

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-110-2011-0158-EA

**CASEFILE/PROJECT NUMBER:**

**PROJECT NAME:** Project 1 – Magnolia Mule Deer Forage Enhancement Treatments  
Project 2 – Comparison of Mechanical Treatments

**LEGAL DESCRIPTION:**

*Project 1 – Magnolia Mule Deer Forage Enhancement Treatments (South Half):*  
Township 1 South, Range 97 West, Sections 34 and 35  
Township 2 South, Range 96 West, Sections 7, 17, and 18  
Township 2 South, Range 97 West, Sections 1-3, 10-12, 14, 15, and 23

*Project 2 – Comparison of Mechanical Treatments:*  
North Magnolia Location: Township 1 South, Range 96 West, Section 31  
South Magnolia Locations: Township 2 South, Range 97 West, Sections 2 and 3

**APPLICANT:** Colorado Parks and Wildlife

**PURPOSE & NEED FOR THE ACTION:** These projects are being proposed to accommodate research being conducted by the Colorado Parks and Wildlife (CPW) as part of a Wildlife Mitigation Plan (WMP) recently developed by CPW and ExxonMobil (XOM). 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.

**Decision to be Made:** The BLM White River Field Office (WRFO) will decide whether or not to approve CPW's Magnolia Mule Deer Forage Enhancement Treatments and Comparison of Mechanical Treatments projects, and if so, under what conditions.

## **SCOPING, PUBLIC INVOLVEMENT, AND ISSUES:**

**Scoping:** Scoping was the primary mechanism used by the BLM to initially identify issues. Internal scoping was initiated when the project was presented to the WRFO interdisciplinary team on 7/26/2011. External scoping was conducted by posting this project on the WRFO's on-line National Environmental Policy Act (NEPA) register on 8/5/2011. The WRFO did not receive any comments or inquires about the project from the public as of 10/7/2011.

**Issues:** No issues were identified.

## **DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:**

**Background/Introduction:** The BLM analyzed approximately 140 acres of hydro-ax treatments across 21 polygons in DOI-BLM-CO-110-2011-0004-EA. Two additional projects, the Magnolia Mule Deer Forage Enhancement Treatment (Project 1) and the Comparison of Mechanical Treatments (Project 2) were proposed by CPW within the Magnolia area (see Figure 1).

**Project 1 – Magnolia Mule Deer Forage Enhancement Treatments:** Over the past four years, CPW has collected baseline demographic and habitat utilization data across the Piceance Basin from about 1,100 deer collared with Very High Frequency (VHF) and Global Positioning System (GPS) transmitters. CPW will supplement the continued collection of these 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.

The Magnolia Mule Deer Forage Enhancement Treatments Project is generally divided into a “South Half” and a “North Half”. Implementation of the South Half is considered under this Environmental Assessment (EA). Implementation of the North Half (roughly another 600 acres of treatment under similar conditions) would be considered under another EA since the specific treatment polygon locations have not yet been identified.

**Project 2 – Comparison of Mechanical Treatments:** Hydro-ax treatments are becoming more common as an alternative to prescribed fires for setting back plant community succession and increasing palatable shrub, grass, and forb biomass. However, the costs and benefits of hydro-ax treatments have not been directly compared to older mechanical techniques such as chaining or roller-chopping. CPW proposes a side-by-side comparison of these different types of treatments in order to aid managers in choosing the most cost effective and appropriate mechanical treatment for pinyon-juniper woodlands.

Differences among mechanical treatments may also affect the outcome of seeding attempts. For instance, when trees are removed with a hydro-ax, a heavy mulch layer is left behind, and little or no disturbance of the ground surface occurs. When trees are removed by chaining, no mulch layer is created, but tree skeletons are left on the ground surface, and a greater degree of soil

disturbance occurs. A secondary goal of this project is to compare the outcome of seeding efforts in different treatment types. Because shrub forage is often limiting to big game, CPW is particularly interested in treatment effects on shrubs. CPW has partnered with Dr. Mark Paschke of Colorado State University (CSU) to assess the effects of mechanical treatments and seedings.

**Proposed Action:** *Project 1: Magnolia Mule Deer Forage Enhancement Treatments (South Half)*: Delineated in close coordination with the WRFO wildlife staff, CPW has proposed mechanical treatment of approximately 463 acres in 69 parcels ranging from 2 to 18 acres each between Hatch Gulch to the north and Piceance Creek to the west and south (see Figure 2) as big game forage enhancement treatments. This project would serve to evaluate the success of mitigating mule deer behavioral and physiological responses to the human disturbance associated with energy development activity using winter range habitat hydro-ax treatments. These treatments are identical to those analyzed in DOI-BLM-CO-110-2011-0004-EA, but at a larger scale.

This project would entail mechanically grinding above ground woody material from a number of small (2 to 18 acres, mean = 7 acres) parcels of shrubland and woodland with a rubber-tired hydro-ax. 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. CPW 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; treatment site boundaries will be maintained using GPS units by the hydro-ax operator. Treatments would be dispersed across the project area and have been designed to target 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. There are no plans at present to supplement the existing vegetation community with seeding except in the mechanical treatment method comparison areas (see Project 2 below). Although there are minor inclusions of slopes between 25-35 percent within the treatment polygons, in practice, mechanical operations would be confined to slopes no greater than 30 percent. These treatments are scheduled to be conducted from October 2012 to March 2013. Machine operation and access would not be allowed under soil moisture conditions that result in rutting (3 inches 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 four-year period by contracted personnel guided by CPW and BLM wildlife staffs. Line and point intercept transects have been established in 50 percent of the treatment parcels as well as representative controls in adjacent undisturbed sites.

*Project 2: Comparison of Mechanical Treatments:* In a subset of the polygons selected from Project 1 (see above) for tree grinding with a hydro-ax, CPW has proposed substituting a mechanical treatment comparison research project on approximately 154 acres. The polygons CPW wishes to use for this are the North Magnolia location (112 acres) and the South Magnolia locations (42 acres). In each of these two areas, 28 smaller treatment plots are delineated (Figures 3 and 4). Each of these smaller plots is assigned to one of four treatments:

1. Tree grinding with a hydro-ax, using identical methods and equipment as described in Project 1 (total= 38 acres).
2. Tree removal with a 50-foot smooth chain (90 lbs/link) pulled by two track bulldozers, a D8 Caterpillar and a D65 Komatsu. The chaining will be “two-way” to maximize the kill of trees (total= 37 acres).
3. Tree removal with a 12-foot long, 5-foot diameter roller-chopper pulled by a D8 Caterpillar track bulldozer. The roller-chopper will be filled with water to aid in tree removal and seedbed preparation (total= 38 acres).
4. Control (no treatment; total= 41 acres).

Treatments would occur in the late fall or early winter of 2011 (October-December). Within each treated plot, CPW wishes to seed a portion of the area (one to two acres per plot) with the species listed in Table 1. The exact proportion of species will depend on price and availability, but the following shrub species would be seeded at a high rate: Saskatoon serviceberry, bitterbrush, mountain mahogany, winterfat, and chokecherry, and the rest of the species adjusted to create a mix providing 800-1,400 seeds/m<sup>2</sup>. For hydro-axed plots, seed would be broadcast prior to treatment. For chained plots, the seed would be broadcast in between the two passes of the chain. For roller-chopped plots, seed would be broadcast after treatment. Seeded areas will be matched with unseeded areas within each plot to allow for statistical analysis. No seeding will be done in control areas.

**Table 1.** Preliminary species list for seed mix in mechanical treatment comparison plots.

Type	Code	Common name	Genus	Species
shrub	AMAL2	Saskatoon serviceberry	<i>Amelanchier</i>	<i>alnifolia</i>
shrub	AMUT	Utah serviceberry	<i>Amelanchier</i>	<i>utahensis</i>
shrub	ARTRW8	Wyoming sagebrush	<i>Artemisia</i>	<i>tridentata</i>
shrub	CEMO2	Mountain mahogany	<i>Cercocarpus</i>	<i>montanus</i>
shrub	CHVI8	Yellow rabbitbrush	<i>Chrysothamnus</i>	<i>viscidiflorus</i>
shrub	ERNAN5	Rubber rabbitbrush	<i>Chrysothamnus</i>	<i>nauseosus</i>
shrub	KRLA2	Winterfat	<i>Krascheninnikovia</i>	<i>lanata</i>
shrub	PRVI	Chokecherry	<i>Prunus</i>	<i>virginiana</i>
shrub	PUTR2	Bitterbrush	<i>Purshia</i>	<i>tridentata</i>
shrub	RHTR	Skunkbush sumac	<i>Rhus</i>	<i>trilobata</i>
grass	ACHY	Indian ricegrass 'White River'	<i>Achnatherum</i>	<i>hymenoides</i>
grass	ELEL	Bottlebrush squirreltail 'Toe Jam Ck'	<i>Elymus</i>	<i>elymoides</i>
grass	ELTR7	Slender wheatgrass 'San Luis'	<i>Elymus</i>	<i>trachycalus</i>
grass	HECO26	Needle and thread	<i>Hesperostipa</i>	<i>commata</i>

grass	KOMA	Prairie Junegrass	<i>Koeleria</i>	<i>macrantha</i>
grass	PASM	Western wheatgrass "Rosana"	<i>Pascopyrum</i>	<i>smithii</i>
grass	POFE	Muttongrass 'UP Ruin Canyon'	<i>Poa</i>	<i>fendleriana</i>
grass	POSE	Sandberg Bluegrass	<i>poa</i>	<i>secunda</i>
grass		Quick Guard	<i>Triticum aestivum</i>	<i>x Secale cereale</i>
grass	VUOC	Six-weeks fescue	<i>Vulpia</i>	<i>octoflora</i>
forb	AMRE	Redroot amaranth	<i>Amaranthus</i>	<i>retroflexus</i>
forb	ARFR4	Fringed sagebrush	<i>Artemisia</i>	<i>frigida</i>
forb	ARLU	White sagebrush	<i>Artemisia</i>	<i>ludoviciana</i>
forb	BASA3	Arrowleaf balsamroot	<i>Balsamorhiza</i>	<i>sagittata</i>
forb	CLSE	Rocky Mountain beeplant	<i>Cleome</i>	<i>serrulata</i>
forb	CRAC2	Tufted hawksbeard	<i>Crepis</i>	<i>acuminata</i>
forb	ERUM	Sulfur-flower buckwheat	<i>Eriogonum</i>	<i>umbellatum</i>
forb	HEBO	Utah sweetvetch	<i>Hedysarum</i>	<i>boreale</i>
forb	HEAN3	Common sunflower	<i>Helianthus</i>	<i>annuus</i>
forb	OECA10	Tufted evening primrose	<i>Oenothera</i>	<i>caespitosa</i>
forb	OEPA	Pale evening primrose	<i>Oenothera</i>	<i>pallida</i>
forb	PEST2	Rocky Mountain penstemon	<i>Penstemon</i>	<i>strictus</i>
forb	LILE3	Lewis flax "Maple Grove"	<i>linum</i>	<i>lewsii</i>
forb	LUAR3	Silvery lupine	<i>Lupinus</i>	<i>argenteus</i>

Access routes for heavy equipment will avoid all occupied, potential, and suitable *Physaria congesta* habitat. Access will be entirely via existing two-track roads, except for one plot in South Magnolia which will require 35 meters of cross-country travel through pinyon-juniper woodlands which will require no leveling or ground clearing. Proposed access routes are noted in Figure 4. Monitoring of vegetation response is integral with study design. Line and point intercept transects have been established in each of the 28 treatment and control plots.

#### Design Features for Both Projects:

- 1) The CPW project lead is responsible for informing all persons who are associated with the project that they will be subject to prosecution for knowingly disturbing archaeological sites or for collecting artifacts.
- 2) If any archaeological materials are discovered as a result of operations under this authorization, activity in the vicinity of the discovery will cease, and the BLM WRFO Archaeologist will be notified immediately. Work may not resume at that location until approved by the Authorized Officer (AO). The applicant will make every effort to protect the site from further impacts including looting, erosion, or other human or natural damage until BLM determines a treatment approach, and the treatment is completed. Unless previously determined in treatment plans or agreements, BLM will evaluate the cultural resources and, in consultation with the State Historic Preservation Office (SHPO), select the appropriate mitigation option within 48 hours of the discovery. The applicant, under guidance of the 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.

- 3) Pursuant to 43 CFR 10.4(g), the applicant must notify the AO, by telephone and written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), the applicant must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.

**No Action Alternative:** The BLM would not authorize implementation of the proposed big game forage enhancement treatment or the mechanical comparison treatments.

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

**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 (White River 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**

**Standards for Public Land Health:** In January 1997, the Colorado BLM approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, special status 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 (EA). These findings are located in specific elements listed below.

**Cumulative Effects Analysis Assumptions:** Cumulative effects are defined in the Council on Environmental Quality (CEQ) regulations (40 CFR 1508.7) as “...the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.” Table 2 lists the past, present, and reasonably foreseeable future actions within the area that might be affected by the Proposed Action; for this project the area considered was the Natural Resources Conservation Service (NRCS) 5<sup>th</sup> Level Watershed. However, the geographic scope used for analysis may vary for each cumulative effects issue and is described in the Affected Environment section for each resource.

**Table 2.** Past, Present, and Reasonably Foreseeable Actions

Action Description	STATUS		
	Past	Present	Future
Livestock Grazing	X	X	X
Wild Horse Gathers	X		X
Recreation	X	X	X
Invasive Weed Inventory and Treatments	X	X	X
Range Improvement Projects : Water Developments Fences & Cattleguards	X	X	X
Wildfire and Emergency Stabilization and Rehabilitation	X	X	X
Wind Energy Met Towers			
Oil and Gas Development: Well Pads Access Roads Pipelines Gas Plants Facilities	X	X	X
Power Lines	X	X	X
Oil Shale			
Seismic	X		
Vegetation Treatments	X	X	X

**Affected Resources:**

The CEQ Regulations state that NEPA documents “must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail” (40 CFR 1500.1(b)). While many issues may arise during scoping, not all of the issues raised warrant analysis in an EA. Issues will be analyzed if: 1) an analysis of the issue is necessary to make a reasoned choice between alternatives, or 2) if the issue is associated with a significant direct, indirect, or cumulative impact, or where analysis is necessary to determine the significance of the impacts. Table 3 lists the resources considered and the determination as to whether they require additional analysis.

**Table 3. Resources and Determination of Need for Further Analysis**

Determination <sup>1</sup>	Resource	Rationale for Determination
<b>Physical Resources</b>		
PI	Air Quality	See discussion below.
NI	Geology and Minerals	Proposed vegetative treatments would not affect the geologic or mineral resources.
PI	Soil Resources*	See discussion below.
NI	Surface and Ground Water Quality*	With mitigation in the Proposed Action to address the potential for soil instability, these treatments will not impact surface or ground water quality.
<b>Biological Resources</b>		
NP	Wetlands and Riparian Zones*	<p>The nearest perennial system supporting riparian vegetation is Piceance Creek, which is separated from the nearest individual treatment site by a minimum 0.6 miles of ephemeral channel. The proposed hydro-ax treatment methods would generally involve no substantive soil disturbance, distribute masticated woody debris on the surface, and would promote prompt increases in shrub and herbaceous ground cover. Proposed chaining and roller-chopping treatments would involve minor discontinuous ground disturbances, but again, would leave considerable woody material on the surface, be confined to small (2-9 acre), intensively monitored study sites, and promote increased ground cover expression. Overall, individual treatment sites are small (7-acre average) and distributed widely across the project area (~3.5 percent of project area). The Proposed Action poses no reasonable risk of contributing measurably to sediment loads in downstream systems as a vector in influencing riparian or aquatic conditions.</p>
PI	Vegetation*	See discussion below.
PI	Invasive, Non-native Species	See discussion below.
NI	Special Status Animal Species*	<p>There are no listed, proposed, or candidate animals known to inhabit or derive important benefit from the project area. The general project area is known to support several BLM-sensitive animals, including northern goshawk, Brewer's sparrow, and greater sage-grouse. A small remnant population of greater sage-grouse is distributed in upland sagebrush-dominated communities across the higher elevations of Magnolia and almost exclusively east of Greasewood Gulch (the eastern margin of the proposed project area). Although most of these treatments are located in former shrub-steppe disclimaxes, all are presently characterized as woodlands and provide no habitat for sage-grouse. Similar in habitat preference to sage-grouse, the Brewer's sparrow is one of the most abundant breeding birds on Magnolia. Breeding populations of these birds would remain unaffected by project work for the same reasons as discussed for sage-grouse.</p> <p>The area's mature woodlands typically support one northern goshawk nest territory. Most (82 percent) of the proposed treatment work would target young woodland stands with no former or current potential to serve as goshawk nest habitat. Thorough woodland</p>

Determination <sup>1</sup>	Resource	Rationale for Determination
		raptor surveys conducted by WRFO in and around those stands that have nest potential have yielded no evidence of goshawk nesting activity.
PI	Special Status Plant Species*	Project 1 requires special status plant species surveys before project implementation. A federally listed threatened species, <i>Physaria congesta</i> (Dudley bluffs bladderpod), is located within 330 m of Project 2 of the Proposed Action. Informal Section 7 was conducted with the US Fish and Wildlife Service (FWS). FWS concurred with the BLM on a “may affect, but is not likely to adversely affect” determination. See the detailed discussion below.
NI	Migratory Birds	The proposed treatments would take place outside (October-December) the migratory bird nesting season with no potential for disrupting any reproductive function. Considered collectively, the treatments involve a substantial amount of pinyon-juniper woodland, which generally supports a unique assemblage of breeding migratory birds. However, each treatment parcel was surveyed and evaluated by WRFO wildlife staff to minimize the involvement of woodland stands best suited as raptor and migratory bird nesting habitat (i.e., appropriate structural diversity and well-developed understory composition and cover). Eighty-two percent of the proposed treatment area represents former fire disclimax shrublands that have been variously colonized with younger age-class pinyon and juniper trees. In the absence of historic fire regimes over the last century, these shrublands have assumed a woodland character. Proposed mechanical reversion to shrubland would correspond to the normal range of variability within these communities and is thought to represent appropriate flux between woodland and shrubland habitats. The limited amount of proposed early mature (84 acres) and mature (21 acres) woodland acreage is in some cases degraded as nesting habitat by human-caused canopy modification (firewood or post cutting), but overall, these small scale treatments (average 7-11 acres per parcel) scattered across the 16,000 acre project area are an appropriate corollary to small wildfire, disease, or insect-related mortality events evident across Magnolia.
NP	Aquatic Wildlife*	Same as Wetlands and Riparian Zones.
PI	Terrestrial Wildlife*	See discussion below.
NP	Wild Horses	The project areas are not within the Piceance-East Douglas Herd Management Area or either of the Herd Areas. However, WRFO has attempted to gather the wild horses that are known to utilize this area. Also, the grazing permittee has authority to graze up to five head of wild horses on this allotment therefore some of the horses seen in this area may be domestics.
<b>Heritage Resources and the Human Environment</b>		
NI	Cultural Resources	The entire proposed project area (i.e., Project 1 “South Half” and Project 2) was surveyed for cultural resources (Jennings and Lincoln 2011) and no sites potentially eligible for the National Register of Historic Places were located, and therefore none will be affected.
NI	Paleontological Resources	The proposed project area is mapped as Uintah Formation (Tweto 1979), which is a Potential Fossil Yield Classification (PFYC) 5 formation. This formation has the potential to yield scientifically significant fossils in the Piceance Basin. However, the vegetation

<b>Determination<sup>1</sup></b>	<b>Resource</b>	<b>Rationale for Determination</b>
		treatments are not likely to affect important resources, as in situ fossils would be exposed in bedrock outcrops, which would not be the same areas where vegetation would be being treated.
NP	Native American Religious Concerns	There are no known Native American concerns in the project area.
PI	Visual Resources	See discussion below.
NI	Hazardous or Solid Wastes	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 a Colorado Department of Public Health and Environment (CDPHE) approved disposal facility.
NI	Fire Management	Proposed treatments lie within the B08-W Fire Management Polygon with resource objectives to manage fires to “protect oil and gas facilities when threatened by public land fires” and “to conduct prescribed burns or other fuels management treatments to buffer oil and gas facilities.” The completion of proposed treatments would enhance the ability for suppression resources to initiate an aggressive, full suppression response.
NI	Social and Economic Conditions	There would not be any substantial changes to local social or economic conditions.
NP	Environmental Justice	According to the most recent Census Bureau statistics (2000), there are no minority or low income populations within the WRFO.
<b>Resource Uses</b>		
PI	Forest Management	The Proposed Action would occur on young and mature productive exposure stand class of pinyon/juniper woodland. The Proposed Action would simulate natural disturbance and have little long-term impact. See discussion below.
NI	Rangeland Management	The Proposed Action takes place in three different cattle grazing allotments. All three allotments are authorized to have small numbers of livestock present while the treatments are being completed, but impacts to livestock are expected to be very minimal. There may be small changes in use patterns while equipment is working in the area, but in general livestock use is concentrated more in the sagebrush shrublands/rangelands than in the targeted areas of the treatments.
NI	Floodplains, Hydrology, and Water Rights	There are no floodplains in the project area and the Proposed Action is not likely to impact surface or groundwater hydrology, the treatments will not require freshwater use, and therefore will not impact water rights.
NI	Realty Authorizations	There are numerous pipelines, power lines, and miscellaneous rights-of-way in the project area. The Proposed Action does not involve any subsurface disturbance.
PI	Recreation	See discussion below.
NI	Access and Transportation	The Proposed Action is not anticipated to negatively impact transportation or impede access in the area.
NP	Prime and Unique Farmlands	There are no Prime and Unique Farmlands within the project area.
<b>Special Designations</b>		

Determination <sup>1</sup>	Resource	Rationale for Determination
NI	Areas of Critical Environmental Concern	The Dudley Bluffs Area of Environmental Concern (ACEC) is located immediately adjacent to the project area. None of the proposed treatments are located within this ACEC.
NP	Wilderness	No Wilderness Study Areas (WSAs) are present in the project area.
NP	Wild and Scenic Rivers	There are no Wild and Scenic Rivers in the WRFO.
NP	Scenic Byways	There are no Scenic Byways within the project area.

<sup>1</sup> NP = Not present in the area impacted by the Proposed Action or Alternatives. 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.

\* Public Land Health Standard

## AIR QUALITY

*Affected Environment:* The Proposed Action is located in Rio Blanco County, which along with Garfield County, makes up the two counties located within the western counties monitoring region (APCD 2010). Based on a review of designated non-attainment areas for criteria pollutants, published by the U.S. Environmental Protection Agency (EPA) (EPA 2011), the Proposed Action is an attainment area for national and state air quality standards. Non-attainment areas are areas designated by EPA as having air pollution levels that persistently exceed the national ambient air quality (NAAQ) standards. General conformity regulations require that federal activities do not cause or contribute to a new violation of NAAQ standards; that actions do not cause additional or worsen existing violations of the NAAQ standards; and that attainment of these standards is not delayed by federal actions in non-attainment areas.

### *Environmental Consequences of the Proposed Action:*

Direct and Indirect Effects: Visible dust is likely to increase during the transportation of equipment to treatment areas and there will be some soil disturbance and dust generated during the treatments that may increase particulates locally. Fugitive dust emissions would be short-term (only during treatments) and localized (the immediate vicinity). Vegetation treatments may generate inhalable particulate matter (PM), specifically for PM 10 microns (µm) or less in diameter (PM<sub>10</sub>) and particles 2.5 µm or less in diameter (PM<sub>2.5</sub>), especially when conditions are dry and/or windy. The majority of dust pollution in Colorado is from miscellaneous fugitive dust sources (CAQCC 2010). The increase in airborne particulate matter from this project is not likely to lead to an exceedance of NAAQ standards on an hourly, eight-hour average or daily basis.

Increases in the following criteria pollutants would occur due to combustion of fossil fuels during vegetation treatment activities: carbon monoxide, ozone (secondary pollutant formed photochemically from volatile organic compounds (VOCs) and nitrogen oxides (NOx)), nitrogen dioxide, and sulfur dioxide. Non-criteria pollutants (NAAQ standards have not been set for non-criteria pollutants) such as nitric oxide, air toxics (e.g., benzene), and total suspended particulates may also experience slight, temporary increases as a result of the Proposed Action.

Cumulative Effects: Principal air pollution sources influencing the two county area include emissions from motor vehicles, oil and gas development, coal-fired power plants, coal mines, sand and gravel operations, windblown dust, and wildfires and prescribed burns (CAQCC 2010). Emissions in the two county area are dominated by facilities and activities related to oil and gas exploration, processing or transportation. Due to emission sources in the Colorado River, White River and in the nearby Unita and Yampa River Basins, VOCs, nitrogen oxides, and dust (particulate matter) are likely to increase into the future. However, overall air quality conditions in the two county area are likely to continue to be in attainment of NAAQ standards due to effective atmospheric dispersion and limited transport of air pollutants from outside the area.

*Environmental Consequences of the No Action Alternative:*

Direct and Indirect Effects: No impacts to air quality would result from the No Action Alternative.

Cumulative Effects: None.

*Mitigation:* None.

**SOIL RESOURCES**

*Affected Environment:* Soils in the proposed treatment areas are shown in Tables 4 and 5; the attributes associated with these soils are shown in Table 6. There are no fragile soils or lands prone to landslides that will be impacted by this project. Although there are minor inclusions of slopes between 25-35 percent within the treatment polygons, as part of the Proposed Action, mechanical operations would be confined to slopes no greater than 30 percent.

**Table 4:** Soils in Hydro-ax Treatment Areas (Project 1)

<b>Soil Classification</b>	<b>Range Site</b>	<b>Acres</b>
Redcreek-Rentsac complex, 5-30% slopes	Pinyon-Juniper Woodlands	175
Rentsac channery loam, 5-50% slopes	Pinyon-Juniper Woodlands	170
Veatch channery loam, 12-50% slopes	Loamy Slopes	43
Castner channery loam, 5-50% slopes	Pinyon-Juniper Woodlands	35
Forelle loam, 3-8% slopes	Rolling Loam	20
Yamac Loam, 2-15% slope	Rolling Loam	9
Piceance fine sandy loam, 5-15% slopes	Rolling Loam	5
Forelle loam, 8-15% slopes	Rolling Loam	2
Torriorthents-RockOutcrop, complex, 15-90% slopes	Stoney Foothills	1

**Table 5: Soils in Treatment Comparison Study Areas (Project 2)**

Soil Classification	Range Site	Acres
Rentsac channery loam, 5-50% slopes	Pinyon-Juniper Woodlands	62
Rentsac-Piceance complex, 2-30% slopes	PJ woodland/Rolling Loam	37
Redcreek-Rentsac complex, 5-30% slopes	Pinyon-Juniper Woodlands	33
Castner channery loam, 5-50% slopes	Pinyon-Juniper Woodlands	15
Forelle loam, 3-8% slopes	Rolling Loam	3
Yamac Loam, 2-15% slope	Rolling Loam	3

Note: Approximately 42 acres are included in Project 2's South Magnolia treatment areas and the acreage is also included in Project 1.

**Table 6: Key Characteristics of Soils to be Affected by the Proposed Action**

Soil Mapping Unit Number	Soil Mapping Unit	Slope (%)	Physiographic Position	Depth Class/Depth to Bedrock (inches)	Runoff Potential	Water/Wind Erosion Potential	Ecological Site Description
15	Castner channery loam	5-50	Mountainside, ridgetops, and uplands	Shallow/ 10-20	Medium to rapid	Moderate to very high	Pinyon-Juniper Woodland
33	Forelle loam	3-8	Terraces and uplands	Deep/60+	Medium	Moderate	Rolling Loam
34	Forelle loam	8-15	Terraces and uplands	Deep/60+	Medium	Moderate to High	Rolling Loam
64	Piceance fine sandy loam	5-15	Uplands and broad ridgetops	Moderately Deep/ 20-40	Slow to medium	Moderate to high	Rolling Loam
70	Redcreek-Rentsac Complex	5-30	Mountainsides and ridges	Shallow/ 10-20	Medium	Moderate to high	Pinyon-Juniper Woodland
73	Rentsac channery loam	5-50	Ridges, foothills, and sideslopes	Shallow/ 10-20	Rapid	Moderate to very high	Pinyon-Juniper Woodland
75	Rentsac-Piceance complex	2-30	Uplands, broad ridges, and foothills	Moderately Deep/ 20-40	Medium	Moderate to High	Rolling Loam
91	Torriorthens-Rock outcrop complex <sup>2</sup>	15-90	Ridges, and canyonsides - extremely rough and eroded	Very shallow to moderately deep/<10-40	Very rapid	Very high	Stony Foothills
96	Veatch channery loam	12-15	Mountainsides	Moderately Deep/ 20-40	Medium	Moderate to Very High	Loamy Slopes
104	Yamac loam	2-15	Rolling uplands, terraces, and fans	Deep/60+	Medium	Slight to moderate	Rolling Loam

*Environmental Consequences of the Proposed Action:*

**Direct and Indirect Effects:** As can be seen from Table 6, soils in the proposed treatment areas have medium to very rapid surface runoff potential and have slight to very high erosion potential with most of the soils having a moderate to high rating for erosion. Rilling and gullyng could be initiated in areas with bare ground, compaction, where the soil surface is exposed, or where soil instability is introduced.

During vegetation treatments a hydro-ax and two track bulldozers will be used on-site. This heavy equipment will compact soils where they are used. The hydro-ax is a rubber tired vehicle and is not likely to cause compaction of soil to the point that it would change the soil's physical properties. However, bull dozers will compact soils and may result in changes to physical properties of soils by reducing porosity near the surface. Treatments will require one pass of the bull dozers for the roller-chopping and two passes for the chaining activities and therefore compaction is not expected to be extensive. The roller-chopper will use a water filled drum designed to crush vegetation and will likely result in some soil compaction, but compaction will be minimal and should not change the physical properties of soils.

Chaining and roller-chopping involve pushing trees over either with a heavy anchor chain or drum and therefore the root-balls for trees and shrubs are pulled out of the ground, exposing and potentially destabilizing soils. These treatments leave pockets in the soil surface that may become unstable or erode during intense thunderstorms. However, these pockets may also be more effective in collecting surface runoff than surrounding ground and therefore be more effective in germinating seeded plants and intercepting surface runoff and this could increase soil productivity. If rainstorms combine impacts from disturbed or compacted areas there is the potential to create rilling and gullyng. This is especially likely in areas with slopes that are steeper than 25 percent and around the treatment area's perimeter.

Soil productivity near vegetation 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 retain soil moisture, vegetation treatment areas are likely to become more productive sites in the future. Where stumps are left in the ground by the hydro-ax they will reduce the productivity of sites, but as the stump and roots decompose these sites will increase soil productivity. Chaining will leave whole trees and shrubs on the soil surface, roller-chopping will leave crushed branches and vegetation material and both techniques will not shred tree trunks (or boles) like the hydro-ax treatment. Where tree debris is left concentrated on the soil surface, productivity would be reduced since the breakdown and incorporation of vegetation material will occur slowly. When larger debris is left on the soil surface it can create protected spots from wind and rain splash erosion and increase vegetation success in these areas.

One of the classic studies on large scale vegetation treatments in pinyon-juniper woodlands was done in the 1970s and found that data collected on 14 sites in southern Utah indicated that areas cleared of pinyon-juniper trees and seeded to grass showed no consistent decrease or increase in sediment yields or infiltration rates (Gifford 1970). From the 1940's through the 1970's, hundreds of thousands of acres of public and private woodlands were cabled, chained, bulldozed, roller-chopped, and treated with herbicide to convert them to grasslands. Many of these projects had the goal of reducing erosion and increasing water yields in addition to improving rangeland for livestock grazing or wildlife. Anticipated studies showing the benefits of increased water yields and reduced erosion from these treatment areas never materialized (Blesky 1996). As a result, woodland conversion in pinyon-juniper dominated areas of the West was reduced starting in the late 1970s and in most areas completely abandoned. Therefore, these vegetation treatments are not likely to increase surface runoff or erosion beyond the treatment areas.

Overall direct impacts to soils from the vegetation treatments are expected to be localized and dispersed with the long-term impact of improving soil productivity. Negative impacts to soils are more likely in the first few years after the treatments and will depend on the intensity of rainfall and success of vegetation establishment. If evidence of soil instability is observed, soil instability and erosion would be reduced or eliminated by the implementation of best management practices (BMPs).

With regular observation for soil stability and if areas of instability are addressed with BMPs, no indirect impacts on soils are expected outside of the treatment areas from the Proposed Action. The Proposed Action would involve transportation of equipment to the treatment areas and the use of a hydro-ax for Project 1 and other heavy equipment to accomplish the chaining and roller-chopping as part of Project 2. Indirect impacts are expected on access roads from this use, but compared to local traffic for oil and gas development this use is minor and not likely to be measurable or distinguishable for other vehicle uses of the access roads.

Cumulative Effects: Oil and gas development in the Magnolia area includes an old single well development into the Wasatch for natural gas, newer multi-well pads into the Mesaverde, and natural gas processing and transportation (i.e., pipelines). Natural gas development is likely to continue to occur with about three to four well pads per square mile and this development will include surface disturbance for well pads, pipelines, roads and support facilities. Livestock grazing occurs on public and private lands in the area and may reduce both canopy cover and the success of vegetation establishment and which could lead to localized erosion in some areas. No other impacts from activities other than oil and gas development and grazing are expected near the project area. In general, soil disturbance in the Proposed Action along with other activities are likely to reduce soil productivity and may lead to increased erosion and instability of soils in localized areas. Erosion and soil instability from this project would be addressed through BMPs. Long-term soil productivity may improve in some of the treatment areas due to the vegetation treatments.

*Environmental Consequences of the No Action Alternative:*

Direct and Indirect Effects: No vegetation treatments would be done on the parcels, pinyon-juniper woodlands in treatment parcels may be more susceptible to wildland fire, which can lead to erosion and reduced soil productivity. However, since these parcels are within an area of oil and gas development this increased risk would likely be off-set by quick detection and response to any ignition sources. Therefore, no impacts to soils are expected for the No Action Alternative.

Cumulative Effects: Cumulative impacts would be similar to those described for the Proposed Action, except vegetation treatments would not occur. No changes to the vegetation would occur in the treatment areas and therefore no changes to soil productivity beyond normal successional process of vegetation. Any potential increase in soil productivity would not occur in these areas.

*Mitigation:* The following mitigation should be incorporated into the Proposed Action to address potential soil instability and erosion.

1. In order to preserve soil productivity, erosion features such as rilling, gullying, piping and mass wasting in the treatment areas or adjacent to the treatment areas as a result of this action will be addressed immediately after observation by developing a plan and implementing BMPs, with BLM approval, to assure successful soil stabilization and to address erosion problems that may develop.

*Finding on the Public Land Health Standard #1 for Upland Soils:* With the mitigation attached to the Proposed Action the vegetation treatments are unlikely to reduce the productivity of soils on public lands.

## VEGETATION

*Affected Environment:* Table 7 outlines the ecological sites and associated vegetation within the proposed treatment areas.

**Table 7:** Ecological Sites and Associated Plant Communities

Ecological Site	Plant Community	Acres
Loamy Slopes	bluebunch wheatgrass, western wheatgrass, muttongrass, big sagebrush, mountainmahogany, and serviceberry	39
Pinyon Juniper woodlands	Indian ricegrass, beardless wheatgrass, prairie junegrass, mountain mahogany, bluebunch wheatgrass, western wheatgrass, and bottlebrush squirreltail	501
Rolling Loam	western wheatgrass, prairie junegrass, big sagebrush, Douglas rabbitbrush, streambank wheatgrass, and needle and thread	34
Stoney Foothills	pinyon-juniper, Indian ricegrass, beardless wheatgrass, prairie junegrass, low rabbitbrush, and some forbs	1

Much of the proposed project area is currently classified as pinyon-juniper woodland. Historically this area represents disclimax shrublands that have been variously colonized with younger age-class pinyon and juniper trees. The understory in the project area is currently a mix of cool-season perennial grasses and forbs with an overstory of pinyon-juniper that is currently meeting public land health standards. Small areas of the invasive annual cheatgrass (*Bromus tectorum*) are present in areas of disturbance or in areas of common livestock congregation.

*Environmental Consequences of the Proposed Action:*

**Direct and Indirect Effects:** In the absence of historic fire regimes over the last century, these shrublands have assumed a woodland character. Proposed mechanical reversion to shrubland would correspond to the normal range of variability within these communities and is thought to represent appropriate flux between woodland and shrubland habitats. These small scale treatments (average 7-11 acres per parcel) scattered across the 16,000 acre project area are an appropriate corollary to small wildfire, disease, or insect-related mortality events evident across Magnolia.

Implementation of the proposed project will result in the removal of the pinyon-juniper overstory and some mixed-mountain shrubland while impacts to understory vegetation will be limited. Some disturbance to understory vegetation will occur from moving equipment on the site and as a result of mulch material being scattered. Chaining will cause the most significant impacts to understory vegetation while the chain is being dragged across the soil surface, but these impacts will still be minimal as a result of the use of a smooth chain. The proposed timeline for implementation will occur in the late fall and early winter when vegetation is going into dormancy which also minimizes impacts. Positive benefits to cool-season perennial grasses and forbs are expected as a result of removing over-story vegetation to allow more light and moisture to reach the soil surface.

Table 1 (in the Proposed Action) shows the preliminary seed mix for the comparison of mechanical treatments (Project 2). The use of Quick Guard (*Triticum aestivum*) was noted in the seed mix and WRFO does not generally endorse the use of sterile hybrids. However, the use of Quick Guard on small-scale research plots should have not impacts that cannot be mitigated, and its use in research projects does provide information on whether they are effective reclamation tools which helps to inform decisions about authorization of its use in the future.

Cumulative Effects: Targeting first generation encroaching pinyon-juniper and mixed mountain shrub is designed to mimic natural fire regimes in the project area and revert these areas back to mid seral mountain shrublands. Fire suppression in the area for the last century has led to a loss of diversity in age-class structures within vegetative communities, and an over-accumulation of fuels for large fires. By mimicking natural small fires using mechanical means, natural fire breaks are being created along with creating more edge habitat for wildlife or other grazing animals.

*Environmental Consequences of the No Action Alternative:*

Direct and Indirect Effects: No vegetation treatments would occur in the project area.

Cumulative Effects: No treatments in the proposed project area will maintain a transition from diverse age-classes of early, mid, and late seral vegetative communities to all late seral. This creates an increased risk of fire and a reduction in suitable habitat for wildlife. With the large amount of oil and gas development in the area, it is anticipated that fire suppression will continue, and the use of mechanical treatments using hydro-ax, roller-choppers, and chaining will be the most effective means for creating diverse vegetative age-classes.

*Mitigation:* None.

*Finding on the Public Land Health Standard #3 for Plant and Animal Communities:*

Currently the project area is meeting land health standards for plant and animal communities. Understory vegetation is dominated by cool-season perennial grasses and forbs with only trace amounts of cheatgrass in areas of previous disturbance or areas of livestock congregation.

## INVASIVE, NON-NATIVE SPECIES

*Affected Environment:* There are several species of Colorado listed noxious weeds within close proximity of the proposed vegetation treatments. The state of Colorado has three designations for noxious weeds that occur within the state. List A species are designated for eradication, List B noxious weeds have, or will have, a state noxious weed management plan developed to stop their spread, and List C species are species which parties will develop and implement state noxious weed management plans designed to support the efforts of local governing bodies to facilitate more effective integrated weed management on private and public lands. The goal of such plans will not be to stop the continued spread of these species but to provide additional education, research, and biological control resources to jurisdictions that choose to require management of List C species (Colorado Department of Agriculture 2011).

No List A species are known to exist around the project area, however there are several List B species. List B species known to occur around the project area are black henbane (*Hyoscyamus niger*), bull thistle (*Cirsium vulgare*), Canada thistle (*Cirsium arvense*), houndstongue (*Cynoglossum officinale*), leafy spurge (*Euphorbia esula*), musk thistle (*Carduus nutans*), and spotted knapweed (*Centaurea maculosa*).

List C species located in the proposed project area are cheatgrass, and halogeton (*Halogeton glomeratus*). Cheatgrass is an undesirable, invasive species that is located in isolated patches around the Magnolia area. These isolated patches are primarily along areas of disturbance from oil and gas activity, or along areas of common livestock congregation.

### *Environmental Consequences of the Proposed Action:*

Direct and Indirect Effects: The primary target of the vegetation treatments is first generation encroaching pinyon-juniper trees and older age-class mixed mountain shrub communities. There should be minimal impacts to the soil surface and understory vegetation which provides direct competition against noxious/invasive species. Some disturbance will occur to the soil surface where equipment will be driving on the site conducting the treatments, and the use of a smooth chain will also impact the soil surface. This type of disturbance can create a pathway for weed species to establish.

There is also the potential for weed seeds and propagules to be transported onto the site from equipment used on the project. Transportation of weeds from other areas does create a risk of introducing new weed species to the area.

Cumulative Effects: Past and present land uses such as oil and gas development and livestock use in the vicinity of the proposed treatments has led to the introduction of many invasive and noxious weeds to the area. It is anticipated that oil and gas development and livestock grazing will continue in the area and there is a high potential for weeds to spread. The proposed vegetation treatments for this project are generally in undisturbed late-seral mixed mountain shrub and pinyon juniper woodlands with few weeds located directly in the polygons. Soil disturbance in the project polygons does create a potential for weeds to move into the area from adjacent communities if not monitored and treated following the project.

*Environmental Consequences of the No Action Alternative:*

Direct and Indirect Effects: There will be no vegetation treatments, and the opportunity for weeds to spread will be minimized.

Cumulative Effects: There will not be any direct or indirect effects to add to potential cumulative effects within the project area.

*Mitigation:*

1. Construction equipment will be washed prior to being brought onto the project area and again following completion of the project.
2. See the Special Status Plant Species section for other weed treatment mitigation.

## **SPECIAL STATUS PLANT SPECIES**

*Affected Environment:* The WRFO supports habitat for two threatened plant species: *Physaria congesta* (Dudley Bluffs bladderpod) and *Physaria obcordata* (Dudley Bluffs twinpod), listed under the Endangered Species Act (ESA). The special status plant species are badland or rock outcrop soil associates, and are considered “oil shale endemics” or edaphic (soil-related) endemic species. *P. congesta* grows on barren white shale outcrops on tongues of the Green River Formation where it has been exposed along down-cut drainages or windswept ridges. It often grows on level surfaces at the points of ridges or in pinyon-juniper savannah areas where outcrops of the white shale geology has been exposed. *P. obcordata* also grows on barren white shale outcrops on tongues of the Green River Formation where it is exposed along down-cut drainages, sometimes occurring below, or interspersed with *P. congesta* habitats.

Project 1: Project 1 of the Proposed Action will be implemented from October 2012 to March 2013 and special status plant species surveys for the affected areas will be completed in spring 2012. A known population of *P. obcordata* is within 400 m of a proposed treatment area and several other proposed treatment areas would impact special status plant species suitable habitat.

Project 2: A population of *P. congesta* is within approximately 330 m of the western-most polygon in the south Magnolia treatment block of Project 2. This population is approximately 0.92 acres in size and is due west of the treatment area. Hayden-Wing and Associates previously identified this population in 2009. All special status plant species potential and suitable habitat was surveyed in either 2010 or 2011 by Hayden-Wing (Hayden-Wing 2011). No other occupied habitat was identified within 600 m of the project area in Project 2. The nearest known occupied habitat of *P. obcordata* is more than 1,000 m to the southwest of the Project 2 treatment area.

*Environmental Consequences of the Proposed Action:*

Direct and Indirect Effects:

Project 1: Special status plant surveys of Project 1 treatment area are necessary in spring 2012 to determine effects this project will have on the special status plant species. There will be no effect to both *P. congesta* and *P. obcordata* if Project 1 treatment areas fall outside of the 600 m life history buffer. If special status plant species are found within 600 m of a proposed treatment area

there are several possible effects to consider in addition to the effects considered for Project 2 (below):

- If suitable habitat is found within proposed treatment areas, habitat disturbance or loss could potentially affect both special status species.
- If the special status plant species are downwind of a treatment area, fugitive dust created by the project could impact the species and associated pollinators.
- Ground disturbance may create an opportunity for invasive species to establish and threaten special status plant species habitat.
- The use of herbicides to control invasive species within the life history buffer of both *Physaria* species may negatively affect the special status plant species.

Project 2: Project 2 of the Proposed Action would involve 154 acres of woodland manipulations with minimal impact to the surrounding community. Since Project 2 of the Proposed Action is within 600 m of occupied habitat of a federally listed threatened species, the WRFO sought informal Section 7 consultation with the FWS. The FWS concurred with BLM's determination that the proposed project, including vegetation treatments and mitigation measures (found below), may affect, but are not likely to adversely affect Dudley Bluffs bladderpod (*Physaria congesta*) and Dudley Bluffs twinpod (*Physaria obcordata*), since any effects would be insignificant and discountable. This is based on the following information:

- The nearest *P. congesta* population is approximately 330 meters to the west of the proposed vegetation treatment area.
- Although suitable habitat is present, the nearest known occurrence *P. obcordata* is more than 1,000 meters southwest of the project area.
- Vegetation treatments would occur east of the closest *P. congesta* population, and since prevailing winds come from the southwest, it is expected that there will be very little, if any, effects from fugitive dust.
- The project proponent will require construction equipment to use access roads from the south and east to avoid indirect impacts to the *P. congesta* population.
- Treatments would be implemented in late October 2011 after the growing season, thereby reducing fugitive dust impacts on listed plant species and pollinators.
- The seed mix was designed to include a high proportion of forbs including those generally favored by pollinator species known to occur in the area.
- Only ground treatment using backpack sprayers will be permitted. No aerial application of any herbicide will occur. Impacts from weed treatments would be extremely unlikely to occur due to distance from the nearest occupied *P. congesta* population.

As a result of previous development in the vicinity of the *Physaria* species' habitat there have been concerns that pollinator species' habitat is fragmented and may limit sexual reproduction (Tepedino 2009). Reclamation of disturbance near special status plant species habitat can be used to augment the availability of flowering plants favored by pollinators. Since Project 2 of the Proposed Action is within 600 m of occupied suitable special status plant species habitat, the seed mix has been designed to include a high proportion of forbs, those generally favored by the pollinator species or those that are native to the area. Using a higher number of forbs would reduce any potential negative impact of habitat loss to pollinator species.

In summary, Project 2 of the Proposed Action may slightly affect the nearest special status plant species; however the project will not adversely affect the species. Project 1 of the Proposed Action may have effects depending on the results of special status plant surveys; however all potential affects can be mitigated so as not to adversely affect the species. If it is not possible to mitigate potential impacts as the project is currently designed, then specific polygons will either be dropped altogether or the configuration altered to ensure that there are no adverse impacts to special status plant species.

Cumulative Effects: With ground and vegetation disturbance there may be the potential in an increase of a non-native or exotic plant species in the project area. Habitat of the Dudley Bluff species is limited to specific geologic formations and any invasions of non-native species could potentially negatively impact suitable habitat. There is suitable habitat within 50 m of Project 1 and there is the potential that either of the threatened *Physaria* species could expand their range into this previously unoccupied habitat. When considering the recovery and persistence of these species, it is important to reduce invasions of non-native and exotic plant species.

*Environmental Consequences of the No Action Alternative:*

Direct and Indirect Effects: Under this alternative there would be no disturbance and therefore no potential impact on special status plant species.

Cumulative Effects: Under this alternative there would be no disturbance and therefore no potential impact on special status plant species.

*Mitigation:*

1. Prior to issuing a Notice to Proceed for Project 1, special status plant species surveys will be conducted and the results of those surveys reviewed by the WRFO Ecologist. Consultation with the FWS must be initiated for all special status plant species populations found within 600 m of treatment areas of Project 1 before proceeding with treatments and any mitigation required by the FWS in the consultation process must be adhered to. If any treatment areas fall within 100 m of an occupied special status plant species population, they will be relocated or dropped from the Proposed Action. Treatment areas or access roads may be moved to avoid impacts to occupied or suitable habitat. Treatments must be implemented between October through March to avoid potential negative impacts during the growing season on species status species and associated pollinators. Mitigation measures found below for Project 2 may also apply to treatment areas within 600 m of special status plant species for Project 1; however, consultation with FWS must be initiated for any weed treatment with 600 m of a special status plant species.
2. The BLM and the FWS have agreed on a “not likely to adversely affect” Section 7 determination for Project 2 of the Proposed Action because the two follow mitigation measure were incorporated into the study design:
  - The project proponent will require construction equipment to use access roads from the south and east to avoid indirect impacts to the *P. congesta* population.

- Treatments will be implemented in late October 2011 after the growing season, thereby reducing fugitive dust impacts on listed plant species and pollinators.
3. BLM will require CPW to monitor and control non-native species infestations on the treatment sites for three years post-disturbance. If non-native or invasive species are found, CPW will be required to complete post-project weed treatment that would be consistent with the BLM White River Field Office Integrated Weed Management Plan (IWMP) and Biological Opinion (TAILS #65413-2010-I-0035). The individual plants and/or larger infestations will be recorded on a GPS unit to notify the BLM in addition to flagging, as stated in the IWMP. Small infestations will be controlled manually within 600 m of occupied *P. congesta* population. If infestations are too large to control manually, ground herbicide treatments may be applied within the treatment buffers (specified in the IWMP) to *P. congesta*. Only ground (spot) treatment using backpack sprayers will be permitted and no aerial application of any herbicide will be permitted. CPW may use the Pesticide Use Proposal (PUP) and Certified Pesticide Applicator (CPA) already held by XOM. If XOM does not provide use under their PUP then CPW will have to obtain a new PUP from the WRFO BLM. The CPA, as directed by CPW, must use the herbicides at the lowest rate needed with indicator dye. After herbicide application, CPW must prepare a Pesticide Application Record (PAR) as well as monitor the infestations within a month to ensure success. CPW must also monitor the *P. congesta* population within a month of herbicide application to detect any potential adverse effects. The WRFO BLM Ecologist must be notified at least one week before CPW monitors the *P. congesta* population.

*Finding on the Public Land Health Standard #4 for Special Status Species:* The Proposed Action and the No Action Alternative should have no influence on populations or habitats of plants associated with the ESA or BLM sensitive species and, as such, should have no influence on the status of applicable Land Health Standards.

## **TERRESTRIAL WILDLIFE**

*Affected Environment:* The Magnolia project area is encompassed by mule deer severe winter range. Although these winter ranges are generally occupied from October through May, their most important role is served under most severe winter conditions during the late winter/early spring months of January through April. Particularly at high animal densities, forage availability is an important factor in sustaining these animals at a nutritional level that promotes strong demographic performance in support of achieving the State's big game population objectives. Elk inhabit the project area as small roving bands during the spring, fall, and winter months.

The woodlands comprising much of the project area support well distributed nesting by accipitrine hawks and woodland owls, including Cooper's hawk, long-eared owl, and sharp-shinned hawk. These birds generally return to breeding territories by mid-April. Successful fledging of young birds usually occurs between mid-July and mid-August. The Magnolia area has been the subject of considerable nest survey efforts over the last several years by WRFO and contracted biologists. Several known nest stands were avoided during project layout and design.

Woodland stands that represented habitat well-suited for raptor nesting were eliminated from treatment consideration by WRFO biologists and project consultants over the course of project layout and design. WRFO biologists performed a final series of nest surveys in the vicinity of those treatments that held any potential for nesting. One Cooper's hawk nest that had failed during the 2011 season was located in the course of these surveys. The nest site and contiguous woodlands comprising this stand were subsequently removed from treatment consideration.

Small mammal populations associated with the project area are not well understood, however, more specialized members of these communities are best associated with mature and well developed pinyon-juniper woodlands. About 18 percent of the treatment acreage (105 acres) is composed of woodlands that show evidence of persistent woodland character, including diverse age-class composition and accumulations of large woody debris from former generations of trees. The remaining acreage is composed of former fire disclimax shrublands that typically support dense, submature canopies with little structural diversity and no evidence of former woodland occupation.

*Environmental Consequences of the Proposed Action:*

Direct and Indirect Effects: The proposed treatments, besides serving as the basis for research investigating opportunities to maintain the State's big game population objectives in the face of coincident pervasive natural gas development, have been designed to remain consistent with woodland and shrubland management objectives established in the White River Resource Management Plan. By emphasizing the treatment of first generation and actively encroaching woodlands, progress would be made in establishing the former extent and distribution of fire-disclimax shrublands on Magnolia. The pattern of numerous, small scattered treatments is intended to offer a high degree of forage and cover interspersion that is most efficiently exploited by deer and is not expected to compromise the scale or integrity of mature woodland habitats as reproductive habitat for woodland-adapted raptors, migratory birds, and resident small mammal populations.

Cumulative Effects: By targeting first generation woodlands and shrubland encroachment, the majority of these treatments (82 percent or 470 acres) were designed to minimize the cumulative loss of mature woodland canopies to ongoing natural gas development and wildfire events. The remaining 105 acres of early mature to mature woodland canopies are small in extent and widely distributed across the 16,000 acre project area, such that their manipulation offers a reasonable mimic to natural forms of woodland perturbation by fire, insects, and disease.

*Environmental Consequences of the No Action Alternative:*

Direct and Indirect Effects: Failure to approve the Proposed Action would forego an opportunity to participate in constructive big game research with CPW and industry in determining methods most effective in sustaining economically important big game populations in the face of energy development. Although wildfire would eventually act to revert much of this acreage to younger seral states, it is unlikely that the timing, extent, and distribution of woodland modification would satisfy the management objectives presently being sought by wildlife and land management entities (i.e., maintaining deer populations in the Piceance Basin).

Cumulative Effects: The conversion of former shrubland disclimax communities to a woodland state would progress incrementally across Magnolia. These conversions typically suppress understory expression and reduce the availability of herbaceous and woody forage that are important for deer sustenance in the spring/fall and winter months, respectively. Without management intervention (or opportune natural vegetation disturbances), deer populations would persist in the long term, but at near-term population levels that would be progressively less capable of meeting the State's big game population objectives, which among other values, support local sport hunting traditions and business economies.

*Mitigation:* None. Mitigation was incorporated into project design features.

*Finding on the Public Land Health Standard #3 for Plant and Animal Communities:*

The project area is undergoing natural gas development but continues to function properly and meets the Land Health Standard. As designed, the Proposed Action contributes to the reestablishment of former shrub disclimax communities without compromising values and functions attributable to interspersed pinyon-juniper woodlands. The No Action Alternative would fail to meet certain pressing land management objectives (e.g, big game), but it is unlikely that the long term function and condition of its shrubland and woodland communities would be compromised in the absence of these treatments. The Proposed Action or No Action Alternative would not be expected to contradict continued meeting of the Land Health Standard.

## **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. Interspersed throughout the area 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:*

Direct and Indirect Effects: 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 by hydro-ax will create a lighter tan color than the greens of the surrounding pinyon-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. Similar visual effects will result from the implementation of the other treatments, however, little if any, woody material will be left on the ground. As such, the areas subject to chaining and roller-chopping are likely to retain a more barren appearance relative to surrounding vegetation. All treated parcels are likely to show sharp breaks in line, texture, and color relative to surrounding vegetation. After the seeding of treated parcels in the comparison areas has been given time to generate, vegetation re-growth will likely reduce the contrasts in line, color and texture. Areas not treated and control areas will experience vegetative re-growth naturally. 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.

Cumulative Effects: The clearing of parcels in the project area, combined with other projects in which parcels are cleared of vegetation, may over time cumulatively contribute to a fractured and broken appearance in line, form, and color on the landscape.

*Environmental Consequences of the No Action Alternative:*

Direct and Indirect Effects: Under this alternative there would be no vegetation disturbed and no contrast created.

Cumulative Effects: None have been identified.

*Mitigation:* None.

## **FOREST MANAGEMENT**

*Affected Environment:* The Proposed Action is located within young and mature stand classes of pinyon-juniper woodland as defined by a survey performed by WRFO personnel from 2003 to 2005. Productive exposure types occur on primarily lower gradient slopes and north and east aspects. Growth rates are higher in these areas due to soil features which allow for effective use of precipitation. This habitat type is further broken down based on the age class of the stand. In this case the affected stands are both mature and young. Mature pinyon-juniper trees on productive exposure establish themselves as the dominant plant community on the site. Young pinyon-juniper trees are a component of the plant community. Young trees tend to replace stands of plants such as sagebrush or mountain shrub communities over time. Young pinyon trees are stem dominated promoting a conical Christmas tree like appearance. Young juniper trees tend to have branches down to the ground and the duff layer may even cover the lowest branches. Both the young and mature stands are valuable locally as a source of fire wood and posts for fence construction. Encroachment sites of young pinyon trees are valuable for Christmas tree harvest.

*Environmental Consequences of the Proposed Action:*

Direct and Indirect Effects: Table 8 shows the estimated loss of woodland acres as a result 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 pinyon-juniper trees will be present sparsely throughout the sites within 15-25 years. A mature stand would develop a within 250-350 years. Removal of mature and middle-aged pinyon and juniper trees would reduce the potential for outbreak of woodland diseases and pest infestations.

**Table 8:** Approximate Acreage of Woodland Disturbed by the Proposed Action

<b>Project Name</b>	<b>Treatment Acres</b>	<b>Access Road (Acres)</b>	<b>Acres Disturbed (Total)</b>	<b>Stand Class</b>	<b>Total Cords</b>
Magnolia Vegetation Removal	105	0	105	Mature Productive Exposure	525
	101	0	101	Young Productive Exposure	303
	369	0	363	Encroachment (Shrubland Disclimax)	0
Total	575		575		828

Cumulative Effects: By targeting first generation woodlands and shrubland encroachment, the majority of these treatments were designed to minimize the cumulative loss of mature woodland canopies to ongoing natural gas development and wildfire events. The early mature to mature woodland canopies are small in extent and widely distributed across the 16,000 acre project area, such that their manipulation offers a reasonable mimic to natural forms of woodland perturbation by fire, insects, and disease. Other impacts would be long-term until woodlands regenerate successfully.

*Environmental Consequences of the No Action Alternative:*

Direct and Indirect Effects: Under this alternative there would be no vegetation treatments and no removal of pinyon-juniper woodlands.

Cumulative Effects: Under this alternative there would be no vegetation treatments and no removal of pinyon-juniper woodlands.

*Mitigation:* None.

## **RECREATION**

*Affected Environment:* The Proposed Action occurs on federal lands administered by the WRFO and also lands designated as the White River Extensive Recreation Management Area (ERMA). The BLM manages the ERMA to provide for unstructured recreation activities such as hunting, dispersed camping, hiking, horseback riding, wildlife viewing, and off-highway vehicle (OHV) use. There are no developed recreational facilities on BLM-administered lands in or near the project area. Recreation in the project area is dispersed in nature with activities primarily related to hunting, camping, wildlife viewing, and OHV riding.

Within the vicinity of the project area, regulated seasonal big game hunting is the predominate dispersed recreational activity. Game Management Unit (GMU) 22 encompasses the project area

and supports annual fall hunting of mule deer, elk, and bear. Seasons for archery, muzzleloading rifle, and rifle are set annually from late August to the end of December in GMU 22.

Recreational Opportunity Spectrum (ROS) classes specified within the project area include Semi-primitive Motorized (SPM), typically characterized by a natural appearing environment with few administrative controls and low interaction among users (but evidence of other users may be present); and Roded Natural (RN), characterized by less naturalness and increased contact with other users. The BLM-administered lands in the project area are designated as either open for OHV travel, restricted temporally due to seasonal conditions, or restricted spatially to existing roads, trails, and ways.

*Environmental Consequences of the Proposed Action:*

Direct and Indirect Effects: Forage enhancement treatment operations are likely to overlap with big game hunting seasons. As such, it is possible that activities of the Proposed Action could temporarily displace target species to adjacent habitat either within or outside of the project area, but away from the areas of activity. Since hunting relies on the presence of game species and the ability of the hunters to close on the animals, hunters generally prefer relatively quiet settings. Actions disturbing the natural setting, beyond the presence of the hunters themselves, could disrupt hunting in the vicinity of the project area. Although such disturbance would adversely affect the hunting experience at that location and possibly for some portion of the surrounding area, hunters may be able to find relatively undisturbed settings within their permitted hunt unit on adjacent public lands.

Part of the intent of the Proposed Action is to determine which, if any, forage treatments will serve to enhance the availability and quality of seasonal forages on deer winter ranges and if they are capable of offsetting impacts to, or elevating, survival and fitness of mule deer exposed to energy development in the Piceance Basin. If the Proposed Action is successful in these goals, the overall hunting experience could indirectly benefit from sustained herds and animals less stressed from the impacts of oil and gas development in the Piceance Basin.

Cumulative Effects: Combined with ongoing oil and gas development activities occurring during big game hunting season in the area, the Proposed Action could cumulatively contribute to displacement of wildlife, thereby negatively impacting the hunter experience.

*Environmental Consequences of the No Action Alternative:*

Direct and Indirect Effects: The Proposed Action would not occur therefore no direct or indirect effects would result.

Cumulative Effects: No cumulative impacts have been identified.

*Mitigation:* None.

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**TRIBES, INDIVIDUALS, ORGANIZATIONS, OR AGENCIES CONSULTED:** Colorado Parks and Wildlife and the U.S. Fish and Wildlife Service.

**INTERDISCIPLINARY REVIEW:**

<b>Name</b>	<b>Title</b>	<b>Area of Responsibility</b>	<b>Date Signed</b>
Bob Lange	Hydrologist	Air Quality; Surface and Ground Water Quality; Floodplains, Hydrology, and Water Rights; Soils	9/23/2011
Zoe Miller	Ecologist	Areas of Critical Environmental Concern; Special Status Plant Species; Forest Management	9/28/2011
Kristin Bowen	Archaeologist	Cultural Resources; Native American Religious Concerns; Paleontological Resources	9/27/2011
Matt Dupire	Rangeland Management Specialist	Invasive, Non-Native Species; Vegetation; Rangeland Management	9/30/2011
Ed Hollowed	Wildlife Biologist	Migratory Birds; Special Status Animal Species; Terrestrial and Aquatic Wildlife; Wetlands and Riparian Zones	9/12/2011
Lisa Belmonte	Wildlife Biologist	Hazardous or Solid Wastes	10/03/2011
Chad Schneckenburger	Outdoor Recreation Planner	Wilderness; Visual Resources; Access and Transportation; Recreation,	9/12/2011
Garner Harris	Zone Fire Management Officer	Fire Management	7/28/2011
Paul Daggett	Mining Engineer	Geology and Minerals	9/13/2011
Janet Doll	Realty Specialist	Realty	8/31/2011
Melissa J. Kindall	Range Technician	Wild Horse Management	8/29/2011
Lisa Belmonte	Wildlife Biologist	Project Lead – Document Preparer	10/6/2011
Heather Sauls	Planning & Environmental Coordinator	NEPA Compliance	10/12/2011

**ATTACHMENTS:**

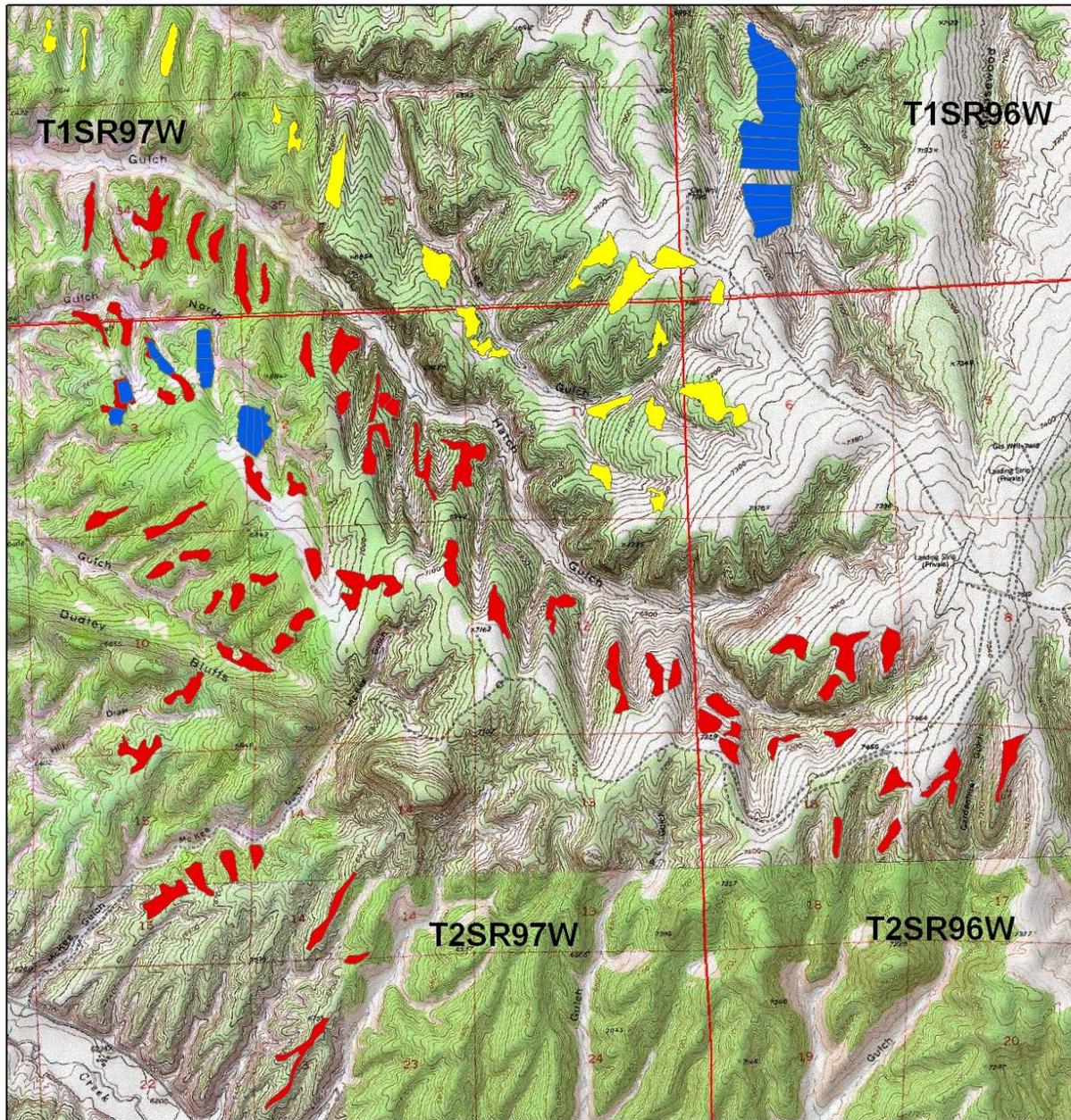
Figure 1: Project Overview – Mule Deer Forage Enhancement and Mechanical Comparison Treatments

Figure 2: Project 1: Mule Deer Forage Enhancement Treatment Areas

Figure 3: Project 2: Mechanical Treatment Comparison – North Location

Figure 4: Project 2: Mechanical Treatment Comparison – South Locations

Figure 1: Project Overview – Mule Deer Forage Enhancement and Mechanical Comparison Treatments



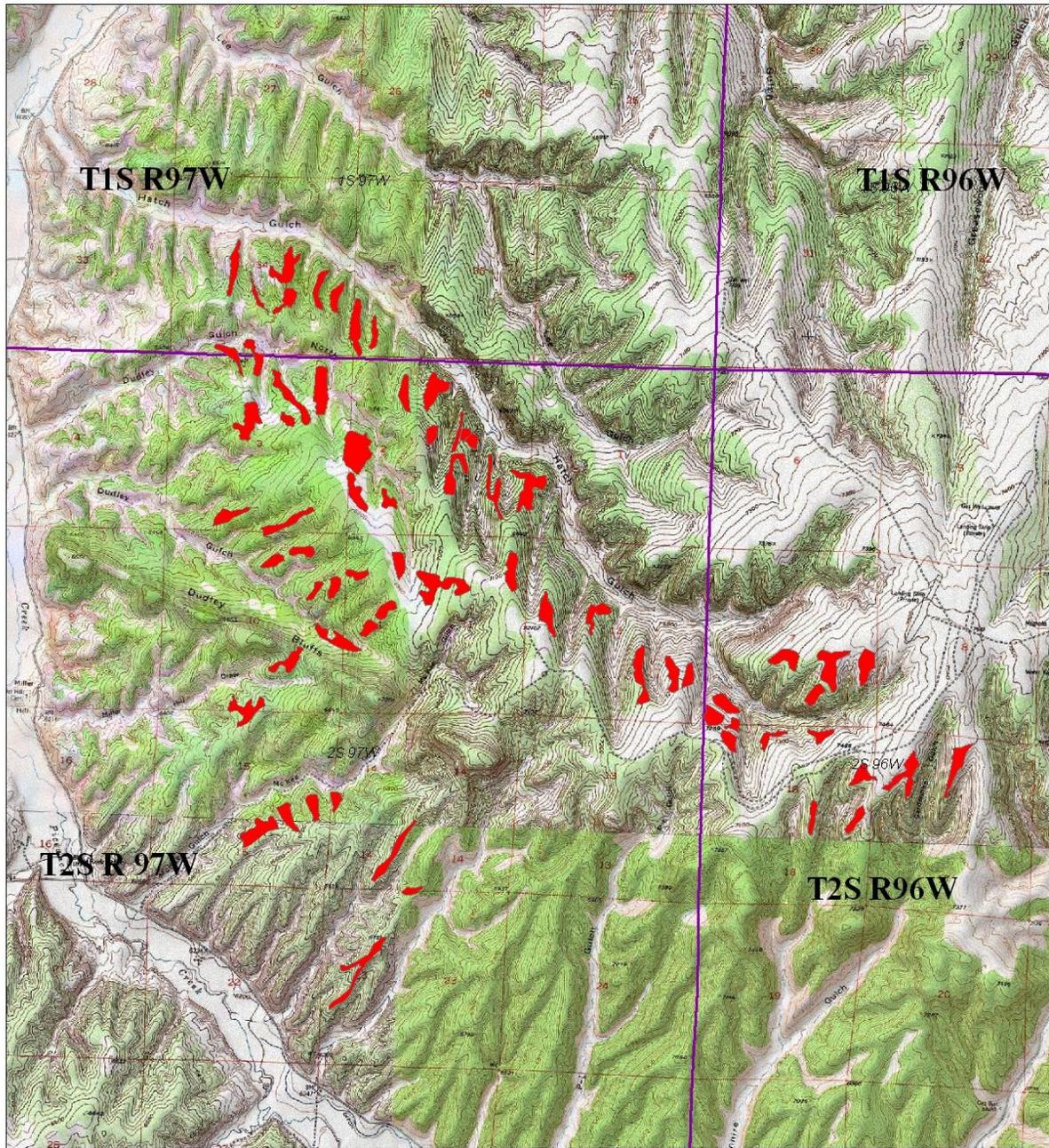
**Legend**

- Pilot Treatments EA 11-0004
- Mechanical Comparison Treatments
- Mule Deer Treatment Areas

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Figure 2: Project 1: Mule Deer Forage Enhancement Treatment Areas

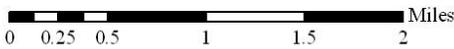


Text



**Legend**

 Mule Deer Treatments\_South



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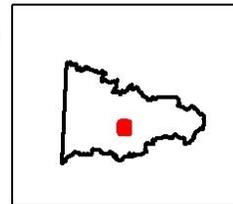
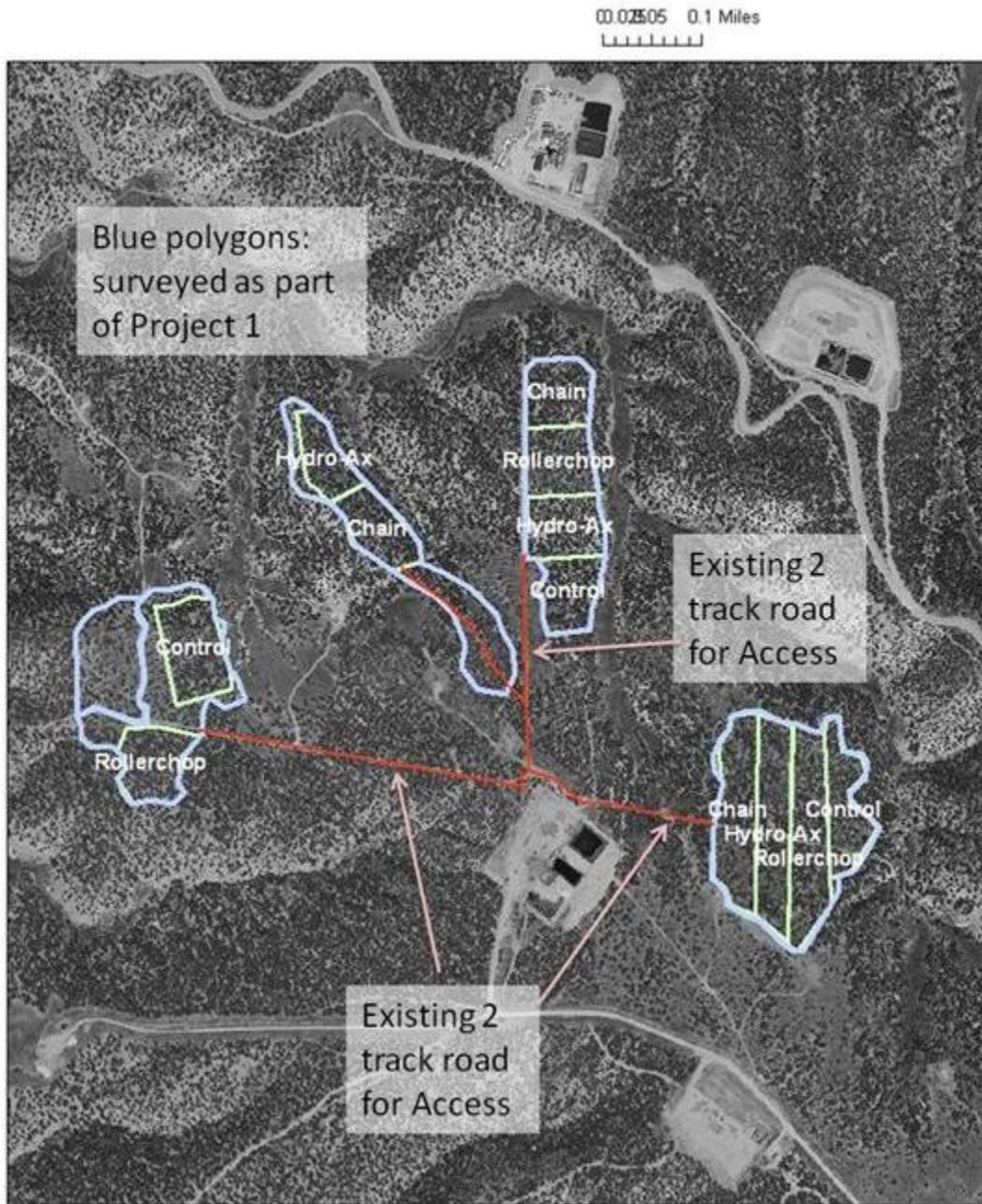


Figure 3: Project 2: Mechanical Treatment Comparison – North Location



Figure 4: Project 2: Mechanical Treatment Comparison – South Locations



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

**Finding of No Significant Impact (FONSI)  
DOI-BLM-CO-110-2011-0158EA**

**BACKGROUND**

The BLM analyzed approximately 140 acres of hydro-ax treatments across 21 polygons in DOI-BLM-CO-110-2011-0004-EA. The following projects, Magnolia Mule Deer Forage Enhancement Treatment (Project 1) and Comparison of Mechanical Treatments (Project 2) were proposed by CPW within the Magnolia area.

Project 1 involves the mechanical treatment of approximately 463 acres in 69 parcels ranging from 2 to 18 acres each between Hatch Gulch to the north and Piceance Creek to the west and south as big game forage enhancement treatments. This project would serve to evaluate the success of mitigating mule deer behavioral and physiological responses to the human disturbance associated with energy development activity using winter range habitat hydro-ax treatments.

Project 2 will involve a subset of the above mentioned treatment areas and will compare vegetation response to four treatment types: 1) tree grinding with a hydro-ax, 2) tree removal with a 50-foot smooth chain (90 lbs/link) pulled by two track bulldozers, a D8 Caterpillar and a D65 Komatsu 3) tree removal with a 12-foot long, 5-foot diameter roller-chopper pulled by a D8 Caterpillar track bulldozer and 4) control (no treatment). A total of 154 acres are included in Project 2.

**FINDING OF NO SIGNIFICANT IMPACT**

Based upon a review of the EA and the supporting documents, I have determined that the Proposed Action is not a major federal action and will not have a significant effect on the quality of the human environment, individually or cumulatively with other actions in the general area. No environmental effects meet the definition of significance in context or intensity, as defined at 40 CFR 1508.27 and do not exceed those effects as described in the White River Record of Decision and Approved Resource Management Plan (1997). Therefore, an environmental impact statement is not required. This finding is based on the context and intensity of the project as described below.

**Context**

The project is a site-specific action directly involving BLM administered public lands that does not in and of itself have international, national, regional, or state-wide importance.

## **Intensity**

The following discussion is organized around the 10 Significance Criteria described at 40 CFR 1508.27. The following have been considered in evaluating intensity for this Proposed Action:

**1. Impacts that may be both beneficial and adverse.** Beneficial, adverse, direct, indirect, and cumulative environmental impacts have been disclosed in the EA. For example, there may be potentially adverse impacts associated with soil disturbance and weed transport. Conversely the project is anticipated to benefit forage resources (improvements in vegetative character) available to big game. Analysis indicated no substantial impacts to physical, biological, or archaeological/paleontological resources.

**2. The degree to which the Proposed Action affects public health or safety.** Public health and safety would not be adversely impacted. There are no known or anticipated concerns with project waste or hazardous materials.

**3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.** The project area does not contain prime or unique farmlands, wetlands, floodplains, or wild and scenic rivers. There were no cultural resources identified within the project area. The Dudley Bluffs ACEC is located to the west of the project area; however none of the treatments are located within its boundaries.

**4. Degree to which the possible effects on the quality of the human environment are likely to be highly controversial.** There will be no highly controversial effects on the human environment.

**5. Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risk.**

No highly uncertain or unknown risks to the human environment were identified during analysis of the Proposed Action.

**6. Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.**

The Proposed Action neither establishes a precedent for future BLM actions with significant effects nor represents a decision in principle about a future consideration. Vegetation treatments similar to those described in the Proposed Action were analyzed in a previous environmental assessment (DOI-BLM-CO-110-2011-0001-EA).

**7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.** No cumulative impacts related to other actions that would have a significant adverse impact were identified or are anticipated.

**8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.** Surveys were conducted in all

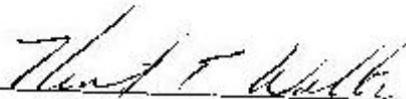
treatment sites and no cultural or historical concerns were identified or anticipated. There are no known American Indian religious concerns.

**9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act (ESA) of 1973.** The U.S. Fish and Wildlife Service (FWS) was consulted due to the project's potential to impacted the Dudley Bluffs bladderpod and Dudley Bluffs twinpod, both federally threatened plant species. Mitigation measures were established (see *Special Status Plant Species* in EA) and the FWS concurred with the BLM finding that the Proposed Action may effect, but is not likely to adversely affect the Dudley Bluffs bladderpod. Depending on survey results, FWS may need to be consulted on Project 1 (Magnolia Mule Deer Forage Enhancement Treatments, North and South Half).

**10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.**

Neither the Proposed Action nor impacts associated with it violate any laws or requirements imposed for the protection of the environment.

**SIGNATURE OF AUTHORIZED OFFICIAL:**

  
Field Manager

**DATE SIGNED:**

10/14/11

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

**DECISION RECORD**

**PROJECT NAME:** Project 1 – Magnolia Mule Deer Forage Enhancement Treatments  
Project 2 – Comparison of Mechanical Treatments

**ENVIRONMENTAL ASSESSMENT NUMBER:** DOI-BLM-CO-2011-0158-EA

**DECISION**

It is my decision to implement the Proposed Action (Alternative A), as mitigated in DOI-BLM-CO-2011-0158-EA, authorizing the implementation of Colorado Parks and Wildlife and BLM's mule deer forage enhancement (vegetation) treatments and comparison of mechanical vegetation treatments.

**Mitigation Measures**

1. **Prior to issuing a Notice to Proceed for Project 1**, special status plant species surveys will be conducted and the results of those surveys reviewed by the WRFO Ecologist. Consultation with the FWS must be initiated for all special status plant species populations found within 600 m of treatment areas of Project 1 before proceeding with treatments and any mitigation required by the FWS in the consultation process must be adhered to. If any treatment areas fall within 100 m of an occupied special status plant species population, they will be relocated or dropped from the Proposed Action. Treatment areas or access roads may be moved to avoid impacts to occupied or suitable habitat. Treatments must be implemented between October through March to avoid potential negative impacts during the growing season on species status species and associated pollinators. Mitigation measures found below for Project 2 may also apply to treatment areas within 600 m of special status plant species for Project 1; however, consultation with FWS must be initiated for any weed treatment with 600 m of a special status plant species.
2. In order to preserve soil productivity, erosion features such as riling, gulying, piping and mass wasting in the treatment areas or adjacent to the treatment areas as a result of this action will be addressed immediately after observation by developing a plan and implementing BMPs, with BLM approval, to assure successful soil stabilization and to address erosion problems that may develop.
3. Construction equipment will be washed prior to being brought onto the project area and again following completion of the project.
4. The project proponent will require construction equipment to use access roads from the south and east to avoid indirect impacts to the *P. congesta* population.

5. Treatments will be implemented in late October 2011 after the growing season, thereby reducing fugitive dust impacts on listed plant species and pollinators.

6. BLM will require CPW to monitor and control non-native species infestations on the treatment sites for three years post-disturbance. If non-native or invasive species are found, CPW will be required to complete post-project weed treatment that would be consistent with the BLM White River Field Office Integrated Weed Management Plan (IWMP) and Biological Opinion (TAILS #65413-2010-I-0035). The individual plants and/or larger infestations will be recorded on a GPS unit to notify the BLM in addition to flagging, as stated in the IWMP. Small infestations will be controlled manually within 600 m of occupied *P. congesta* population. If infestations are too large to control manually, ground herbicide treatments may be applied within the treatment buffers (specified in the IWMP) to *P. congesta*. Only ground (spot) treatment using backpack sprayers will be permitted and no aerial application of any herbicide will be permitted. CPW may use the Pesticide Use Proposal (PUP) and Certified Pesticide Applicator (CPA) already held by XOM. If XOM does not provide use under their PUP then CPW will have to obtain a new PUP from the WRFO BLM. The CPA, as directed by CPW, must use the herbicides at the lowest rate needed with indicator dye. After herbicide application, CPW must prepare a Pesticide Application Record (PAR) as well as monitor the infestations within a month to ensure success. CPW must also monitor the *P. congesta* population within a month of herbicide application to detect any potential adverse effects. The WRFO BLM Ecologist must be notified at least one week before CPW monitors the *P. congesta* population.

#### **COMPLIANCE WITH LAWS & CONFORMANCE WITH THE LAND USE PLAN**

This decision is in compliance with the Endangered Species Act and the National Historic Preservation Act. It is also in conformance with the 1997 White River Record of Decision/Approved Resource Management Plan.

#### **ENVIRONMENTAL ANALYSIS AND FINDING OF NO SIGNIFICANT IMPACT**

The Proposed Action was analyzed in DOI-BLM-CO-2011-0158-EA and it was found to have no significant impacts, thus an EIS is not required.

#### **PUBLIC INVOLVEMENT**

External scoping was conducted by posting this project on the WRFO's on-line National Environmental Policy Act (NEPA) register on 8/5/2011.

#### **RATIONALE**

Analysis of the Proposed Action has concluded that there are no significant negative impacts and that it meets Colorado Standards for Public Land Health.

#### **ADMINISTRATIVE REMEDIES**

Any appeal of this decision must follow the procedures set forth in 43 CFR Part 4. Within 30 days of the decision, a Notice of Appeal must be filed in the office of the Authorized Officer at White River Field Office, 220 East Market St., Meeker, CO 81641 with copies sent to the

Regional Solicitor, Rocky Mountain Region, 755 Parfet St., Suite 151, Lakewood, CO 80215, and to the Department of the Interior, Board of Land Appeals, 801 North Quincy St., MS300-QC, Arlington, VA, 22203. If a statement of reasons for the appeal is not included with the notice, it must be filed with the Interior Board of Land Appeals at the above address within 30 days after the Notice of Appeal is filed with the Authorized Officer.

**SIGNATURE OF AUTHORIZED OFFICIAL:**



Field Manager

**DATE SIGNED:**

10/24/11