

**U.S. Department of the Interior
Bureau of Land Management**

Environmental Assessment

**Shiner Basin Sagebrush Treatment/Fuel Reduction
DOI-BLM-UT-G010-2015-0113-EA**

PREPARING OFFICE

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Environmental Assessment
Shiner Basin Sagebrush Treatment/Fuel
Reduction
DOI-BLM-UT-G010–2015–0113-EA

Prepared by
U.S. Department of the Interior
Bureau of Land Management
Vernal Field Office
Vernal, Utah

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Finding of No Significant Impact

Finding of No Significant Impact

Environmental Assessment DOI-BLM-UT-G010-2015-0113-EA

Based on the analysis of potential environmental impacts Shiner Basin Sagebrush Treatments/Fuel Reductions EA DOI-BLM-UT-G010-2015-0113-EA, I have determined that the proposed action will not have any significant impacts on the environment and an environmental impact statement is not required.

Signatures:

Approved by:

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/s/ Troy Suwyn	9/28/2015
Troy Suwyn	Date
Fire Management Officer	

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Decision Record

Decision

Based on my understanding of the information contained in the *Shiner Basin Sagebrush Treatments/Fuel Reduction EA* and my subsequent finding of no significant impact, it is my decision to authorize the actions needed to restore the sagebrush vegetation type, and reduce fuel loads as set out in DOI-BLM-G010-2015-0113 EA.

The following actions will be realized:

- Apply the Lop & Scatter treatment to the project area.
- Apply ongoing weed control efforts following treatment.

Rationale for Decision:

My decision to authorize implementation of the proposed action alternative will not result in any undue or unnecessary environmental degradation to wilderness characteristics, threatened or endangered species, cultural resources, or matters pertaining to Native American religious freedoms or their customs. Realization of the proposed action is in conformance with the existing Vernal RMP (2008) and is consistent with the Uintah County Land Use Plan. The No Action Alternative was not selected because that alternative would not meet the stated purpose and need of restoring sagebrush vegetation and reducing the hazardous fuel loads.

Implementation of the proposed action will result in the improvement towards a vigorous and healthy sagebrush vegetative type. The treatment will result in the following positive result:

1. Reductions of the existing hazardous fuel loads and decrease the risk of unplanned fire events.
2. There would be increased forage for both livestock, big game species and occupied sage-grouse habitat.
3. Habitat values for sagebrush related keystone species would be improved.

Protest and/or Appeal Provision:

The decision or approval may be appealed to the Interior Board Of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR 4.21. Within 30 days of receipt of the decision, an appeal must be filed to: Interior Board of Land Appeals, Office of Hearings and Appeals, U.S. Department of the Interior, 801 North Quincy St., Suite 300, Arlington, Virginia, 22203. A copy of the notice of appeal must also be filed in the Vernal Field Office at 170 South 500 East; Vernal, Utah, 84078, as well as with: Office of the Solicitor, 125 South State Street, Suite 6201, Salt Lake City, Utah, 84138. Public notification of this decision will be considered to have occurred on , May 11, 2015. The appellant has the burden of showing that the decision appealed from is in error.

If you wish to file a petition for stay pursuant to 43 CFR 3150.2(b), the petition for stay should accompany your notice of appeal and shall show sufficient justification based on the following standards:

1. The relative harm to the parties if the stay is granted or denied,
2. The likelihood of the appellants success on merits,
3. The likelihood of irreparable harm to the appellant or resources if the stay is not granted, and
4. Whether the public interest favors the granting of the stay

Authorizing Official:

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/s/ Troy Suwyn	9/28/2015
Troy Suwyn	Date
Fire Management Officer	

Chapter 1. Introduction

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1.1. Introduction

The Environmental Assessment (EA) has been prepared to analyze the Shiner Basin Sagebrush Treatments/Fuel Reduction projects. 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 Shiner Basin Sagebrush Treatments/Fuel Reduction projects.

1.2. Identifying Information:

1.2.1. Location of Proposed Action:

Location:

Uintah County, Vernal, Utah

Township 3 South, Range 24 East, Sections 26–35; Township 3 South, Range 23 East, Sections 24, 25 SLB&M.

1.2.2. Name and Location of Preparing Office:

Lead Office - Vernal Field Office and number NEPA #DOI-BLM-G010-2015-0113 EA

1.3. Purpose and Need for Action:

The purpose of the Shiner Treatments/Fuel Reduction projects are to provide for increased quality habitat for sage grouse and mule deer, also to reduce the buildup of hazardous fuels that have accumulated over the last several decades in order to prevent the potential for large catastrophic fire events, and to restore natural fire regimes. The proposed action is needed to restore the project areas.

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Chapter 2. Proposed Action and Alternatives

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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.

2.1. Description of the Proposed Action:

The proposed action involves removing encroaching Pinyon-Juniper (P-J) from sagebrush ecosystems along with reducing hazardous fuels.

The methodology involves the reduction of approximately 3,696 acres of hazardous fuels by the removal of Pinyon-Juniper trees through a lop and scatter type of removal. This involves the cutting of the P-J trees by hand with a chainsaw. The resulting volume of slash would be reduced to a level of three (3) feet. Remaining stumps would be no greater than 6” above level ground. In the project area, the P –J trees have increased in overall density and encroached into the sagebrush habitat type, with an average density of 100 stems/acre.

Shiner

The vegetation in the project area is comprised of sagebrush that has been encroached by P-J trees. The sagebrush vegetative type has been designated as a Fire Regime Group III (Fire return interval 35-100 years). The increased amount of P-J trees has resulted in a change in the Fire Regime Condition Class from a Class I to a Class II Condition Class. (Vernal Fire Management Plan, 2005) The departure from a Class I Condition Class to a Class II Condition Class indicates that at least one cycle of the natural fire regime fire interval has been missed due to historic fire suppression efforts. The change from a Class I to Class II has resulted in an increase of the hazardous fuel loads in the project area.

No new access roads would be needed to access the project area and access would be via existing roads and trails.

The project area still has an adequate understory vegetation to protect the soil from erosion, following removal of the P-J trees. Therefore reseeding this area after treatment would not be required. The project has been designated to provide for the optimum amount of edge effect in order to increase the habitat values for wildlife, and to maintain the natural openings where the sagebrush habitat is located.

In order to prevent the establishment of weeds within the project area as a result of the proposed action, the following measures would be incorporated to reduce the risk of noxious and invasive weeds from becoming established:

1. A pre-project weed inventory would be conducted to determine the presence of noxious weeds. If weeds were found, they would be: a) mapped and reported; 2) removed or treated prior to surface disturbance; 3) and removed or treated prior to seed set when possible.
2. All vehicles and equipment would be power-washed after driving through a noxious weed infestation.
3. Staging areas would be located in weed free sites.
4. Annual monitoring of the project area for weed establishment would occur for three years following implementation of the proposed action.

5. Annual treatments of weeds would be conducted under the authority of existing Vernal Field Office Pesticide Use Proposals, and following existing policy (Vernal Field Office Surface Disturbing Weed Policy 2009).

No chemicals subject to SARA Title III in amounts greater than 10,000 pounds would be used. No extremely hazardous substances as defined in 40 CFR 355 in threshold planning quantities would be used.

2.2. Description of Alternatives Analyzed in Detail:

2.2.1. No Action Alternative

Under this alternative, no restoration actions or fuel reductions would be taken. Current resource conditions and trends would continue

2.3. Alternatives Considered but not Analyzed in Detail

Prescribed Fire and Seeding: The use of prescribed fire to remove the P-J was considered but eliminated. The rationale for not using prescribed fire was that portions of the project area lay directly adjacent to private property. The proximity of the private land constrains the application of prescribed fire due to the high risk of fire moving on to these adjacent lands. In addition the dense canopy provides for a heavy and continuous fuel load which would be extremely risky to ignite as the fire would be difficult to control without constructing fuel breaks with heavy equipment. Thus this alternative was not considered as it would not be feasible to conduct a prescribed burn under these existing conditions.

2.4. Conformance

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

P. 78 in the Fire 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.

P. 102 in the Non-WSA Lands with Wilderness Characteristics (WC), under WC-3: When compatible with the goals and objectives for management of non-WSA lands with wilderness characteristics:

P. 113 allow surface-disturbing activities within public water reserves that enhance the riparian resource.

- Permit vegetation and fuel treatments using prescribed fire, mechanical, and chemical treatments, and other actions compatible with the Healthy Lands Initiative (HLI).

P. 133 in the Vegetation section, under Veg-5: Allow mechanical, fire, biological, cultural, or chemical methods for vegetation manipulation using the type of manipulation appropriate to and

consistent with other land use objectives, and incorporating standard operating procedures and BMP's, as applicable, to protect other resources.

P. 135 in the Vegetation section, under Veg-13: Restore or rehabilitate up to 200,000 acres of sagebrush steppe over the life of the plan. Such vegetation treatment plans will consider the Western Association of Fish and Wildlife Agencies Guidelines for Management of Sage Grouse Populations and Habitats and State and Local Conservation Plans.

2.4.1. Relationships To Statutes, Regulations and Other Plans

Uintah County's General Land Use Plan, as amended in 2011 relative to public land concerns: All alternatives considered in detail in the EA would be consistent with the County's general planning objectives which state:

- To insure that public lands are managed for multiple use and sustained yield and to prevent waste of natural resources.
- To support the wise use conservation and protection of public lands and its resources including well-planned management prescriptions.
- Management of forage resources directly affect water quality and water supplies.
- The proper management and allocation of forage on public lands is critical to the viability of the Basin's agricultural, recreation and tourism industry.

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).
- 1995 Federal Wildland Fire Management Policy.
- 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.
- 1998 BLM Handbook 9214, "Prescribed Fire Management" describes authority and policy for prescribed fire use on public lands administered by the Bureau of Land Management.

- 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.

Chapter 3. Affected Environment:

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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 Diamond Mountain Plateau, approximately 40 miles from Vernal, Utah. The project area occurs on a fairly large topographical plateau. The vegetation in the area consists of pinyon-juniper larkspur, galleta, bluebunch wheatgrass, bottlebrush squirreltail, birchleaf mountain mahogany, black sagebrush, needle & thread grass, Indian rice grass, western wheatgrass, saline wildrye, and some bitterbrush. 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.

3.2.1. Natural Areas

BLM natural areas are non-wilderness study areas found to have wilderness characteristics and identified within the Vernal RMP to be managed to protect, preserve, and maintain those qualities of wilderness character (i.e. appearance of naturalness, outstanding opportunities of primitive and unconfined recreation, and solitude). The project area exists within the Diamond Mountain natural area. The Vernal RMP (p. 101 of the ROD) specifically allows for fuels treatments within the identified BLM Natural Areas under decision WC-3 which states, “When compatible with the goals and objectives for management of non-WSA lands with wilderness characteristics permit vegetation and fuel treatments using prescribed fire, mechanical and chemical treatments and other actions compatible with Healthy Lands Initiative (HLI).”

Background information; the BLM evaluated 34 units for wilderness characteristics in 2007. Of these units, a total of 17 had either recent or historic vegetation treatments which were identified by an interdisciplinary team. Of the 17 units with vegetation treatments, 12 of the treatments evaluated to retain their wilderness character with vegetation treatments not being identified as noticeable to the casual observer. Five of the units identified vegetation treatments as having noticeable intrusions to wilderness character, (see 2007 inventory for Cliff Dweller, Lower Flaming Gorge, Mountain Home, Seep Canyon, and Wolf Points units.) The five the dominant noticeable vegetation treatment was the chaining method which involved heavy equipment dragging a chain between equipment (generally two bull dozers a) and uprooting trees along the way. In heavy or dense pinion-juniper trees, the chainings were identified as noticeable intrusions based on large piles of dead uprooted trees being left behind.

3.2.2. Fuels and Fire Management

The project area is located within the Diamond Mountain (B8) Fire Management Unit (FMU) identified in the Vernal Fire Management Plan. The Diamond Mountain FMU objectives include:

- Manage the vegetation to attain the ecological stage that would benefit wildlife in crucial habitat and livestock grazing.

- Manage forests and woodlands for long-term healthy habitat for animal and plant species, forest and woodland health, and riparian restoration and enhancement.

Fire Management Actions/Strategies within the FMP in the Non-fire Fuels Treatment contain the following objectives:

- Achieve the desired mix of seral stages for each major vegetative type.
- Create fuel breaks within the mountain big sage type to prevent large unplanned fires in this type.
- Remove encroaching woody species from the major vegetative types.
- Reduce fuel loads.
- Chemical treatments would be utilized in conjunction with prescribed fire and mechanical treatments to achieve desired objectives, and to also control invasive species.

Fire Regime Condition Class (FRCC) as outlined in the Forest Service Rocky Mountain Research Station technical report entitled “Development of Coarse Scale Spatial Data for Wildland Fire and Fuel Management (RMRS-87, 2004). The Healthy Forest Restoration Act adopts this classification system, known as the Fire Regime Condition Class which describes the amount of departure of an area or landscape from historic to present conditions. This departure from the natural state may be a result of changes in one or more ecosystem components such as fuel composition, fire frequency, or other ecological disturbances. As mandated by national direction, the Vernal FMP utilizes the FRCC classification system to rank existing ecosystem conditions and prioritize areas for treatment. The project area is has been designated as FRCC 2 (lands that are moderately altered from their historical range). Due to this alteration in the fire regime and corresponding change in the Fire Condition Class there has been a corresponding increase in the overall fuel loadings.

The alteration in the FRCC from a Class 1 to a Class 2 can be associated with the reduced role of fire in the ecosystem. The shift from a relatively stable or limited rate of pinyon-juniper expansion to a substantial increase in conifer establishment in both space and time is generally attributed to the reduced role of fire; introduction of livestock grazing, and shifts in climate. (Miller et al., 2008)

Fuel loadings for the project area were assessed through utilizing BLM Technical Note 430-“Guide for Quantifying Fuels in the Sagebrush Steppe and Juniper Woodlands of the Great Basin” (Stebleton and Bunting, 2009). Based on this guide along with the research completed by Miller et al. (2005, 2008) and on site tree density measurements to determine Pinyon-Juniper stems per acre, it was determined that the project area is in a Phase 1 condition as described in the literature described above.

Forb and grass component

- Live herbaceous loading- 0.06 tons/acre
- Dead herbaceous loading- 0.02 tons/acre
- Total herbaceous loading- 0.08 tons/acre

Non-tree woody component (Shrubs)

- Total shrub fuel loading- 1.86 tons/acre

Pinyon-Juniper Trees, with a current height of 15 to 18 feet in height.

- Live fuel loading- 17.21 tons/acre
- Dead fuel loading- 1.35 tons/acre
- Total Fuel loading is estimated to be 18.56 tons/acre

Combined fuel loadings for the project area are approximately 20.5 tons/acre.

The current height of pinyon-juniper trees in the area is 10 to 12 feet in height. In the event of a wildland fire, flame lengths can be expected to reach 25 to 35 feet in length.

3.2.3. Invasive Plants/Noxious Weeds, Soils, and Vegetation

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: musk thistle (*Cardus nutans*), Canada thistle (*Cirsium arvense*), teasel (*Dipsacum* spp.), broadleaved pepperweed (*Lepidium latifolium*), and saltcedar (*Tamarix ramosissima*). All of these species are Utah state noxious weeds.

Soils

The NRCS has developed Ecological Site Descriptions for most of the State of Utah. Ecological sites are defined by the NRCS as “A distinctive kind of land, with specific physical characteristics which differs from other types of land in its ability to produce a distinctive kind and amount of vegetation, and in its response to management”. The main Ecological Sites located within the project area is Semidesert Loam (Wyoming Big Sagebrush)-R034XY212UT, Desert Shallow Clay (Mat Saltbush)-R034XY117UT, and Semidesert Gravelly Loam (Wyoming Big Sagebrush)-R034XY205UT. The soil types within the project area include:

Map Unit Symbol	Map Unit Name	Acres in Shiner Project Area	Percent in Project Area
2	Abracon loam, 3 to 8 percent slopes	100.5	2.2%
3	Abracon-Solirec complex, 3 to 8 percent slopes	699.4	15.5%
10	Badland-Polychrome-Rock outcrop complex, 50 to 75 percent slopes	412.7	9.2%
30	Bullpen-Hanksville complex, 25 to 50 percent slopes	196.6	4.4%
32	Bullpen-Polychrome complex, 2 to 50 percent slopes	88.8	2.0%
45	Clapper gravelly loam-Badland-Rock outcrop complex, 25 to 50 percent slopes	447.8	9.9%
46	Clapper very cobbly loam, 4 to 25 percent slopes	223.7	5.0%
51	Clapper-Hanksville complex, 4 to 50 percent slopes	0.3	0%
53	Cliff sandy loam, 2 to 4 percent slopes	0.9	0%
95	Hanksville silty clay loam, 2 to 25 percent slopes	107.1	2.4%
97	Hanksville silty clay loam, moist, 25 to 50 percent slopes	0.5	0%
108	Honlu sandy loam, 1 to 8 percent slopes	2090.9	46.4%
135	Mikim complex, 1 to 4 percent slopes	134.5	3.0%
256	Walknolls extremely channery sandy loam, 4 to 25 percent slopes	0.3	0%

The soils are well drained soils that formed in alluvium and colluvium derived from sedimentary, igneous, and metamorphic rocks. (NRCS Web Soil Survey 2015)

The project area vegetation is a mixture of mountain sagebrush, Wyoming sagebrush and P-J. The P-J has encroached into the vegetative communities, with an estimated average density of 56 stems/acre in the lop & scatter area. Potential native vegetation within the project area is described by the NRCS as a mixture of sagebrush and P-J. P-J expansion into the sage-steppe habitat types would be considered part of the historic expansion described by (Miller et al. 2008) and are not part of the potential native vegetative community for the project area.

Vegetation

The project area vegetation is dominated by mountain sagebrush and Wyoming sagebrush. The sagebrush community has reached a stage where sagebrush is of a single age class, mature, and quite decadent. The understory contains a viable population of perennial grasses and forbs but these species are suppressed by the dense overstory of sage and their vigor and productivity are very limited. Understory species are comprised of larkspur, galleta, bluebunch wheatgrass, bottlebrush squirreltail, birchleaf mountain mahogany, black sagebrush, needle & thread grass, Indian rice grass, western wheatgrass, saline wildrye, and some bitterbrush.

Studies across the Intermountain West have shown substantial increases in Pinyon-Juniper since the late 1800's. (Burkhardt and Tisdale,1976; Gedney et al 1999; Knapp and Soule 1998; Miller and Rose 1995; Soule and Knapp 2000; Tausch et al 1981). These increases were the result of both infill in mixed aged tree communities and expansion into shrub- steppe communities that appeared to have not supported trees over the last few centuries. (Miller, et al 2005) This documented expansion of P-J into the shrub-steppe community has also occurred in the project area, and has resulted in a decline in the overall cover of the shrubs, forbs, and grasses. Along with a decline in the vigor, and productivity of the understory species that occur due to the inherent ability of P-J to outcompete the understory species for light, water, and nutrients.

Miller et al.(2008, 2005) have identified and described phases of woodlands development in the Intermountain West. Phases are described as:

-

Phase I- P-J trees are present but shrubs and herbs are the dominant vegetation that influences ecological processes on the site.

-

Phase II- P-J trees are co-dominant with shrubs and herbs and all three vegetation layers influence ecological processes on the site.

-

Phase III- P-J trees are the dominant vegetation and the primary plant layer influencing ecological processes on the site.

Using the above descriptions, and the use of the BLM Technical Note 430- "Guide for Quantifying Fuels in the Sagebrush Steppe and Juniper Woodlands of the Great Basin" (Stebbleton and Bunting, 2009) along with USGS Circular 1335- Pinyon-Juniper Field Guide: Asking the Right Questions to Select Appropriate Management Actions (Tausch et al. 2009) it was determined that the project area can best be depicted as being in a Phase II condition.

3.2.4. Plants

Park rockcress (*Arabis vivariensis*) – BLM Sensitive

A review of field office GIS layers shows one historical known location representing at least one individual of park rockcress (*Arabis vivariensis*), a BLM-sensitive species, within proximity of the proposed treatment areas T2S, R24E. Although no known locations are within proposed treatment areas, potential habitat occurs across portions of the Six-Mile slashing proposed project area. Field surveys conducted by ATV on June 3, 2014, did not identify suitable habitat within the 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.

Hamilton's milkvetch (*Astragalus hamiltonii*) – BLM Sensitive

A review of field office GIS layers shows 8 known locations representing at least 55 individuals of Hamilton's milkvetch (*Astragalus hamiltonii*), a BLM-sensitive species, within proximity of the proposed treatment areas T2-3S, R 23-25E. Although no known locations are within proposed treatment area, potential habitat occurs across portions of the project area. Field surveys conducted by ATV on June 3, 2014, did not identify suitable habitat within the proposed treatment areas.

Hamilton's milkvetch is a Utah BLM sensitive plant endemic to the Uintah Basin in Uintah County Utah. This member of the bean family is a perennial herb, up to 23 inches tall, and produces white to cream colored flowers from late spring to early summer. Hamilton's milkvetch inhabits desert shrub and piñon-juniper communities growing primarily on the Duchesne River formation.

Goodrich's stickweed (*Cleomella palmeriana* var. *goodrichii*) – BLM Sensitive

A review of field office GIS layers shows 3 known locations representing an unknown number of individuals of Goodrich's stickweed (*Cleomella palmeriana* var. *goodrichii*), a BLM-sensitive species, within proximity of the proposed treatment areas in T2-3S, R 23-25E. Although no known locations are within proposed treatment area, potential habitat is immediately adjacent to the proposed treatment polygon. Field surveys conducted by ATV on June 3, 2014, did not identify suitable habitat within any of the proposed treatment areas.

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.

3.2.5. Wildlife

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). In addition, The Utah Steering Committee has identified approximately 542,967 acres of Bird Habitat Conservation Area’s (BHCA, USC 2005). BHCA’s are intended to display areas where bird habitat conservation projects may take place, predicated on concurrence, collaboration, and cooperation with all landowners involved; however, the BHCA’s have no official status. Portions of the project area fall within the Diamond Mountain BHCA.

Numerous species may migrate through, or nest within the project area. This section identifies migratory birds that may inhabit the project area such as the Diamond Mountain BHCA or those that are classified, 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.

Raptors

Some of the more visible birds in and near the project area include ferruginous hawks, golden eagles and red-tailed hawks. The BLM raptor database was reviewed and there are no known nests within the project area. Habitats in and around the project area provide diverse breeding and foraging habitat for raptors. These habitats include rocky outcrops, pinyon-juniper woodlands, and sagebrush shrub lands.

Non-USFWS Designated (Big Game Species)

Mule deer and Rocky Mountain elk are the primary big game species found within the project area (UDWR 2008, 2010). 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. During winter months elk move to lower elevations where they are found most often on south facing slopes, primarily in P-J woodlands. Deer typically move down to lower elevation foothill areas.

Crucial elk and deer winter habitat has been designated within the project area. These designations were made in the Vernal Field Office RMP (BLM, 2008).

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 lop & scatter operations; therefore, they will not be discussed further in this document.

Threatened, Endangered, Proposed or Candidate

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 population declines (approximately 80%) occurred from the mid-1960s to mid-1980s. On March 5, 2010, the USFWS determined that the greater sage-grouse warrants protection under the ESA; however, the USFWS concluded that proposing the species for protection is precluded by the need to take action on other species, therefore they became a candidate species. Research and conservation efforts in the last 20 years have help stabilize and recover many populations. Populations appear to have taken a positive turn in recent years (UDWR 2009, WAFWA 2015). Utah Division of Wildlife Resources (UDWR) identifies occupied, winter and brood habitat within the project area. The project area is also a Sage Grouse Management Area (SGMA) within the state's Conservation Plan for Greater Sage-Grouse in Utah. Currently, the BLM identifies occupied habitat as Preferred Priority Habitat (BLM IM 2012-043), and is also a Priority Habitat Management Area (PHMA) in the Draft Sage-grouse Plan Amendment (Utah Greater Sage-grouse, Land Use Plan Amendment, Final Environmental Impact Statement, 2015). UDWR is in support of the project and assisted in developing the treatment polygon (email Maxfield 2015).

3.2.6. Visual Resources

The Vernal Field Visual Resource Inventory (November 2011) serves as the baseline information for assessing potential effects to visual resources for proposed projects. The project area falls within two units. Unit #10 –Lower Diamond Gulch. The unit was given a scenic quality rating of A and is described as the unit including a deeply incised canyon at the east end formed on one side by the back face of Diamond Mountain. Horizontal layering is prominent in the landscape and there are rugged and blocky cliff faces. Unit #11 – Diamond Mountain. This unit was given a scenic quality rating of B and is described as the unit including a broad, sloped and somewhat rolling slope of pinyon juniper sage. There are exposed walls and cliffs along wash edges. Dense pinyon juniper cover with minimal sage is located in northern higher elevation areas. Pinyon juniper is absent but somewhat similar topography is present in lower elevations where there are lower rolling hills.

Table 3.1. Landscape Character Unit #10

	Land Form/Water	Vegetation	Structure
Form	Blocky, rugged, bold, steep	Vertical	No structures visible
Line	Horizontal banding, complex, curved, undulating	Indistinct	
Color	Bluff, deep red brown, pink, gray	Dark Green Juniper and pine, gray sage	
Texture	Rough, coarse	Coarse to fine in some areas, ordered and stippled	

Table 3.2. Landscape Character Unit #11

	Land Form/Water	Vegetation	Structure
Form	Sloped, rolling	Rounded individual mostly indistinct	No structures visible
Line	Horizontal, angled, undulating	Some irregular along patch edges	
Color	Gray, pink buff	Dark green, gray, green	
Texture	Smooth to medium	Fine to medium, stippled	

The Vernal RMP identified the project area as Visual Resource Management (VRM) Class II & III lands. The objectives of VRM II 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.

The objective of VRM III 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 characteristic landscape. New projects can be approved that are not large scale, dominating features. Approximately 550 acres are within VRM II and the remaining 3,146 acres are within VRM III.

Chapter 4. Environmental Effects:

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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

Under the proposed action alternative 780 acres of the proposed 3,696 acres of lop & scatter fuel treatment would occur within the Diamond Mountain natural area. During project implementation (no more than 4 weeks at any one time during phases) the sights and sounds associated with the use of the chainsaws would detract from opportunities for solitude and primitive or unconfined recreation in the area. Upon completion of the project lop and scatter activities would detract from the untrammelled character of the area. However, due to the minimal amount of junipers to be removed it is not expected that noticeable wood debris piles would remain upon completion of the project. Given the experience of similar projects being performed within the Diamond Mountain natural area, it is not expected that the proposed lop and scatter activities will be noticeable to the casual observer within 1-3 years. In the long term, the area would retain a sense of being primarily affected by the forces of nature. It is also expected that the naturalness of the area would be improved through the vegetative treatment of the encroaching pinyon-juniper encouraging the development of native biological communities.

4.2.2. Fuels and Fire Management

Fuels

The slashing treatment of P-J would alter the arrangement of over 18 tons of hazardous fuels from standing 15–18 feet in height to less than 2 feet in height. The fuel height has a direct correlation to fire behavior in the event of a wildland fire. Over time the fine fuels attached to pinyon and juniper trees (needles and twigs) would decompose and decrease fuel loading and flammability. The FRCC for the project area would change from the current Class II Condition Class to a Class I condition Class. The reduction in fuel loadings would be expected to result in a decline in the degree of fire severity that occurs from any unplanned fire events, as the residual shrubs, forbs, and grasses typically produce shorter flame lengths and reduced rates of spread of the flaming fire front. With an expected decline in fire severity, then the understory species are more likely to survive an unplanned fire event, which would also hasten vegetative recovery following a fire event. A hastened recovery of vegetation would also likely reduce the potential for any post fire erosion events.

The proposed seed species should allow the vegetation to have higher fuel moisture contents farther into the fire season.

Fire Management

The lower fuels would result in shortened flame lengths in these fuels; lower flame lengths would also increase the ability of fire suppression resources in extinguishing or controlling wildland

fires in the area. An additional benefit would consist of suppression resources using the treatment area as a fire break or an anchor point for strategic wildland fire tactics. Any concentration of cheatgrass in the area would increase fire spread ability. The proposed seed species should compete with cheatgrass and thus reduce fire spread in the event of a wildland fire.

4.2.3. Invasive Plants/Noxious Weeds, Soils, and Vegetation

Invasive Plants/Noxious Weeds

Canada thistle, musk thistle, teasel, and saltcedar 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 Canada thistle, musk thistle, and saltcedar, 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.

Soils

Under the proposed action alternative, encroaching P-J trees would be removed across the 3,696 acre project area. Soil erosion and sediment yields are not expected to increase, the tree removal will leave vegetative debris and litter on the surface following treatment, which will provide for protective ground cover. The understory has adequate vegetation for ground cover. Slopes in the project area are between 1 and 8 percent, which should preclude the ability of any storm generated runoff to cause any potential soil erosion issues.

Vegetation

Under this alternative, there would be 3,696 acres of fuel reduction and shrub-steppe enhancement. Encroaching pinyon-juniper trees would be removed across the 3,696 acre project area. The shrubs, grasses, and forbs are expected to increase in overall vigor and productivity as the competition with the pinyon-juniper trees for light, nutrients, and water is drastically reduced. Three thousand, six hundred, and ninety six acres of shrub-steppe habitat would be maintained as shrub-steppe habitat.

The proposed action would result in maintaining a Phase I condition, slowing the transition to a Phase II Condition as described in BLM Technical Note 430 (Stebbleton and Bunting, 2009), and Miller et. al. (2008, 2005).

4.2.4. Plants

Park rockcress (*Arabis vivariensis*), Hamilton's milkvetch (*Astragalus hamiltonii*), and Goodrich's stickweed (*Cleomella palmeriana* var. *goodrichii*) – BLM Sensitive

Slashing treatments are not expected to negatively impact any of our BLM-sensitive plant populations because the treatments are focused specifically on the removal of piñon pine and Utah juniper and are not expected to cause ground disturbance that would be detrimental to adjacent forbs. Additionally, habitat for all three of these BLM-sensitive plants is within open soils surrounded by sparser piñon-juniper communities; these species are not known to occur within denser sagebrush stands where piñon-juniper removal is targeted.

4.2.5. Wildlife

Migratory Birds

Migratory bird species may be present during the breeding/nesting season from March 1- August 31. If project operations were to take place during the breeding/nesting season, individual bird species could be impacted. Impacts may include; destruction of nests, eggs, and nesting habitat, fragmentation of habitat, reduction of habitat patch size, human presence during the breeding/nesting season can cause nest abandonment. Project activities are planned to occur after August 1st. The proposed project targets younger pinyon-juniper trees that are not older, mature stands of pinyon-junipers which are favored by most pinyon-juniper bird species. Although there may be some short-term direct impacts to pinyon-juniper bird species, the long term benefit of the project would benefit sagebrush/grassland bird species, several of which are currently identified as BLM State Sensitive Species.

Raptors

Impacts would be the same as the migratory bird section. Treatments would be planned to occur after August 31. If project activities were to occur during the nesting season (March 1 – August 31), raptor surveys would be required, and no tree removal would be allowed within .5 mile of an occupied nest site.

Non-USFWS Designated (Big Game Species)

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 increasing densities of pinyon-juniper or other conifer trees (UDWR 2008). The tree-dominated habitats occupied by persistent pinyon-juniper adjacent to the project area offer a place to retreat from severe weather, but offer little in the way of forage. That is why it is important to maintain mosaic patterns of habitat that can provide forage, cover, and water. Treatment of the encroachment pinyon-juniper 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 for the long term. Approximately 3,696 acres of crucial elk and deer winter habitat was identified within the proposed project area. An increase in human presence during the winter months could cause short term impacts (increased stress, increased energy expenditure) to big game species. No treatment activities will be allowed from December 1 — April 31, during elk and deer wintering period.

Threatened, Endangered, Proposed or Candidate

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

The project area falls within PPH , and PHMA, with approximately 3,696 acres of occupied nesting, brood rearing, and winter habitat in the project area. There are known leks within 4 miles of the project area, but none within the project boundary. Sage-grouse habitat use and requirements change through the annual flow of the seasons and life functions. Early brood-rearing (May-July) generally occurs relatively close to nest sites. As herbaceous plants mature and dry, hens move their broods to late brood-rearing (July-September) habitats which consist of more succulent vegetation. Winter habitat almost exclusively consists of sagebrush, which is the main diet of sage-grouse in the winter. Recent telemetry data has shown sage-grouse using the Shiner Basin during the winter and spring months (personal conversation with Maxfield for telemetry data). A single hen from Blue Mountain was documented moving to the Shiner Basin project area in the fall of 2014 extending into the late fall (email Maxfield 2014). The proposed action is consistent with the 2013 Conservation Plan, Section 2, Habitat Objective 2.0.3; Enhance an average of 25,000 acres of sage-grouse habitat in Sage-grouse Management Areas annually.

Direct impacts (mortality of individual grouse from vehicles) to sage grouse are not anticipated as these activities would not be conducted within sage grouse nesting, or early brood-rearing seasons from March 1- June 15, and vehicles will be utilized on existing two-track roads. Indirect impacts could include temporary displacement (flushing) from foraging/cover areas. Overall, treatment activities would result in a positive impact for sage-grouse. Encroaching pinyon-juniper would be removed leaving the younger, smaller plants. The understory would be replenished with a mixture of forbs, grasses, and shrubs. In recent years the BLM has conducted similar treatments to mountain sagebrush and treatments have been considered a positive improvement to sage-grouse habitat, as they have promoted younger sagebrush and replenished understories. The proposed action conforms with the policies and procedures outlined in the BLM's Greater Sage Grouse Interim Management guidance (BLM 2012). No treatment activities would be allowed from Feb. 15 — July 15 in order to protect sage-grouse during breeding/nesting and brood rearing periods, and November 15 — March 15 during the winter period. Project activities are planned in the fall of 2015.

4.3. Alternative B — No Action

Under the No Action Alternative, current resource trends would continue, no tree removal would occur.

4.3.1. BLM Natural Areas

Under this alternative approximately 780 acres of lop and scatter fuel treatment would not occur within the Diamond Mountain Natural Area.

4.3.2. Fuels and Fire Management

Fuels

Under the no action alternative, there would be no removal of the P-J 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 P-J 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. The fuel loading would continue to increase, eventually shifting the project area from the existing Condition Class I to a Condition Class II 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.

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. The increased amount of P-J tree densities will 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 10-12 feet in a sagebrush community would result in 25- 35 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, wildland fire engines and bulldozers limits are eight feet flame lengths. These conditions increase fire behavior characteristics and minimize the ability of firefighters suppressing wildfires.

4.3.3. Invasive Plants/Noxious Weeds, Soils and Vegetation

Invasive Plants/Noxious Weeds

Known populations of Canada thistle, musk thistle, teasel, perennial pepperweed, and saltcedar 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.

Soils

Under this alternative there would be no removal of the encroaching P-J trees across the project area. Other ongoing land use issues such as livestock grazing could impact the soils resource resulting in increased soil erosion and sediment yields.

Vegetation

Under this alternative there would be no removal of encroaching P-J trees across the project area. Under current climate conditions, conifers are likely to continue expanding into shrub-steppe plant communities. (Miller, et al. 2008) With the expected continuation of the P-J expansion, the project area is expected to move from the existing Phase I condition to a Phase II condition. In a Phase II condition, P-J trees are co-dominant with shrubs and herbs and all three vegetation layers

influence ecological processes on the site. There would be a transition from the shrub-steppe habitat to P-J trees over time.

4.3.4. Plants

Park rockcress (*Arabis vivariensis*), Hamilton's milkvetch (*Astragalus hamiltonii*), and Goodrich's stickweed (*Cleomella palmeriana* var. *goodrichii*) – BLM Sensitive

Populations of park rockcress, Hamilton's milkvetch, and Goodrich's stickweed that potentially occur within the proposed treatment area would not be impacted.

4.3.5. Wildlife

Migratory Birds

The expected continued encroachment of P-J into sagebrush ecosystems would continue. The understory decline is expected to only minimally affect Migratory Birds in the short term, but the long term will result in a loss of understory and habitat for birds species associated with that particular vegetation type. Migratory Bird species will utilize more area than just the 3,696 acre project area.

Raptors

Under this alternative, impacts to Raptors would be slight, as the prey base is not expected to change drastically over the short term, but long term impacts resulting from encroaching P-J would result in a loss of understory species and prey species associated with that particular vegetation type. Raptors will utilize more area than just the 3,696 acre project area.

Non-USFWS Designated (Big Game Species)

There would be a slow and steady decline in terms of forage quality, as the understory grasses and forbs decline and the P-J trees dominates the project area further.

Threatened, Endangered, Proposed or Candidate

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

There will be a slow and steady decline in understory plants. Over time, the P-J trees will dominate as the sagebrush, understory grasses and forbs decline. There would be a decline in habitat quality for sage-grouse over time.

4.4. Cumulative Impact 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

Within the 1 – 3 year window, minor noticeable impacts (tracks, dead and down trees) will occur on a total of 780 non-contiguous acres. After 3 years impacts with the project will have dissipated, and natural weathering processes will prove to be beneficial to the opportunity for solitude and appearance of naturalness via growth of native species within the area. Cumulative impacts in the long term will be negligible based on visual breaks by landform, and the natural weathering process. The No Action Alternative would not result in an additional accumulation of impacts.

4.4.2. Fuels and Fire Management

The Cumulative Impact analysis area (CIAA) for Fire and Fuels is the Diamond Mountain (B8) Fire Management Unit. 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. Future treatments in this Fire Management Unit B8 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, this Fire Management Unit landscape will eventually be composed of different age classes of vegetation. The No Action Alternative would not result in an accumulation of impacts. The No Action Alternative would not result in an additional accumulation of impacts.

4.4.3. Invasive Plants/Noxious Weeds, Soils and Vegetation

Invasive Plants/Noxious Weeds

The CIAA area for vegetation is the Vernal Field Office. 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 Canada thistle, musk thistle, teasel, perennial pepperweed, and saltcedar occur within and in close proximity to the project area. Current and reasonably foreseeable actions in the CIAA that include soil or vegetation disturbance require implementation of weed prevention and mitigation practices such as those described in Chapter 4.2.3; 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 variable, 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 additional accumulation of impacts.

Soils and Vegetation

The Cumulative Impact area for vegetation is the Vernal Field Office.

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 50,000 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. Field Office Weed Monitoring and Control program would continue

to treat weed infestation areas. The No Action alternative would not result in an additional accumulation of impacts.

4.4.4. Plants

Herbicide application, infestation by noxious weeds, and vegetation treatments in potential and occupied habitat pose the greatest threat to potential park rockcress, Hamilton's milkvetch, and Goodrich's stickweed in the CIAA. The proposed action is not expected to negatively impact any of these species, and mitigation measures implemented for other similar projects will help reduce current and future impacts on potential park rockcress, Hamilton's milkvetch, and Goodrich's stickweed populations in the CIAA. The No Action Alternative would not result in an additional accumulation of impacts.

4.4.5. Wildlife

Migratory Birds and Raptors

The Cumulative Impact area for wildlife is the Vernal Field Office. The Vernal Field Office has been involved in restoring declining habitat conditions in the sage steppe habitat type. These habitat improvement projects would typically be comprised of removing P-J encroachment from sage brush, restoration of cheatgrass infested sage brush types, and sage brush manipulation projects that have a seeding component that improves understory conditions. It is expected that habitat treatments within sage steppe habitat types would continue to occur in the future. The No Action Alternative would not result in an additional accumulation of impacts.

Non-USFWS Designated (Big Game Species)

The Cumulative Impact area for vegetation is the Vernal Field Office. Current population estimates for the deer in the Diamond Unit is 12,300, below the population objective of 13,000. Conversely, elk numbers have risen substantially in the same time span. Current population estimates for the South Slope/Diamond Mountain Unit is 3,100, well above the objective of 2,500. Presently, the South Slope/Diamond Mountain Unit is open to limited entry permits for both deer and elk. Since present deer numbers are below the established herd management objective numbers, deer numbers will continue to increase in the future, until herd objective numbers are realized. As herd numbers increase, then the continued need for vigorous and productive vegetative types would increase. The Vernal Field Office has been involved in restoring declining habitat conditions in the sage steppe habitat type. These habitat improvement projects would typically be comprised of removing P-J encroachment from sage brush, restoration of cheatgrass infested sage brush types, and sage brush manipulation projects that have a seeding component that improves understory conditions. It is expected that habitat treatments within sage steppe habitat types would continue to occur in the future. The No Action Alternative would not result in an additional accumulation of impacts.

Threatened, Endangered, Proposed or Candidate

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

The Cumulative Impact area for Greater Sage Grouse is the Vernal Field Office. The Vernal Field Office has been involved in restoring declining habitat conditions in the sage steppe habitat type across the Field Office. It is expected that habitat treatments within sage steppe habitat types

would continue to occur in order to prevent the further decline of sage grouse population numbers and the potential for ESA federal listing from the U.S. Fish and Wildlife Service. These habitat improvement projects would typically be comprised of removing P-J encroachment from sage brush, restoration of cheatgrass infested sage brush types, and sage brush manipulation projects that have a seeding component that improves understory conditions. The BLM and UDWR will continue to use telemetry data to assist in project development for sage-grouse habitat restoration treatments. The No Action Alternative would not result in an additional accumulation of impacts.

4.4.6. Visual Resources

A visual contrast rating form was not completed for this project as the area is inaccessible due to weather constraints in the winter season. A similar project in a similar setting was completed for the Marshall Draw project, and though it was a much smaller scale in acreage, the land is very comparable. Should the opportunity to develop Key Observation Points become available in the spring, the Visual Resources Section could be updated to include pictures of the area and selection of key observation points within the area.

Greens associated with pinion juniper would be removed, and dead tree grays would replace them, only lower on the view horizon based on the 2-3 ft planned bucking that would occur by the lop and scatter project. In the short term, the removal of the pinion juniper would be noticeable, but visual resources for the greater area would see improvements to the natural state, making it less likely that the casual observer would notice the loss of the pinyon juniper but rather focus on the appearance of naturalness. The No Action Alternative would not result in an additional accumulation of impacts.

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**Chapter 5. Tribes, Individuals,
Organizations, Preparers, or Agencies
Consulted:**

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During preparation of the EA, public involvement consisted of posting the proposal in back office for e Planning. Issues or impacts identified through the interdisciplinary team analysis process are described in Appendix B.

Table 5.1. List of Persons, Agencies and Organizations Consulted

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
State Historic Preservation Officer (SHPO)	National Historic Preservation Act Section 106	SHPO Concurrence received May 20, 2015
Utah Division of Wildlife Resources (UDWR)	Coordination with Habitat Biologist, and Wildlife Conservation Biologist.	Contacted by email (2015) and they support the project.
Grazing Permittee	Coordination with grazing permittee	Range Management Specialist contacted two permittees by phone and they support the project.

For a list of preparers see Appendix A

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Chapter 6. References

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Appendix A. Interdisciplinary Team Checklist

Project Title Shiner Lop & Scatter :

NEPA Log Number: DOI—BLM—UT—G010—2015—0113—EA

File/Serial Number:

Project Leader:Dixie Sadlier

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 relevant impact that need to be analyzed in detail in the EA

NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section D of the DNA form. The Rationale column may include NI and NP discussions.

Determina-tion	Resource/Issue	Rationale for Determination	Signature	Date
RESOURCES AND ISSUES CONSIDERED (INCLUDES SUPPLEMENTAL AUTHORITIES APPENDIX 1 H-1790-1)				
NI	Air Quality & Greenhouse Gas Emissions	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 less than one or two vehicles per day during the project, and the project is estimated to take 25 days to complete.	Dixie Sadlier	6/18/2015
PI	BLM Natural Areas	RMP and GIS review indicates that activities would occur within the Diamond Mountain Natural Area	William Civish	6/24/2015
NI	Cultural: Archaeological Resources	The current project was determined to be an <i>undertaking</i> per 36 CFR 800.16(y). The area of potential effect (APE) 36 CFR 800.16(d) is considered to be the area within the polygons in the attached maps. Pursuant to 36 CFR 800.5(1)(b) a “no adverse effect” letter was sent to the State Historic Preservation Officer (SHPO) on May 8, 2015. We received the SHPO concurrence to our determination on May 20, 2015.	Kathie Davies	8/5/2015

Determination	Resource/Issue	Rationale for Determination	Signature	Date
NI	Cultural: Native American Religious Concerns	Tribal consultation was conducted on 6/10/2015. We did not receive any comments from the Tribes. Also, the proposed project will not hinder access to or use of Native American religious sites.	Kathie Davies	8/5/2015
NP	Designated Areas: Areas of Critical Environmental Concern	RMP and GIS review shows that no ACEC's are present within the proposed project area	William Civish	6/24/2015
NP	Designated Areas: Wild and Scenic Rivers	RMP and GIS review shows that no WSR's are present within the proposed project area	William Civish	6/24/2015
NP	Designated Areas: Wilderness Study Areas	RMP and GIS review shows that no WSA's are present within the boundaries of the proposed activity	William Civish	6/24/2015
NI	Environmental Justice	No minority or economically disadvantaged communities or populations are present which could be affected by the proposed action or alternatives.	Dixie Sadlier	3/7/2014
NP	Farmlands (prime/unique)	There are no Prime Farmlands located in the project area because there are no irrigated lands in the project area, which is a pre requisite for the resource designation.	Dixie Sadlier	6/18/2015
PI	Fuels/Fire Management	The proposed action will reduce fuel loadings across the 3,696 acre area. The project will rearrange hazardous fuels in a manner that will decrease fire behavior.	Blaine Tarbell	6/27/2015
NI	Geology/Minerals/ Energy Production	Removal of pinyon and juniper trees would not have any impact on the value of mineral resources in the project area. As the project area has adequate understory to protect soil from erosion following tree removal, no impact to geologic conditions should be expected either.	Justin Snyder	7/2/2015
PI	Invasive Plants/ Noxious Weeds, Soils & Vegetation	IP/NW: The following invasive plants/noxious weeds have been previously documented in the Project Area, per BLM GIS review: musk thistle (<i>Cardus nutans</i>), Canada thistle (<i>Cirsium arvense</i>), teasel (<i>Dipsacum</i> spp.), broadleaved pepperweed (<i>Lepidium latifolium</i>), and saltcedar (<i>Tamarix ramosissima</i>). Without appropriate mitigation measures in place, the project has the potential to contribute to the introduction and spread of invasive plant/noxious weed infestations in the Project Area.	Christine Cimiluca	6/22/2015

Determination	Resource/Issue	Rationale for Determination	Signature	Date
		<p>Soils: The Proposed Action has the potential to increase soil erosion in the Project Area.</p> <p>Vegetation: The Proposed Action involves the removal of encroaching pinyon-juniper trees in the Project Area.</p>		
NI	Lands/Access	<p>The project area is located within the Vernal Field Office Resource Management Plan planning area.</p> <p>The current land uses within the area identified in the proposed project and adjacent lands, consist of wildlife habitat, recreational use, sheep and cattle ranching, SITLA land and Dinosaur National Monuments northern boundary. No existing land uses would be changed or modified by the implementation of the Proposed Action; therefore there would be no adverse effects.</p> <p>There are several identified Uintah County Class D roads within the project area. Contact with Uintah County is recommended notifying them of the proposed project. The address to send notice letter to is;</p> <p>Uintah County Commission 152 E. 100 N. Vernal Utah 84078</p> <p>The class D roads are: Blair Spring Road, Rough McKee Bench Rd, Rainbow Draw Road, : 90306, 090308A 100402, 172401, and class B road: Island Park Road UTU-69125-17.</p> <p>Also identified in the proposed project area is SITLA lands in T3S., R24E., Section 32, ALL, and Section 28, NENE. It is recommended that notification of the proposed project be sent to SITLA. (Coordination has already happened with SITLA)</p> <p>The south half of T3S., R24E., Section 35 is identified as Dinosaur National Monument. If the proposed project is within this area, it is recommended that the Dinosaur National Park be notified of the proposed project.(No project work will be completed on the National Park)</p>	Margo Roberts	08/11/2015

Determination	Resource/Issue	Rationale for Determination	Signature	Date
		Master Title Plats have been checked for conflicts with Public Water Reserves. There are no PWR's in the proposed project area.		
NP	Lands with Wilderness Characteristics (LWC)	A review of the RMP and GIS layers shows that no Lands with Wilderness Character are present (see Natural Area write up)	William Civish	6/24/2015
NI	Livestock Grazing & Rangeland Health Standards	<p>The proposed project area is in Shiner Allotment. There will be no loss of AUM's or grazing rotation adjustment, because there will be no seed planted.</p> <p>This allotment was evaluated for Rangeland Health Standards. It was determined that this allotment is meeting the Utah Standards for Rangeland Health. The proposed action is designed to improve the vegetative condition through removing competing encroaching trees which will enhance the understory vegetation. There is expected to be a long term increase in vegetative ground cover and a reduction in soil erosion. The proposed action will likely contribute to this allotment continuing to meet Rangeland Health Standards and Guidelines.</p>	Tracey Hart	8/3/2015
NI	Paleontology	Removal of pinyon and juniper trees would not directly impact paleontological resources hosted in alluvium and bedrock. As the project area has adequate understory to protect soil from erosion following tree removal, no indirect impact to paleontological resources should be expected either.	Justin Snyder	7/2/2015
PI	Plants: BLM Sensitive	The following UT BLM Sensitive plant species have either been documented in the Project Area per BLM GIS review, or suitable habitat is present, based on BLM soils models: park rockcress (<i>Arabis vivariensis</i>), Hamilton milkvetch (<i>Astragalus hamiltonii</i>), and Goodrich's stickweed (<i>Cleomella palmeriana</i> var. <i>goodrichii</i>). Since these species and/or suitable habitat for these species are present in the Project Area, it is possible that these species may be directly or indirectly impacted as a result of the Proposed Action.	Chrstine Cimiluca	6/22/2015

Determina- tion	Resource/Issue	Rationale for Determination	Signature	Date
NP	Plants: Threatened, Endangered, Proposed, or Candidate	No federally threatened, endangered proposed or candidate plant species are present in the Project Area, per BLM GIS review. Suitable habitat for these species is also not present in the Project Area, per species habitat modelling. Since these species and suitable habitat are not present, they will not be impacted as a result of the Proposed Action.	Christine Cimiluca	6/22/2015
NI	Plants: Wetland/Riparian	No mapped wetlands or riparian areas are present in the Project Area, per BLM GIS review. Unmapped wetlands/riparian areas may be present, per 2014 NAIP aerial photo review. The Proposed Action would be focused on encroaching pinyon-juniper trees into sagebrush communities, and would avoid wetlands and riparian areas. Therefore, if these areas are present no direct or indirect impacts are anticipated as a result of the Proposed Action.	Christine Cimiluca	6/22/2015
NI	Recreation	No developed recreation sites or SRMAs exist within the project area. Some hunting occurs within the project area, however based on the scope of the project it is not anticipated that hunting will be impacted based on the number of available acres open to hunting, and no direct or indirect loss of big game can be associated with the project (see wildlife rationale).	William Civish	6/24/2015
NI	Socio-Economics	Due to the small scale project size, socioeconomics are not expected to be measurably impacted by this proposed project.	Dixie Sadlier	3/7/2014
PI	Visual Resources	The proposed project occurs within VRM class II and III lands. The objective of VRM II 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 predominate natural features of the characteristic landscape. The objective of VRM III is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate.	William Civish	6/24/2015

Determina- tion	Resource/Issue	Rationale for Determination	Signature	Date
NI	Wastes (hazardous/solid)	<i>Hazardous Waste:</i> 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. <i>Solid Wastes:</i> 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.	Dixie Sadlier	6/18/2015
NI	Water: Floodplains	A review of the Field Office GIS layer files indicates that there are no 100 year flood plains located in the project area.	Dixie Sadlier	6/18/2015
NI	Water: Groundwater Quality	The proposed action would not directly impact groundwater. Furthermore, the project would maintain and/or improve surface hydrologic conditions by preventing increased erosion/runoff associated with catastrophic wildfire. This positive effect would be passed along to the groundwater system.	Justin Snyder	7/2/2015
NI	Water: Hydrologic Conditions (stormwater)	Overall ground cover is expected to increase as a result of the proposed action, which would improve hydrologic conditions.	Dixie Sadlier	6/18/2015
NI	Water: Surface Water Quality	Surface Water Quality is not expected to be impacted by the proposed action removal of pinyon-juniper will improve overall ground cover and hydrology.	Dixie Sadlier	6/18/2015
NI	Water: Waters of the U.S.	The proposed action of removing encroaching P-J from the sage-steppe habitat is expected to improve overall ground cover and hydrology and would not degrade any ephemeral drainages in the project area.	Dixie Sadlier	6/18/2015
NP	Wild Horses	VFO GIS layers indicate that there are no Wild Horse areas present in the project area.	Dixie Sadlier	6/18/2015
PI	Wildlife: Migratory Birds (including raptors)	Potential impacts to habitat and nesting.	Dixie Sadlier	6/18/2015

Determination	Resource/Issue	Rationale for Determination	Signature	Date
PI	Wildlife: Non-USFWS Designated	BLM has designated crucial winter habitat for elk and mule deer within the project area. Project should enhance habitat for both species	Dixie Sadlier	6/18/2015
PI	Wildlife: Threatened, Endangered, Proposed or Candidate	The proposed action has been designed to enhance sage-grouse habitat. The proposed action is consistent with the guidelines established in Utah IM-2012-043. Personal communication with UDWR Sensitive Species Biologist 2015. Is the proposed project in sage grouse PPH or PGH? Yes x No If the answer is yes, the project must conform with WO IM 2012-043.	Dixie Sadlier	6/18/2015
NI	Woodlands/Forestry	VFO GIS layers indicate that there are no commercial woodlands present within the project area	Dixie Sadlier	8/5/2015

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FINAL REVIEW:			
Reviewer Title	Signature	Date	Comments
Environmental Coordinator	Kelly Buckner	8/18/2015	
Authorized Officer	Troy Suwyn	9/28/2015	