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Blue Mountain Hazardous Fuel Reduction

Location:
Uintah County, Vernal, Utah
T4S, R25E, Sections 19-22, 26-30, 33-35
T5S, R25E, Sections 9, 10, 15, 16, 20-22

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BLM

CHAPTER 1 - INTRODUCTION AND NEED FOR THE PROPOSED ACTION

The Environmental Assessment (EA) has been prepared to analyze the Blue Mountain Hazardous Fuel Reduction project. The EA is an analysis of potential impacts that could result with the implementation of a proposed action or no action alternative. The EA assists the BLM in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any "significant" impacts could result from the analyzed actions. "Significance" is defined by NEPA and is found in regulation 40 CFR 1508.27. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a statement of "Finding of No Significant Impact" (FONSI). A Decision Record (DR), which includes a FONSI statement, is a document that briefly presents the reasons why implementation of the selected alternative will not result in "significant" environmental impacts (effects) beyond those already addressed in the Vernal Resource Management Plan (2008). This document provides the environmental assessment for the Blue Mountain Hazardous Fuel Reduction Project.

1.1 PURPOSE AND NEED FOR THE PROPOSED ACTION

The proposed action is needed primarily to reduce the risk of wildfires near private property adjacent to the project area. An additional need is to maintain important sagebrush habitat for a variety of wildlife species in the project area.

The purpose for the Blue Mountain Hazardous Fuel Reduction project includes:

- Maintain and improve areas that provide for important ecological functions and habitat for Greater sage grouse.
- Maintain important sagebrush habitat for a variety of wildlife species in the project area.
- Establish "green breaks" in hazardous fuels that reduce the risk of wildland fires removing large blocks of sagebrush.
- Reduce the buildup of hazardous fuels by removing pinyon pine and Utah juniper encroachment into sagebrush communities.
- Reduce the risk of large fire events.
- Reduce fire behavior intensity characteristics in the area for more favorable suppression activities in the event of a wildland fire.

1.2 CONFORMANCE WITH BLM LAND USE PLAN(S)

The alternatives considered in this EA are in conformance with the Vernal Resource Management Plan Record of Decision (2008). The specific citations are listed below:

Page 77 in section Goals and Objectives reads:

- The primary goal and objective of fire management is to help restore natural systems to their proper functioning condition by restoring fire to its legitimate role in the ecosystem, including managing wildland fire for other resource benefits.

- For Wildland Urban Interface (WUI) areas, the objective will be to reduce hazardous fuels adjacent to these at-risk areas through mechanical, prescribed fire,

> or chemical treatments, or a combination thereof. The BLM will develop WUI Projects in partnership with the State of Utah, the Ute Indian Tribe, and Daggett, Duchesne, Uintah, and Grand Counties.

Page 78 in section Fire-4 reads:

> Hazardous fuel reduction activities will be implemented primarily through the use of prescribed fire and managed wildland fire. In some cases, chemical and/or mechanical treatments will be used in conjunction with fire. Where social and/or resource constraints preclude the use of fire, mechanical and/or chemical treatments will be used.

1.3 RELATIONSHIPS TO STATUTES, REGULATIONS AND OTHER PLANS

This project is in Uintah County.

Uintah County General Plan of 2007

All alternatives considered in detail in the EA are not in conflict with the Uintah County's General Plan Update of 2007, which state:

> With respect to "public land management", the County continues to support "multiple-use" management practices, responsible public-land resource use and development...

Federal Statutes and Regulations.

- Protection Act of September 20, 1922 (42 Stat. 857; U.S.C. 594).
- Taylor Grazing Act of June 28, 1934 (48 Stat. 1269; U.S.C. 315).
- Reciprocal Fire Protection Act of May 27, 1955 (69 Stat. 66; 42 U.S.C. 1856, 1856a).
- Economy Act of June 30, 1932 (47 Stat. 417; 31 U.S.C. 686).
- The Federal Land Management and Policy Act of 1976 (FLPMA) (Public Law 94-579; 43 U.S.C. 1701).
- Disaster Relief Act, Section 417 (Public Law 93-288).
- 2001 Annual Appropriations Acts for the Department of the Interior.
- United States Department of the Interior Manual (910 DM 1.3).
- 2001 Updated Federal Wildland Fire Management Policy (1995 Federal Wildland Fire Management Policy Update).
- 1998 Departmental Manual 620 Chapter 1, Wildland Fire Management General Policy and Procedures.
- September 2000, "Managing the Impacts of Wildfires on Communities and the Environment."
- October 2000, National Cohesive Strategy goal is to coordinate an aggressive, collaborative approach to reduce the threat of wildland fire to communities and to restore and maintain land health.

- August 2001, "Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment -10 Year Comprehensive Strategy" provides a foundation for wildland agencies to work closely with all levels of government, tribes, conservation, and commodity groups and community-based restoration groups to reduce wildland fire risk to communities and the environment.

1.4 IDENTIFICATION OF ISSUES

1.4.1 Internal Scoping

The proposed action was reviewed by an interdisciplinary team of BLM resource specialists. For a list of all resources considered, refer to Appendix A. The below issues were carried forward for detailed analysis based on this internal review, since they would be potentially impacted by the project to a level that may help make a reasoned choice among alternatives or may be related to a potentially significant effect.

- Natural Areas-Potential short term reduction of the naturalness wilderness characteristics from the sights and sounds of the equipment associated with the proposed action.
- Fuels/Fire Management-Potential for the proposed action to change the fire cycle by decreasing hazardous fuels designed to result in a return to the natural fire regime and condition class with shorter flame lengths for fires that do occur.
- Wildlife and Special Status Animal Species-Potential improvement of big game, migratory birds, sage grouse, and Mexican spotted owls through the proposed action vegetation treatment. Potential short term disturbance of individual wildlife from the sights and sounds of the equipment associated with the proposed action
- Plants: Invasive Plants/Noxious Weeds-Potential for the spread of existing weed infestations due to equipment being utilized in those areas.
- Plants: Vegetation, Excluding USFWS designated species-Potential damage or destruction of Park rockcress or Rock bitterweed due to use of the equipment associated with the proposed action in or near their habitat.

1.4.2 Public Scoping

The proposed project was posted to the BLM eplanning website. A public scoping letter was submitted by Southern Utah Wilderness Alliance as a result of this posting. Their letter identified the following issues. A summary of how these issues were addressed is also included below.

- BLM should conduct an updated wilderness inventory prior to authorizing the project.
    - Inventories for wilderness characteristics have been conducted as disclosed in the Appendix A. No projects or changed circumstances have occurred since that time that would affect the presence or absence of these characteristics. A GIS and aerial photography survey of the area confirmed these results.
- BLM should review a range of alternatives including:
    - Reducing livestock grazing.
        - This is out of the scope of this document.
    - Seeding with native seed.
        - This is included in the proposed action.
    - Establishing fire breaks.

        - This is included in the proposed action.
    - Modifying the fire suppression regime.
        - This is included in the proposed action.
    - Protecting wilderness characteristics
        - This EA is not a decision document, so protection of wilderness characteristics is beyond the scope of this document. However, impacts to wilderness characteristics are disclosed in chapter 4.
    - Protect other resources such as cultural, air, water, soil, and vegetation.
        - This EA is not a decision document, so protection of these resources is beyond the scope of this document. However, consideration of impacts to these resources are documented or disclosed in Appendix A or chapter 4.
    - Include a no action alternative.
        - This alternative is included in Chapter 2.
- BLM should collect quantitative data regarding the impacts of grazing on vegetation and habitat.
    - This is beyond the scope of this EA.
- BLM should provide data regarding status of big game habitat.
    - Existing environment and impacts to big game habitat are disclosed in chapters 3 and 4.
- BLM should provide data on wildfires in and near project area.
    - According to BLM records no fires have occurred in or near the project area in the timeframe specified (20 to 50 years). As disclosed in chapters 3 and 4, this area should be on a 35 to 100 year fire cycle, and has gone at least one fire interval period between fire events. Part of the purpose and need is to reduce the potential for catastrophic fire that is created by the missed fire event and the associated accumulation of hazardous fuels.
- BLM should determine risk for spread of weeds.
    - This is disclosed in chapter 4.
- BLM should monitor the treatment efficacy.
    - Monitoring is an integral part of the proposed action.
- BLM should disclose cumulative impacts including from drought and fire.
    - Cumulative impacts have been disclosed in chapter 4.
- BLM should disclose the lack of relevant scientific (peer-reviewed) information on vegetation treatments in the Colorado Plateau.
    - It is noted that there is a lack of peer-reviewed literature studying chain harrow projects in the Colorado Plateau. However, a similar treatment was conducted in or near the project area seven years ago, and BLM monitoring of that treatment has been utilized in the design of the current proposed action and in the consideration of the environmental impacts.
- BLM should disclose the proposed project's impacts on climate change and climate change's impact on vegetation in the project area including quantification of greenhouse gas emissions and quantification of carbon released into the atmosphere.
    - Contribution to greenhouse gas emissions from the proposed action was considered as documented in Appendix A and determined to not reach an impact level that may help make a reasoned choice among alternatives or may be related to a potentially significant effect.

- BLM should protect the BLM natural areas as they can provide resistance to climate change.
    - This EA is not a decision document, so protection of these resources is beyond the scope of this document. However, impacts to BLM natural areas are disclosed in chapter 4.
- BLM should ensure soil and vegetation disturbance do not render ecosystems vulnerable to climate change.
    - This EA is not a decision document, so protection of these resources is beyond the scope of this document. However, impacts to these resources are disclosed in Appendix A or chapter 4.
- Until research can demonstrate the optimum sustainable ranges and densities of pinion and juniper trees, BLM should not conduct treatments in these ecosystems.
    - Not conducting the treatment is included in the no action alternative.
- BLM should maintain old forest pinion juniper stands for carbon sequestration.
    - The proposed action would not impact established pinion juniper stands. It targets pinion juniper encroachment (new growth) in sagebrush ecosystems.
- BLM should design the project to minimize soil disturbance.
    - It was determined, as documented in Appendix A that impacts to soils by the proposed action would not rise to a level that may be related to a potentially significant effect.
- BLM should disclose impacts to and mitigate impacts from weeds.
    - These impacts and mitigations are included in chapter 4.
- BLM should consult with the Utah State Historic Preservation Office and the Tribes.
    - Consultation is documented in chapter 5.
- BLM should disclose and model impacts to air quality.
    - It was determined, as documented in Appendix A that impacts to air quality by the proposed action would not rise to a level that may be related to a potentially significant effect.
- BLM should analyze impacts from dust to rapid snow melt.
    - It was determined, as documented in Appendix A that impacts to soils and air quality by the proposed action would not rise to a level that may be related to a potentially significant effect.

CHAPTER 2 – DESCRIPTION OF ALTERNATIVES, INCLUDING PROPOSED ACTION

2.1 Introduction

This EA focuses on the Proposed Action and No Action Alternatives. The No Action alternative is considered and analyzed to provide a baseline for comparison of the impacts of the proposed action.

2.2 Proposed Action

The proposed action is a hazardous fuels reduction project and a greater sage-grouse habitat improvement project. The treatments involve 6,280 acres.

Treatment	Acres
Slashing	4,602
Mastication/Mowing & Seeding	1,678
Total	**6,280**

The specific proposed actions are comprised of several different treatments as follows:

1) Slashing: Treatment one involves a hand lop and scatter on 4,602 acres located primarily on the Blue Mountain plateau. This slashing treatment will protect the area from pinyon pine and Utah juniper (PJ) encroachment.

a) The majority of the slashing units represent 3,785 acres and are located surrounding the mastication treatments. These units are dense mountain big sagebrush and sparse Utah juniper trees. Slash will be cut to heights less than two feet tall. The unit has a wide range of densities of Utah junipers throughout the project. On the far northwest section, the junipers average 60 trees per acre (t/a), twelve feet tall and 5.2 inches diameter at root collar (drc). The trees become less dense closer to the Harper's corner road. The majority of the project area within one mile of the road averages less than 1 tree/acre, 4 feet tall, and an average of 1.9 drc.

b) The slashing only unit is adjacent to Bourdette draw. This unit is a north-facing slope with elevations ranging from 6,950 to 8,050 feet. This unit is 817 acres and consists of Utah juniper in the overstory and shrubs that are primarily Mountain big sagebrush, bitterbrush, and mountain mahogany. The unit has a healthy understory of grasses. These juniper trees average 12 feet tall, 5.1 inches drc and the density is approximately 14 trees per acre (tpa).

2) Mastication: The second treatment involves a two-way harrow device pulled behind a rubber tire tractor. The mastication treatment is approximately 1,678 acres. Mowing sagebrush may be substituted for harrowing to compare vegetation response to different treatments. This treatment would likely be divided over a five year period. There will be three phases of mastication/seeding treatment. The majority of the mastication and seeding will be over 7,500 feet in elevation.

Table 1	Year	Treatment	Acres
Phase 1	2014	Mastication/seeding	598
Slashing	2015	Slashing	4,602
Phase 2	2016	Mastication/seeding	454
Phase 3	2018	Mastication/seeding	626

3) Seeding: The third treatment would employ a seeding application across the same 1,678 acres the harrow is implemented. The projected seed mixture is comprised of the following species and rates. The actual seed mixture may vary with availability and cost.

Common Name	**Scientific Name**	**Var**	**Native**
Canbi Bluegrass	Poa secunda	canbyi	N
Snake river Wheatgrass	Elymus wawawaiensis	Secar	N
Thickspike Wheatgrass	Elymus lanceolatus	Critana	N
Bluebunch Wheatgrass	Psedoroegnaria spicata	Anatone	N
Basin Wildrye	Leymus cinerius	Continental	N
Western Yarrow	Achillea millefolium occidentalis		N
Blue Flax	Linum lewisii	Maple Grove	N
bee plant	Cleome serrulata	purple	N
Bitterbrush	Purshia tridentata	FG/Maybell	N
Needle-and-Thread	Hesperostipa comata		N
Utah sweetvetch	Hedysarum boreale	Timp	N
globemallow	Sphaeralcea coccinea		N
Green Needlegrass	Nassella viridula	Lodorm	N

The grazing permittee would be advised of the project to avoid conflicts with ongoing grazing operations. Livestock grazing will be deferred in the seeded areas for two growing seasons post seeding.

No mastication treatment work would be allowed during times of saturated soil conditions, which exist when ruts greater than three inches in depth are created by machinery. No new access roads would be needed to access the project area, existing roads and trails will be utilized. No permanent manmade structures would be established or left remaining after treatment work is completed. Mastication work will primarily occur on slopes less than 30%

Treatment work is expected to occur after August 31. These dates would protect deer and elk on their summer/fawning/calving range and are in compliance with the 2008 Resource Management Plan. Delaying treatment until after August 31 would also protect greater sage-grouse during, lekking, nesting, and brood rearing (Personal communication Brian Maxfield, UDWR 2014).

The project will be monitored to determine and evaluate vegetation response; in addition, the DWR indicated an interest in tracking GSG use and activity in the project vicinity. Maintenance treatments will follow to reduce the encroachment of PJ by removing regeneration.

2.3 No Action Alternative

Under this alternative, no hazardous fuel reduction actions would be taken. Current resource conditions and trends would continue. Private property would continue to be at risk from wildfires; hazardous fuels would continue to increase. Pinyon and juniper trees would continue to invade into critically important sage-grouse habitat changing the vegetation composition and structure.

2.4 Alternatives Considered But Not Analyzed

2.4.1 Prescribed Fire

This alternative was dismissed from detailed analysis because it would not meet the project purpose and need. A prescribed fire option would not allow for controlled removal of the sagebrush vegetation type in specific sites. One goal is to benefit the greater sage grouse habitat; an increased risk of affecting a large amount of greater sage grouse habitat is a deterrent for considering prescribed fire.

2.4.2 No Disturbance in Natural Areas

This alternative was dismissed from detailed analysis because it would not meet the project purpose and need to benefit the greater sage grouse habitat.

CHAPTER 3 – AFFECTED ENVIRONMENT

3.1 Introduction

This chapter presents the potentially affected existing environment (i.e., the physical, biological, social, and economic values) of the project area as identified by the interdisciplinary team analysis and as presented in Chapter 1 of this assessment. This chapter provides the baseline for comparison of impacts/consequences described in Chapter 4.

3.2 General Setting

The project area is located on the Yampa Plateau which is approximately 10 miles northeast of Jensen, Utah. The overstory vegetation in the area consists primarily of mountain big sagebrush and encroaching young pinyon pine and juniper trees. Grasses present include: *Poa secunda* with a minor amount of *Bromus tectorum*, a sample of forbs include: *Collinsia parviflora, Claytonia lanceolata, Allium acuminatum, Delphinium specie, Alyssum specie*.

Soils consist primarily of mountain loams that are well drained with annual precipitation amounts of 16 to 22 inches. Elevation range is from 6,420 up to 8,140, Slopes range from flat to 40% in the project area.

3.3 Resources Brought Forward for Analysis

During the analysis conducted by the interdisciplinary team, it was found that the following aspects of the environment could potentially be affected by the proposed action.

3.3.1 BLM Natural Areas

Most of the BLM Natural Areas are managed for wilderness characteristics because they are adjacent to lands that are already being managed for wilderness values in the Dinosaur National Monument and WSAs. The goals and objectives for Natural Areas identified are to:

- Protect, preserve, and maintain the wilderness characteristics (i.e., appearance of naturalness, outstanding opportunities for primitive and unconfined recreation or solitude) of non—WSA lands with wilderness characteristics (Natural Areas)
- Manage these primitive and backcountry landscapes for their undeveloped character and provide opportunities for primitive recreational activities and experiences of solitude.

WC-2 in the 2008 Vernal RMP states:
The 106,178 acres of non-WSA lands with wilderness characteristics will be managed with the following common prescriptions

- VRM Category II
- Closed to oil and gas leasing, except for the White River area which will be open to leasing, subject to major constraints (NS)
- Closed to solid mineral leasing
- Closed to disposal of mineral materials
- Closed to woodland product harvest
- Avoidance area for rights-of-way
- OHVs will be limited to designated routes, except for the upper portion of the Lower Flaming Gorge Wilderness Characteristics area, which will be closed.

- No motorized vehicles will be allowed to travel on a single path up to 300 feet from designated routes to access a camp.
- Retain public lands in federal ownership

WC-3 in the 2008 Vernal RMP states:
When compatible with the goals and objectives for management of non-WSA lands with wilderness characteristics (Natural Areas):

- Permit vegetation and fuel treatments using prescribed fire, mechanical and chemical treatments, and other actions compatible with the Healthy Lands Initiative (HLI).
- Permit construction of wildlife water and livestock facilities, and minimal recreation facilities.

The following natural areas occur in the project boundary; Bourdette Draw, Daniels Canyon, Moonshine Draw and Stuntz Draw Natural Areas.

3.3.2 Fuels and Fire Management

Fuels Management:
The project area vegetation is separated into several different vegetation groups. The treatments will affect the amount and arrangement of fuels which has a direct impact on fire behavior.

The mountain big sagebrush type has been designated as fire regime group III where the historic natural fire interval is between 35-100 years. The project area has also been designated as a class II condition class. The condition class II designation indicates that the area has gone at least one fire interval period (35-100 years for this site) between fire events. Due to this alteration in the fire regime and corresponding change in the fire condition class there has been an increase in the overall fuel loadings. The slashing units are in mountain sagebrush communities with encroachment of juniper trees. Sagebrush sites have experienced significant PJ infilling and expansion during the last century in the Uintah Bain area. Pinyon and juniper trees have expanded into landscapes once dominated by an assemblage of sage-brush grasses, forbs, and shrubs. The expansion of pj woodlands affects soil resources, water and nutrient cycles, forage production, wildlife habitat, biodiversity, plant communities, plant structure and fire patterns across the landscape. Another impact of the changing vegetation is the shift from historic fire regimes to larger and more intense wildfires that are increasingly determining the future of the landscape. A healthy sagebrush system is more adapted to withstand cheatgrass and other exotic weed species after fire and other disturbances.

“Managing sagebrush-steppe and pinyon-juniper woodlands to reduce woody fuels and restore healthy native perennial herbaceous vegetation is the most effective way to mitigate the spread of cheatgrass and slow large scale land cover conversion. Ecosystems with healthy native perennial herbaceous vegetation and low tree density are less likely to experience severe wildfire and more likely to recover to a desirable state following fire” (Rau 2014).

Fire Management:
Mountain big sagebrush with vegetation heights of 3-4 feet tall if ignited would result in 10-15 feet flame lengths. The vegetation mix of pinyon pine and Utah juniper with heights of 12-15 feet in a sagebrush community would result in 30-40 foot flame lengths if ignited.

3.3.3 Wildlife

3.3.3.1 Big Game Species

Mule deer and Rocky Mountain elk are the primary big game species found within the project area. Use typically occurs from spring to winter, when elk and deer utilize the project area for foraging, thermal cover and escape cover. Both species have an extremely variable diet and therefore live in a variety of habitats. They consume a combination of grasses, forbs, and shrubs. Food consumption is also related to the season of use. Elk and deer eat mostly grasses and forbs during summer months. During winter, elk move to lower elevations where they are found most often on south facing slopes, primarily in pinyon-juniper woodlands. Deer typically move down to lower elevation foothill areas.

Elk and deer crucial summer habitat has been designated within the project area. These designations were made in the Vernal Field Office RMP. Other wildlife species that are likely to occur in the project area include black bear, mountain lion, coyote, and bobcat, as well as a large variety of small mammals. Many of these species are habitat generalists, meaning they are not tightly restricted to specific habitat types. These species have not shown negative impacts by fuel reduction operations; therefore, they will not be discussed further in this document.

3.3.3.2 Migratory Birds

The Migratory Bird Treaty Act (MBTA), was implemented for the protection of migratory birds. Unless permitted by regulations, the MBTA makes it unlawful to pursue, hunt, kill, capture, possess, buy, sell, purchase, or barter any migratory bird, including the feathers or other parts, nests, eggs, or migratory bird products. In addition to the MBTA, Executive Order 13186 sets forth the responsibilities of Federal agencies to further implement the provisions of the MBTA by integrating bird conservation principles and practices into agency activities and by ensuring that Federal actions evaluate the effects of actions and agency plans on migratory birds. The Utah Partners In Flight (UPIF) has prioritized migratory birds that are considered "most in need of conservation action, or at least need to be carefully monitored throughout their range within Utah." These are also the species "that will be most positively influenced by management as well as those species with the greatest immediate threats" according to UPIF (Parrish et al. 2002).

Numerous species may migrate through, or nest within the project area. This section identifies migratory birds that may inhabit the project area such as High-Priority birds by Partners in Flight (*), according to the habitat types found within the project area:

- *Sagebrush-Steppe;* horned lark, sage sparrow, sage thrasher*, Brewer's sparrow*, western kingbird, Say's phoebe, prairie falcon, green-tailed towhee*, and Swainson's hawk.
- *Pinyon-Juniper Woodlands;* black-chinned hummingbird*, gray flycatcher*, gray vireo*, Lewis' woodpecker, Clark's nutcracker, pinyon jay, western scrub jay, black-throated gray warbler, bushtit, juniper titmouse*, northern shrike, Virginia's warbler*, broad-tailed hummingbird*, mountain bluebird*, and Say's phoebe.

3.3.3.3 Raptors

Some of the more visible birds in and near the project area include golden eagles, red-tailed hawks, prairie falcons, northern goshawk, and peregrine falcon. The BLM raptor database was reviewed and no known raptor nests were identified within the project area, however, there is known nests adjacent to the project area. Habitats in and around the project area provide diverse breeding and foraging habitat for raptors. These habitats include rocky outcrops, PJ woodlands and sagebrush shrub lands.

3.3.3.4 Threatened, Endangered, Proposed, or Candidate Animal Species

3.3.3.4.1 Greater Sage-grouse (Federal Candidate, BLM Sensitive, Utah State Sensitive)

The greater sage-grouse is an important game bird found in Utah. These birds inhabit sagebrush plains, foothills, and mountain valleys. Sagebrush is the predominant plant of quality habitat. Factors involved in the decline in both the distribution and abundance of greater sage-grouse include permanent loss, degradation, and fragmentation of sagebrush-steppe habitat throughout the western states including Utah (Heath et al 1996, Braun 1998). Documented severe populations declines (approximately 80%) occurred from the mid-1960s to mid-1980s. Research and conservation efforts in the last 20 years have help stabilize and recover many populations. Populations appear to have taken a slight positive turn in recent years. Division of Wildlife Resources identifies occupied, brood, and winter habitat within the project area (UDWR 2009). The project area is considered a Sage-Grouse Management Area (SGMA) within the state's Conservation Plan for Greater Sage-grouse in Utah. There are known leks within some of the treatment areas. Currently, BLM considers all occupied sage-grouse habitat as Preferred Priority Habitat (PPH, BLM IM 2012-043).

3.3.3.4.2 Mexican Spotted Owl (Federally Threatened Species)

The range of the MSO extends from the southern Rocky Mountains in Colorado and the Colorado Plateau in southern Utah, southward through Arizona and New Mexico. The most northerly nesting occurrence in the southwest was recorded September 6, 1958, in the Book Cliffs area of northeastern Utah (USFWS 1995). A single male has been heard in the area of Dinosaur National Monument (Heyd, C. 2007).

In Utah, MSOs generally occur year-round at 4,400 – 7,000 feet. These habitats often include narrow, shady cool canyons in sandstone slick rock (USFWS 1995). The MSO occupies a variety of vegetative habitats throughout its range, but generally they inhabit high canopy closure, high stand density, and a multilayered canopy areas resulting from an uneven-aged stand (Ganey et al.1988, Ganey and Balda 1989; Fletcher 1990; USFWS 1995). Other characteristics include downed logs, snags, and mistletoe infection that are indicative of an old grove and the absence of active management.

The project area was ground surveyed by SWCA in 2005 to determine the quality level (poor, fair or good) of potential nesting habitat. The study revealed 13 polygons with approximately 2,565 acres of potential fair/good nesting habitat within .5 mile the Project Area (SWCA 2005). The habitat was resurveyed by BLM biologist in 2009 and was reconfirmed as potential fair and good nesting habitat. No Critical habitat has been identified within the project area.

3.3.4 Plants: Invasive Plants / Noxious Weeds

A review of the Field Office GIS layer files shows known occurrences of the following weed species within proposed treatment areas: houndstongue (*Cynoglossum officinale*), bull thistle (*Cirsium vulgare*), and diffuse knapweed (*Centaurea diffusa*). Infestations of the following species are located within 1 mile of the proposed treatment areas: russian knapweed (*Acroptilon repens*), spotted knapweed (*Centaurea stoebe*), Canada thistle (*Cirsium arvense*), field bindweed (*Convolvulus arvensis*), broadleaved pepperweed (*Lepidium latifolium*), and saltcedar (*Tamarix ramosissima*). All of these species except for bull thistle are Utah state noxious weeds.

3.3.5 Plants: Vegetation, Excluding USFWS designated species

3.3.5.1 Park rockcress (Arabis vivariensis) – BLM Sensitive

A review of field office GIS layers shows 14 known locations representing at least 143 individuals of park rockcress (*Arabis vivariensis*), a BLM-sensitive species, within proximity of the proposed treatment areas T5S, R24-25E. Although no known locations are within proposed treatment areas, potential habitat occurs across the entire proposed project area.

Park rockcress is endemic to Uintah County, Utah, and Moffat County, Colorado. This member of the mustard family is low growing and mat forming perennial with tall slender flowering stalks to 25 centimeters. Purple flowers from 7–9 millimeter long are produced from May to July. Park rockcress typically occupies rocky outcrops, ridges, talus slopes, and rock crevices in mixed desert shrub and pinyon-juniper communities between 5,000 and 7,600 feet elevation.

3.3.5.2 Rock bitterweed (Hymenoxys lapidicola) – BLM Sensitive

A review of field office GIS layers shows 6 known locations and 5 population polygons representing an unknown number of individuals of rock bitterweed (*Hymenoxys lapidicola*), a BLM-sensitive species, within proximity of the proposed treatment areas in T5S R24-25E, and T4S R25E. Although no known locations are within proposed treatment areas, potential habitat is immediately adjacent to the entire proposed treatment area.

Rock bitterweed is endemic to the vicinity of Blue Mountain in Northeast Utah. This member of the sunflower family is a cushion-forming perennial that produces yellow flowers from May to June. Rock bitterweed typically grows in crevices, joints, and ledges of sandstone cliff faces within the pinyon-juniper zone from 5,500 to 8,200 feet elevation.

CHAPTER 4 – ENVIRONMENTAL IMPACTS

4.1 Introduction

This Chapter analyzes the direct and indirect impacts that the proposed action and the no action alternative have on the resources identified in Chapter 1 and explained in Chapter 3. It also analyzes the cumulative impacts expected from other land use activities and recognizes actions that could take place in the reasonably foreseeable future.

4.2 Alternative A – Proposed Action

4.2.1 BLM Natural Areas

Impacts to Natural areas are expected in the short term from the sights and sounds of the equipment proposed for the project. Specifically, a tractor with a drag, operating sounds of chainsaws, and movement of workers and equipment in and out of the area. Opportunities for solitude will be impacted during the operation of equipment, with engine noise from chainsaws and the tractor or other machinery being utilized. It is anticipated that these impacts will be short lived, and not impact the long term values of primitive and unconfined recreation, appearance of naturalness, and opportunities for solitude. It is not likely that visitors will be displaced during the proposed action. The majority of use within the area consists of camping on the south rim of Blue Mountain within designated sites, riding ATV's on two track roads, and hunting within the general area. Driving for pleasure and wildlife watching are also activities that take place within the area. Highest season of use is during hunting season, when most visitors will encounter the sights and sounds of motors from OHV's, trucks, campers, and also chainsaws within the area.

4.2.2 Fuels and Fire Management

Slashing:
Removing the 10-20 foot tall juniper trees would leave the remaining 3 foot tall sagebrush. This change in fuel height would decrease the flame lengths from 30 to 40 foot flame lengths in the current juniper trees down to 10-15 foot flame lengths in the three foot tall sagebrush.
Mastication/seeding:
Harrowing sagebrush and seeding grass and forbs species would change the vegetation successional stage from a mature mountain big sagebrush stand to an early stage of grasses and forbs. The short term affect (1 to 4 years) would be a decrease in hazardous fuels, vegetation type, plant heights, fuel densities, and fuel arrangement. This change of hazardous fuels would result in a decrease in fire behavior measured primarily by flame lengths. Flame lengths determine the ability of fire fighters to suppress fires in the event of a wildfire. The mid stage affect would also keep hazardous fuels and fire behavior much less than current characteristics. Based on similar treatments in the area, the expectation is the current late successional sagebrush stage would repeat in approximately 25 to 30 years.

Fire and fuel specifications in a sagebrush ecosystem without pinyon or juniper trees.

Stage	Current	Short Term	Intermediate	Long Term
Time (years post treatment)	Current	1-3	4-10	11 plus

Stage	Current	Short Term	Intermediate	Long Term
Successional stage, sagebrush	mature	early	early-mid	mid-mature
predominant Vegetation type	Mountain big sagebrush	Grass, new forbs	Grass, forbs, sage	Grass, forbs, sage, juniper encroachment
Sage Cover (%)	60	<15	15-40	40 +
Fuel height (in)	34	12	24	28 +
Fuel loading (tons/acre)	6-8	0.5	1-2	3 +
Expected Flame length (feet)	10-15	2-3	4-7	7-10

Fuels Management:
The Yampa plateau is an area with continuous large sagebrush areas, these types of conditions do not allow for effective suppression activities on wildland fires. Removing three foot tall sagebrush and establishing a grass/forb vegetation cover in strategic areas would add breaks in the homogenous sagebrush expanses. These "green strips" would allow firefighters strategic opportunities to reduce the spread of a wildland fire in the event of an ignition.

4.2.3 Wildlife

4.2.3.1 Big Game Species

Crucial elk and deer summer habitat has been designated by the Vernal Field Office Resource Management Plan. One of the major problems facing big game populations in Utah is that many of the crucial ranges are in late successional plant community stages that are dominated by mature stands of PJ or other conifer trees. Tree-dominated habitats offer a place to retreat from severe weather, but offer little in the way of food. That is why it is important to maintain mosaic patterns of habitat that can provide food, cover, and water (UDWR 2008). Both species can be found utilizing the project area during the summer months. An increase in human presence during the summer fawning/calving time frames could cause short term impacts (increased stress, increased energy expenditure) to big game species. Treatment of encroachment or invasion sites can successfully return this area into a grassland/shrubland community, thus enhancing and promoting the return of sagebrush and other perennial understory species which will benefit big game habitat in the long term. The harrow treatments will increase the mixture of understory species and promote younger, smaller sagebrush plants.

Timing restrictions: Do not conduct treatment activities from May 15-June 30 in order to protect elk and deer on the summer range during fawning/calving seasons. This restriction would not apply if deer and/or elk are not present, or if it is determined through analysis and coordination with UDWR that impacts could be mitigated (USDOI-RMP 2008).

4.2.3.2 Migratory Birds

Migratory bird species may be present during the breeding/nesting season from May 1- July 31. Treatment activities will take place after August 31, outside of the breeding/nesting season. Individual bird species may be displaced during project activities. The proposed hazardous fuel

reduction project targets younger pinyon-juniper trees stands which are not favored by most pinyon-juniper bird species. Although there may be some short-term impacts to pinyon-juniper bird species, the long term benefit of the hazardous fuel reduction project would benefit sagebrush/grassland bird species, several of which are currently identified as BLM State Sensitive Species.

4.2.3.3 Raptors

Impacts would be the same as the migratory bird section. Treatment activities will take place in the fall outside of the nesting season.

4.2.3.4 Threatened, Endangered, Proposed, or Candidate Animal Species

4.2.3.4.1 Greater Sage-grouse (Federal Candidate, BLM Sensitive, Utah State Sensitive)

The UDWR has designated occupied, brood, and winter habitat in the project area. Utah BLM is currently considering occupied sage-grouse habitat as Preliminary Priority Habitat (PPH). PPH comprises areas that have been identified as having the highest conservation value to maintaining sustainable Greater Sage-Grouse populations. There are also known leks within the slashing project areas. Short term impacts from treatment activities would result in temporarily displacing individual sage-grouse. Treatments will take place after August 31 to avoid any impacts to breeding/nesting birds. Overall, treatments will result in a positive impact for sage-grouse. Older, decadent plants will be removed leaving the younger, smaller plants. The understory will be replenished with a mixture of forbs, grasses, and shrubs. Encroaching pinyon-juniper trees will be removed from sagebrush habitat types. UDWR assisted in the mapping of the harrow polygons to ensure ample winter habitat remains in appropriate areas. Both Utah and Colorado BLM along with UDWR have had successful treatments adjacent to the project area in the past. Previously treated areas have shown aggressive recovery to pre-treatment cover, but there is more spacing between individual plants, which is important to brood rearing habitat. The proposed treatments will promote younger sagebrush, and other seeded perennial understory species, which is beneficial to sage-grouse year around habitat. The proposed action is consistent with the guidelines established in Utah IM-2012-043, as personal communication with UDWR (Brian Maxfield, 2014) verified that the project will benefit sage-grouse in the area.

Timing restrictions: Because of the seasonal use of sage-grouse throughout the breeding and nesting season, no project activities will be allowed until after August 31. Treatments will be completed in the fall of the year to avoid any impacts on breeding/nesting individual birds.

4.2.3.4.2 Mexican Spotted Owls

Potential Mexican Spotted Owl (MSO) breeding/nesting habitat was identified on BLM lands within 0.5 miles of the Project Area according to the "Assessment of Potential Mexican Spotted Owl Nesting habitat on BLM-Administered Lands in Northeastern Utah (BLM 2005)", and BLM biologist review. Project activities will take place in the fall, outside of the nesting season. Foraging habitat should not be impacted by project implementation. Younger pinyon-juniper trees have been targeted for slashing. No old grove stands are present in the project area. The harrow project has been designed to enhance the sage-steppe habitat by removing older sagebrush plants, replacing them with younger healthier sagebrush plants, and introducing more

forbs into the understory. Overall, treatment activities will improve/maintain habitat, and protect habitat from large scale unplanned fire events.

Based upon the timing of treatment activities, abundance of potential MSO nesting and foraging habitat across the region, and insignificant and discountable impacts to any possible dispersing and foraging owls, the BLM has determined that the Proposed Action would result in a ***"not likely to adversely affect"*** situation for the MSO.

4.2.4 Plants: Invasive Plants / Noxious Weeds

Houndstongue, bull thistle, and diffuse knapweed are known to occur within proposed treatment areas for slashing. Slashing causes minimal ground disturbance and is not expected to result in population growth of existing noxious weed species. Additional noxious weed species may occur in areas that are planned for mastication, mowing, and seeding. Across all proposed treatment areas, the management goal will be to minimize or eliminate new infestations of noxious weed species.

Mitigation:

- Known populations of houndstongue, bull thistle, and diffuse knapweed, and any new noxious weed populations encountered in any proposed fuels treatment areas prior to or during treatment, will be spot treated with an upland herbicide mix (Curtail + Telar XP) prior to applying the proposed fuels-removal treatment.
- Any equipment used in treatment areas that contain noxious weed populations will be power-washed prior to being driven into another treatment area.
- The BLM will continue to practice early detection and rapid eradication to ensure new noxious weed populations do not establish as a result of project activities. Annual monitoring will continue for three years following project completion.

4.2.5 Plants: Vegetation, Excluding USFWS designated species

4.2.5.1 Park rockcress (Arabis vivariensis) – BLM Sensitive

The entire proposed project area overlaps with potential habitat for park rockcress. In particular, known populations of park rockcress are near proposed treatment areas in T5S R24-25E where slashing treatments are planned. Slashing treatments are not expected to negatively impact park rockcress populations as they are focused specifically on the removal of piñon pine and Utah juniper and not expected to cause ground disturbance that would be detrimental to adjacent forbs. Potentially, scatter piles could be placed on individuals of park rockcress. Mastication/mowing of sagebrush and post-treatment seeding are likely to temporarily disturb the ground surface. Park rockcress suitable habitat is within sparser piñon-juniper communities and not within denser sagebrush stands, so park rockcress is unlikely to occur within planned mastication/mowing and seeding areas.

4.2.5.2 Rock bitterweed (Hymenoxys lapidicola) – BLM Sensitive

Known locations and population polygons of rock bitterweed are within proximity of the entire project area. Potential habitat is immediately adjacent to proposed treatment areas. Rock bitterweed tends to grow on steep cliff faces in rock crevices, and this species is more likely to occur on the steeper slopes immediately adjacent to the proposed treatment areas than directly

within the proposed treatment areas. In addition, slashing is expected to have little potential to impact rock bitterweed, while mastication/mowing and seeding have greater potential to impact this species (see previous paragraph under park rockcress).

Mitigation:

- The entire proposed project area will be surveyed for suitable habitat for park rockcress and rock bitterweed. If suitable habitat is found within the project area, it will be surveyed for park rockcress.
- If either species is found within proposed treatment areas, a BLM botanist will mark avoidance areas, provide avoidance maps to all ground crews working on the proposed project, and train all field crews in how to recognize and avoid park rockcress and rock bitterweed.

4.3 Alternative B – No Action

Under the No Action Alternative, current resource trends would continue.

4.3.1 BLM Natural Areas

Under the No Action Alternative, there would be a gradual change over time in vegetation and scenery as vegetation changes from a dominant sagebrush site to an increase of dominance of pinyon and juniper trees.

4.3.2 Fuels and Fire Management

4.3.2.1 Fuels Management:

Under the no action alternative, there would be no removal of the PJ trees across the project area. Sagebrush obligate species, including sage-grouse are sensitive to western juniper encroachment into sagebrush communities (Miller et al 2005). Over time the PJ trees would eventually out-compete the shrubs, grasses, and forbs for water, nutrients, and light, resulting in the loss of the sagebrush habitat type in the project area. Over time, the fuel loading would continue to increase, eventually shifting the project area from the existing Condition Class II to a Condition Class III situation. In the absence of disturbance or management, the majority of these landscapes will become closed woodlands resulting in the loss of understory plant species and greater costs for restoration (Miller et al 2008).

Under the no action alternative there would be a continued progression of mature sagebrush species with declining vigor and growth. The current sagebrush would become decadent and there would be an increase in the dead component in the crowns and individual species.

4.3.2.2 Fire Management:

Eventually, an unplanned wildland fire is expected to occur, and since the fuel loadings would have increased, the severity of the fire event is also expected to be greater. Since the increased amount of PJ tree densities would have correspondingly decreased the amount of understory plants, the loss of trees from an unplanned fire event would most likely result in increased soil erosion due to the lack of ground cover remaining following the fire event.

The current vegetation mix of pinyon pine and Utah juniper with heights of 12-15 feet in a sagebrush community would result in 30 - 40 foot flame lengths if ignited. Under the no action alternative, fuels would continue to increase in height, tons/acre, and dead component. These variables would decrease the ability to suppress wildland fires. Standard procedures for wildland firefighters include not engaging direct tactics by hand on flames over four feet tall, equipment limits (engines or dozers) are eight foot flame lengths. These conditions increase fire behavior characteristics and minimize the ability of firefighters suppressing wildfires.

4.3.3 Wildlife

Under this alternative, there would be no harrow or removal of PJ trees within the sagebrush. Encroachment by PJ trees into sagebrush habitats is detrimental to sagebrush-dependent species because it results in the loss or fragmentation of sagebrush habitat. Over time the PJ trees and overgrowth of sagebrush will out-compete the shrubs, grasses, and forbs, resulting in the loss of the sagebrush habitat type.

4.3.4 Plants: Invasive Plants / Noxious Weeds

Known populations of houndstongue, diffuse knapweed, and bull thistle within the proposed treatment area would continue to receive regular (at a maximum, annually) herbicide treatment until eradicated. Unknown noxious weed populations within the project area will either be located and treated in future years or remain unlocated and untreated, and will continue expanding in future years.

4.3.5 Plants: Vegetation, Excluding USFWS designated species

4.3.5.1 Park rockcress (Arabis vivariensis) – BLM Sensitive

Populations of park rockcress that potentially occur within the proposed treatment area would not be impacted.

4.3.5.2 Rock bitterweed (Hymenoxys lapidicola) – BLM Sensitive

Populations of rock bitterweed that potentially occur within the proposed treatment area would not be impacted.

4.4 Cumulative Impacts Analysis

"Cumulative impacts" are those impacts resulting from the incremental impact of an action when added to other past, present, or reasonably foreseeable actions regardless of what agency or person undertakes such other actions.

4.4.1 BLM Natural Areas

The cumulative impact area for this resource is the boundary of the natural areas. Past, present, and reasonably foreseeable activities include other vegetation treatment projects. Based on identified best management practices for the project (see section 4) it is not likely that long term cumulative direct or indirect impacts would occur. Within the short term (1-3 years) the sight of bucked (small segments) trees would likely not be noticeable based on a lack of small tree density within the Natural Areas. Sagebrush height would change from 3-4 ft to 2 ft and under;

however, color, texture, landform and vegetation type would remain the same. Opportunities for solitude, naturalness and outstanding primitive recreation would continue to occur within the natural areas, with short term impacts based mostly on site and sound during equipment operation. The project as proposed would be compatible with the goals and objectives for Natural Areas in the long term. The No Action alternative would not result in an accumulation of impacts.

4.4.2 Fuels and Fire Management

The Cumulative Impact area for fuels and fire management is the Vernal Field Office. Past, present, and reasonably foreseeable actions include other vegetation treatments, mineral development, wildfire management, and livestock grazing. Cumulative impacts include vegetation manipulation, or disturbance through treatments and/or surface disturbance. Since 2004, The Vernal Field Office of the Bureau of Land Management has been involved with the Utah Partners for Conservation and Development to take actions to restore declining habitat conditions in the sage steppe habitat type. Approximately 85,000 acres have been treated to date, and continued actions by this group are expected to continue to occur in the future through the use of mechanical, prescribed fire, chemical applications, and wildland fire use to manage the vegetative resource.

The Bureau of Land Management has been directed by Congress (2001 Updated Federal Wildland Fire Management Policy) to implement actions designed to reduce decades of accumulation of hazardous fuels on public lands. In the future in the Vernal Field Office, hazardous fuel reductions activities will most likely increase through the use of mechanical, prescribed fire, and wildland fire use to manage the vegetative resource. With the increased hazardous fuel reductions, the Field Office landscape will eventually be composed of different age classes of vegetation.

4.4.3 Wildlife

The cumulative impact area for wildlife is Daniels Canyon and Stuntz Valley grazing allotments which consist of approximately 37,400 acres. Past, present, and reasonably foreseeable actions include other vegetation treatments, wildfire management, weed infestations, and livestock grazing. Cumulative impacts include vegetation manipulation, or disturbance through treatments and/or surface disturbance. The Vernal Field Office of the Bureau of Land Management has been involved with the Utah Partners for Conservation and Development to take actions to restore declining habitat conditions in the sage steppe habitat type. Approximately 1,022,409.65 acres have been treated throughout the state, and continued actions by this group are expected to continue to occur in the future through the use of mechanical, prescribed fire, chemical applications, and wildland fire use to manage the vegetative resource.

4.4.3.1 Migratory Birds/Raptors

The cumulative impact area for wildlife is Daniels Canyon and Stuntz Valley grazing allotments which consist of approximately 37,400 acres. Improvement of sage-steppe habitats should improve both the habitat and the prey populations that these species depend upon. The methods listed above will continue to be used to manage habitat within nesting/foraging habitat types. Past, present, and reasonably foreseeable actions include other vegetation treatments, wildfire management, weed infestations, and livestock grazing. Cumulative impacts include vegetation

manipulation, or disturbance through treatments and/or surface disturbance. The No Action alternative would not result in an accumulation of impacts.

4.4.3.2 Big Game

The cumulative impact area for wildlife is Daniels Canyon and Stuntz Valley grazing allotments which consist of approximately 37,400 acres. Due to precipitous decline in deer numbers, deer hunting has been limited for the Vernal Unit. Conversely, elk numbers have risen substantially in the same time span. Blue Mountain is currently open to bull elk permits. Presently, the project area is open to limited permits for deer and open permits for elk. Since present deer numbers are below the established herd management objectives numbers, deer will continue to increase in the future, until herd objective numbers are realized. As their numbers increase, the continued need for vigorous and productive vegetation types will increase. Past, present, and reasonably foreseeable actions include other vegetation treatments, wildfire management, weed infestations, and livestock grazing. Cumulative impacts include vegetation manipulation, or disturbance through treatments and/or surface disturbance. The No Action alternative would not result in an accumulation of impacts.

4.4.3.3 Threatened, Endangered, Proposed, or Candidate Animal Species

4.4.3.3.1 Greater Sage-grouse (Federal Candidate, BLM Sensitive, Utah State Sensitive)

The cumulative impact area for wildlife is Daniels Canyon and Stuntz Valley grazing allotments which consist of approximately 37,400 acres. Approximately 7,958 acres of sage-grouse habitat will be treated. Habitat for greater sage-grouse will continue to be managed to maintain, enhance, and restore conditions that meet their life history needs. The proposed action was designed to enhance habitat for greater sage-grouse and reduce fuels loads and reduce the risk of a unplanned fire event. Past, present, and reasonably foreseeable actions include other vegetation treatments, wildfire management, weed infestations, and livestock grazing. Cumulative impacts include vegetation manipulation, or disturbance through treatments and/or surface disturbance. The No Action alternative would not result in an accumulation of impacts.

4.4.3.3.2 Mexican Spotted Owl

The cumulative impact area for wildlife is Daniels Canyon and Stuntz Valley grazing allotments which consist of approximately 37,400 acres. Approximately 2,565 acres of potential foraging habitat will be treated. Forage habitat will continue to be managed as a sage steppe habitat type. The continued need for vigorous and productive vegetation types will increase. Past, present, and reasonably foreseeable actions include other vegetation treatments, wildfire management, weed infestations, and livestock grazing. Cumulative impacts include vegetation manipulation, or disturbance through treatments and/or surface disturbance. The No Action alternative would not result in an accumulation of impacts.

4.4.4 Plants: Invasive Plants / Noxious Weeds

The cumulative impact area for plants is the Garden Creek-Green River and Cliff Creek watersheds. Past, current and future activities occurring in the cumulative impact area include: recreation; agricultural and residential development of private land, road construction, wildfire,

fuels treatments and recreational activities (including but not limited to hunting, fishing, and hiking).

Past disturbances, both human caused and natural, have provided soil and vegetation disturbance conducive to invasion of noxious weeds. Past development, management activities, and recreational activities often employed inadequate weed prevention measures. As a result, the infestations of houndstongue, diffuse knapweed, and bull thistle occur within and in close proximity to the project area. Current and reasonably foreseeable actions in the cumulative impact area that include soil or vegetation disturbance require implementation of weed prevention and mitigation practices such as those described in Chapter 4.2.5.1; therefore, the risk of spread of existing infestations from the above-listed actions is considered to be low. Under all alternatives, known weed infestations may provide seed source for expansion elsewhere in the project area. The risk of expansion of these infestations would be low to high, depending on the location and extent of future disturbances and their proximity to existing untreated infestations. The No Action alternative would not result in an accumulation of impacts.

4.4.5 Plants: Vegetation, Excluding USFWS designated species

Park rockcress (*Arabis vivariensis*) and rock bitterweed (*Hymenoxys lapidicola*) – BLM Sensitive

The cumulative impact area, and past, present, and future activities, are the same for this resource as for invasive plants/noxious weeds. Cumulative impacts include vegetation manipulation, or disturbance through treatments and/or surface disturbance. The Herbicide application, infestation by noxious weeds, and vegetation treatments in potential and occupied habitat pose the greatest cumulative threat to potential park rockcress and rock bitterweed populations in the cumulative impact area. The mitigation measures in Chapter 4.2.5.2 serve to minimize the cumulative effects of the proposed action, when considered with all other past, current and future impacts, on potential park rockcress populations in the cumulative impact area. The No Action alternative would not result in an accumulation of impacts.

CHAPTER 5 – CONSULTATION AND COORDINATION

5.1 Introduction

During preparation of the EA, public involvement consisted of posting the proposal on the Utah ePlanning NEPA register on November 6, 2013. Issues or impacts identified through the interdisciplinary team analysis process are described in Appendix A.

5.2 Persons, Groups, and Agencies Consulted

United States Geologic Survey - recommended project and coordinated with adjacent landowner and Leasee.

Utah State Historical Preservation Office - A "no adverse effect" letter was sent to the State Historic Preservation Officer (SHPO) on 3/19/2014. We received their concurrence to our determination on March 28, 2014.

Utah Division of Wildlife Resources - approved of the project for sage-grouse (UDWR 2014).

Scott Chew, Adjacent Landowner and livestock Leasee – Approves of the proposed project.

Native American Tribes - Tribal consultation was conducted on 5/14/2013. We received one "no effect" responses from the Hopi Tribe on 6/3/2013. No other comments were received. Also, the proposed project will not hinder access to or use of Native American religious sites.

5.3 List of Preparers

NAME	TITLE	RESPONSIBILITIES
Blaine Tarbell	Team Lead, Natural Resource Specialist	Impact analysis for Fire/Fuels Management
Jessica Brunson	Botanist	Impact analysis for Invasive, Non-native Species,vegetation including Special Status plant Species.
Dixie Sadlier	Wildlife Biologist	Impact analysis for Wildlife
Jason West	Recreation Planner	Impact analysis for BLM Natural Areas.

5.4 Public Involvement

The proposed action was posted to the BLM eplanning NEPA register. A public scoping comment resulted and was addressed as documented in section 1.4.2. A public comment period is pending.

CHAPTER 6 – REFERENCES

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APPENDIX A - INTERDISCIPLINARY TEAM ANALYSIS RECORD CHECKLIST

Project Title: Blue Mountain Hazardous Fuel Reduction Project

NEPA Log Number: **DOI-BLM-UT-G010-2014-0001-EA**

File/Serial Number:

Project Lead: Blaine Tarbell

DETERMINATION OF STAFF: (Choose one of the following abbreviated options for the left column)

NP = not present in the area impacted by the proposed or alternative actions
NI = present, but not affected to a degree that detailed analysis is required
PI = present with potential for significant impact analyzed in detail in the EA; or identified in a DNA as requiring further analysis
NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section C of the DNA form.

Determi-nation	Resource	Rationale for Determination*	Signature	Date
NI	Air Quality	Air quality impacts from the projected levels of emission are expected to be negligible. Minimum quantities of dust emissions are anticipated because the volume of traffic from this proposal would be approximately one or three vehicles per day during the project, and the project is estimated to take 30 days to complete.	Stephanie Howard	3/26/14
NP	Areas of Critical Environmental Concern	A review of the Field Office GIS layer files indicates that there are no ACECs present within the project area. Additionally, the Vernal RMP/ROD map section was reviewed and no ACEC's were present within the proposed project area.	Dan Gilfillan	3/7/14
PI	BLM natural areas	Bourdette Draw, Daniels Canyon, Moonshine Draw and Stuntz Draw Natural Areas, last inventoried in 2007, all occur within the project boundary.	Jason West	5/20/2014
NI	Cultural Resources	Lop & Scatter The current project was determined to be an undertaking per 36 CFR 800.16(y). The area of potential effect (APE) is considered to be the area within the polygons on the attached maps. A "no adverse effect" letter was sent to the State Historic Preservation Officer (SHPO) on 3/19/2014. We received their concurrence to our determination on March 28, 2014. Dixie Harrow The APE for this undertaking is considered to be the area on the project maps defined as Dixie Harrow project. The shapefiles for the project area were sent to the Division of Wildlife Resources (DWR) on 3/7/2014. DWR forwarded the shapefiles to William Self Associates (WSA) for a 100% pedestrian cultural inventory. The inventory was completed (U-14-SQ-0142) and twenty-two new sites were identified and recorded. There were three prehistoric sites, three historic sites, one reservoir, and fourteen roads recorded. Only one site	Kathie Davies	6/11/2014.

Determi-nation	Resource	Rationale for Determination*	Signature	Date
		(42Un8339) was recommended as "eligible" to the National Register of Historic Places. We are avoiding all "eligible" sites during the undertaking and SHPO concurrence will be obtained prior to any surface disturbance.		
NI	Greenhouse Gas Emissions	No standards have been set by EPA or other regulatory agencies for greenhouse gases. In addition, the assessment of greenhouse gas emissions and climate change is still in its earliest stages of formulation. Global scientific models are inconsistent, and regional or local scientific models are lacking so that it is not technically feasible to determine the net impacts to climate due to greenhouse gas emissions. It is anticipated that greenhouse gas emissions associated with this action and its alternative(s) would be negligible due to their localized and short term nature.	Stephanie Howard	3/26/14
NP	Environmental Justice	No minority or economically disadvantaged communities or populations are present which could be affected by the proposed action or alternatives.	Blaine Tarbell	01/28/2014
NP	Farmlands (Prime or Unique)	No prime or unique farmlands as defined by the NRCS are present in the project area. Also, no irrigated lands are located in the proposed action area; therefore this resource will not be carried forward for analysis.	Blaine Tarbell	01/28/2014
PI	Fish and Wildlife Excluding USFWS Designated Species	Treatments will increase forage and improve habitat for big game species.	Dixie Sadlier	6/5/2014
NI	Floodplains	A review of the Field Office GIS layer files and personal knowledge of the area indicates that there are no HUD inventoried flood plains directly located in the project area. However minor ephemeral drainage with small flood plains that are not HUD inventoried are present. The project would not be expected to negatively impact these flood plains.	Blaine Tarbell	6/3/2014
PI	Fuels / Fire Management	Project is designed to reduce hazardous fuel loads. The project will treat approximately 6,280 acres.	Blaine Tarbell	1/27/2014
NI	Geology / Mineral Resources / Energy Production	Geology and mineral resources would not be impacted by this project because it is a surface project that will not preclude or affect mineral interests.	Betty Gamber	1/31/2013
NI	Hydrologic Conditions (stormwaters)	The proposed action is designed to increase ground cover, which would improve hydrologic conditions. The removal of pinyon and juniper trees to reduce fuels would increase ground vegetation; this would result in a positive flow of surface waters by reducing water flow energy. The project would not need consideration for Section 402 of the Clean Water Act for stormwaters.	Blaine Tarbell	1/27/2014
PI	Invasive Plants / Noxious Weeds	A review of the Field Office GIS layer shows known occurrences of the following weed species within or near proposed treatment areas: russian knapweed (*Acroptilon repens*), spotted knapweed (*Centaurea stoebe*), white knapweed (*Centaurea diffusa*), Canada thistle (*Cirsium arvense*), bull thistle (*Cirsium vulgare*), field bindweed (*Convolvulus arvensis*), houndstongue (*Cynoglossum officinale*), broadleaved pepperweed (*Lepidium latifolium*), and saltcedar (*Tamarix ramosissima*).	Jessi Brunson	3/25/14
NP	Lands / Access	The Project Area is located within the Vernal Field Office Resource Management Plan planning area which allows for oil and gas development with associated road and pipeline right-	Margo Roberts	02/05/2014

Determi-nation	Resource	Rationale for Determination*	Signature	Date
		of-ways. No existing land uses would be changed or modified by the implementation of the Proposed Action; therefore there would be no adverse effects. Right-of-Way UTU-65115 (T. 5 S., R. 25 E., sec. 22, NENW) is in the proposed project area. The ROW authorizes a RAWS station. The ROW holder is BLM. There are several Uintah County Class D roads, and one Class B road that traverses thru the proposed project area. Contact with Uintah County on the proposed project is recommended.		
NI	Livestock Grazing	According to BLM VFO RMP under "Measures designed to protect livestock grazing resources" Rangelands that have been re-seeded or otherwise treated to alter vegetation composition, chemically or mechanically, would be ungrazed for a minimum of two complete growing seasons. Leasee will be notified of any rangeland resting requirements.	Marcus White Bull	5/6/2014
PI	Migratory Birds	Potential impacts to migratory bird species.	Dixie Sadlier	6/5/2014
NI	Native American Religious Concerns	Tribal consultation was conducted on 5/14/2013. We received one "no effect" responses from the Hopi Tribe on 6/3/2013. No other comments were received. Also, the proposed project will not hinder access to or use of Native American religious sites.	Kathie Davies	5/21/2014
NP	Paleontology	No surface disturbance would occur that could impact Paleontology resources. No paleo localities are present on GIS paleo layer.	Elizabeth Gamber	1/31/2014
NI	Rangeland Health Standards and Guidelines	The project will enhance livestock grazing in the future. The proposed project area is within the following active cattle allotments: Green River, Docs Valley, Point of Pines.	Marcus White Bull	5/6/2014
NP	Socio-economics	Due to the small scale project size, socioeconomics are not expected to be measurably impacted by this proposed project.	Blaine Tarbell	1/28/2014
NI	Recreation	Blue Mountain SRMA falls within the project area. However, the Blue Mountain SRMA was identified for (but not limited to) the following activities: Hang-gliding (competitive and special events), rock climbing, historic interpretation, and OHV use on designated routes. Based on current observed uses (hunting, driving for pleasure, OHV use and camping) on Blue Mountain, occurring mostly on or near the southern rim of Blue Mountain, and along Burdette Draw within the designated campsites and dispersed campsites, it is not likely that the proposed treatment would have any impact to the currently identified recreation opportunities within the area. During the actual project implementation phase, the sights and sounds could have minor impacts to individuals driving for pleasure as they would likely see the equipment use in progress. The impact would be short term in nature, and would not likely displace any visitors to public lands.	Jason West	5/20/2014
NI	Soils	Project is designed to improve long term vegetative cover which would reduce soil erosion potential. There will be no surface disturbing actions during saturated soil conditions. Soils consist primarily of well drained mountain loams.	Blaine Tarbell	4/1/2014

Determi-nation	Resource	Rationale for Determination*	Signature	Date
PI	Threatened, Endangered or Candidate Animal Species	Office files were reviewed, along with a site visit. Greater Sage-Grouse occupied habitat is within the project area. These designations were made by UDWR. The proposed action is consistent with the guidelines established in Utah IM-2012-043. Personal communication with UDWR Sensitive Species Biologist, Brian Maxfield, 2014.Treatment activities will occur after August 31, outside of the nesting season for Mexican Spotted Owls.	Dixie Sadlier	6/5/2014
NP	Threatened, Endangered, Candidate, or Proposed Plant Species	A review of field office GIS layers revealed no known occurrences of Threatened, Endangered, Candidate or Proposed Species populations or potential/suitable habitat in or near the project area.	Jessi Brunson	3/25/14
PI	Vegetation, Excluding USFWS designated species	A review of field office GIS layers shows known locations for rock bitterweed (*Hymenoxys lapidicola*) and park rockcress (*Arabis vivariensis*), both BLM-sensitive plant species, within proximity of the treatment areas, and overlap of potential habitat for both species within proposed treatment areas.	Jessi Brunson	3/25/14
NI	Visual Resources	Class II Objective. The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape. New projects can be approved if they blend in with the existing surroundings and don't attract attention (i.e., small-scale picnic area or primitive campground in valley shielded from view that blends with natural appearance). Based on Best Management Practices and the low density of small trees, it is not likely that the casual observer would notice the vegetation treatments within 5 years of the projects implementation. Best management Practices for these actions include low stump cut heights of 1 foot or less with bucking (cutting trees into small segments) instead of leaving whole trees). In some instances it would be preferable for mastication as no tree fragments will remain, and tracks from a mastication machine have shown to not be noticeable between 1-3 years in other treatments with like soils and vegetation within the area. Additionally, color line form and texture will not be noticeably changed based on only sagebrush of certain heights being removed and only new growth trees (usually less than 5 feet and an average of around 3 feet being removed.) Therefore, color, landform and line will not likely be noticeable to the casual observer.	Jason West	5/20/2014
NP	Wastes (hazardous or solid)	*Hazardous Waste:* No chemicals subject to reporting under SARA Title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the project. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the project. *Solid Wastes:* Trash would be confined in a covered container and hauled to an approved landfill. Burning of waste or oil would not be done. Human waste would be contained and be disposed of at an approved sewage treatment facility.	Blaine Tarbell	5/1/2014
SW: NI GW: NI	Water Quality (surface / ground)	SW: Surface water would not be adversely impacted by this action.	SW: Blaine Tarbell GW: Betty Gamber	1/31/2014

Determi-nation	Resource	Rationale for Determination*	Signature	Date
		GW: Groundwater would not be adversely impacted by this action.		
NI	Wetlands / Riparian Zones	All designated riparian areas would be avoided per the proposed action. It is standard practice during these types of fuel management projects to avoid riparian areas by workers and equipment.	Blaine Tarbell	6/3/2014
NP	Wild and Scenic Rivers	VFO GIS layers indicate that there are no Wild and Scenic Rivers present within the Vernal Field Office Boundary	Dan Gilfillan	3/7/14
NP	Wild Horses and Burros	VFO GIS layers indicate that there are no Wild horse and Burro Areas present within the project area.	Dusty Carpenter	5/2/2014
NP	Wilderness	VFO GIS layers indicate that there are no Wilderness areas present within the Vernal Field Office Boundary. The proposed project does not fall within any WSAs.	Dan Gilfillan	3/7/14
NP	Woodland / Forestry	VFO GIS layers indicate that there are no commercial woodlands present within the project area	Blaine Tarbell	6/2/2014
PI	Areas with Wilderness Characteristics	Impacts to WC would be the same as impacts to the Natural Areas. See Natural Areas impact analysis in the document.	Jason West	5/20/2014

Reviewer Title	Signature	Date	Comments
NEPA / Environmental Coordinator			
Authorized Officer			

Appendix B - Project Maps

Blue Mountain Fuels Project