

U.S. Department of the Interior  
Bureau of Land Management  
White River Field Office  
220 E Market St  
Meeker, CO 81641

## ENVIRONMENTAL ASSESSMENT

**NUMBER:** DOI-BLM-CO-110-2011-0004-EA

**CASEFILE/PROJECT NUMBER:**

**PROJECT NAME:** North Hatch Pilot Forage Treatments

**LEGAL DESCRIPTION:**

Township 1 South, Range 97 West  
Section 27 (1<sup>st</sup> generation woodland sites)  
Section 35 (Lee Gulch chaining sites)  
Section 35, 36 (pinyon-juniper encroachment)

Township 2 South, Range 97 West  
Section 1 (pinyon-juniper encroachment)

Township 1 South, Range 96 West  
Section 31 (pinyon-juniper encroachment)

Township 2 South, Range 96 West  
Section 6 (pinyon-juniper encroachment)

**APPLICANT:** BLM White River Field Office (WRFO) and Colorado Division of Wildlife (CDOW)

**ISSUES AND CONCERNS:** No issues or concerns.

**DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:**

***Background/Introduction:*** Over the past 3 years, the CDOW has collected baseline demographic and habitat utilization data across the Piceance Basin from about 900 deer collared with Global Positioning System (GPS) transmitters. The CDOW will supplement the continued collection of this data with animal condition and distribution metrics, including winter fawn and annual adult doe survival, early and late winter body condition of adult females using ultrasonography, and deer abundance using helicopter mark-resight surveys. Collectively, these measures will be used to evaluate deer behavioral and physiological response to habitat treatments and industry-adopted Best Management Practices (BMPs) in areas undergoing natural gas development in contrast to those areas that are minimally developed.

**Proposed Action:** Delineated in close coordination with the WRFO wildlife staff, the CDOW has proposed mechanical treatment of up to 140 acres in 20 parcels along the ridge between Lee Gulch and Hatch Gulch (see Attachment 1: Project Location Map) as big game forage enhancement treatments. This project would serve as a small scale pilot to evaluate the technical and logistic feasibility of more comprehensive project implementation, which is expected to involve another 1100 acres of treatment across the western half of Magnolia over the next 2 years.

This project would entail mechanically grinding above ground woody material from a number of small (2-20 acres, weighed mean=10.6 acres) parcels of shrubland and woodland with a rubber-tired hydro-ax (See Attachment 2: Treatment Site Map). Primary project access would be from existing roads or two-tracks. Machine access to individual treatment sites would be directly from these roads (where treatments are bisected) or short cross-country traverses (average 25 meter, maximum 60 meter) that would require no vegetation clearing or ground leveling. CDOW and contract personnel working in concert with BLM WRFO staff would remain in contact with the equipment operator and monitor the accuracy and progress of treatments. Treatments would be dispersed across the project area and have been designed to target mature big sagebrush communities that have redeveloped in 1970's vintage woodland chainings (3 parcels ; ~18 acres) and fire-disclimax shrubland communities that are represented by late successional mixed deciduous shrub/big sagebrush types that support young pinyon pine and Utah juniper regeneration and first-generation woodland stands that bear no evidence of previous woodland character. Canopy reduction, depending on community character, would invigorate crown sprouting (e.g., deciduous shrubs), prompt germination and establishment of a new generation of seed-derived shrubs (e.g., sagebrush), and increase the density of herbaceous ground cover. There are no plans at present to supplement the existing vegetation community with seeding. Although there are minor inclusions of slopes between 25-35% within the treatment polygons (about 3% of mapped acreage), in practice, mechanical operations would be confined to slopes no greater than 25%. These treatments are scheduled to be conducted in the late fall or early winter months (October-December) of 2010. Machine operation and access would not be allowed under soil moisture conditions that result in rutting (3" or more) and hydro-ax and transport equipment would be cleaned to remove noxious weed seed prior to entering the project area. Weed control would be evaluated and implemented, where necessary, on a case-by-case basis through BLM's standard pesticide program protocols.

Monitoring of vegetation response is integral with study design. Monitoring plant response and integral reconnaissance for noxious and invasive weeds would be conducted over the following 4-year period by contracted personnel guided by CDOW and BLM wildlife staffs. Line and point intercept transects have been established in each of the 20 treatment parcels as well as 10 representative controls in adjacent undisturbed sites. Baseline pre-treatment plant inventories are the property of the CDOW; CDOW has indicated a willingness to share that full data set with BLM.

**No Action Alternative:** BLM would not authorize implementation of the proposed big game forage enhancement treatments.

**ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD:** None

**PURPOSE & NEED FOR THE ACTION:** This project is being proposed to accommodate research being conducted by the CDOW as part of a Wildlife Mitigation Plan (WMP) recently developed by the CDOW and Exxon-Mobil. The WMP fulfills, in part, requirements of Colorado House Bill 1298 that is

intended to better balance the State's oil and gas development and wildlife conservation responsibilities. This project is a part of a larger effort designed to experimentally evaluate the response of deer to various mitigation strategies. The treatments are being proposed to determine if efforts to enhance the availability and quality of seasonal forages on deer winter ranges are capable of offsetting impacts to, or elevating, survival and fitness of mule deer exposed to energy development in the Piceance Basin.

**PLAN CONFORMANCE REVIEW:** The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: White River Record of Decision and Approved Resource Management Plan (ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: 2-26

Decision Language: "Ensure that big game habitats provide components and conditions necessary to sustain big game populations at levels commensurate with multiple use objectives and state-established population objectives."

"Maintain or enhance the productivity and quality of preferred forages on all big game ranges."

"Provide the forms, distribution and extent of vegetative cover and forage that satisfy the physiological and behavioral requirements of big game."

### **AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES:**

**STANDARDS FOR PUBLIC LAND HEALTH:** In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental analysis. These findings are located in specific elements listed below:

## INTERDISCIPLINARY TEAM ANALYSIS RECORD CHECKLIST

<b>DETERMINATION OF STAFF:</b>		
<b>Determination</b>	<b>Resource</b>	<b>Rationale for Determination*</b>
<b>Natural, Biological and Cultural Resources</b>		
NI	Air Quality	Vegetation treatment equipment and vehicles to transport equipment to the site will result in emissions of pollutants common with internal combustion engines, but these emissions will be limited to times of treatment and would be similar to casual uses that occur on public lands and therefore are expected to be short-term and minor.
PI	Soils	See impacts described below.
NI	Wastes (hazardous or solid)	Brush will be shredded in place and does not constitute a solid waste. Equipment will require fueling and there is the potential for minor spills of hydraulic fluids or vehicle fluids such as oil and anti-freeze. All minor spills that might occur should be contained immediately using absorbent materials and removed from the site with other trash to the landfill.
NI	Water Quality (Surface/Ground)	These vegetation treatments will not involve any direct disturbance of the ground surface, but will have some indirect impacts as described in the soils section. Since the chips and wood shreds will be left in place and scattered with the equipment these treatment are not expected to result in greater surface runoff or rain splash erosion that would lead to changes in water quality. Therefore, impacts to water quality are not expected.
NP	Wetlands/Riparian Zones	The treatment parcels are located in the Lee Gulch drainage. The proposed action would have no effective influence on channel systems and would generate virtually no fugitive sediments. The minimum separation between the treatments and the nearest riparian system (Piceance Creek) would be 2.7 miles of ephemeral channel.
NI	Vegetation	Currently, the project area is meeting Colorado Land Health Standards for vegetation, and that is not expected to change as a result of this project. The use of rubber tire equipment should only result in minor impacts to vegetation since there is mitigation in place limiting work to when it is not muddy and work will take place while plants are generally dormant. Vegetation response will be closely monitored and with the above mitigation, effects are expected to be minimal.
NI	Invasive, Non-native Species	Noxious weeds occur relatively infrequently within the immediate area of the proposed project area, but three knapweed species along with black henbane and leafy spurge are known to occur in the Magnolia gas camp area. The invasive alien cheatgrass is also known to occur in the general vicinity of the proposed project area. With implementation of the mitigation measures discussed in the proposed action, it is not expected that there will be significant impacts from weeds as a result of this project.

<b>DETERMINATION OF STAFF:</b>		
<b>Determination</b>	<b>Resource</b>	<b>Rationale for Determination*</b>
PI	Threatened, Endangered, and Sensitive Plant Species	The proposed forage treatment areas have been thoroughly surveyed for special status plants by Hayden-Wing Associates during the 2010 blooming season. No occupied habitat was located, but suitable threatened plant habitat was found as close as 140 meters from the forage treatment area.
NI	Threatened, Endangered, and Sensitive Animal Species	There are no animals listed, proposed, or candidate to the Endangered Species Act that inhabit or derive important benefit from the project site. Although a number of BLM sensitive animals inhabit the greater project area (e.g., nearest northern goshawk nest site: ¾ mile, nearest occupied habitat for greater sage-grouse: 1.4 miles), by merit of timing or site selection, the only species that would be subject to influence would be the Brewer's sparrow. Nest habitat suitability for this species is limited by woodland encroachment such that the habitat capable of supporting up to 12 pair would be foregone for up to 20 years. Once shrubland character is regained, these sites would be capable of supporting at least 50 pair of Brewer's sparrow.
NI	Migratory Birds	Proposed operations would take place outside the nesting season for migratory birds and would have no direct influence on reproductive activity. The dispersed treatment sites are represented by shrub-steppe fire-disclimax communities that variously encroached by young pinyon-juniper encroachment. Treatments would remove shrub-based nest substrate for 5-20 years and would be expected to reduce breeding bird abundance by up to 40 pairs (less than 4% of like-habitat in immediate project locale). This seral manipulation is considered compatible with normal patterns of perturbation that maintain disclimax shrublands considered appropriate to this site.
NP	Wildlife, Aquatic	The treatment parcels are located in the Lee Gulch drainage. The proposed action would have no effective potential to influence the condition or function of downstream channel systems that support aquatic communities (Piceance Creek) and would generate virtually no fugitive sediments. The minimum separation between the treatments and the nearest riparian system (Piceance Creek) would be 2.7 miles of ephemeral channel.
PI	Wildlife, Terrestrial	See discussion below.
NI	Wild Horses	This area is not part of the Piceance-East Douglas Herd Management Area but is known to have wild horses. In 2010, the WRFO gathered and removed 9 head of wild horses however 7 head of wild horses escaped capture. The WRFO, depending on the winter conditions, may attempt to gather them starting in December 2010.
PI	Cultural Resources	The area contained recorded cultural resources, some of which had previously been recommended for avoidance. In general, the Piceance Basin contains several categories of cultural resources, some of which, such as aboriginal wooden architecture (wickiups, etc.), are especially vulnerable to substantial impacts from the proposed action.

<b>DETERMINATION OF STAFF:</b>		
<b>Determination</b>	<b>Resource</b>	<b>Rationale for Determination*</b>
NI	Paleontology	With no excavation, the avoidance of steep slopes, and the use of rubber-tired vehicles, the proposed action has a negligible potential to affect important fossil resources.

NP = not present in the area impacted by the proposed or alternative actions

NI = present, but not affected to a degree that detailed analysis is required

PI = present with potential for impact analyzed in detail in the EA

## **NATURAL, BIOLOGICAL, AND CULTURAL RESOURCES**

### **SOILS** (includes a finding on Standard 1)

*Affected Environment:* The soils analysis identified areas that have slopes above 25% according to 10 meter Digital Elevation Model data, but none above 35% in the treatment areas. The Soil Classifications for the treatment area is shown below.

#### **Soil Classifications (acres potentially impacted based on a 30m buffer)**

<b>Soil Classification</b>	<b>Range Site Description</b>	<b>Acres</b>
Torriorthents-Rock Outcrop, complex, 15-90% slopes	Stoney Foothills	1
Redcreek-Rentsac complex, 5-30% slopes	PJ woodlands/PJ woodlands	93
Rentsac channery loam, 5-50% slopes	Pinyon Juniper woodlands	66
Piceance fine sandy loam, 5-15% slopes	Rolling Loam	38
Yamac Loam, 2-15% slope	Rolling Loam	38
Castner channery loam, 5-50% slopes	Pinyon Juniper woodlands	29
Veatch channery loam, 12-50% slopes	Loamy Slopes	9

These soils have medium to rapid runoff characteristics and erosion hazard can be moderate to very high.

*Environmental Consequences of the Proposed Action:* Soil productivity near hydro-ax treatments may be reduced initially due to the deposition of organic debris from the treatment. However, as this mulch breaks down and since it will help soil retain soil moisture, these localized areas are likely to become more productive in the future.

Soil disturbance will occur from the rubber-tired tractors. Overall impacts are expected to be localized and dispersed with the long-term impact of improving soil productivity. Since some of these soils have a very high potential for water erosion, it would be good to have these sites stabilized by the time late summer severe storms are more prominent. This method of masticating brush in place is preferable to other methods such as chaining that disturb the soil by mechanically removing the stumps, since the root mass stays in place and due to the mulch produced. Mulch of this type has shown to protect bare ground from rainsplash erosion as well as effectively increasing surface runoff and damming up surface runoff in rills to allow for infiltration.

*Environmental Consequences of the No Action Alternative:* None identified, however overall soil productivity may be less than that with the vegetation treatment, particularly in the old chaining areas.

*Mitigation:* None identified.

*Finding on the Public Land Health Standard for upland soils:* The vegetation treatment is likely to improve long-term soil productivity and therefore should improve upland soil conditions. Soil disturbance will be localized, dispersed and generally low impact and therefore should recover within 2-5 years at most.

**THREATENED, ENDANGERED, AND SENSITIVE PLANT SPECIES** (includes a finding on Standard 4)

*Affected Environment:* The proposed forage treatment areas fall within the survey buffers for ExxonMobil's North Hatch Gulch project and PCU 197-36A well pad. These areas were thoroughly surveyed for special status plants by Hayden-Wing Associates during the 2010 blooming season (HWA, 2010a and 2010b). No special status plant species were located during these surveys, but several patches of suitable threatened plant habitat were identified in the vicinity of the proposed project. The closest of these is located approximately 140 meters from the forage treatment area. Since these areas of suitable habitat have been surveyed during the most recent blooming season, BLM is confident that they are not occupied at this time. In addition, the sensitive and threatened plants found in the North Hatch Gulch area are associated with white shale slopes and hilltops with high levels of sun exposure. The proposed forage treatments will occur in pinyon-juniper forests, which are not known to support special status plants.

*Environmental Consequences of the Proposed Action:* Based on 2010 plant survey results, the proposed action is expected to have no impact on special status plants or associated habitats.

*Environmental Consequences of the No Action Alternative:* The no action alternative is expected to have no effect on special status plants or associated habitats.

*Mitigation:* None

*Finding on the Public Land Health Standard for Threatened & Endangered species:* The proposed and no-action alternatives are not expected to affect populations or habitats of plants associated with the Endangered Species Act or BLM sensitive species and, as such, should have no influence on the status of applicable Land Health Standards.

## **WILDLIFE, TERRESTRIAL** (includes a finding on Standard 3)

*Affected Environment:* The project area is composed of shrub-steppe benchlands and ridgelines interspersed with pinyon-juniper slopes at elevations between 6400-7250 feet. Much of the shrub-steppe component above 6800 ft, and the primary focus of the proposed treatments, is fire-disclimax shrublands whose character is heavily influenced by pinyon-juniper regeneration. As conifer canopies continue to develop on these lands, shrub expression and herbaceous ground cover and the wildlife cover and forage they provide progressively diminish. All the proposed treatment sites lie within or on the periphery of mule deer severe winter range. Topographic and elevational properties of these ranges generally provide moderated snow depth and more readily accessible supplies of winter and spring forage than surrounding winter ranges and are, by definition, those ranges that support 90% of the Game Management Unit's deer population under the most adverse winter weather conditions. The most important function of these severe winter ranges is fulfilled from early January through the end of April. The White River RMP established a Timing Limitation that limits surface disturbing activities during this period of big game occupation.

Woodlands in the project area support nesting use by Cooper's and sharp-shinned hawks and long-eared owl. These raptors generally begin nesting by the middle of April (owl somewhat earlier) and fledge young by mid-July. Most of the more structurally developed and mature woodlands capable of supporting nesting use in the vicinity of the proposed treatments have been recently inventoried (2010) as clearances for oil and gas development. Raptor nest sites within 400 meters and potentially influenced by surface disturbing activities include: 2 Cooper's hawk nest sites 225 and 400 meters from the nearest treatment area, 2 sharp-shinned hawk nest sites 100 and 120 meters lateral to and 20-40 meters below the nearest treatment edge, and 1 long-eared owl nest site 340 meters from the nearest treatment. The White River RMP established No Surface Occupancy and Timing Limitation buffers that are delineated around the functional nest sites of raptors as a means of maintaining the character and utility of nest stands and preventing adverse disruption of adults and young at active nests.

There are a number of small mammals associated with these woodland and shrubland habitats. Although typically dominated by deer mouse and least chipmunk, these communities are incompletely surveyed and poorly understood. However, the species known to inhabit this portion of northwest Colorado are thought to be widely distributed in extensive suitable habitats and have broad ecological tolerance. There are no narrowly distributed or highly specialized species of small mammal known to occur in or near the project area.

*Environmental Consequences of the Proposed Action:* The intent of this project is to evaluate whether localized shifts in forage availability and quality are capable of offsetting changes in animal distribution and condition that may be attributable to natural gas development. Rather than relying on natural events to alter successional-advanced plant communities (e.g., disease, wildfire) that are unpredictable in space and time, this project would apply surrogate seral treatments in incremental patterns considered most advantageous to deer based on their behavioral tendencies. All treatment sites were delineated in former shrub disclimax

communities that, in varying degrees, support first-generation woodland development (i.e., no evidence of previous woodland character). These treatments would, on a localized basis, reverse declining trends in overall forage supplies that attend increasingly dense conifer canopies and would reestablish shrubland disclimax character considered appropriate for this area. These treatments would be expected to enhance the diversity and availability of preferred herbaceous forage in the short term and over time and through normal successional processes redevelop woody growth as a winter big game forage staple (sagebrush, deciduous browse).

Absent the need to clear or construct equipment access and considering the amount of woody debris that would be scattered on the surface, it is unlikely that this project would promote off-road vehicle travel and the subsequent development of new trails. These effects would be monitored and, if necessary, remedied on a case-by-case basis by the CDOW and BLM, since proposed project objectives are fundamentally incompatible with increasing road-density effects and road density objectives established in the WRFO RMP. Proposed project work is scheduled to take place as early as possible in November or December of 2010 in an explicit attempt to avoid contributing to animal disturbance during the most important late winter/early spring use period. Project timing and treatment implementation were specifically designed to contribute as little as possible to cumulative effects associated with natural gas development and public land recreation in the Magnolia area of Piceance Basin, including longer term habitat modification and occupation of the land base and animal disturbance during periods of important reproductive or energetic challenges.

Proposed project work is scheduled to take place in November and December of 2010 and would have no potential influence on raptor reproductive activities that occur at known or undiscovered nest sites. The treatment sites themselves were selected to avoid any foreseeable modification to the character of mature woodland stands that represent nesting or associated foraging habitat. Removal of woody structure at the treatment sites would be expected to alter the abundance of small mammals that occupy the treatment sites. These changes may involve temporary shifts in relative abundance, but due to the small size and dispersion of the sites relative to the surrounding landscape, the effects would remain subtle, short term, and localized. Reversion of shrub-steppe character to these woodland-encroached shrublands would be considered compatible with the long term successional balance of woodland and shrubland habitat availability and would not contribute functionally to cumulative effects on nongame wildlife populations in the Magnolia area of Piceance Basin.

*Environmental Consequences of the No Action Alternative:* There would be no action authorized that would influence local wildlife populations or habitat. Conversely, there would be no incremental progress made in reverting up to 135 acres of fire-disclimax shrubland communities to their former state and function.

*Mitigation:* None.

*Finding on the Public Land Health Standard for plant and animal communities* (partial, see also Vegetation and Wildlife, Aquatic): The project area presently meets the land health standards for

all wildlife groups. Implementation of small, dispersed seral treatments that generally mimic natural forms of successional perturbation are considered compatible with the long term maintenance of a habitat matrix appropriate to this landscape and is, therefore, consistent with continued meeting of the land health standard.

## **CULTURAL RESOURCES**

*Affected Environment:* Approximately 20% of the project area and its environs had been inventoried before the planning stage of the current project, resulting in over 30 recorded historic properties (archaeological sites) and isolated finds in the vicinity of the project area (cf. Elkins and McKibbin 2008). Most recorded historic properties in this vicinity are prehistoric open lithic scatters and camps, though aboriginal wooden architecture (e.g., wickiups) is known to infrequently occur.

The project area was inventoried for cultural resources at the Class III (100% pedestrian) level. Two previously-recorded sites within the project area could not be relocated and are presumed destroyed. These sites had previously been officially determined Not Eligible for listing on the National Register of Historic Places (NRHP) by the BLM and Colorado Office for Archaeology and Historic Preservation (OAHP). Two prehistoric isolated finds, categorically Not Eligible for NRHP listing, were also discovered in the undertaking's area of potential effect (APE) (Slaughter 2010, Stahl 2010).

Letters requesting government-to-government consultation regarding a list of planned 2010 WRFO projects and EAs were sent on 1/27/2010 to the Ute Mountain Ute Tribe, the Southern Ute Tribe, the Ute Tribe of the Uintah & Ouray Reservation, and the Eastern Shoshone Tribe, with follow-up phone calls on 3/15/2010 and a link to an online, updated EA/EIS list mailed on 8/20/2010. Additionally, consultation requests regarding ExxonMobil's North Hatch Gulch Plan of Development, occurring adjacent to the proposed action, were sent on 8/23/2010 and 8/24/2010 to the Ute Mountain Ute Tribe, the Southern Ute Tribe, the Ute Tribe of the Uintah & Ouray Reservation, and the Eastern Shoshone Tribe, with follow-up phone calls on 9/27/2010 and 9/28/2010. Currently, no Native American Religious Concerns or Traditional Cultural Properties are known in or near the project area.

*Environmental Consequences of the Proposed Action:* While the vicinity of the project area may contain historic or prehistoric architectural sites, which are particularly vulnerable to impacts from the proposed action, the APE of the project does not contain any historic properties potentially Eligible for NRHP listing. The project will not affect any sites potentially Eligible for NRHP listing.

*Environmental Consequences of the No Action Alternative:* The No Action Alternative would have no potential to affect historic properties.

*Mitigation: BLM Handbook of Guidelines and Procedures for Inventory, Evaluation, and Mitigation of Cultural Resources: V.I.O.:* In the event that cultural resources and/or human remains are discovered during operations, activity in the vicinity of the discovery will cease, and the BLM authorized officer will be notified immediately. BLM, in cooperation with the proponent and/or cultural resource consultant, will ensure that the cultural resources and/or human remains are protected from further disturbance until BLM determines the treatment approach, and the treatment is completed.

Unless otherwise noted in treatment plans or agreements, BLM will evaluate the cultural resources and, in consultation with the SHPO, select the appropriate mitigation option within 48 hours of the discovery. BLM will implement the mitigation in a timely manner. The process will be fully documented in reports, site forms, maps, drawings, and photographs. The BLM will forward documentation to the SHPO for review and concurrence.

If human remains are discovered on BLM-administered land, the treatment of human remains will be in accordance with Native American Graves Protection and Repatriation Act (AGPRA) and BLM policy. If human remains are discovered on private or state land during a BLM undertaking, the BLM will notify the State of Colorado Archaeologist immediately, who will comply with Colorado Revised Statutes (Appendix) regarding the discovery of human remains (24-80-1302).

Should future consultations with tribal authorities reveal the existence of sensitive Native American Religious Concerns or Traditional Cultural Properties, appropriate mitigation and/or protection measures may be undertaken.

**ELEMENTS NOT PRESENT OR NOT AFFECTED:**

No flood plains, prime and unique farmlands, exist within the area affected by the proposed action. There are also no Native American religious or environmental justice concerns associated with the proposed action.

**OTHER ELEMENTS:** For the following elements, only those brought forward for analysis will be addressed further.

Other Elements	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Visual Resources			X
Fire Management			X
Forest Management			X
Hydrology/Water Rights		X	
Rangeland Management		X	

Other Elements	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Realty Authorizations			X
Recreation		X	
Access and Transportation		X	
Geology and Minerals	X		
Areas of Environmental Concern	X		
Wilderness	X		
Wild and Scenic Rivers	X		
Cadastral	X		
Socio-Economics	X		

## VISUAL RESOURCES

*Affected Environment:* The proposed action would traverse areas with a Visual Resource Management (VRM) III classification. The objective of the VRM III class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape. South of the proposed action, the development of natural gas has created many features that attract some attention to the casual observer traveling Rio Blanco County road (RBC) 5.

*Environmental Consequences of the Proposed Action:* The proposed action will be in contrast with the surrounding area in color due to the change in vegetation type. The initial mastication of the woody materials will create a lighter tan color than the greens of the surrounding pinion-juniper and sagebrush. This contrast in color will remain until the sites woody material decomposes or bleaches from the sun and the revegetation of grasses and some brush begin to dominate the site. The casual observer traveling RBC 5 would only be able to view the western most polygons. Revegetation of the site naturally or through seeding would return color to the site and the level of change to the characteristic landscape would be low, and the objective of the VRM III classifications would be retained.

*Environmental Consequences of the No Action Alternative:* Under this alternative there would be no vegetation disturbed and no contrast created.

*Mitigation:* None

## **FIRE MANAGEMENT**

*Affected Environment:* The proposed area is within the D4 Little Hills fire management polygon. The predominant vegetation within this polygon is mountain shrub, pinion-juniper woodland, big sagebrush and Douglas fir communities. Fire management is used as a tool to promote a vegetation mosaic representing natural distributions of plant communities of varying successional stages. Within the D4 polygon, managing fires by using an appropriate management response (AMR) throughout the polygon to promote a vegetation mosaic is the preferred option when life and property are not at threat.

*Environmental Consequences of the Proposed Action:* The proposed action calls for the mastication of pinion-juniper trees. The hydro-axe machines available for use on this project have either a horizontal orientated shaft or a vertically orientated shaft. Both types of equipment are capable of masticating trees up to 20' tall with varying diameters. They effectively break down the woody fuel and scatter the debris, thereby eliminating any hazardous fuel load concentrations, as well as mowing brush like a conventional brush beater. The mulch is scattered across the surface. If a horizontal orientated shaft (e.g., FECON) type of equipment is used, the mulch may be more concentrated where the tree is pushed over and the final stages of shredding occurs. If a vertically orientated shaft with flailing blades (e.g., hydro-axe) type of equipment is used, the masticated material or debris will be distributed further from the stump of the tree. The vertically orientated shaft generally leaves small branches and pieces of wood from pencil size up to bowling ball size. The mulch or masticated woody debris would be susceptible to fire until the majority of the material has decomposed or revegetation has occurred, however, the fire behavior is expected to decrease in comparison to the current state.

*Environmental Consequences of the No Action Alternative:* Under this alternative there would be no disturbance to the vegetation and no change to the risk of fire.

*Mitigation:* None

## **FOREST MANAGEMENT**

*Affected Environment:* The proposed action is located in pinion-juniper of varying stand classifications and ages. The primary focus of the study is within the sub-mature and young pinion-juniper stands and the generating young pinion-juniper invading the brush types.

*Environmental Consequences of the Proposed Action:* The removal of the trees through mechanical mastication will set back successional the stand structure while leaving the seed bed intact. It is expected that the tree regeneration within the disturbed areas will be comparable to the chaining that occurred in the 1970's in that young pinion-juniper trees will be present sparsely throughout the sites within 15-25 years.

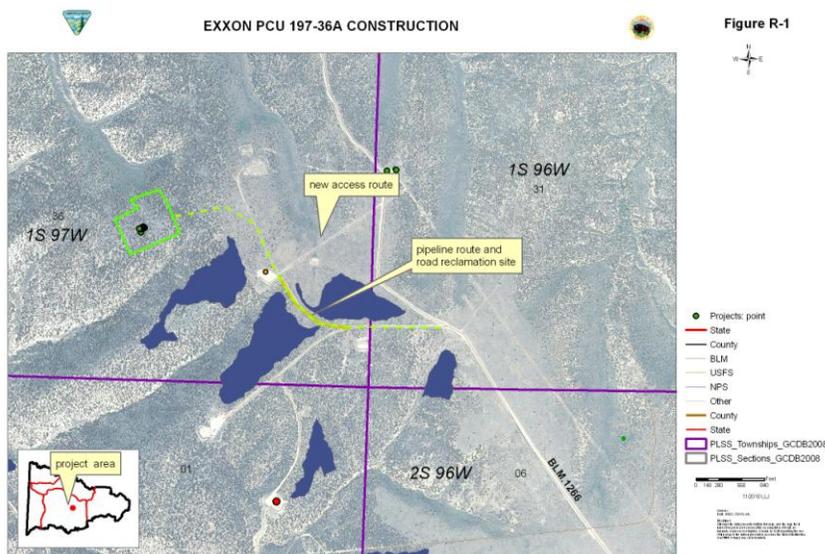
*Environmental Consequences of the No Action Alternative:* There would be no disturbance within the pinion-juniper and the generating trees within the brush types will continue to convert the vegetative community.

*Mitigation:* None

## REALTY AUTHORIZATIONS

*Affected Environment:* The west end of the project area has not been developed and there are no authorized facilities near the proposed sites. A major pipeline corridor is located in the bottom of Hatch Gulch and large lines cross between several sites at the top of the draw (T.2S., R.96W. section 1). Older ETC Canyon pipelines are located in the north of section 1 and to the north and east. Proposed Exxon well pad PCU-197-36A is located in T.1S., R.97.W. section 36. The well pad is north of the nearest treatment site but a road, pipelines, and a reclamation site are located adjacent to two sites.

*Environmental Consequences of the Proposed Action:* The existing pipelines would have distinct vegetation patterns and should be avoidable. Well markers should be present but may be less distinct on the older, smaller lines. Exxon is beginning construction on the pipelines and reclamation site and will be working in the area during the treatment project. The existing road will be the route for the pipelines and then will be reclaimed and obliterated, as shown in the following figure R-1:



*Environmental Consequences of the No Action Alternative:* None

*Mitigation:* The BLM, DOW, and contractor should contact the Exxon field crew to cooperate in avoiding mutual impacts during access and work activities.

**CUMULATIVE IMPACTS SUMMARY:** Cumulative impacts from vegetation manipulations were analyzed in the White River Resource Area PRMP/FEIS. Reversion of shrub-steppe character to these woodland-encroached shrublands would be considered compatible with the long term successional balance of woodland and shrubland habitat availability and would not contribute functionally to cumulative effects on nongame wildlife populations in the Magnolia area of Piceance Basin.

**REFERENCES CITED:**

Hayden-Wing Associates.

2010a Rare Plant and Suitable Habitat Surveys, ExxonMobil North Hatch Gulch Project. Laramie, WY.

2010b Rare Plant and Suitable Habitat Surveys, ExxonMobil PCU 197-36A and PWDD System. Laramie, WY.

Elkins, Melissa and Anne McKibbin

2008 Class III Cultural Resource Inventory of Proposed Seismic Lines for ExxonMobil Corporation's 2009 Piceance 3D Seismic Survey Project, Rio Blanco County, Colorado. Metcalf Archaeological Consultants, Eagle, Colorado. WRFO CRIR# 09-54-02.

Slaughter, Stephanie

2010 ExxonMobil Corporation: A Class III Cultural Resources Inventory of ca. 450 Acres for Mule Deer Habitat Treatment, Magnolia Pilot Area, in Rio Blanco County, Colorado. Metcalf Archaeological Consultants, Eagle, Colorado. WRFO CRIR# 10-54-07.

Stahl, Jenny

2010 Class III Cultural Resource Inventory of Six Well Pads and Associated Facilities for ExxonMobil Corporation's Proposed North Hatch Gulch Project, Rio Blanco County, Colorado. Metcalf Archaeological Consultants, Eagle, Colorado. WRFO CRIR# 10-54-06.

**PERSONS / AGENCIES CONSULTED:** Colorado Division of Wildlife

**INTERDISCIPLINARY REVIEW:**

<b>Name</b>	<b>Title</b>	<b>Area of Responsibility</b>	<b>Date Signed</b>
Bob Lange	Hydrologist	Air Quality, Water Quality, Surface and Ground Hydrology and Water Rights, Soils, and Wastes, Hazardous or Solid	11/05/2010
Jill Schulte	Botanist	Areas of Critical Environmental Concern, Threatened and Endangered Plant Species	10/13/2010
Geoffrey Haymes	Archeologist	Cultural Resources, Paleontological Resources	11/26/2010
Matthew Dupire	Rangeland Management Specialist	Invasive, Non-Native Species, Vegetation , Rangeland Management	11/08/2010
Ed Hollowed	Wildlife Biologist	Migratory Birds, Threatened, Endangered and Sensitive Animal Species, Terrestrial and Aquatic Wildlife, Wetlands and Riparian Zones	11/01/2010
Jim Michels	Outdoor Recreation Planner	Wilderness, Access and Transportation, Recreation	11/03/2010
Jim Michels	Fire Management Specialist	Fire Management, Forest Management	11/03/2010
Paul Daggett	Mining Engineer	Geology and Minerals	10/15/2010
Linda Jones	Realty Specialist	Realty Authorizations	11/16/2010
Jim Michels	Natural Resource Specialist / Outdoor Recreation Planner	Visual Resources	11/03/2010
Melissa J. Kindall	Range Technician	Wild Horses	11/29/2010

# **Finding of No Significant Impact/Decision Record (FONSI/DR)**

## **DOI-BLM-CO-110-2011-0004-EA**

**FINDING OF NO SIGNIFICANT IMPACT (FONSI)/RATIONALE:** The environmental assessment and analysis of the environmental effects of the proposed action have been reviewed. The approved mitigation measures (listed below) result in a Finding of No Significant Impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action.

**DECISION/RATIONALE:** It is my decision to authorize the mechanical treatment of shrubland and woodland communities in the Lee and Hatch Gulch area to experimentally evaluate the response of deer to various mitigation strategies.

### **MITIGATION MEASURES:**

1) In the event that cultural resources and/or human remains are discovered during operations, activity in the vicinity of the discovery will cease, and the BLM authorized officer will be notified immediately. BLM, in cooperation with the proponent and/or cultural resource consultant, will ensure that the cultural resources and/or human remains are protected from further disturbance until BLM determines the treatment approach, and the treatment is completed.

Unless otherwise noted in treatment plans or agreements, BLM will evaluate the cultural resources and, in consultation with the SHPO, select the appropriate mitigation option within 48 hours of the discovery. BLM will implement the mitigation in a timely manner. The process will be fully documented in reports, site forms, maps, drawings, and photographs. The BLM will forward documentation to the SHPO for review and concurrence.

2) If human remains are discovered on BLM-administered land, the treatment of human remains will be in accordance with Native American Graves Protection and Repatriation Act (AGPRA) and BLM policy. If human remains are discovered on private or state land during a BLM undertaking, the BLM will notify the State of Colorado Archaeologist immediately, who will comply with Colorado Revised Statutes (Appendix) regarding the discovery of human remains (24-80-1302).

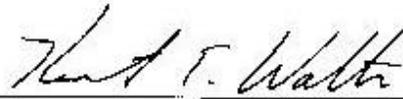
3) Should future consultations with tribal authorities reveal the existence of sensitive Native American Religious Concerns or Traditional Cultural Properties, appropriate mitigation and/or protection measures may be undertaken.

4) The BLM, DOW, and contractor should contact the Exxon field crew to cooperate in avoiding mutual impacts during access and work activities.

**COMPLIANCE/MONITORING:** WRFO wildlife staff in concert with CDOW researchers would monitor project implementation and ensure that the terms and conditions of this EA are met. The CDOW research group and a 3<sup>rd</sup> party consultant would be responsible for monitoring and reporting vegetation response and weed establishment on the treatment and control sites.

**NAME OF PREPARER:** Ed Hollowed, WRFO Wildlife Biologist

**SIGNATURE OF AUTHORIZED OFFICIAL:**

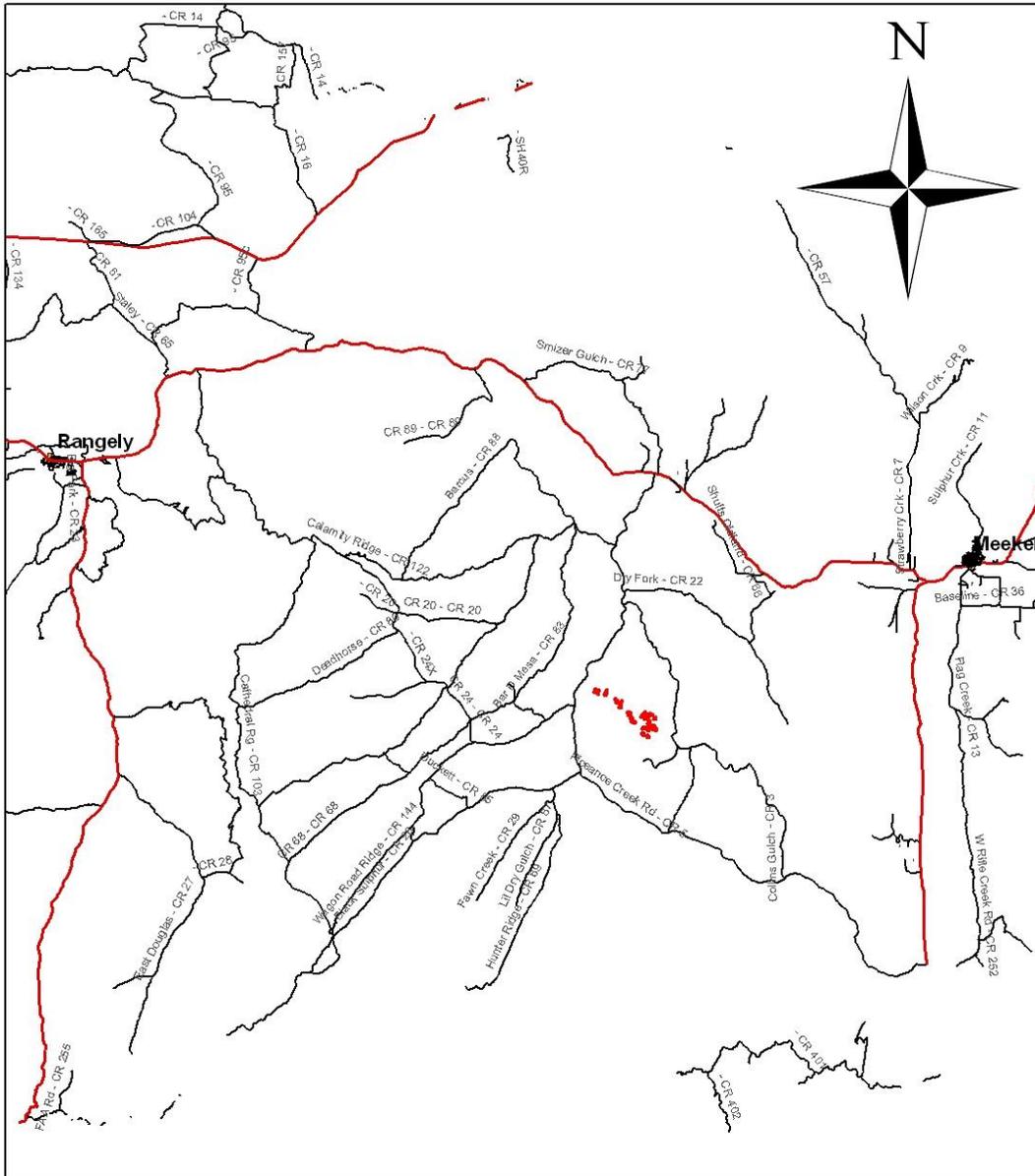


Field Manager

**DATE SIGNED:** 12/03/2010

**NAME OF ENVIRONMENTAL COORDINATOR:** Heather Sauls

**ATTACHMENTS:** Attachment 1: Project location map  
Attachment 2: Treatment site map



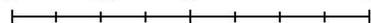
## Lee Gulch Pilot Treatments 2010 Location Map



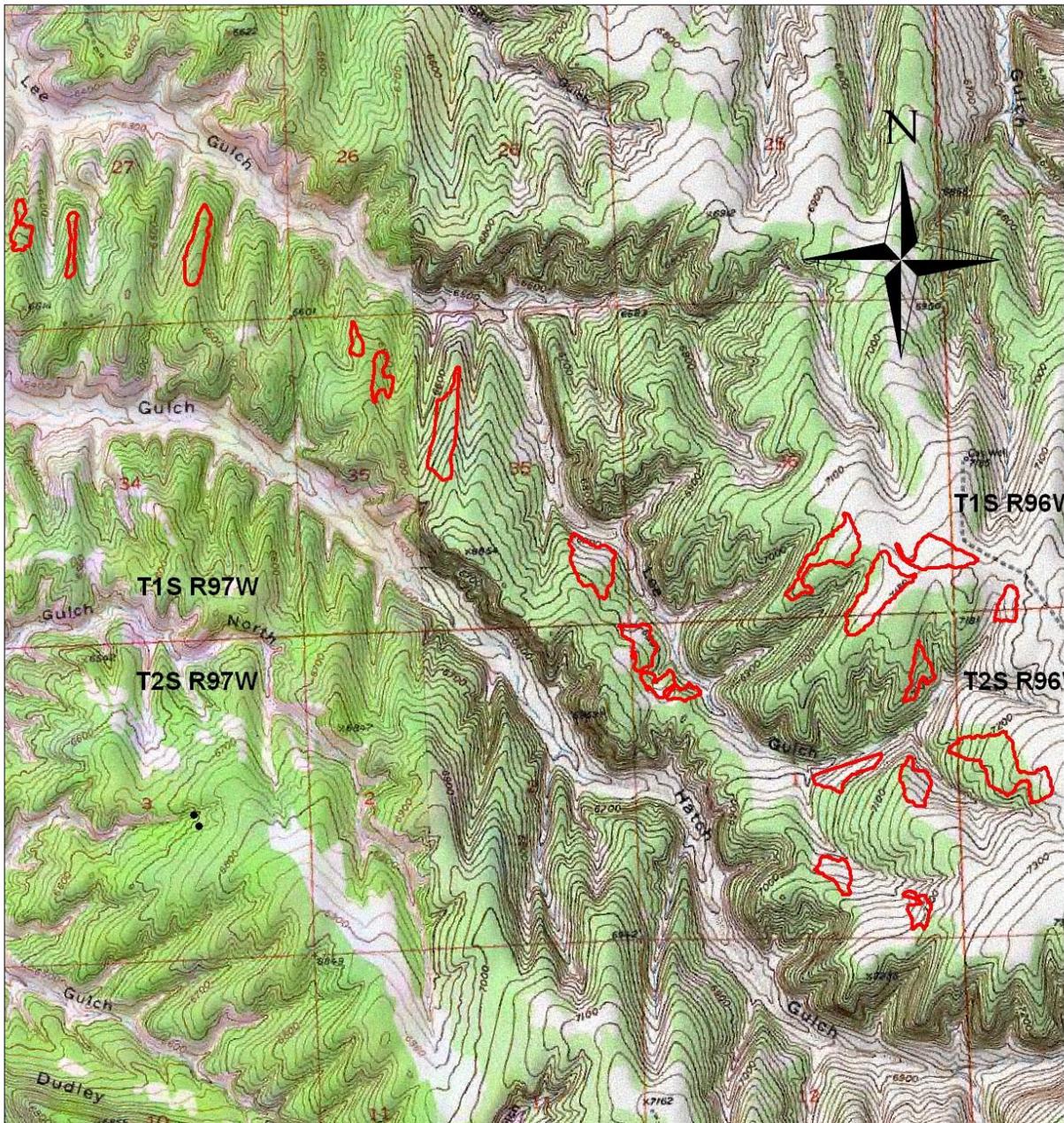
### Legend

Treatment Parcels

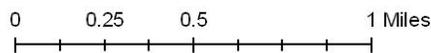
0      4.5      9      18 Miles



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## Lee Gulch Pilot Treatments 2010



### Legend

 Treatment Parcels

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