to avoid impacts. We have attached a copy of our BMPs that apply specifically to Gunnison County.

We encourage the applicant and the BLM to review the attached BMP document and incorporate as many of the recommendations as possible into planning this development. Note that Gunnison sage grouse, bighorn sheep,

DEPARTMENT OF NATURAL RESOURCES, Harris D. Sherman, Executive Director  
WILDLIFE COMMISSION, Brad Coors, Chair • Tim Glenn, Vice Chair • Dennis Buechler, Secretary  
Members, Jeffrey Crawford • Dorothea Farris • Roy McAnally • John Singletary • Mark Smith • Robert Streefer  
Ex Officio Members, Harris Sherman and John Stulp

If you have any questions regarding these comments or the attached BMP document, please contact District Wildlife Manager Kirk Madariaga at (970) 527-4419.

Sincerely,

A handwritten signature in cursive script, appearing to read "J. Wenum", with a long horizontal flourish extending to the right.

J Wenum  
Area Wildlife Manager, Gunnison

cc: CDOW- Spezze, Area File, Energy File  
COGCC - Thom Kerr  
Gunnison County



Figure 3: NFMMDP & Bull Mountain Units - Cutthroat Trout

