

**United States Department of the Interior  
Bureau of Land Management**

---

Environmental Assessment DOI-BLM-UT-G010-2012-76-EA

October 2012

**Bottom Canyon Hazardous Fuel Reduction Phase II**

*Location:*

Uintah County, Vernal, Utah

*Township 15 South, Range 21 East, Sections 1, 2, 4, 9, 10, 11, 12, 15, 16, and 21; SLB&*

---

Vernal Field Office  
170 South 500 East  
Vernal, Utah 84078  
Phone: 435-781-4400  
FAX: 435-781-4410



# CHAPTER 1

## INTRODUCTION AND NEED FOR THE PROPOSED ACTION

### INTRODUCTION

The Environmental Assessment (EA) has been prepared to analyze the Bottom Canyon Hazardous Fuel Reduction Phase II 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 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 Bottom Canyon Hazardous Fuel Reduction Phase II project.

### PURPOSE AND NEED FOR THE PROPOSED ACTION

The purpose of the Bottom Canyon Hazardous Fuel Reduction Phase II project is 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. In addition, the proposed action is needed to maintain important sage-steppe habitat for a variety of wildlife species in the project area.

### CONFORMANCE WITH BLM LAND USE PLAN(S)

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

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.*

Page 33 in Section F of the RMP ROD contains rationale for not managing the Wolf Point Wilderness Characteristic Unit as a BLM Natural Area. The ROD states: *7,999 acres of the total area is currently leased for O&G. Wilderness Characteristics could not be protected, preserved, or maintained.*

## **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,

## **2.0 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 involves the reduction of approximately 415 acres of hazardous fuels through use of the bullhog mastication device. The bullhog methodology involves the chipping of the trees with a reciprocating drum mounted on a rubber tired front end loader machine. The mastication treatment results in bark, sawdust, and wooden chips being left on the ground after treatment is completed.

In the project area, the P –J trees have increased in overall density and encroached into the sagebrush habitat type, increasing the overall fuel loads. The vegetation in the project area is comprised of both mountain big sagebrush and Wyoming sagebrush that has been encroached by Pinyon-Juniper trees. The sagebrush vegetative type has been designated as a Fire Regime Group III (Fire return interval 35-100 years). The project area has also been designated as being in a Class II Condition Class. (Vernal Fire Management Plan, 2009) 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. 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. No treatment work would be allowed during times of saturated soil conditions, which exist when ruts greater than 4” in depth are created by the bullhog machine in a straight line movement.

The mastication area still has an adequate understory vegetation to protect the soil from erosion, following removal of the P-J trees. The project has been designed 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. The proposed action is designed to remove encroaching P-J trees only. Sites that contain mature Pinyon-Juniper trees, (for this document, mature is defined as greater than 26" dbh) as determined by the soils and vegetation mapping completed by the NRCS in the Uintah Area Soil Survey (persistent P-J) are mapped out and would not be treated. In addition, no Ponderosa Pine trees would be treated.

Treatment work is expected to occur after August 15, 2012. However, if treatment activities occur between May 1 and August 1, then a migratory bird survey would be conducted by a qualified wildlife biologist to determine if there are migratory bird species of concern, as listed by the Partners in Flight Species of Concern for the Colorado Plateau. Nesting trees occupied by any of these species would be avoided, with a 50 meter buffer of no disturbance around each identified nesting tree/shrub, during the nesting period.

Due to the potential for weed invasion within the project area, standard weed prevention measures would be followed as described below:

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 equipment would be power-washed prior to entering the project area.
3. All vehicles and equipment would be power-washed after driving through a noxious weed infestation.
4. Staging areas would be located in weed free sites.
5. Annual monitoring of the project area for weed establishment would occur.
6. 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.

### **2.3 No Action**

Under this alternative, no hazardous fuel reduction actions would be taken. Current resource conditions and trends would continue.

### **2.4 Alternatives Considered, but Eliminated from Further Analysis: Prescribed Fire:**

The project contains a moderate amount of cheatgrass within the understory. The use of prescribed fire would result in an expansion of the cheatgrass species which typically responds favorably to fire. The expansion of cheatgrass from fire would result in an increased amount of the highly flammable fuel bed, which would increase the overall hazardous fuel loading. Thus this alternative was not considered since it would not meet the purpose and need of reducing hazardous fuel loads. In the project area, the Wyoming sagebrush habitat provides crucial elk winter and summer range, and crucial mule deer summer range, in addition to providing habitat for a host of sagebrush obligate non game species. The loss of this habitat type combined with the ongoing loss of habitat loss from the active energy development in the area would result in even more loss of this important habitat type. This alternative was not considered, because it would not maintain sagebrush habitat for wildlife species.

### **Hand Treatments**

The use of hand treatments (chainsaws) to achieve the hazardous fuel reduction objective was considered but eliminated. This treatment would encompass the use of chainsaws to cut down the trees and leave them where they lie. The density of P-J trees is approximately 562 stems/acre. With that density of trees, manually cutting the trees down and leaving them on the ground would result in a large amount of woody slash lying on the ground. This would have the effect of substantially increasing the overall amount of hazardous fuel loads on the surface as the slash dries out. This alternative was not considered because it would not reduce the accumulation of hazardous fuels.

### **Hand Treatments with Smaller Slashing and Some Removal of Felled Trees**

The use of hand treatments (chainsaws) with the slashing debris cut to a smaller particle size along with some removal of felled trees was considered. It would not be feasible or realistic to require a contractor to spend the time and resources needed to reduce the standing trees down to a smaller particle size than the typical hand treatment produces. The rationale is based on that the average density of trees within the project area is approximately 562 stems/per acre, resulting in the hand cutting of approximately 233,230 trees. Additional time and effort would then be required to reduce the cut trees debris down to a size comparable to the size resulting from a mastication treatment would be cost prohibitive and deemed unreasonable. Having a portion of the tree boles physically removed by hand from the project site would also be impractical and unfeasible due to the time, effort and expense to physically remove the trees over 415 acres. In addition, relocating felled trees effectively transfers the hazardous fuel from the project site to a nearby site, which would not reduce the fuel loading in the project area. Hazardous fuel contractors typically do not perform this kind of work, due to the high cost associated with this method. Thus this alternative was considered but eliminated based on the rationale discussed above.

## **3.0 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 in the Bookcliffs area, approximately 65 miles south of Vernal, Utah. The project area occurs on a fairly large topographical plateau. The vegetation in the area consists of Pinyon-Juniper, mountain sagebrush, Wyoming sagebrush, cheatgrass, larkspur, needle & thread grass, Indian rice grass, western wheatgrass, and a small amount of various forb species.

### **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 Fish and Wildlife Excluding USFWS Designated Species**

##### **Greater Sage-grouse (BLM Sensitive, Federal Candidate)**

The greater sage-grouse is a BLM sensitive species, and a federal candidate for listing under the Endangered Species Act. 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. Utah Division of Wildlife Resources (UDWR 2012) identifies occupied, brood, and winter habitat within the project area. There are two historic leks near, but outside of the project area.

##### **Raptors**

Some of the more visible birds in and near the project area include golden eagles, red-tailed hawks, Cooper's hawk, Swainson's hawk, great horned owl, and ravens. The BLM raptor database was reviewed and no known raptor nests were identified 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.

##### **Big Game**

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 (UDWR 2008). 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, elk move to lower elevations where they are found most often on south facing slopes, primarily in P-J woodlands (UDWR, 2010). Deer typically move down to lower elevation foothill areas.

Crucial elk winter 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 bull hog operations; therefore, they will not be discussed further in this document.

### **3.3.2 Fuels and Fire Management**

The project area is located within the Upper Bookcliffs (C6) Fire Management Unit (FMU) identified in the Vernal Fire Management Plan. The Upper Bookcliffs FMU calls for:

Approximately 113,000 acres per decade would be treated with prescribed fire. Objectives are: achieve the desired mix of seral stages for all major vegetative types, remove Pinyon-Juniper and Douglas Fir encroachment from the Wyoming sagebrush, mountain big sagebrush, aspen, and mountain browse types: and reduce fuel loads.

#### **Non fire Fuels Treatments**

Treat 7,000 acres per decade. Objectives are: achieve the desired mix of seral stages for the major vegetative types; remove the encroaching Pinyon-Juniper from the sagebrush and aspen types; provide fuel breaks in the sagebrush types to limit the size of unplanned fires; and 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 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 P-J 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. (2008, 2005) and on site tree density measurements to determine Pinyon-Juniper stems per acre, it was determined that the project area is in a Phase 2 condition as described in the literature described above. For a Phase 2 condition, fuel loads are estimated to be:

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

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.

### **3.3.3 Greenhouse Gas Emissions**

Ongoing scientific research has identified the potential impacts of anthropogenic (man-made) greenhouse gas (GHG) emissions and changes in biological carbon sequestration due to land management activities on global climate. Through complex interactions on a regional and global scale, these GHG emissions and net losses of biological carbon sinks cause a net warming effect of the atmosphere, primarily by decreasing the amount of heat energy radiated by the earth back into space. Although GHG levels have varied for millennia, recent industrialization and burning of fossil carbon sources have caused CO<sub>2</sub>(e) concentrations to increase dramatically, and are likely to contribute to overall global climatic changes. The Intergovernmental Panel on Climate Change recently concluded that —warming of the climate system is unequivocal and most of the observed increase in globally average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations..

Global mean surface temperatures have increased nearly 1.8°F from 1890 to 2006. Models indicate that average temperature changes are likely to be greater in the Northern Hemisphere. Northern latitudes (above 24° N) have exhibited temperature increases of nearly 2.1°F since 1900, with nearly a 1.8°F increase since 1970 alone. Without additional meteorological monitoring systems, it is difficult to determine the spatial and temporal variability and change of climatic conditions, but increasing concentrations of GHGs are likely to accelerate the rate of climate change.

In 2001, the IPCC indicated that by the year 2100, global average surface temperatures would increase 2.5 to 10.4°F above 1990 levels. The National Academy of Sciences has confirmed

these findings, but also has indicated there are uncertainties regarding how climate change may affect different regions. Computer model predictions indicate that increases in temperature will not be equally distributed, but are likely to be accentuated at higher latitudes. Warming during the winter months is expected to be greater than during the summer, and increases in daily minimum temperatures is more likely than increases in daily maximum temperatures. Increases in temperatures would increase water vapor in the atmosphere, and reduce soil moisture, increasing generalized drought conditions, while at the same time enhancing heavy storm events. Although large-scale spatial shifts in precipitation distribution may occur, these changes are more uncertain and difficult to predict.

Several activities contribute to the phenomena of climate change, including emissions of GHGs (especially carbon dioxide and methane) from fossil fuel development, large wildfires and activities using combustion engines; changes to the natural carbon cycle; and changes to radiative forces and reflectivity (albedo). It is important to note that GHGs will have a sustained climatic impact over different temporal scales. For example, recent emissions of carbon dioxide can influence climate for 100 years.

### **3.3.4 Invasive Plants/Noxious Weeds, Soils, and Vegetation**

#### **Soils**

Soils within the project area have been studied, mapped and described as part of the official published Uintah soil survey, completed by the Natural Resource Conservation Service (NRCS 1995). The Uintah soil survey meets the standards of the National Cooperative Soil Survey and describes the soil map units, their individual components, and provides interpretive information on soil use and management.

Soils within the project area are comprised of one soil map unit. Map unit 274 is comprised of a complex of soils. The soils within map unit 274 are the Winteridge soil, and the Moonset soil. The Winteridge soil is a loam that is derived from eolian deposits over slope alluvium derived from sandstone, limestone, silt, and shale. The Winteridge loam is located on slopes between 1 and 8 percent, is well drained, and has a runoff hazard of medium. The Ecological Site designated for the Winteridge soil (by the NRCS) is a MLRA 48A- 034BY312UT-Upland Loam.

The Ecological Site designated for the Moonset soil type is an Upland Shallow Loam (P-J). For this project however, the project area was mapped through the use of a GPS device to avoid the Moonset soil type since it supports mature or persistent P-J, and the proposed action involves the Winteridge soil type only.

#### **Vegetation**

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” (Stebleton 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.

As noted in Section 3.3.1, the project area is comprised of the Winterridge soil type. This soil type supports the sagebrush vegetative type. The understory vegetative community is comprised of similar species composed mostly of western wheatgrass, needle and thread grass, bluegrass, cheatgrass and various forb species. Pinyon-Juniper has encroached into both of the vegetative communities, with an estimated average density of 562 stems/acre.

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 Ecological Sites located within the project area are:

MLRA 34A- 034BY312UT

Upland Loam

Since the potential native vegetation in the project area is described by the NRCS as a sagebrush vegetative community, the presence of P -J at the level of approximately 562 stems/acre indicates that the P-J trees present on these sites should be considered to be part of the historic P-J expansion described by (Miller et al. 2008) and are not part of the potential native vegetative community for the project area.

### 3.3.5 Lands with Wilderness Characteristics

The project area lies west of the Bull Canyon Road within an area that has been determined by the Vernal Field Office to contain wilderness characteristics (Wolf Point unit). The Wolf Point Unit is 11,802 acres in size, and the entire 415 acres mastication project lies within this unit. This unit was reviewed by a Vernal Field Office Interdisciplinary Team in 2007 and determined to possess wilderness characteristics. In 2011, the BLM conducted a 694 acre mastication project (EA UT-G010- 2011-0129) that is identical to the project being proposed in this document.

### 3.3.6 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) within the VPA (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.

Numerous species may migrate through, or nest within the project area. This section identifies migratory birds that may inhabit the project area such as BHCA’s 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.

## 4.0 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 Fish and Wildlife Excluding USFWS Designated Species**

#### **Greater Sage-grouse (BLM Sensitive, Federal Candidate)**

The UDWR has designated the project area as occupied, brood rearing, and winter habitat. There also two historic leks near the project area. Sage-grouse habitat use and requirements change through the annual flow of the seasons and life functions. Strutting on lekking areas could occur from March - May. 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.

Direct impacts (mortality of individual grouse from bullhog vehicles) to sage grouse are not anticipated as these activities would not be conducted within sage-grouse occupied, or early brood-rearing seasons from March 1- June 15. Indirect impacts could include temporary displacement (flushing) from foraging/cover areas.

Treatment of the encroachment Pinyon-Juniper can successfully maintain this area as a grassland/shrubland community, thus enhancing and promoting the long term maintenance of sagebrush and other perennial understory species which will benefit sage grouse. The proposed action is consistent with the guidelines established in Utah IM-2012-043. as personal communication with UDWR (Brian Maxfield, 2012) verified that the project will benefit sage-grouse in the area.

#### **Raptors**

Impacts would be the same as the migratory bird section. If treatment activities occur between May 1 - August 1, then a raptor survey would be conducted by a qualified wildlife biologist.

#### **Big Game**

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 P-J or other conifer trees (UDWR 2008). The tree-dominated habitats occupied by persistent P-J 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 P-J sites can successfully return this area into a grassland/shrub land community, thus enhancing and promoting the return of sagebrush and other perennial understory species which will benefit big game habitat for the long term.

Both deer and elk can be found within the project area throughout the year. 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 would be allowed from December 1 - April 30, during the elk wintering time period

#### **4.2.2 Fuels and Fire Management:**

With the removal of the encroaching P-J, the overall fuel loadings for the project area would decline from an existing 20.56 tons/acre to 2.05 tons/acre, a reduction of an estimated 18.51 tons/acre. 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 loading 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.

#### **4.2.3 Greenhouse Gas Emissions**

Climate change analyses are comprised of several factors, including greenhouse gases (GHGs), land use management practices, the albedo effect, etc. The tools necessary to quantify climatic impacts are presently unavailable. As a consequence, impact assessment of specific effects of anthropogenic activities cannot be determined. Additionally, specific levels of significance have not yet been established. Existing climate prediction models are global in nature; so are not at the appropriate scale to estimate potential impacts of climate change on the project area. Therefore, climate change analysis for the purpose of this document is limited to accounting and disclosing of factors that contribute to climate change. Qualitative and/or quantitative evaluation of potential contributing factors within the project area are included where appropriate and practicable. The lack of scientific tools designed to predict climate change on regional or local scales limits the ability to quantify potential future impacts. However, potential impacts to air quality due to climate change are likely to be varied. For example, if global climate change results in a warmer and drier climate, increased particulate matter impacts could occur due to increased wind blown dust from drier and less stable soils. Cool season plant species' spatial ranges are predicted to move north and to higher elevations, and extinction of endemic threatened/endangered plants may be accelerated. Due to loss of habitat, or due to competition from other species whose ranges may shift northward, the population of some animal species may be reduced.

#### **4.2.4 Invasive Plants/Noxious Weeds, Soils, and Vegetation**

##### **Soils**

Soil erosion is not expected to increase as a result of the proposed action, as the project area is relatively flat, and no mastication treatment would be conducted during periods of saturated soil conditions. The proposed action would result in an increase in overall ground cover as removal of the encroaching P-J trees is expected to benefit the understory grasses, forbs, and shrubs in their overall productivity and vigor since the competition with the P-J for water, nutrients and

light would be dramatically reduced. An increase in overall ground cover is expected to improve overall watershed conditions through increased infiltration and lessened amounts of bare ground, which reduces the potential for soil erosion.

## **Vegetation**

Under this alternative, there would be 415 acres of fuel reduction activities. Encroaching Pinyon-Juniper trees would be removed across the 415 acre project and there would be a minor amount of shrub loss from being crushed by the bull hog machine. 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. 415 acres of shrub-steppe habitat would be maintained as shrub-steppe habitat.

The proposed action would result in a change from the current Phase II condition to a Phase I Condition as described in BLM Technical Note 430- (Stebleton and Bunting, 2009), and Miller et al (2008, 2005).

### **4.2.5 Lands with Wilderness Characteristics**

The mastication treatment is expected to result in leaving piles of woody matter composed of 1-2 inch chips. The piles would be less than one foot high, and resemble compost type piles. The piles would be scattered, diffuse, and isolated enough that the average observer would not perceive the woody matter as a substantial impact to naturalness. The mastication treatment would not leave behind any man-made structures, and since there would be no mastication work during times of saturated soil conditions, there would be a minimal amount of tire tracks across the project area. Those tracks that are made would likely be erased within one to two years following treatment. The project boundaries follow the natural sage brush openings and there would be no residual long term sharp contrasts or straight edge effects left upon the landscape in the project area.

Previous mastication projects have been conducted in other identified units having Lands with Wilderness Characteristics within the Vernal Field Office. A 300 acre mastication project was completed in 2006 in the Bitter Creek Lands with Wilderness Characteristics unit. The unit was reviewed in 2007 by the VFO Interdisciplinary Team, and the team determined that the 300 acre mastication project did not diminish the unit's wilderness characteristics. Since the Bitter Creek unit was determined by the ID Team to possess wilderness characteristics with the 2006 mastication project, the proposed action is not expected to diminish the wilderness characteristics of the Wolf Point Lands with Wilderness Characteristics unit either.

### **4.2.6 Migratory Birds**

Migratory bird species may be present during the breeding/nesting season from May 1- August 1. Since the proposed action is planned to occur in the fall of 2012, impacts to migratory birds are expected to be minimal. However, if the project were not to occur this fall, and occur later next year, during the breeding and 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 also cause nest abandonment. The mastication would result in a long term loss of 415 acres of P-J trees. There would also be a minor amount of shrub loss from being crushed by the bull hog machine. There is nesting habitat adjacent to the project area. The proposed project targets younger P-J trees and not the older, mature or persistent stands of P-J which are favored by most P-J bird species. The long term benefit of the proposed project would maintain the sagebrush/grassland habitat which would in return benefit sagebrush/grassland bird species, several of which are currently identified as BLM State Sensitive Species.

### **4.3 Alternative B-No Action**

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

#### **4.3.1 Fish and Wildlife Excluding USFWS Designated Species**

##### **Greater Sage-Grouse**

There would be no treatment of the Pinyon-Juniper encroachment, resulting in the loss of sagebrush and other perennial understory. Over time, the decline of the sagebrush type habitat including the understory would result in a loss of 415 acres of brood-rearing habitat.

##### **Raptors**

Impacts under this alternative would be the same as the no action for Migratory Birds.

##### **Big Game**

The continued encroachment by P-J into sagebrush habitats would be detrimental to sagebrush-dependent species because it results in the loss or fragmentation of sagebrush habitat. Over time the Pinyon-Juniper trees will out compete the shrubs, grasses, and forbs, resulting in the loss of the sagebrush habitat type. The decline of the sagebrush type habitat including the understory would result in a loss of forage over 415 acres for a variety wildlife species, especially for sagebrush dependent species.

#### **4.3.2 Fuels and Fire Management**

Under this alternative, there would be no removal of the encroaching P-J trees across the project area. Hazardous fuel loads would be expected to increase as the P-J densities increase and replace the shrub/herbaceous understory. The FRCC for the project area would be expected to change from a Class II Condition to a Class III condition as the fuel loading increases. As the fuel loading increases, increased fire severity is also expected to increase from unplanned fire events.

#### **4.3.3 Greenhouse Gas Emissions**

Impacts for this alternative would be the same as described in Section 4.2.3.

#### **4.3.4 Invasive Plants/Noxious Weeds, Soils, and Vegetation**

##### **Soils**

Under this alternative, there would be no removal of the encroaching P-J trees across the project area. 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. As P-J becomes the dominant species affecting ecological processes on the site, overall ground cover is expected to decline. With declining ground cover, overland erosion is expected to increase, leading to increased erosion and sedimentation rates.

##### **Vegetation**

Under this alternative, there would be no removal of the encroaching P-J trees across the project area. Under current climatic 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 II condition to a Phase III condition. In a Phase III condition, the P-J trees would have replaced the sagebrush and herbaceous understory, and the P-J would be the dominant species affecting the ecological processes on the site. As the perennial species decline over time, the existing cheatgrass plants are expected to also increase over the same time period, resulting in a site with a P-J tree overstory and a cheatgrass dominated understory. There would be a long term loss of 415 acres of shrub-steppe habitat over time.

#### **4.3.5 Lands with Wilderness Characteristics**

Under this alternative, existing resource conditions would continue. The wilderness characteristics within the project area would remain and would not be diminished over time as the Pinyon-Juniper trees increase, and the sagebrush habitat declines in scope and quality. Any unplanned fire that would occur would also not diminish the wilderness characteristics.

#### **4.3.6 Migratory Birds**

The continued encroachment by Pinyon-Juniper into sagebrush habitats would be detrimental to sagebrush-dependent species because it results in the loss of sagebrush foraging/nesting habitat. Over time, there is expected to be a loss of 415 acres of foraging and nesting habitat under this alternative.

#### **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.

## Fire and Fuels:

The Cumulative Impact area for Fire and Fuels is the Vernal Field Office. 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. Approximately 75,000 acres have been treated to date, and in the future 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, along with an overall reduction in hazardous fuel loads.

## 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 75,000 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.

## Wildlife and Special Status Animal Species:

The Cumulative Impact area for Wildlife and Special Status Animal Species is the Vernal Field Office Area.

### Migratory Birds, Raptor Species, Greater Sage-grouse

The Vernal Field Office has been involved in restoring declining habitat conditions in the sage steppe habitat type. It is expected that habitat treatments within sage steppe habitat types will continue to occur in the future as the need for increased amounts of suitable habitats increases.

### Big Game

Due to a precipitous decline in deer numbers in the early 1990s deer hunting has been limited and/or closed. Conversely, elk numbers have risen substantially in the same time span.

Presently, the Bookcliffs is open to limited entry permits for both deer and elk. Since present deer and elk numbers are below the established herd management objective numbers, deer and elk 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 will increase.

## Greenhouse Gas Emissions

Rangelands, and to a broader extent sagebrush steppe ecosystems, are important for carbon sequestration, primarily because of the significant carbon stored as soil organic matter and the magnitude of the rangelands that occur within the United States (roughly one-third of total lands,

excluding Alaska) Conversion of sagebrush steppe to annual vegetation dominance (such as cheatgrass) is associated with 1) volatilization of carbon in woody shrubs during wildfires (carbon source); 2) loss of surface soil organic matter layer due to erosion after a wildfire, 3) reduction in net carbon stored in deeper soils; and 4) reduction in net carbon exchange in annual grasslands compared to sagebrush steppe lands. Conversion of sagebrush steppe to annual vegetation dominance would be cumulative with such events occurring throughout much of the western United States.

Lands with Wilderness Characteristics: The Cumulative Impact area for wilderness characteristics is defined as the area in the Wolf Point Lands with Wilderness Characteristic area that was determined by the Vernal FO to possess all of the criteria needed for wilderness values defined as “naturalness” and possessing “opportunities for solitude and primitive and unconfined recreation” (i.e., 11,802 acres). The proposed action is not expected to directly or indirectly impact the wilderness characteristics of the area. Because no direct or indirect impacts to wilderness characteristics would occur under either the Proposed Action or the Proposed Action alternatives, no cumulative impacts would occur under the either alternative.

## **5.0 CONSULTATION AND COORDINATION**

### **5.1 Introduction**

During preparation of the EA, public involvement consisted of posting the proposal on the Utah BLM Environmental Notification Bulletin Board (ENBB) on January 14, 2011. Issues or impacts identified through the interdisciplinary team analysis process are described in Appendix B.

### **5.2 Persons, Groups, and Agencies Consulted**

Utah Division of Wildlife Resources  
Utah State Historical and Preservation Office  
Bert Delmabert, grazing operator  
Southern Utah Wilderness Alliance

### **5.3 List of Preparers**

The list of preparers is located in Appendix A.

## 6.0 REFERENCES

Braun, C. E., 1998. Sage grouse declines in western North America: what are the problems? Proceedings of the Western Association of State Fish and Wildlife Agencies 78:139-156

Burkhardt, J.W.; Tisdale, E.W.; 1976. Causes of juniper invasions in southwestern Idaho. Ecology: 57: 472-484

Gedney, D.R.; Azuma, D.L.; Bolsinger, C.L.; McKay, N; 1999. Western Juniper in Eastern Oregon. Gen Tech Rep. NW-GTR-464. U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 53 p.

Heath, B. R., Straw, S Anderson and J. Lawson. 1996. Proceedings of sage grouse workshop. Pinedale, Wy. USA.

Knapp, P.A.; Soule, P.T.; 1998 Recent Juniperous occidentalis expansion on a protected site in Central Oregon. Global Change Biology. 4: 347-411.

Maxfield, Brian: UDWR, 2012. Personal communication August 7, 2012.

Miller, R.F.; Rose, J.A.; 1995. Historic expansion of Juniperous occidentalis in Southeastern Oregon. Great Basin Naturalist. 55: 37-45

Miller, Richard F.; Tausch, Robin J; McArthur, E. Durant; Johnson, Dustin D; Sanderson, Stewart C; 2008. Age Structure and Expansion of Pinyon-Juniper woodlands; a regional perspective in the Intermountain West. Research Paper RMRS-RP-69. Fort Collins, Colorado; U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 15 p.

Miller, R.F.; Bates, J.D.; Svejcar, T.J.; Pierson, F.B.; Eddleman, L.E.; 2005. Biology, Ecology, and management of western juniper. Oregon State University Agricultural Experiment Station. Technical Bulletin 152. 77p.

Natural Resources Conservation Service 1995 Soil Survey of Uintah Area, Utah- Parts of Daggett, Grand, and Uintah Counties.

Parrish, J.R., F.P. Howe, and R.E. Norvell. 2002. Utah Partners In Flight Avian Conservation Strategy Version 2.0. Utah Partners in Flight Program, Utah Division of Wildlife Resources. 1594 West North Temple, Salt Lake City, Utah 84116. UDWR Publication Number 02-27. i-xiv 302 pp.

Soule, P.T.; Knapp, P.A.; 2000 Juniperous occidentalis establishment history on two minimally disturbed research natural areas in Central Oregon. Western North American Naturalist. 60: 26-33.

Tausch, R.J.; West, N.E.; Nabi, A.A.; 1981. Tree age and dominance patterns in Great Basin pinyon-juniper woodlands. Journal of Range Mangement. 34: 259-264

Tausch, R.J.; Miller, R.F.; Roundy, B.A., Chambers, J.C.; 2009. Pinyon and Juniper Field Guide: Asking the Right Questions to Select Appropriate Management Actions. USGS Circular 1335. 95p.

Stebbleton, A. and S. Bunting. 2009. Guide for Quantifying Fuels in the Sagebrush Steppe and Juniper Woodlands of the Great Basin. Technical Note 430. Bureau of Land Management, Denver, Colorado. BLM/ID/PT-09/002+2824. 81p.

Utah Division of Wildlife Resources. Approved March 31, 2010. Utah Elk Statewide Management Plan. State of Utah Department of Natural Resources, Division of Wildlife Resources, Salt Lake City, Utah.

Utah Division of Wildlife Resources. Approved September 2009. Utah Greater Sage-grouse Management Plan. State of Utah Department of Natural Resources, Division of Wildlife Resources, Salt Lake City, Utah.

U.S. Bureau of Land Management, 2008. Record of Decision for the Vernal Field Office Resource Management Plan. U.S. Bureau of Land Management, Vernal Utah.

U.S. Bureau of Land Management, 2009, Fire Management Plan

U.S. Bureau of Land Management, Approved December 22, 2011. IM 2012-043, Greater Sage-Grouse Interim Management Policies and Procedures.

Utah Steering Committee (USC). 2005. Coordinated Implementation Plan for Bird Conservation In Utah. Intermountain West Joint Venture.

## INTERDISCIPLINARY TEAM CHECKLIST

**Project Title:** Bottom Canyon Hazardous Fuel Reduction Phase II

**NEPA Log Number:** G010-2012-076

**File/Serial Number:**

**Project Leader:** Steven Strong

**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.

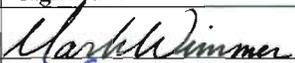
Determination	Resource	Rationale for Determination*	Signature	Date
<b>RESOURCES AND ISSUES CONSIDERED (INCLUDES SUPPLEMENTAL AUTHORITIES APPENDIX 1 H-1790-1)</b>				
NI	Air Quality	Air quality impacts from the projected levels of emission are expected to be negligible. Minimum quantities of dust emissions are anticipated because the volume of traffic from this proposal would be less than one or two vehicles per day during the project, and the project is estimated to take 10 days to complete.	Steven Strong	2/14/2012
NP	Areas of Critical Environmental Concern	A review of the Field Office GIS layer files indicates that there are no ACEC's present in the project area.	Jason West	3/1/2012
NI	BLM Natural Areas	A review of the Field Office GIS layer files indicates that there are no BLM Natural Areas located in the project area.	Jason West	3/1/2012
NP	BLM Sensitive Plant Species	A review of the Field Office GIS layer files indicates that there are no known BLM Sensitive plant species in the project area.	Kristin Williams	6/27/12
NP	Cultural Resources	It was established under 36 CFR 800.3 that the Bottom Canyon bullhog project was an undertaking as defined in 36 CFR 800.16(y). The project consists of using a bullhog to mulch trees which has the potential to cause disturbance to cultural material. In determining the scope of identification (36 CFR 800.4) it was determined that the area of potential effect (APE) is the area within the polygon presented in this document. Existing roadways will be used to conduct this project and no new access roads will be created. Therefore the only surface disturbance will be associated with the movement of the bullhog.  WSA, Inc. was contracted to complete a 100% intensive, pedestrian cultural inventory of the project area. We received their report titled <i>Bottom Canyon Bullhog Phase</i>	Kathie Davies	8/2/2012

Determination	Resource	Rationale for Determination*	Signature	Date
		<p>// on 7/18/2012. Their intensive inventory failed to identify any sites. However, their survey identified 13 isolated finds across the project area. Isolated finds are "not eligible" to the National Register of Historic Places (NRHP) and no avoidance measures need to be taken.</p> <p>A "no-effect" letter was sent to the State Historic Preservation Officer (SHPO) on 7/24/2012. We received their concurrence letter on 8/2/2012.</p>		
NI	Environmental Justice	No minority or economically disadvantaged communities or populations are present which could be affected by the proposed action or alternatives.	Steven Strong	2/14/2012
NP	Farmlands (Prime or 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.	Steven Strong	2/14/2012
PI	Fish and Wildlife Excluding USFWS Designated Species	Crucial elk winter habitat has been designated by the Vernal RMP. Treatment of encroachment areas will benefit elk winter habitat.	Dixie Sadlier	3/05/2012
NP	Floodplains	A review of the Field Office GIS layer files indicates that there are no 100 year flood plains located in the project area.	Steven Strong	2/14/2012
PI	Fuels/Fire Management	The proposed action is designed to reduce fuel loadings.	Steven Strong	2/14/2012
NI	Geology / Mineral Resources/Energy Production	The project area is leased for fluid minerals. However, there are no existing and or developed energy production sites located within the project area.	Steven Strong	2/14/2012
PI	Greenhouse Gas Emissions	Greenhouse gases would be emitted as part of the proposed action. However, there are currently no "credible scientific" methods to predict the potential climate change impacts from project specific GHG emissions (40 CFR 1502.22 Incomplete or Unavailable Information).	Steven Strong	2/14/2012
NI	Hydrologic Conditions (stormwater)	The Proposed Action is designed to improve ground cover, thus the proposed action is not expected to impact Hydrologic Conditions.	Steven Strong	2/14/2012
NI-Soils NI-Weeds PI- Vegetation	Invasive Plants/Noxious Weeds, Soils, and Vegetation	Soil erosion is not expected to increase due to no surface disturbing actions. There would be a loss of P-J trees across 415 acres. Black henbane ( <i>Hyoscyamus niger</i> ) occurs along Moon Ridge, Divide Ridge and Winter Ridge roads, all of which access the project area. Due to minimal surface disturbance, applicant committed measures and BLM's practice of early detection and rapid eradication, noxious weed infestations are not expected to increase as a result of the project.	Steven Strong	2/14/2012
NI	Lands/Access	The proposed actions of fuel reduction is not expected to impact any existing ROWS or access, as there is no surface disturbing actions involved and no permanent structures would be built or left behind.	Steven Strong	2/14/2012
PI	Lands with Wilderness Characteristics (LWC)	The majority of the proposed action takes place within the Wolf Point Inventory Unit. Wolf Point was inventoried and found to have wilderness character; however, vegetation treatments of this type and nature have not shown to have impacts to future identification of wilderness characteristics or to detract from the identified opportunities associated with lands with wilderness characteristics.	Jason West	2/14/2012

Determination	Resource	Rationale for Determination*	Signature	Date
NI	Livestock Grazing	The proposed project will not directly impact livestock operations; as the pasture will be available for use and no rest will be required. The overall ecology of the project area may benefit from long term indirect impacts.	Dusty Carpenter	3/6/2012
PI	Migratory Birds	Species could be directly/indirectly impacted. The long term benefit will come from treating encroachment into the sage-steppe habitat.	Dixie Sadlier	3/05/2012
NP	Native American Religious Concerns	Tribal consultation letters were sent to the Tribes on 2/24/2011. We received one no effect response from the Hopi Tribe on March 25, 2012, one no-effect letter from the Pueblo of Laguna Tribe on March 18, 2012. No other responses were received.	Kathie Davies	7/18/2012
NI	Paleontology	No subsurface disturbance is planned to occur with the proposed action, thus there would be no impacts to Paleontology resources.	Steven Strong	2/14/2012
NI	Rangeland Health Standards	To date, there has been no formal rangeland health assessment done on this allotment. The proposed action is designed to improve the vegetative condition by removing competition with P-J trees. There is expected to be a long term increase in vegetative ground cover and a reduction in soil erosion	Steven Strong	2/14/2012
NI	Recreation	Hunting takes place within the project area, ATV use is limited to designated trails and travel within the project area. The proposed lop and scatter action is not expected to deter these activities.	Jason West	3/1/2012
NI	Socio-Economics	Due to the small scale project size, socioeconomics are not expected to be measurably impacted by this proposed project.	Steven Strong	2/14/2012
PI	Threatened, Endangered or Candidate Animal Species	Office files were reviewed, along with a site visit. Greater Sage-Grouse occupied, brood, and winter 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, 2012.	Dixie Sadlier	3/05/2012
NP	Threatened, Endangered, Proposed, or Candidate Plant Species	A review of the Field Office GIS layer files indicates that <i>Sclerocactus wellandicus</i> (Threatened), <i>Schoenocrambe suffrutescens</i> (Endangered) and <i>Penstemon grahamii</i> (Proposed) occur to the north of the project area in the Parachute Creek member of the Green River Formation, the same geology parent material subtending the proposed project area. However, a cursory field survey revealed suitable habitat for all three species to be lacking.	Kristin Williams	6/27/12
NI	Visual Resources	The proposed project falls within a VRM Class III area. For VRM Class III the proposed action is not expected to detract from the existing form, color and texture of the surrounding landscape, and is not expected to draw attention from the casual observer, which is within the guidelines and prescriptions for the VRM Class III.	Jason West	3/1/2012
NI	Wastes (hazardous or 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,	Steven Strong	2/14/2012

Determination	Resource	Rationale for Determination*	Signature	Date
		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.		
NI	Waters of the U.S.	Waters of the U.S. are not expected to be impacted by the proposed action as there would be no surface disturbing actions that would impact the overall hydrology.	Steven Strong	2/14/2012
Surface- NI Ground- NI	Water Resources/Quality (surface/ground)	Ground water is not expected to be impacted by the proposed action as there would be no sub surface disturbance associated with the proposed action.  Surface water is not expected to be impacted by the proposed action as there are no surface disturbing actions involved.	Steven Strong	2/14/2012
NP	Wetlands/Riparian Zones	VFO GIS layers indicate that there are no Wetland/Riparian zones within the project area	Steven Strong	2/14/2012
NP	Wild and Scenic Rivers	VFO GIS layers indicate that there are no Wild and Scenic Rivers present within the Vernal Field Office Boundary	Jason West	3/1/2012
NP	Wild Horses and Burros	VFO GIS layers indicate that there are no Wild horse and Burro areas present within the project area.	Steven Strong	2/14/2012
NP	Wilderness/WSA	A Vernal RMP and GIS layers review indicate that there are no Wilderness areas present within the Vernal Field Office Boundary.	Jason West	3/1/2012
NP	Woodland / Forestry	VFO GIS layers indicate that there are no commercial woodlands present within the project area	Steven Strong	2/14/2012

**FINAL REVIEW:**

Reviewer/Title	Signature	Date	Comments
NEPA/Environmental Coordinator		10/2/12	2012-0076
Authorized Officer		10/3/12	

**APPENDIX B: RESPONSE TO ENVIRONMENTAL ASSESSMENT COMMENT**  
**Bottom Canyon Hazardous Fuel Reduction Phase II**  
**Environmental Assessment, DOI-BLM-UTG010-2012-076**

Comments in common to several groups or individuals were combined into one comment, where applicable; and subsequently addressed in one response. Comments that were not considered substantive (e.g. opinions or preferences) did not receive a formal response, but were considered in the BLM decision making process. Two comment letters were received from two organizations following the issuance of the Bottom Canyon Hazardous Fuel Reduction Phase II Environmental Assessment, DOI-BLM-UTG010-2012-076 comment period. Comments were reviewed and considered in the decision making process. BLMs responses to substantive comments are identified below.

1	Southern Utah Wilderness Alliance	The BLM has failed to Take a Hard Look at Whether the Historic Range of Density of the Pinyon-Juniper Forest in the Project Area Has Changed	Section 3.3.4 describes the existing vegetative status of the project area. The expansion and encroachment of Pinyon-Juniper across the Intermountain West is well documented by research cited in this document. Stebleton and Bunting (2009) describe and classify the expansion and/or encroachment of Pinyon-Juniper. This source is used in the EA to describe the degree of expansion/encroachment in the project area.
2	Southern Utah Wilderness Alliance	The Moonshine and Bottom Canyon EAs Lacks Evidence That the “Hazardous Fuels” Have Built Up and Fails to Explain What Sort of Build Up Has Taken Place and What Constitutes Hazardous Fuels.	Section 3.3.2 describes the existing fuel loading both in terms of amounts (tons/acres) and by functional group (shrubs, trees, and herbaceous). Section 4.3.2 describes the changes that will result from the proposed action.
3	Southern Utah Wilderness Alliance	The Moonshine and Bottom Canyon EAs Lack Evidence That Vegetation Treatment in This Area is Necessary to Maintain the Correct Fire Cycle in the Project Area.	Section 3.3.2 describes the existing Fire Regime and the existing Condition Class in terms of how the vegetative changes have occurred over time combined with historic fire suppression and how that relates to a change in Fire Regime

			Condition Class
4	Southern Utah Wilderness Alliance	The Moonshine and Bottom Canyon EAs Lack Evidence that This Vegetation Treatment Will Restore or Increase Ecological Function	Sections 3.3., 4.3.1, 3.3.4, and 4.3.4 describe various ways ecologic functions would be affected by the project.
5	Southern Utah Wilderness Alliance	The Moonshine and Bottom Canyon EAs Ignore Climate Change Impacts and Fails to Consider Cumulative Impacts to and From Climate Change to All Vegetation Projects in the Vernal Field Office.	Although presently there are no "credible scientific" methods to predict the potential climate change impacts from project specific greenhouse gas (GHG) emissions, chapter 3 and chapter 4 discuss climate change. GHG baseline information is currently unavailable to conduct a meaningful cumulative impact analysis. Based on 40 CFR 1502.22 (Incomplete or Unavailable Information) the BLM cannot reasonably analyze GHG emissions from the proposed action and no action alternatives.
6	Southern Utah Wilderness Alliance	BLM Did Not Fully Assess or Disclose Adverse Effects to Historic Properties from the Proposed Action.	<p>The Area of Potential Effect was defined as the area within the project polygons. The "scope of identification" under 36 CFR 800.4 was determined through an inventory of previous projects, and identified known sites within the project area. Through the Cultural Resources Inventory for the project area no eligible sites were found.</p> <p>As per the Native American section in the ID Team Checklist, Tribal consultation letters were sent to the Tribes on 2/24/2011. The BLM received one no effect response from the Hopi Tribe on March 25, 2012, one no-effect letter from the Pueblo of Laguna Tribe on March 18, 2012. No other responses were received.</p>

7	Southern Utah Wilderness Alliance	The Moonshine and Bottom Canyon EAs Fail to Consider the Impact on Greater Sage Grouse	Section 4.2.1 describes potential indirect impacts to sage-grouse. There are no direct impacts anticipated because of the timing of the proposed project. Communications with UDWR sensitive species biologist also concluded that there would be no direct impacts, and that the treatment would benefit sage-grouse habitat (see email).
8	Southern Utah Wilderness Alliance	The Moonshine and Bottom Canyon EAs Fail to Fully Consider an Alternative to Remove Pinyon and Juniper Trees by Hand	Section 2.4.3 describes the rationale for not fully analyzing the Cut into Smaller Slash with Some Felled Tree Removal Alternative.
9	Southern Utah Wilderness Alliance	The Moonshine and Bottom Canyon EAs fail to Fully Consider an Alternative to Remove Pinyon and Juniper Trees by Prescribed Fire.	Section 2.4.1 describes the rationale for not going forward with Analyzing the Use of Prescribed Fire as an Alternative to the Proposed Action. Under the Vernal Fire Management Plan, Fire Management Unit C6 does allow for prescribed fire to occur, but where resource/social values preclude the use of fire, then non fire fuels reduction treatments may be utilized. For the project area, the presence of cheatgrass is considered a resource value that precludes the use of prescribed fire.

# United States Department of the Interior Bureau of Land Management

---

Finding of No Significant Impact  
For  
DOI-BLM-UT-G010-2012-076-EA  
Environmental Assessment

---

October, 2012

## Bottom Canyon Hazardous Fuel Reduction Phase II

*Location:*

Uintah County, Vernal, Utah  
*Township 15 South, Range 21 East, Sections 1, 2, 4, 9, 10, 11, 12, 15, 16, and 21; SLB&M*

U.S. Department of the Interior  
Bureau of Land Management  
Vernal Field Office  
170 South 500 East  
Vernal, Utah 84078  
Phone: 435-781-4400  
FAX: 435-781-4410



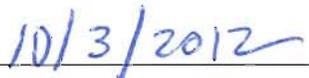
**FINDING OF NO SIGNIFICANT IMPACT**  
**Environmental Assessment**  
**DOI-BLM-UT-G010-2012-076-EA**

---

**Bottom Canyon Hazardous Fuel Reduction Phase II**

Based on the analysis of potential environmental impacts contained in the *Bottom Canyon Hazardous Fuel Reduction* Environmental Assessment (EA), and considering the significance criteria in 40 CFR 1508.27, I have determined that the proposed action will not have a significant effect on the human environment. An environmental impact statement is therefore not required.

  
\_\_\_\_\_  
Authorized Officer

  
\_\_\_\_\_  
Date

**United States Department of the Interior  
Bureau of Land Management**

---

**Decision Record  
For  
DOI-BLM-UT-G010-2012-076-EA  
Environmental Assessment**

---

**October, 2012**

---

**Bottom Canyon Hazardous Fuel Reduction Phase II**

***Location:***

Uintah County, Vernal, Utah  
*Township 15 South, Range 21 East, Sections 1, 2, 4, 9, 10, 11, 12, 15, 16, and 21; SLB&*

---

U.S. Department of the Interior  
Bureau of Land Management  
Vernal Field Office  
170 South 500 East  
Vernal, Utah 84078  
Phone: 435-781-4400 FAX: 435-781-4410



**DECISION RECORD**  
**Environmental Assessment**  
**DOI-BLM-UT-2010-G010-2012-076-EA**  
*Bottom Canyon Hazardous Fuel Reduction Phase II*

**Decision:** Based on my understanding of the information contained in the *Bottom Canyon Hazardous 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 as set out in DOI-BLM-GO10-2012-076 EA

The following actions will be realized:

- Apply the Mastication treatment.
- Monitor for noxious and invasive weeds 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 the Wyoming sagebrush habitat.

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:

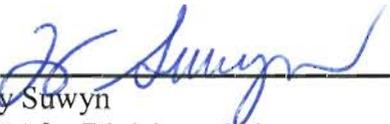
- 1) There would be increased forage for both livestock and big game species, and sage grouse.
- 2) Habitat values for sagebrush related keystone species would be improved.
- 3) Hazardous Fuel loadings would be reduced.

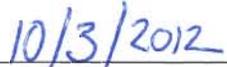
**Protest and/or Appeal Provision:**

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 October 5, 2012. 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

  
\_\_\_\_\_  
Troy Suwyn  
AFM for Division of Fire

  
\_\_\_\_\_  
Date