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Preliminary Environmental Assessment
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BURNT CANYON
WILDLAND URBAN INTERFACE
FUELS REDUCTION PROJECT

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NATIONAL SYSTEM OF PUBLIC LANDS

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1.0 BACKGROUND

1.1 Introduction

The project area analyzed in this environmental assessment (EA) is located around private land in Burnt Canyon within Lincoln County, Nevada. The project area is located on public land partially within Township 5 North, Range 70 East, Sections 19 and 30 (Map 1). Location is based on Mt. Diablo Base and Meridian (MDM).

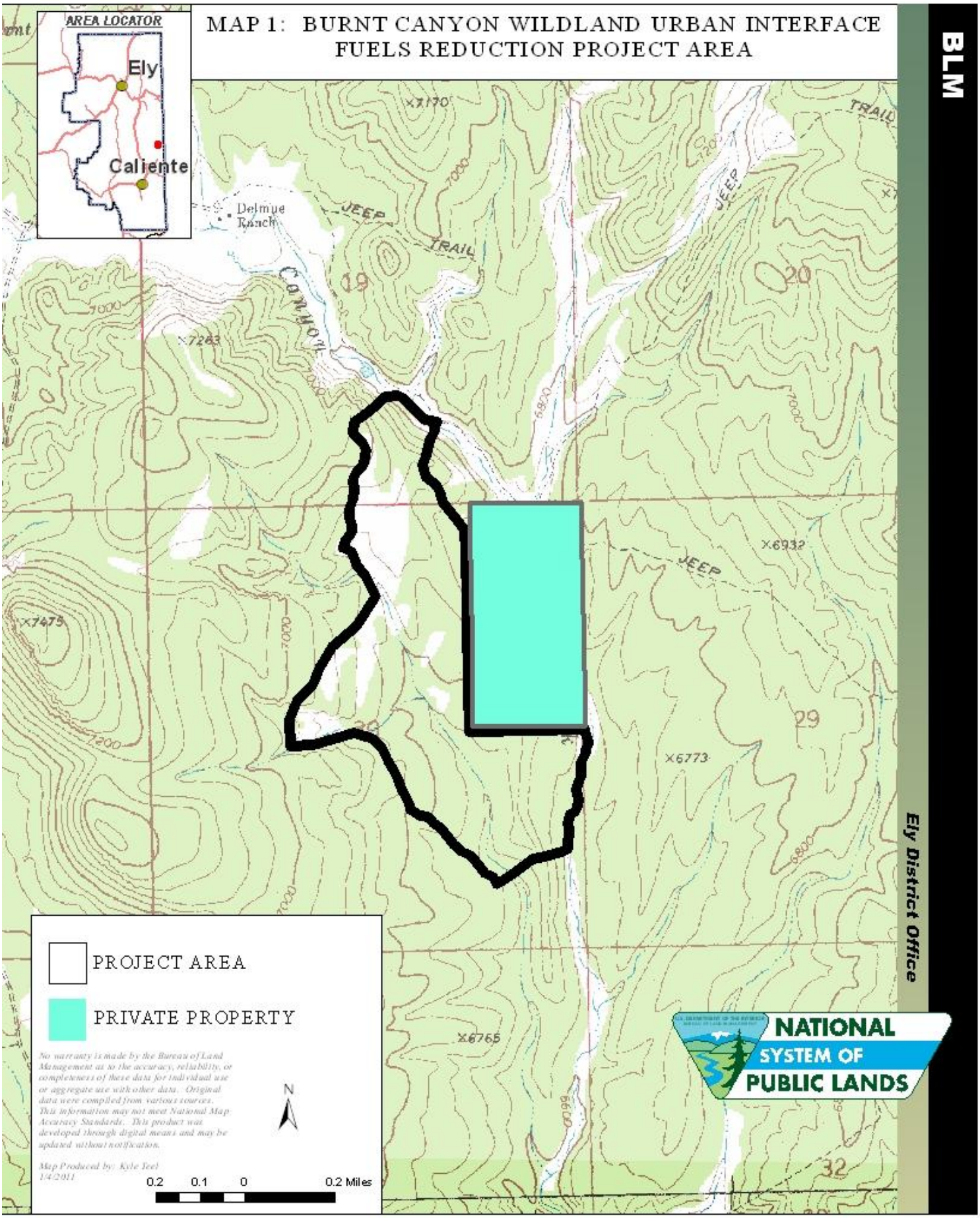
The primary vegetation within the project area consists of sagebrush communities, single-leaf pinyon (*Pinus monophylla*) and Utah juniper (*Juniperus osteosperma*). The total project area perimeter includes approximately 190 acres. However, treatment would occur on no more than 75 percent of the area or up to 142 acres. All of the lands within the project area are public lands administered by the Bureau of Land Management (BLM).

1.2 Purpose and Need for Action

The purpose of the Proposed Action is to reduce hazardous fuels and threat of wildfire to the private property and structures within Burnt Canyon. Based on BLM fire data from 1980 to 2010, 36 fires have been recorded within a five mile radius of the private property (Map 2).

Fire Regime Condition Class (FRCC) is an interagency, standardized tool for determining the degree of departure from reference condition vegetation, fuels and disturbance regimes (http://www.frcc.gov/). Assessing FRCC can help guide management objectives and set priorities for treatments. The classification is based on a relative measure describing the degree of departure from the historical natural fire regime. This departure is described as changes to one or more of the following ecological components: vegetation characteristics (species composition, structural stages, stand age, canopy closure and mosaic pattern); fuel composition; fire frequency, severity and pattern; and other associated disturbances (e.g. insects and disease mortality, grazing and drought). The three classes are based on low (0-33% departure; FRCC1), moderate (34-66% departure; FRCC2) and high (67-100% departure; FRCC3) departure from central tendency of the natural (historical) regime. Low departure is considered to be within the natural (historical) range of variability, while moderate and high departures are outside the range of variability. The FRCC rating is accompanied by a series of indicators of the potential risks that may result from the changes to the associated ecological components when disturbance is applied. Reference descriptions for a typical FRCC1 community have been developed for all major vegetation types in the Great Basin (LANDFIRE 2010). Reference conditions are compared to actual conditions for purposes of determining current FRCC classes.

The Fire Regime Condition Class (FRCC) for the project area is FRCC 2 (moderate). This indicates that fire regimes have been moderately altered from their historical range. Fire frequencies are departed from historical frequencies by multiple return intervals. Risk of losing key ecosystem components is moderate.


MAP 1: BURNT CANYON WILDLAND URBAN INTERFACE
FUELS REDUCTION PROJECT AREA
AREA LOCATOR
Ely
Caliente
Delmue Ranch
JEEP
TRAIL
CANYON
PROJECT AREA
PRIVATE PROPERTY
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.
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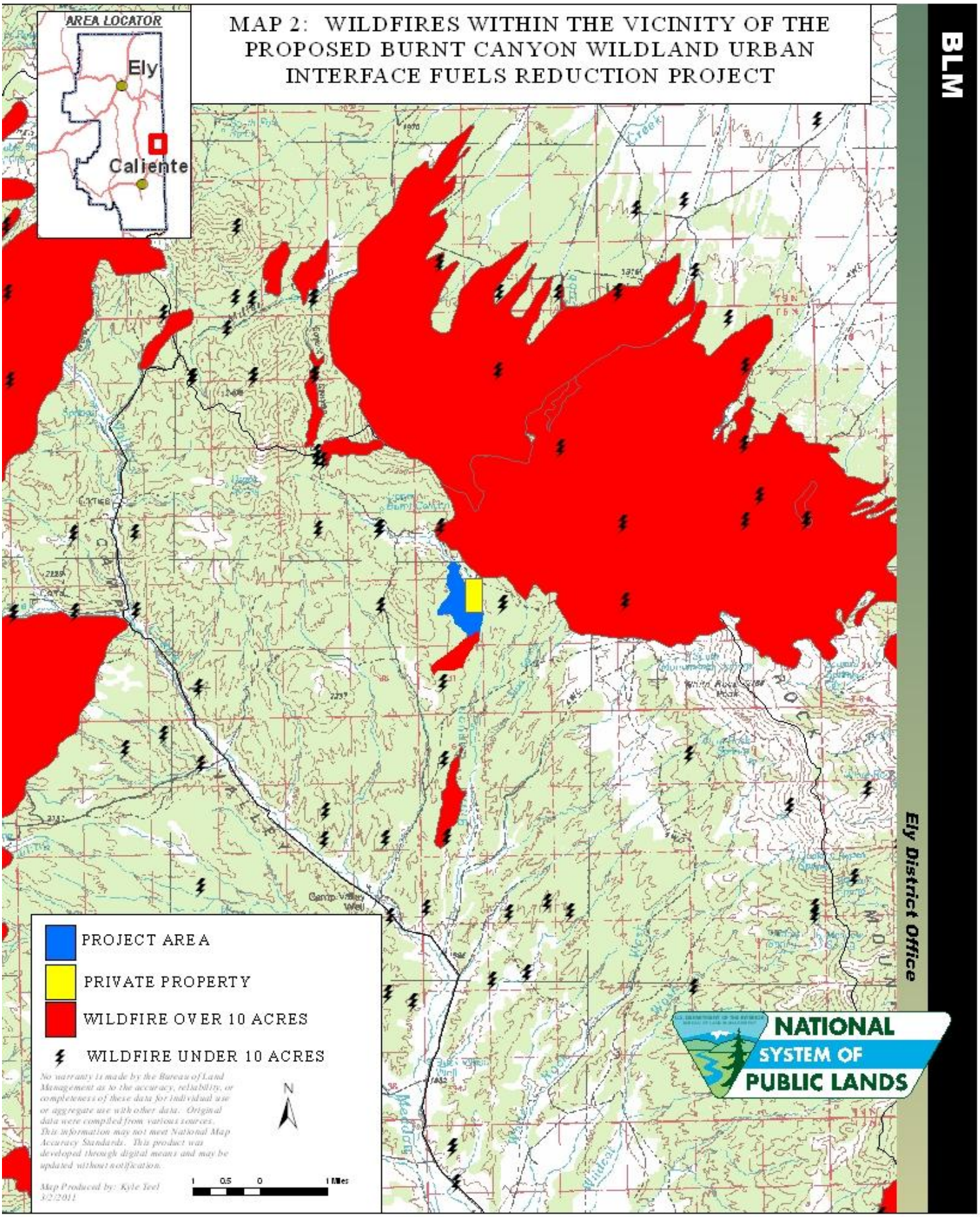
MAP 2: WILDFIRES WITHIN THE VICINITY OF THE PROPOSED BURNT CANYON WILDLAND URBAN INTERFACE FUELS REDUCTION PROJECT
AREA LOCATOR
Ely
Caliente
BLM
Ely District Office
PROJECT AREA
PRIVATE PROPERTY
WILDFIRE OVER 10 ACRES
WILDFIRE UNDER 10 ACRES
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.
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The proposal is being considered in order to achieve the following resource management goals:

- Reduce the threat of wildfire to the structures and private property within Burnt Canyon through implementation of fuel reduction treatments.

- Reduce the risk of large, uncontrolled wild fires by reducing fuel loading and continuity within the Spring Valley South East watershed.

- Restore the historic disturbance regime within the project area and the Spring Valley South East Watershed.

Short Term (immediately post treatment)

- Reduce the canopy cover and fuel continuity of single-leaf pinyon, Utah juniper, and shrub species to prevent crown fire potential on up to 75 percent of the project area.

Long Term (5 to 10 years post treatment)

- Establish a defensible fire break to the private property by reducing fuel loading.

1.3 Relationship to Planning

The Proposed Action and Alternative Action are in conformance with, and tiers to the analysis in the Ely District Proposed Resource Management Plan/Final Environmental Impact Statement completed for the *Ely District Record of Decision and Approved Resource Management Plan (August 2008)*.

The Proposed Action and Alternative Action are in conformance with the following Resource Goals and Management Actions:

Fire Management

Goals – Provide an appropriate management response to all wildland fires, with emphasis on firefighter and public safety, consistent with overall management objectives. Return fire to its natural role in the ecological system and implement fuels treatments, where applicable, to aid in returning fire to the ecological system. Establish a community education program that includes fuels reduction within the wildland urban interface to create fire-safe communities.

Management Actions – Fire Management

FM-3: Implement and update the Ely Fire Management Plan, as needed. Tier the Ely Fire Management Plan to the general fire management actions in this RMP. Fire management units within the planning area have been identified on the basis of similar vegetation type and condition, management constraints, issues, and objectives and

strategies. The following management actions will take place within those fire management units.

2) **Fuels treatments** – develop and implement prescribed fire and non-fire fuels treatments (mechanical, chemical, and biological) to create fire-safe communities, protect private property, achieve resource management objectives (see the discussion on Vegetation Resources), and restore ecological system health;

5) **Community assistance/protection** – establish an active community education and assistance program where needed to create fire-safe communities and prevent catastrophic impacts on sensitive natural resources.

FM-5: In addition to fire, implement mechanical, biological, and chemical treatments along with other tools and techniques to achieve vegetation, fuels, and other resource objectives.

FM-6: Base fire management priorities on: 1) firefighter and public safety, and 2) resource protection objectives.

Forest/Woodland Products

Goals – Provide opportunities for traditional and non-traditional uses of vegetation products on a sustainable, multiple-use basis.

Management Actions – Forest/Woodland Products

Parameter – Biomass Products

FP-22: Allow biomass harvest in areas where vegetation projects require vegetation removal and meet project objectives.

Vegetation Resources

Goals - Manage vegetation resources to achieve or maintain resistant and resilient ecological conditions while providing for sustainable multiple uses and options for the future across the landscape.

Management Actions – Vegetation Resources

Parameter – Pinyon-Juniper Woodlands

VEG-9: Integrate treatment priorities to include:

1. Public safety and protection from catastrophic wildland fire above other considerations.

The proposal is also consistent with other Federal, State and local plans including, but not limited to, the following:

- *A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment, Ten-Year Comprehensive Strategy* was a policy developed in 2001 that placed emphasis on reducing risk to communities and the environment by managing wildland fire, hazardous fuels and ecosystem restoration and rehabilitation on both forests and rangelands. Three of the four goals outlined in this policy include: (1) Improve fire prevention and suppression; (2) Reduce hazardous fuels and (3) Restore fire adapted ecosystems.

- The Healthy Forests Initiative for Wildfire Prevention and Stronger Communities. The Healthy Forests Initiative implements core components of the Cohesive Strategy agreed to by Federal, State and local agencies as well as Tribal Governments and stakeholders. The purpose of the Cohesive Strategy is to ensure a coordinated effort to provide fire protection for communities while improving the health of watersheds and vegetative communities.

  The hazardous fuels reduction portion of the strategy states, "Assign the highest priority for hazardous fuels reduction to communities at risk, readily accessible municipal watersheds, threatened and endangered species habitat and other important local features where conditions favor uncharacteristically intense fires." (Protecting People and Sustaining Resources in Fire-Adapted Ecosystems: A Cohesive Strategy, page 9).

The Burnt Canyon Wildland Urban Interface (WUI) Fuels Reduction Project responds to the fuels reduction element of the Cohesive Strategy.

1.4 Issues

Issues are consequences or potential consequences to the human environment. The identification of issues for this environmental assessment was accomplished by considering the resources that could be affected by implementation of the proposed action or any of the alternatives, through involvement with the public and input from a BLM interdisciplinary team. Internal scoping with the BLM interdisciplinary team was held on January 10, 2011 with no issues being identified. Public scoping resulted in two comments, one in support of the project and the other requested to continue to be involved in the planning process.

2.0 DESCRIPTION of PROPOSED ACTION and ALTERNATIVES

2.1 Proposed Action

The proposal is to reduce the threat of wildfire to the private property and structures adjacent to the project area by reducing fuel loading and continuity within the pinyon, juniper, and shrub (sagebrush and cliffrose) communities on up to 142 acres within an overall project area of 190 acres (Map 1). Manual, mechanical and/or a combination of both treatment methods could be used within the project area to reduce fuel loading and continuity. Manual methods would

involve the use of a chainsaw or similar type of equipment to cut the trees and/or brush. Mechanical methods for trees would involve the use of equipment that would masticate or cut the trees and brush whole. Slash/biomass creation and disposal would depend on the technique used. Manual methods would create slash in the form of limbs and large pieces or bole of the tree trunk. Slash could be chipped and spread back on the ground, chipped and hauled off as biomass, the boles removed as biomass (firewood) with the limbs being chipped or piled and disposed of later through prescribed fire. Mastication equipment would shred or chip the trees/brush with the resulting biomass being spread back out on the ground. Slash from equipment that cuts the trees whole could be piled and disposed of through prescribed fire or processed through a chipper with the residual spread back out on the ground or hauled off as biomass. Potential biomass utilization from the reduction of fuel loading and continuity would include but is not limited to chips and firewood.

If slash is disposed of through prescribed fire an open burn variance would be obtained from the State of Nevada, Bureau of Air Quality Planning.

The project area would be seeded, aerially with a mixture of species adapted to the ecological site and resistant to fire.

All treatment areas that create surface disturbance would be inventoried for cultural resources to identify eligible (Historic Properties) and sensitive sites prior to implementing treatments. Identified cultural sites would be recorded and evaluated to determine eligibility for the National Register of Historic Places. Eligible cultural resources would be avoided or impacts mitigated as necessary before any surface disturbing treatments are initiated.

A survey for mining claim markers in documented active claim sites would be conducted prior to implementing treatments. All active mining claim marker locations and tag information would be recorded. Active mining claim marker or stakes would be avoided to the extent practical. Active mining claim markers that are destroyed by thinning or chaining operations would be re-staked using a legal mining claim marker. The re-staking of mining claim markers would occur in coordination with the existing mining claimants to assure accurate, legal staking procedures that would minimize damage to claims.

The Ely District Noxious Weed Prevention Schedule would be adhered to during all phases of project implementation. Mitigation measures identified in the Noxious and Invasive Weeds Risk Assessment (Appendix A) would be implemented as part of the proposed action.

No new roads would be constructed or created during project implementation. Off-road travel with heavy equipment would occur during tree thinning activities. Loading and unloading any equipment would occur on existing roads to minimize off-road disturbances and impacts. If determined necessary, signs would be posted along roads within or adjacent to the treatment areas in regards to travel restrictions in order to assist in mitigating impacts from future cross country travel. When the ground is saturated to where ruts could be created, project implementation would cease until the ground dries out sufficiently.

The treatment areas would be monitored following project implementation to determine success towards meeting vegetative resource management objectives. All monitoring techniques would

follow BLM approved methods. The treatment areas would also be monitored to ensure any potential noxious weeds and undesirable species infestations are controlled. If noxious weeds are found, suppression measures would be taken. The noxious weed infestations would be reported to the Ely District Office Weed Coordinator in order to be included on the treatment schedule as soon as possible.

Future treatment actions similar to those listed above, including manual or mechanical thinning would occur on the site over the next twenty years to maintain vegetation treatment objectives. Maintenance treatments would not be allowed if causing more disturbance than the proposed treatment methods listed above.

2.2 No Action Alternative

The No Action Alternative is the current management situation. Under the No Action Alternative, there would be no treatments implemented within the proposed project areas.

2.3 Alternatives Considered but Eliminated from Detailed Analysis

Broadcast prescribed fire and the use of chemical treatments (Tebuthiuron) were considered as methods to thin pinyon and juniper within the project area. Broadcast prescribed burning as opposed to pile prescribed burning as described in the Proposed Action was eliminated from detailed analysis because of the close proximity of the private property and structures and a fuels reduction treatment would still be needed to reduce the threat of the broadcast prescribed burn. Tebuthiuron was eliminated from detailed analysis because this type of treatment would result in red slash remaining on the trees, and sagebrush skeletons still standing which would not reduce fuel continuity in sufficient time to protect the communities from wildfire.

3.0 DESCRIPTION of the AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES and CUMULATIVE EFFECTS

3.1 Introduction:

This chapter presents the potentially affected existing environment (i.e., the physical, biological, social, and economic values and resources) and the potential consequences to this environment resulting from the Proposed Action and No Action Alternative.

While many issues may arise during scoping, not all of the issues raised warrant analysis. Issues raised through scoping are analyzed if:

- Analysis of the issue is necessary to make a reasoned choice between alternatives.
- The issue is significant (an issue associated with a significant direct, indirect, or cumulative impact or where analysis is necessary to determine the significance of impacts).
- If there is a disagreement about the best way to use a resource, or resolve an unwanted resource condition, or potentially significant effects of a proposed action or alternative.

A description of the affected environment, followed by the environmental consequences for each resource is described below. The geographic scope for the cumulative impacts analysis is the

93,400 acre Spring Valley South East Watershed. Cumulative effects are the effects on the environment which result from the incremental impacts of actions in this EA when added to other past, present and reasonably foreseeable actions.

The identification of issues to be analyzed, and the resulting effect from the proposed action is summarized in Table 2.

Table 2: Summary of issues and resources analyzed.

Resource/Concern	Analyzed	Rationale for Analysis or Dismissal from Analysis
Air Quality	Yes	Short-term dust and/or smoke during implementation.
Water Quality, Drinking/Ground	No	Project implementation would not affect the quality and/or quantity of surface or ground water.
Water Rights	No	No new water rights applications will be filed as a result of project.
Farmlands, Prime and Unique	No	No farmlands, prime and unique are located within the project area.
Soils	Yes	Mainly short-term impacts until vegetative establishment.
Forest Health	No	The project's goals reflect the intent of the Healthy Forest Restoration Act.
Vegetation	Yes	Short-term impacts until vegetative establishment
Special Status Plants	No	None are present in the project area
Wetlands/Riparian	No	No springs or riparian areas are located within the project area
Fish and Wildlife	Yes	Fish are not present within the project area. However, wildlife species maybe.
Migratory Birds	No	Project implementation would occur after migratory bird season
FWS listed or proposed threatened (T) or endangered (E) species or critical habitat	No	None present in the project area
Special Status Animals	No	None present in the project area
Wild Horses	Yes	The project area is located within Eagle Herd Management Area.
Livestock Grazing	No	Livestock use occurs during the spring and summer within this area of the allotment. However, due to the location and size of the project livestock grazing is not expected to occur within the project area.
Native American Religious Concerns	No	None identified
Cultural Resources	No	Eligible cultural sites would be avoided
Visual Resource Management (VRM)	No	Within VRM Class II areas. Treatments would be implemented to conform to the goals and objectives of this VRM classes.
Human Health and Safety	No	Project implementation poses no human health and/or safety to the public.
Wastes, Hazardous or Solid	No	Project implementation will not produce any wastes, hazardous or solid.
Wild and Scenic Rivers	No	None present.
Fire and Fuels	Yes	Project area in FRCC 2; goal is to modify vegetation characteristics to meet FRCC 1

Invasive, Non-Native Species	No	There are no invasive, non-native species located within the project area. However, Scotch thistle, spotted knapweed, musk thistle, and bull thistle may be located along roads and drainages leading to the project area. The design features of the Proposed Action including preventive measures during implementation; treating areas where weeds spread; and improving native vegetation, will decrease impacts to weeds. Due to processes outlined in the design features no cumulative effects are anticipated. No additional analysis is needed.
Areas of Environmental Concern	No	None present in the project area.
Environmental Justice	No	No minority or low income populations identified near or within project vicinity

3.2 Air Quality

Affected Environment

The current condition of air quality in the planning area is good, relative to other areas of the nation (BLM 2008). The project area is not located within or adjacent to any Class I air sheds.

Potential Environmental Consequences

Proposed Action

During project implementation short-term consequences could occur in the form of fugitive dust and/or smoke if slash is disposed of through prescribed fire. However, once the project stops for the day or for project completion the air quality would return to its present condition.

No Action Alternative

Air quality would remain at its present condition.

Cumulative Effects

Past actions, including approximately 13,142 acres of wildfire, approximately 10,200 acres of wildfire rehabilitation, 9,300 acres of habitat improvements, 214 acres of wildland urban interface projects and other land use activities may have affected air quality in the short-term. Implementing the Proposed Action and continued occurrence of other land use activities could continue to have short term consequences to the air quality. The potential exists for future wildfire events and wildland fire use for resource benefits to occur, although it cannot be determined at this time how many could occur and acres that could be affected. With foreseeable wildfires, rehabilitation of these areas could also occur, although it cannot be determined at this time how this would affect the air quality. Presently, there is an additional 2,000 acres of fuels treatments/habitat improvement activities being considered that could affect short-term air quality within the watershed similar to the effects described in the Proposed Action. The overall cumulative impacts from all past, present and future actions are expected to be minimal.

3.3 Soils

Affected Environment

Three different soil mapping units occur within the project area; Urwil stony fine sandy loam 2 to 15 percent, Satt-Swisbob association, and Tica-Rock outcrop association (NRCS, 2008).

Potential Environmental Consequences

Proposed Action

There should be minimal soil erosion expected from implementation of the treatment methods. Under all of the treatment methods, minimal to no impacts are expected to the existing grass and shrub communities which should remain on the site and provide for soil protection and stability. Manual treatments would result in scattered slash providing a protective layer for soils from erosion and establishing understory vegetation. Biomass from mastication treatments should assist in preventing soil erosion and improve soil water holding capacity. Seeding of the treatment areas, along with the recruitment and establishment of perennial grasses and native shrubs following treatments should further promote soil health over the long term along with assisting the ecological sites in achieving site potential. A diverse vegetative understory of grasses, forbs and shrubs assists in preventing soil erosion by minimizing bare soil. Over the long term, standing plant density is expected to increase and plant biomass or litter is expected to increase which should stabilize and protect the soil resource. No new roads would be constructed or created during the treatments. Off road travel from equipment would occur during implementation of the treatments. Soil compaction is also expected to be minimal because the type of equipment and treatment methods would break up the majority of any compaction that may occur.

No Action Alternative

Current erosion rates should remain the same until such time that an uncontrolled wildfire occurs. If trees continue to establish on sagebrush ecological sites, the perennial grass and shrub component could continue to be reduced. Continued tree establishment could out-compete understory grasses and shrubs leaving unoccupied spaces and bare ground. This competition from trees could reduce the amount of vegetation available to stabilize and protect soils. Soil erosion rates could increase under this action. Following an uncontrolled wildfire event which removes a majority of the vegetation on site, the soils could be more exposed and vulnerable to water events. Grasses and shrubs regenerate at a much faster rate than tree species. If the grass and shrub component continues to be reduced over time and a high intensity wildfire event occurs in the area, vegetation establishment could be minimal after a fire and the likelihood of cheatgrass establishment becomes much greater. Soils could be more vulnerable to erosion due to the absence of desirable, perennial grasses and native shrubs which provide much greater protection to soils than undesirable annuals due to root depth and longevity. Higher erosion rates could occur and increase potential for gully formation. Sedimentation in lower drainage areas is expected to occur under such a situation.

Cumulative Effects

Past actions, including approximately 13,142 acres of wildfire, approximately 10,200 acres of wildfire rehabilitation, 9,300 acres of habitat improvements, 214 acres of wildland urban interface projects and other land use activities may have affected soils on areas outside the proposed project area. Goals of habitat improvement, wildfire rehabilitation, and wildand urban interface projects were to prevent further soil erosion, and to establish perennial vegetation to meet habitat and rangeland standards. The projects also minimized soil erosion potential from wildfire. Implementing the Proposed Action, could aid in reducing soil erosion through the improvement of the overall condition of vegetative communities, their resiliency to future disturbance and provide a mosaic of differing ecological conditions which would reduce and minimize cumulative impacts. The potential exists for future wildfire events and wildland fire use for resource benefits to occur, although it cannot be determined at this time how many could occur and acres that could be affected. With foreseeable wildfires, rehabilitation of these areas could also occur, although it cannot be determined at this time how many could occur and acres that could be affected. Presently, there is an additional 2,000 acres of fuels treatments/habitat improvement activities being considered that would affect soils within the watershed similar to the effects described in the Proposed Action. The overall cumulative impacts from all past, present and future actions are expected to be minimal.

3.4 Vegetation

Affected Environment

The primary vegetation within the project area consists of pinyon and juniper and sagebrush communities. Perennial grasses within the proposed project area include species such as Indian ricegrass (*Achnatherum hymenoides*), needle and thread (*Hesperostipa comata*), bottlebrush squirreltail (*Elymus elymoides*), and bluegrasses (*Poa spp.*). Undesirable, non-native, annuals such as cheatgrass (*Bromus tectorum*) occur within the proposed project area. Native shrubs include Wyoming big sagebrush (*Artemisia tridentata wyomingensis*), black sagebrush (*Artemisia nova*), rabbitbrush (*Chrysothamnus sp.*), Nevada tea (*Ephedra nevadensis*), and antelope bitterbrush (*Purshia tridentata*). The primary tree species are single-leaf pinyon pine (*Pinus monophylla*) and Utah juniper (*Juniperus osteosperma*). There has been an overall reduction in the production and vigor of perennial grasses within the proposed treatment areas and in some areas, brush communities have become even-aged, mature, decadent stands with minimal to no understory. Pinyon and juniper is becoming established on sagebrush habitats within the proposed treatment area.

Potential Environmental Consequences

Proposed Action

Vegetative conditions are expected to improve the site potential (e.g., variety of understory grasses and forbs with sagebrush overstory) following implementation of the proposed treatments. Reducing and removing pinyon and juniper density on sagebrush ecological sites should remove competition for nutrients, and assist in establishment and recruitment of

understory grasses and forbs, and improving shrub vigor and health. In areas where biomass is left on the ground (e.g. chaining and mastication areas), residual woody vegetation should provide protection to regenerating grasses and shrubs. Felled and scattered trees should also continue to provide protective cover for wildlife species. The decomposition of woody plant material should also improve soil nutrient content which could enhance the recruitment, establishment and long-term viability of the grass and shrub community, as well as provide protection to the soil resource.

No Action Alternative

Vegetative conditions are expected to remain the same for the short-term and decline in condition over the long-term. The health, vigor, recruitment and production of native and non-native, perennial grasses and native shrubs would continue to decline in the long-term due to shrubs becoming older and decadent and the increasing cover of pinyon and juniper. The establishment of pinyon and juniper onto sagebrush ecological sites would continue to further decline the health and vigor of the understory grasses, forbs and shrubs which are important for soil protection, soil stability and other watershed values.

Cumulative Effects

Past actions, affecting vegetation resources include approximately 13,142 acres of wildfire, approximately 10,200 acres of wildfire rehabilitation, 9,300 acres of habitat improvements, and 214 acres of wildland urban interface projects, livestock, wild horse, wildlife use, land actions, and recreation activities. These activities have created varying ecological conditions. Implementing the Proposed Action, combined with past actions, could result in ecological conditions that meet site potential and mimic the natural disturbance regime. This would provide a mosaic of differing ecological conditions which would increase the vegetative communities' resiliency to future disturbances while reducing and minimizing cumulative effects associated with disturbances. The potential exists for future wildfire events and wildland fire use for resource benefits to occur, although it cannot be determined at this time how many could occur and acres that could be effected. With foreseeable wildfires, rehabilitation of these areas could also occur, although it cannot be determined at this time how many could occur and acres that could be effected. Presently, there is an additional 2,000 acres of fuels treatments/habitat improvement activities being considered that would affect vegetation within the watersheds. The overall cumulative effects from all past, present and future actions are expected to move the vegetation communities to a more natural range of variability.

3.5 Wildlife Resources

Affected Environment

A diversity of wildlife resources typical of the Great Basin ecological systems could occur within or adjacent to the proposed area. Big game species include Rocky Mountain elk and mule deer. Nongame species could include but not limited to coyote, bobcat, fox, badger, mountain lion, and various rodents.

Potential Environmental Consequences

Proposed Action

During project implementation wildlife species present within or adjacent to the project area could be displaced from the project area to adjacent habitat. This displacement would be short-term and once project implementation was completed for the day or the entire project wildlife species would return to the area. Wildlife species could benefit from habitat diversification and the improvement of the vegetative conditions following implementation of the proposed treatments.

No Action Alternative

Short-term displacement and habitat diversification and improvement of vegetative conditions would not occur.

Cumulative Effects

Past actions, affecting wildlife resources include approximately 13,142 acres of wildfire, approximately 10,200 acres of wildfire rehabilitation, 9,300 acres of habitat improvements, and 214 acres of wildland urban interface projects, livestock, wild horse, wildlife use, land actions, and recreation activities. These activities have created varying habitat conditions. Implementing the Proposed Action, would result in additional creation of variable habitat. The potential exists for future wildfire events and wildland fire use for resource benefits to occur, although it cannot be determined at this time how many could occur and acres that could be effected. With foreseeable wildfires, rehabilitation of these areas could also occur, although it cannot be determined at this time how many could occur and acres that could be effected. Presently, there is an additional 2,000 acres of fuels treatments/habitat improvement activities being considered that would affect wildlife resources within the watershed. The overall cumulative effects from all past, present and future actions are expected to create variable habitat conditions throughout the watershed.

3.6 Wild Horses

Affected Environment

The project area is located within Eagle Herd Management Area.

Potential Environmental Consequences

Proposed Action

During project implementation wild horses present within or adjacent to the project area could be displaced from the project area to adjacent habitat. This displacement would be short-term and once project implementation was completed for the day or the entire project wild horses would

return to the area. Wild horses could benefit from habitat diversification and the improvement of the vegetative conditions following implementation of the proposed treatments.

No Action Alternative

Short-term displacement and habitat diversification and improvement of vegetative conditions would not occur.

Cumulative Effects

Past actions, affecting wild horses include approximately 13,142 acres of wildfire, approximately 10,200 acres of wildfire rehabilitation, 9,300 acres of habitat improvements, and 214 acres of wildland urban interface projects, livestock, wild horse, wildlife use, land actions, and recreation activities. These activities have created varying habitat conditions. Implementing the Proposed Action, would result in additional creation of variable habitat. The potential exists for future wildfire events and wildland fire use for resource benefits to occur, although it cannot be determined at this time how many could occur and acres that could be effected. With foreseeable wildfires, rehabilitation of these areas could also occur, although it cannot be determined at this time how many could occur and acres that could be effected. Presently, there is an additional 2,000 acres of fuels treatments/habitat improvement activities being considered that could affect wild horses within the watershed. The overall cumulative effects from all past, present and future actions are expected to create variable habitat conditions throughout the watershed.

3.7 Fire and Hazardous Fuels

Affected Environment

The proposed project area is located within the Highlands and South Egan Range – High Value – Low Constraint Fire Management Units (FMUs).

Historically, the valleys and mountains adjacent to project area were fire adapted. Fire played a regular disturbance role in the ecosystem. Fire exclusion has occurred throughout the west since Europeans arrived, which is thought to have affected the natural role of fire. Vegetation volume has increased, and vegetative composition has changed as a result of this natural disturbance alteration resulting in mature sagebrush with increasing dead to live woody material and decreasing understory grasses and forbs. Fires prior to European settlement once carried through fine fuels and created structural and age class diversity in sagebrush sites. According to Miller and Tausch (2001), infrequent fires in the past 130 years have allowed pinyon and juniper to establish on sagebrush sites. This fuel type presents a unique fire hazard as the potential for crown fire is higher. Crown fires typically burn at higher wind speeds and are more difficult to control. When this occurs, fires are usually stand replacing with crown fire domination. When fires occur with little wind, as when a high pressure system is in place over the area, fires will typically burn minimal trees.

Fire history and fire effects in the Great Basin are a vital component of resource health. There is evidence to support the existence of repeated wildland fires in eastern Nevada. It is not uncommon to find thin lines of charcoal exposed in arroyo cuts, marking episodes of prehistoric burning. Often, more than one episode is visible in the exposure. In the pinyon and juniper woodlands, ancient burned-out stumps can sometimes be found among mature stands of trees.

The typical burn cycles for pinyon, juniper and sagebrush vegetation types vary from 15 to 50 years. The current burn cycle is about a 125 years. This has led to an accumulation of fuel loadings, increased stand densities and pushed the project area into higher fire regime condition classes.

Environmental Consequences

Proposed Action

Fire behavior should be decreased as a result of reduced fuel loading and continuity. Future natural fires within the proposed project area should be less extensive and smaller in size. Smaller wildfires should be easier to manage, reducing the risk to multiple natural resources, private lands, private withholdings, physical structures associated with Right-Of-Ways and aesthetic values. Future fires should mimic natural severity. The danger of large, uncontrolled wildfires should be reduced under this alternative. Under the Proposed Action, implementation of the treatments should move the project area toward a more natural vegetative community with manageable fuel loading (FRCC 1) by reducing fuel loading and continuity, and establishing more perennial grass and forb species which naturally occur within the ecological site potential. Studies have shown that fuels treatments conducted prior to a large, uncontrolled fire event reduce fire burn severity and extreme fire behavior. These treatments modify stand structure and extreme wildfire behavior. In a report written by the Apache-Sitgreaves National Forest in 2002 titled, "Rodeo-Chediski Fire Effects Report", studies showed the lessening of burn severity on treated areas prior to a wildfire burning through the area.

No Action Alternative

Fuel conditions could continue to increase and accumulate beyond levels representative of the natural (historic) fire regime which could increase the burn intensity potential. The risk of a large, uncontrolled wildfire could remain much greater. If a wildfire does occur in the area, fuel loading and the associated fire intensity should be reduced. The No Action Alternative should result in high fuel loading, continuity and fire intensity potential in the long-term.

Cumulative Effects

Past actions, including approximately 13,142 acres of wildfire, 9,300 acres of habitat improvements, 10,200 acres of wildfire rehabilitation, and 214 acres of wildland urban interface projects, along with livestock, wild horse, wildlife use, land actions, and recreation activities may have affected fire and hazardous fuels on areas outside the proposed project area. These activities have created varying ecological conditions. Implementing the Proposed Action, combined with past actions, could result in ecological conditions that meet site potential and

mimic the natural disturbance regime. This would provide a mosaic of differing ecological conditions which would increase the vegetative communities' resiliency to future disturbances while reducing and minimizing cumulative effects associated with disturbances. The potential exists for future wildfire events and wildland fire use for resource benefits to occur, although it cannot be determined at this time how many could occur and acres that could be affected. With foreseeable wildfires, rehabilitation of these areas could also occur, although it cannot be determined at this time how many could occur and acres that could be affected. Presently, there are an additional 2,000 acres of fuels treatments/habitat improvement activities being considered that would affect vegetation within the watershed. Overall, cumulative impacts from all past, present and future actions should be minimal and FRCC 1 should be achieved in the long term.

4.0 CONSULTATION and COORDINATION

Public Interest and Record of Contacts who Commented

On February 2, 2011, a letter was mailed indicating the BLM's intent on initiating the planning and public scoping processes and describing the project goals to groups and individuals who have expressed an interest in participating in fuels reduction projects as well as state, county and federal agencies. The Ely District Native American Coordinator sent a letter discussing the proposed action and alternatives to the Native American Tribes on April 25, 2011. A letter requesting a site visit was received from the Duckwater Shoshone Tribe. On May 12, 2011 a field tour of the proposed project was conducted with Duckwater Shoshone Tribe representative Mr. Chruchill.

Comments received from the public during the initial planning stages and public scoping period were in support of the project and a request to remain on the project mailing list were received.

Internal District Review

Kyle Teel	Fire Ecologist (Fire, Fuels)
Ken Vicencio	Rangeland Management Specialist (Livestock Grazing, Noxious Weeds, Invasive Species, Vegetation)
Mark D'Aversa	Hydrologist (Riparian/Wetlands/Floodplains; Soil/Water/Air)
Nancy Williams	Wildlife Biologist (Wildlife; Migratory Birds; T&E and Special Status Species; ACECs)
Mindy Seal	Natural Resource Specialist (Noxious Weeds, Invasive Species)
Benjamin Noyes	Wild Horse and Burro Specialist (Wild Horses)
John Miller	Outdoor Recreation Planner (VRM, Recreation)
Dave Jacobson	Wilderness Planner (Wilderness Values, VRM)
Kurt Braun	Archeologist (Cultural/Paleontological/Historical Resources)
Melanie Peterson	Environmental Protection Specialist (Hazardous Materials)
Elvis Wall	Native American Coordinator (Native American Religious Concerns),
Brenda Linnell	Realty Specialist (Lands and Realty Uses)
Dave Davis	Geologist (Minerals)
Zachary Peterson	Forester (Forest Resources)
Gloria Tibbetts	NEPA, Environmental Justice

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Miller, R.F.; Tausch, R.J. 2001. The role of fire in pinyon and juniper woodlands: a descriptive analysis. In: Galley, K.E.M.; Wilson, T.P., eds. Proceedings of the invasive species workshop: the role of fire in the control and spread of invasive species. Fire Conference 2000: the first national congress on fire ecology, prevention, and management. Miscellaneous Publication No. 11. Tallahassee, FL: Tall Timbers Research Station: 15-30.

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6.0 APPENDIX

Appendix A

RISK ASSESSMENT FOR NOXIOUS & INVASIVE WEEDS

Burnt Canyon Wildland Urban Interface Fuels Reduction Project
Lincoln County, Nevada

On April 19, 2011 a Noxious & Invasive Weed Risk Assessment was completed for the Burnt Canyon Wildland Urban Interface Fuels Reduction Project. See attached map for project location. The proposal is to reduce the threat of wildfire to the private property and structures adjacent to the project area by reducing fuel load and continuity within the Pinyon, Juniper, and shrub (sagebrush and cliff rose) communities on up to 142 acres within an overall project area of 190 acres.

Tree removal would be conducted by manual (chainsaw) and/or mechanical methods such as chaining or mastication. Slash/biomass removal would depend on the type of method used. A portion of the slash/biomass created from manual methods or equipment which provides whole tree cutting methods would be used to cover trails created by tree removal equipment and place in gullies were possible. The remaining slash could be scattered or consolidated into piles and disposed of later through prescribed burning or chipping, left whole on site to degrade by natural means or hauled off site for use as biomass. Biomass could take the form of firewood, posts, chips, and various other products. It is anticipated that fuel wood would be the main biomass taken from the project area. Slash/biomass created from mastication equipment would be left on site to decompose by natural means.

The project area would be seeded, aerially with a mixture of species adapted to the ecological site and resistant to fire.

No new roads would be constructed during project implementation. Off-road travel consisting of pickups with trailers, and/or heavy equipment would occur during tree removal activities. Loading and unloading any equipment would occur on existing roads to minimize off-road disturbances and impacts. If determined necessary, signs would be posted along roads within or adjacent to the treatment areas in regards to travel restrictions in order to assist in mitigating impacts from future cross country travel. Some of the slash would be used to cover any routes created by manual tree cutting operations to reduce their visibility. Slash from mastication equipment would be left on site to cover routes taken during tree removal operations.

The treatment areas would be monitored following project implementation to determine success towards meeting resource management objectives. All monitoring techniques would follow BLM approved methods. The treatment areas would be monitored to ensure any potential noxious weeds and undesirable species infestations are controlled. If noxious weeds are found, suppression measures would be taken. The noxious weed infestations would be reported to the Ely District Weed Coordinator in order to be included on the treatment schedule as soon as possible.

No field weed surveys were completed for this project. Instead the Ely District weed inventory data was consulted. No weeds were found within the project area. The following weed species are found along roads and drainages leading to the project area:

Onopordum	Scotch Thistle
Centaurea	Spotted Knapweed
Carduus	Musk Thistle
Cirsium	Bull Thistle

There is also probably cheatgrass (*Bromus tectorum*), bur buttercup (*Ceratocephala testiculatus*), and Russian thistle (*Salsola kali*) scattered along roads in the area. The area was last inventoried for noxious weeds in 2004.

Factor 1 assesses the likelihood of noxious/invasive weed species spreading to the project area.

None (0)	Noxious/invasive weed species are not located within or adjacent to the project area. Project activity is not likely to result in the establishment of noxious/invasive weed species in the project area.
Low (1-3)	Noxious/invasive weed species are present in the areas adjacent to but not within the project area. Project activities can be implemented and prevent the spread of noxious/invasive weeds into the project area.
Moderate (4-7)	Noxious/invasive weed species located immediately adjacent to or within the project area. Project activities are likely to result in some areas becoming infested with noxious/invasive weed species even when preventative management actions are followed. Control measures are essential to prevent the spread of noxious/invasive weeds within the project area.
High (8-10)	Heavy infestations of noxious/invasive weeds are located within or immediately adjacent to the project area. Project activities, even with preventative management actions, are likely to result in the establishment and spread of noxious/invasive weeds on disturbed sites throughout much of the project area.

For this project, the factor rates as Low (3) at the present time. Due to the heavy machinery use associated with this project and ground disturbance, it is likely that the project activities will result in new weed infestations to the area, especially of non-native, invasive weeds such as cheatgrass.

Factor 2 assesses the consequences of noxious/invasive weed establishment in the project area.

Low to Nonexistent (1-3)	None. No cumulative effects expected.
Moderate (4-7)	Possible adverse effects on site and possible expansion of infestation within the project area. Cumulative effects on native plant communities are likely but limited.
High (8-10)	Obvious adverse effects within the project area and probable expansion of noxious/invasive weed infestations to areas outside the project area. Adverse cumulative effects on native plant communities are probable.

This project rates as Moderate (6) at the present time. New infestations could establish within the project area and adversely impact those native plant communities. However, there are weed control design features in the proposed action that would reduce the probability of these adverse effects. This project could improve native plant communities over the long term, increasing the potential for native plants to compete with invasive species for available resources. In addition,

the seeding of fire resistant species will reduce the likelihood of the project area being invaded by invasive species.

The Risk Rating is obtained by multiplying Factor 1 by Factor 2.

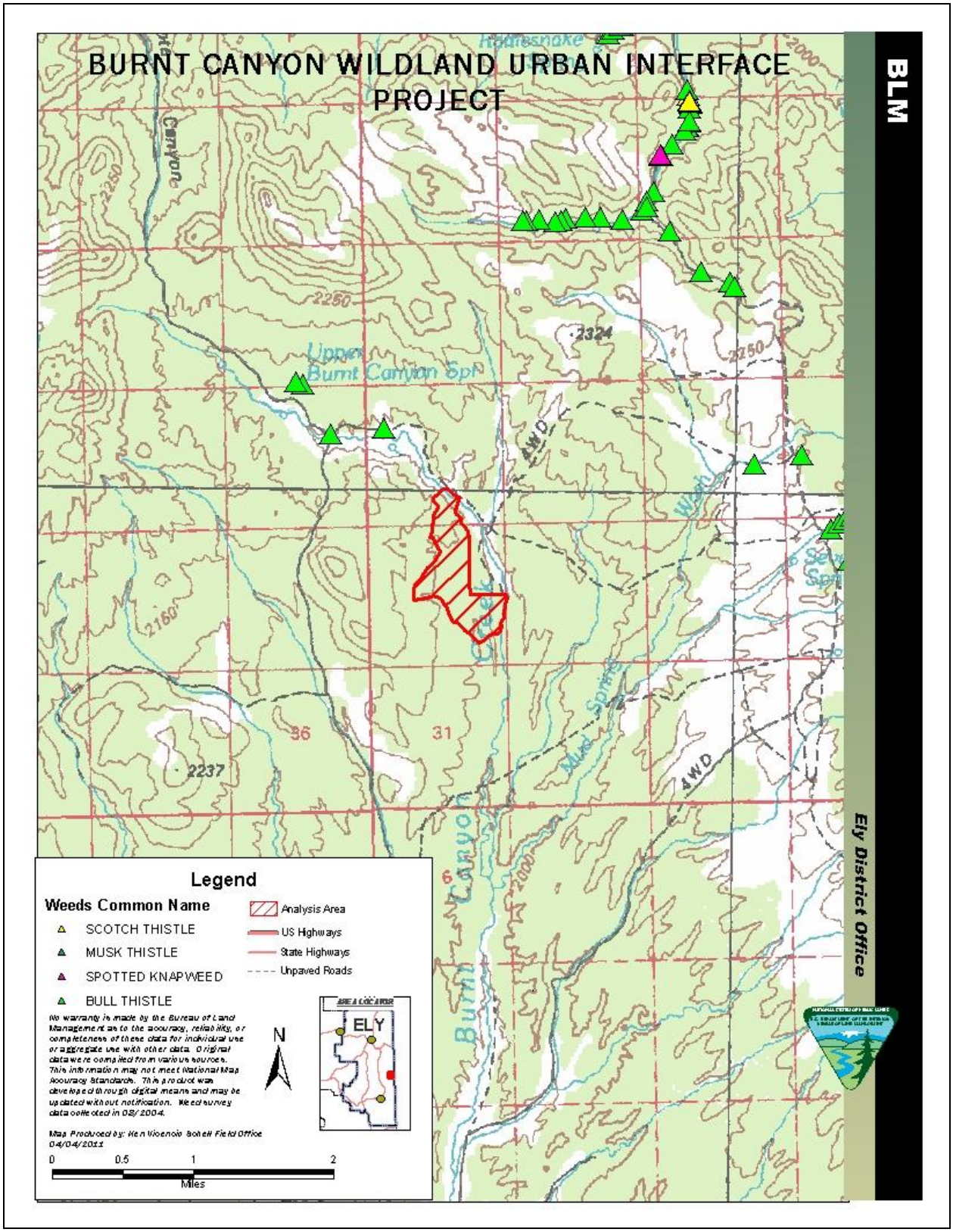
None (0)	Proceed as planned.
Low (1-10)	Proceed as planned. Initiate control treatment on noxious/invasive weed populations that get established in the area.
Moderate (11-49)	Develop preventative management measures for the proposed project to reduce the risk of introduction of spread of noxious/invasive weeds into the area. Preventative management measures should include modifying the project to include seeding the area to occupy disturbed sites with desirable species. Monitor the area for at least 3 consecutive years and provide for control of newly established populations of noxious/invasive weeds and follow-up treatment for previously treated infestations.
High (50-100)	Project must be modified to reduce risk level through preventative management measures, including seeding with desirable species to occupy disturbed site and controlling existing infestations of noxious/invasive weeds prior to project activity. Project must provide at least 5 consecutive years of monitoring. Projects must also provide for control of newly established populations of noxious/invasive weeds and follow-up treatment for previously treated infestations.

For this project, the Risk Rating is Moderate (18). This indicates that the project can proceed as planned as long as the following measures are followed:

- Monitoring will be conducted for a period no shorter than three years and the spread of noxious weeds is noted, appropriated weed control procedures will be determined in consultation with BLM personnel and will be in compliance with the appropriate BLM handbook sections and applicable laws and regulations.
- To eliminate the transport of vehicle-borne weed seeds, roots, or rhizomes all vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities or for authorized off-road driving will be free of soil and debris capable of transporting weed propagates. All such vehicles and equipment will be cleaned with power or high pressure equipment prior to entering or leaving the work site or project area. Cleaning efforts will concentrate on tracks, feet and tires, and on the undercarriage. Special emphasis will be applied to axels, frames, cross members, motor mounts, on and underneath steps, running boards, and front bumper/brush guard assemblies. Vehicle cabs will be swept out and refuse will be disposed of in waste receptacles. Cleaning sites will be recorded using global positioning systems or other mutually acceptable equipment and provided to the Ely District Weed Coordinator or designated contact person.
- Removal and disturbance of vegetation would be kept to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.)

Reviewed by: \s\Ken Vicencio 4/19/2011

Ken Vicencio Date
Rangeland Management Specialist


BURNT CANYON WILDLAND URBAN INTERFACE PROJECT
BLM
Ely District Office
Rattlesnake
Canyon
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Upper Burnt Canyon Spr
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Mud Spring
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Burnt Canyon Creek
2000
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Weeds Common Name
SCOTCH THISTLE
MUSK THISTLE
SPOTTED KNAPWEED
BULL THISTLE
Analysis Area
US Highways
State Highways
Unpaved Roads
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification. Weed survey data collected in 08/2004.
Map Produced by: Ken Woenoie Schell Field Office 04/04/2011
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