



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Ely District Office
HC33 Box 33500 (702 N. Industrial Way)
Ely, Nevada 89301-9408
http://www.blm.gov/nv/st/en/fo/ely_field_office.html



In Reply Refer To:
9210 (NVL0044)

Decision Record **Cave Valley Ranch Habitat Improvement and Fuels Reduction Project** **DOI-BLM-NV-L020-2008-0014-EA**

Background

The Bureau of Land Management has completed the planning and an environmental assessment (EA) to conduct a habitat improvement and hazardous fuels reduction project in the Cave Valley Watershed of White Pine and Lincoln counties, Nevada. The project is located at the following legal descriptions of the Mt. Diablo Baseline and Meridian:

- Township 9 North, Range 63 East, Section 1
- Township 9 North, Range 64 East, Section 6
- Township 10 North, Range 63 East, Sections 13, 24, 25, 26, 35 and 36
- Township 10 North, Range 64 East, Sections 19, 30 and 31

The purpose of the project is to reduce the rubber rabbitbrush community within the private property and adjacent public land drainages in order to restore ecological site conditions, to reduce hazardous fuels, to improve wildlife habitat and to improve other watershed values. Most of the existing stands of big sagebrush within the proposed treatment area will be avoided.

The total project area is 1,100 acres. Approximately 57 percent (626 acres) of the project area is public land managed by the Bureau of Land Management's (BLM) Schell Field Office and 43 percent (474 acres) is privately owned and managed by Cave Valley Ranch, LLC. An estimated 75 percent of the total project area, or 825 acres will actually be treated. The project will be completed as a combined effort of the BLM, Cave Valley Ranch and the Rocky Mountain Elk Foundation (RMEF).

On August 21, 2009 a Finding of No Significant Impact (FONSI) for the Cave Valley Ranch Habitat Improvement and Fuels Reduction Project was signed. The FONSI was based on environmental effects disclosed in the EA (DOI-BLM-NV-L020-2008-0014-EA) that was completed for the project. The FONSI demonstrates that an environmental impact statement pursuant to Section 102(C) of the National Environmental Policy Act is not required. The above referenced FONSI and EA are enclosed with this decision.

Decision

It is my decision to implement the Cave Valley Ranch Habitat Improvement and Fuels Reduction Project as described in the proposed action of the attached EA (DOI-BLM-NV-L020-2008-0014-EA).

All actions, mitigation measures, standard operating procedures and monitoring as described in the proposed action will be incorporated during project implementation.

This decision is in conformance with vegetation and fire management resource goals, objectives and decisions as described in the *Ely District Record of Decision and Approved Resource Management Plan (August 2008)* and the *Final Programmatic Environmental Impact Statement (PEIS) – Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States (2007)*.

The proposal is also consistent with other Federal, State and local plans including the *White Pine County Public Lands Policy Plan (2007 Revision)*, *White Pine County Elk Management Plan (2007 Revision)*, *White Pine County Sage Grouse Conservation Plan (2004)*, *Lincoln County Public Land Management and Use Plan (1997)*, *Lincoln County Master Plan (2007)*, *Lincoln County Code Requirements (2009)*, *Lincoln County Elk Management Plan (2006 Revision)*, *Mojave – Southern Great Basin Resource Advisory Council Standards and Guidelines (1997)*, *Northeastern Great Basin Resource Advisory Council Standards and Guidelines (1997)* and *Lincoln County Sage Grouse Conservation Plan (2004)*.

Rationale

It has been determined through the resource monitoring studies that ecological site conditions within the proposed project boundary are not within site potential. A decline in ecological conditions adversely affects rangeland health, wildlife habitat, soil stability and other watershed values over the long-term. Proper functioning ecological sites have a diversity of grasses, forbs, shrubs and trees and are essential to watershed integrity by stabilizing soils, promoting water infiltration and providing sufficient soil cover. There is a need to restore ecological site conditions in order to improve a wide array of watershed values.

The proposed action will promote an improvement in soil protection, soil stability, rangeland health, wildlife habitat and other watershed values over the long term. The proposed action will improve the health, vigor, recruitment and production of perennial grasses, forbs and shrubs. A mowing and chemical treatment will reduce the levels of rubber rabbitbrush and allow for greater vegetative diversity and maintain thermal cover, protective cover and improve visual resources. The rejuvenation of sagebrush and perennial grass and forb communities will improve the ecological conditions within the proposed project area.

It has also been determined that resources within the project area are at risk of wildfire due to increased fuel loading. A majority of the proposed project area has been rated at Fire Regime Condition Class (FRCC) 2 (moderate departure). 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. Vegetation attributes have been moderately altered from their historical range. There is a need to assure that the fuel type occurring within the project area is within the natural regime. The goal is to meet FRCC 1 for the fuel type within the project area which means that fire regimes are within the natural regime for the biophysical setting.

The proposed action will decrease fire behavior of wildfires by reducing fuel loading and continuity. Future natural fires will be less extensive and smaller in size. Smaller wildfires will 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. The danger of large uncontrolled wildfires will be reduced. The FRCC will be reverted to within the natural (historic) range.

As a result of the analysis in the Cave Valley Ranch Habitat Improvement and Fuels Reduction EA, and the above Finding of No Significant Impact, the BLM has determined that the decision to implement the proposed action and associated mitigation measures will not result in unnecessary or undue degradation to public lands or cause significant impacts to public health and safety.

Public Involvement

On August 11, 2008, 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. A notice was placed in BLM Nevada News on August 20, 2008 and under "NEPA" at http://www.blm.gov/nv/st/en/fo/ely_field_office.html in August of 2008. The project was also presented at the Native American Coordination Meeting on March 19, 2009. Consultation and coordination also occurred with the grazing permittees on the Cave Valley Ranch, Sheep Pass and Shingle Pass allotments; project partners (Cave Valley Ranch and RMEF) and partner agencies such as NDOW.

The only comments received during the initial planning stages and public scoping period were from the project partners. The BLM did receive requests from agencies, groups and individuals to remain on the project mailing list.

The preliminary EA was mailed to interested public on July 27, 2009. The public review and comment on the preliminary EA ended on August 10, 2009. The only comments received during the review and comment period was from the Nevada State Clearinghouse and the Lincoln County Planning Department. The Nevada State Clearinghouse indicated they were supportive of the project as written. The Lincoln County Planning Department indicated that they were supportive of the project as long as the project did not discourage or prohibit agriculture, wildlife habitat, community stability, local custom and culture, present and future economic stability, grazing rights, private improvements on public lands, mining rights, floodplains, recreational opportunities, access and water rights stability. It was determined that none of the applicable resources or special uses would be discouraged or prohibited. The Lincoln County Planning Department also requested that the BLM ensure that the project proposal was consistent with the Lincoln County Public Land Management and Use Plan (1997), Lincoln County Master Plan (2007) and Lincoln County Code Requirements (2009). It was determined that the project proposal is consistent with these plans.

Appeal Procedures

All of the documents supporting this decision are available for review by the public.

Appeal procedures for this decision are outlined in Title 43 of the Code of Federal Regulations (CFR), Part 4.

In accordance with Title 43 CFR 4.410, any party to a case who is adversely affected by the decision of an officer of the Bureau of Land Management shall have a right to appeal to the Interior Board of Land Appeals (Board). In accordance with Title 43 CFR 4.411, a person who wishes to appeal the decision must file a notice that he wishes to appeal in the office of the authorized officer who made the decision. In accordance with Title 43 CFR 4.413, within 15 days of filing the notice of appeal and any petition for stay, the appellant also must serve a copy of the appeal and any petition for stay on any person named in

the decision and on the Office of the Solicitor in the manner prescribed in Title 43 CFR 4.401(c). The office to file notice of appeal and a copy of the notice to appeal:

Bureau of Land Management
Ely District Office
HC 33 Box 33500
Ely, NV 89301

and a copy to

Office of the Regional Solicitor
Pacific Southwest Region
U.S. Department of the Interior
2800 Cottage Way, Room E-2753
Sacramento, CA 95825-1890

A person served with the decision being appealed must transmit the notice of appeal in time for it to be filed in the office where it is required to be filed within 30 days after the date of service. In accordance with Title 43 CFR 4.411 (b), the notice of appeal may include a statement of reasons for the appeal, a statement of standing if required by Title 43 CFR 4.412 (b), and any arguments the appellant wishes to make. In accordance with Title 43 CFR 4.412 (a), if the notice of appeal did not include a statement of reasons for the appeal or the appellant wishes to file additional statements of reasons, the appellant shall file such statements with the Board within 30 days after the appeal was filed. The address to file such statements to the Board is:

Board of Land Appeals
Office of Hearings and Appeals
801 North Quincy Street
Arlington, VA 22203

If statement of reasons for appealing were filed with the "Notice of Appeal", no additional statement is necessary.

Pursuant to Title 43 CFR 4.21 (b), an appellant also may petition for a stay of the final decision pending appeal by filing a petition for stay along with the notice of appeal.

At the conclusion of any document that a party must serve, the party or its representative must sign a written statement certifying that service has been or will be made in accordance with the applicable rules and specifying the date and manner of such service [Title 43 CFR 4.422(c)(2)].

Approval

/s/ Tye Petersen
Fire Management Officer
Ely District Office

8/21/2009
Date

Enclosures:

1. Finding of No Significant Impact (FONSI)
2. Cave Valley Ranch Habitat Improvement and Fuels Reduction Project EA (DOI-BLM-NV-L020-2008-0014-EA)



United States Department of the Interior

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In Reply Refer To:
9210 (NVL0044)

Finding of No Significant Impact Cave Valley Ranch Habitat Improvement and Fuels Reduction Project DOI-BLM-NV-L020-2008-0014-EA

Finding of No Significant Impact

I have reviewed the enclosed environmental assessment (EA) for the proposed Cave Valley Ranch Habitat Improvement and Fuels Reduction Project (DOI-BLM-NV-L020-2008-0014-EA) dated August of 2009. After consideration of the environmental effects as described in the EA, and incorporated herein, I have determined that the proposed action with the design specifications, including minimization or mitigation measures identified in the EA will not significantly affect the quality of the human environment and that an Environmental Impact Statement (EIS) is not required to be prepared.

This finding is based on consideration of the Council on Environmental Quality's (CEQ) criteria for significance (40 CFR 1508.27), with regard to the context and the intensity of impacts described in the EA.

Context

The project area is located in Cave Valley approximately 40 miles south of Ely, Nevada in White Pine and Lincoln Counties (refer to attached map). The area is within the main Cave Valley drainage of the Cave Valley watershed. The project is located at the following legal descriptions:

- Township 9 North, Range 63 East, Section 1
- Township 9 North, Range 64 East, Section 6
- Township 10 North, Range 63 East, Sections 13, 24, 25, 26, 35 and 36
- Township 10 North, Range 64 East, Sections 19, 30 and 31

The total project area analyzed in the EA is 1,100 acres. Approximately 57 percent (626 acres) of the project area is public land managed by the Bureau of Land Management's (BLM) Schell Field Office and 43 percent (474 acres) is privately owned and managed by Cave Valley Ranch, LLC. An estimated 75 percent of the total project area, or 825 acres will actually be treated. The project will be completed as a combined effort of the BLM, Cave Valley Ranch and the Rocky Mountain Elk Foundation (RMEF).

According to soil properties, the natural (historic) vegetation community for the project area is big sagebrush (*Artemisia tridentata*) and basin wildrye (*Leymus cinereus*) (USDA – NRCS 2003), but the area has been invaded by rubber rabbitbrush (*Ericameria nauseosa*). Rubber rabbitbrush is a competitive shrub that usually increases as ecological condition declines (USDA – NRCS 2003).

Rubber rabbitbrush is difficult to control and often results in the decline of other plant species as it becomes established.

The project area has provided habitat for a host of wildlife species including sage grouse (*Centrocercus urophasianus*), Rocky Mountain elk (*Cervus elaphus nelsoni*) and mule deer (*Odocoileus hemionus*). The continued competition and establishment of rubber rabbitbrush is a concern as it is decreasing habitat values for several wildlife species.

A majority of the proposed project area has been rated at Fire Regime Condition Class (FRCC) 2 (moderate departure). 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. Vegetation attributes have been moderately altered from their historical range. There is a need to assure that the fuel type occurring within the project area is within the natural regime. The goal is to meet FRCC 1 for the fuel type within the project area.

Intensity

The following discussion is organized around the Ten Significance Criteria described in 40 CFR 1508.27 and incorporated into BLM's Critical Elements of the Human Environment list (H-1790-1), and supplemental Instruction Memorandum, Acts, regulations and Executive Orders. The following have been considered in evaluating intensity for this proposal:

1. Impacts that may be both beneficial and adverse.

The EA has considered both beneficial and adverse impacts of the habitat improvement and fuels reduction project. Considering all impacts, the project will result in reduced fuel loads, improved ecological and habitat conditions and fire resiliency for the proposed project area. Lower fuel loading will reduce the risk of damage from wildfire within the project area and protect vegetation, soils, wildlife habitat and other watershed values. Effects to overall improved ecological conditions, watershed stability and the establishment of a more fire resilient ecological community are expected over time. A return of the natural fire regime and vegetative conditions is considered as merely improving the quality of the human environment through proactive treatments and fire management. Impacts that could be adverse include the potential for short-term soil erosion following the mowing and chemical treatments which could occur only with localized high intensity precipitation events. The increase in the production and vigor of perennial herbaceous species following project implementation will mitigate effects from soil erosion. The scattered biomass from mowing activities will also mitigate effects from soil erosion.

2. The degree to which the proposed action affects public health or safety.

The proposed action will result in improved public health and safety by reducing the existing fuel load and minimizing the risk of damage due to uncontrolled wildfires. Proposed treatment designs and mitigating measures will minimize impacts to public health and safety. Public health and safety could be compromised if vegetation treatments are not implemented in the area. The proposed action will have very minimal effects on air quality for the short term. Dust is expected to occur under mowing activities but is not expected to exceed Nevada and National Ambient Air Quality Standards. Emissions from equipment will also occur, but air quality will not be affected beyond the current emission levels.

Air quality will be minimally impacted, as wind will sufficiently transport emission particles from the area. All State and National air quality standards are expected to be met.

3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers or ecologically critical areas.

The project area is representative of the Great Basin in terms of vegetative condition and ecological functionality. Treatment design features and mitigating measures associated with the proposed action will ensure the protection of historic and cultural resources that occur within the project area. The project area does not contain any park lands, prime farmlands, wetlands or wild and scenic rivers. The area is not considered an ecologically critical area, but failure to take action to reduce the risk from wildfire could place the area at risk from erosion and/or the establishment of noxious or invasive weeds following a large wildfire. Failure to improve the ecological conditions will eventually result in a loss or damage to cultural resources that occur within or near the project area.

4. The degree to which the effects on the quality of the human environment are likely to be highly controversial.

The treatment methods analyzed in the EA are well known and documented as successful tools for reducing fuel continuity and improving habitat conditions. The treatments in the proposed action will allow for attainment of resource objectives. The treatment design features and mitigating measures associated with the treatments will minimize adverse impacts to the quality of the human environment. In the long term, benefits will be realized to the quality of the human environment as vegetative species diversity and distribution will increase, and wildfire sizes will decrease. The effects resulting from the proposed treatments are not likely to be highly controversial.

5. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

The treatment methods to be used are accepted standard practices, and the effects of the treatments do not involve unique or unknown risks. Mitigation measures have been included in the treatment designs to address known risks and uncertainties. Monitoring is also incorporated in the project design to address any uncertainty.

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

The actions associated with this project, and as identified in the EA do not establish a precedent for future actions with significant effects and does not represent a decision in principle about a future consideration. While post treatment monitoring data from this project might be used to determine appropriate actions in future similar type projects, those projects will be subject to environmental assessment standards and as independent decision-making processes.

7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.

All resources have been evaluated for cumulative impacts in the EA and no significant impacts were identified. Other fuels reduction and habitat improvement projects may be proposed in the future in the Cave Valley watershed. These projects seen together with anticipated future proposed land disturbing activities in the area will not result in cumulatively significant impacts at the local or watershed scale. Overall, future similar projects will improve vegetation and habitat diversity and protect watersheds from erosion and hazards from large wildfires. As standard procedure, future projects will be subject to cumulative impact analysis and reviewed on an area-specific case-by-case basis.

8. The degree to which the action may adversely affect districts, sites, highways, structures or objects listed in or eligible for listing in the NRHP or may cause loss or destruction of significant scientific, cultural or historical resources.

The proposed action will not adversely affect districts, sites, highways, structures or objects listed on or eligible for listing in the National Register of Historical Places, nor will it cause the loss or destruction of significant scientific, cultural or historical places. Mitigation measures associated with the actions address protection of eligible historic and cultural properties that occur in the project area. Identified cultural and historic properties will be avoided or mitigation actions completed prior to treatment to prevent adverse impacts.

9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the ESA of 1973.

It has been determined that no federally listed threatened or endangered species occur within the proposed project area.

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

The proposed action will not violate or threaten to violate any Federal, State or local law or requirement imposed for the protection of the environment. The proposed action is consistent to the maximum extent possible with Federal, State and local policies and plans.

/s/ Tye Petersen

Fire Management Officer
Ely District Office

8/21/2009

Date

Enclosure

1. Cave Valley Ranch Habitat Improvement and Fuels Reduction Project EA (DOI-BLM-NV-L020-2008-0014-EA)

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

Environmental Assessment
DOI-BLM-NV-L020-2008-0014-EA
August 2009

Cave Valley Ranch Habitat Improvement and Fuels Reduction Project

Location:

Township 9 North, Range 63 East, Section 1
Township 9 North, Range 64 East, Section 6
Township 10 North, Range 63 East, Sections 13, 24, 25, 26, 35 and 36
Township 10 North, Range 64 East, Sections 19, 30 and 31
White Pine and Lincoln County, Nevada

Applicant/Address:

Cave Valley Ranch, LLC
1932 Ivy Point Lane
Las Vegas, NV 89134

U.S. Department of the Interior
Bureau of Land Management
Ely District Office
Phone: (775) 289-1800
Fax: (775) 289-1910



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1.0 BACKGROUND

1.1 Introduction

The project area analyzed in this Environmental Assessment (EA) is located in Cave Valley approximately 40 miles south of Ely, Nevada in White Pine and Lincoln Counties (Map 1). The area is within the main Cave Valley drainage of the Cave Valley watershed. The project is located at the following legal descriptions of the Mt. Diablo Baseline and Meridian:

- Township 9 North, Range 63 East, Section 1
- Township 9 North, Range 64 East, Section 6
- Township 10 North, Range 63 East, Sections 13, 24, 25, 26, 35 and 36
- Township 10 North, Range 64 East, Sections 19, 30 and 31

The total project area to be analyzed in this EA is 1,100 acres. Approximately 57 percent (626 acres) of the project area is public land managed by the Bureau of Land Management's (BLM) Schell Field Office and 43 percent (474 acres) is privately owned and managed by Cave Valley Ranch, LLC. An estimated 75 percent of the total project area, or 825 acres would actually be treated. The project would be completed as a combined effort of the BLM, Cave Valley Ranch and the Rocky Mountain Elk Foundation (RMEF).

According to soil properties, the natural (historic) vegetation community for the project area is big sagebrush (*Artemisia tridentata*) and basin wildrye (*Leymus cinereus*) (USDA – NRCS 2003), but the area has been invaded by rubber rabbitbrush (*Ericameria nauseosa*). Rubber rabbitbrush is a competitive shrub that usually increases as ecological condition declines (USDA – NRCS 2003). Rubber rabbitbrush is difficult to control and often results in the decline of other plant species as it becomes established.

The project area has provided habitat for a host of wildlife species including sage grouse (*Centrocercus urophasianus*), Rocky Mountain elk (*Cervus elaphus nelsoni*) and mule deer (*Odocoileus hemionus*). The continued competition and establishment of rubber rabbitbrush is a concern as it is decreasing habitat values for several wildlife species.

1.2 Purpose and Need for Action

The purpose of the Proposed Action is to reduce the rubber rabbitbrush community within the private property and adjacent public land drainages in order to restore ecological site conditions, to reduce hazardous fuels, to improve wildlife habitat and to improve other watershed values. All of the existing stands of big sagebrush within the proposed treatment area would be avoided.

The need for the proposal results from monitoring data which indicates a dominance of rubber rabbitbrush on the project site which should be comprised of approximately 70 to 80 percent basin wildrye when at the ecological site potential (USDA – NRCS, 2003).

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 most major vegetation types. Reference conditions are compared to actual conditions for purposes of determining current FRCC classes.

A majority of the project area has been rated at FRCC 2 (moderate departure). 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. Vegetation attributes have been moderately altered from their historical range. There is a need to assure that the fuel type occurring within the project area is within the natural regime. The goal is to meet FRCC 1 for the fuel type within the project area.

The proposal is being considered in order to achieve the following resource management goals:

- Reduce rubber rabbitbrush on sagebrush and basin wildrye dominated ecological sites in order to improve the overall vegetative composition within the ecological site potential and improve the health, vigor and production of perennial herbaceous species
- Improve the available habitat for neighboring sage grouse, mule deer and elk populations
- Reduce the risk of large, uncontrolled wild fires by reducing fuel loading and continuity within the Cave Valley Watershed and meet FRCC 1
- Restore the historic disturbance regime within the project area

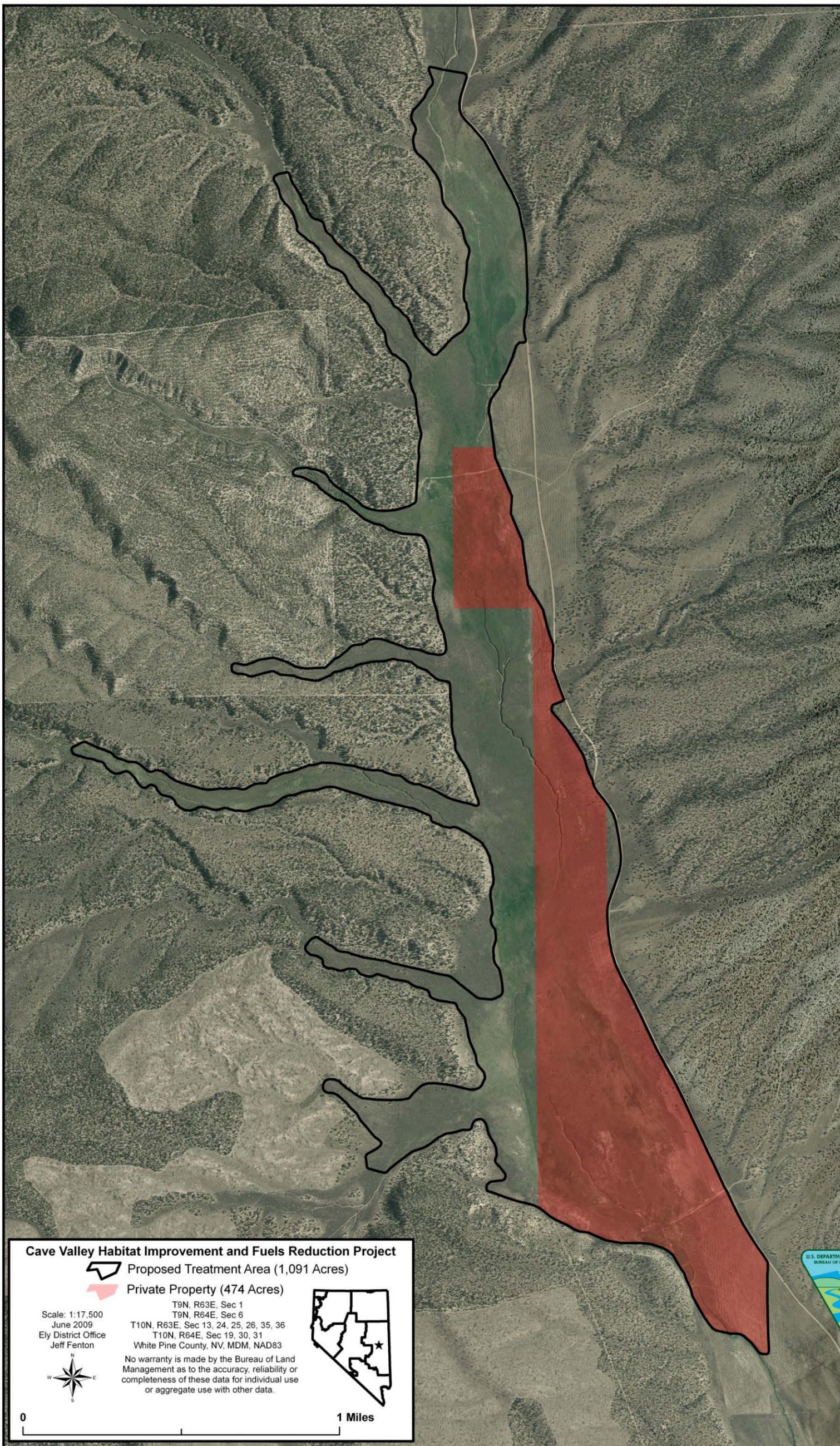
Resource management objectives include the following:

Short Term (immediately post treatment)

- Reduce the canopy cover of rubber rabbitbrush by at least 90 percent on sagebrush and basin wildrye dominated ecological sites on approximately 75 percent (825 acres) of the 1,100 acre project area parameter

Long Term (5 years post treatment)

- Increase the percent composition by weight (lbs/acre) of perennial grasses and forbs to a minimum of 90 percent of the ecological site potential on sagebrush and basin wildrye dominated sites within 5 years following completion of the proposed treatments



Cave Valley Habitat Improvement and Fuels Reduction Project

 Proposed Treatment Area (1,091 Acres)

 Private Property (474 Acres)

Scale: 1:17,500
June 2009
Ely District Office
Jeff Fenton



T9N, R63E, Sec 1
T9N, R64E, Sec 6
T10N, R63E, Sec 13, 24, 25, 26, 35, 36
T10N, R64E, Sec 19, 30, 31
White Pine County, NV, MDM, NAD83



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.

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1.3 Relationship to Planning

The Proposed Action and Alternative Action are in conformance with, and tiers to the analysis completed for the *Ely District Record of Decision and Approved Resource Management Plan (August 2008)* and the *Final Programmatic Environmental Impact Statement (PEIS) – Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States (2007)*.

The Proposed Action and Alternative Action are in conformance with the following Vegetation Resources Goals and Objectives:

Goals – Vegetation Resources 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. (Page 26)

Objectives – Vegetation Resources To manage for resistant and resilient ecological conditions including healthy, productive and diverse populations of native or desirable non-native plant species appropriate to the site characteristics. (Page 26)

Management Actions – Vegetation Resources (General Vegetation Management)

- ✓ VEG-1: Emphasize treatment areas that have the best potential to maintain desired conditions or respond and return to the desired range of conditions and mosaic upon the landscape, using all available current or future tools and techniques. (Page 26)
- ✓ VEG-4: Design management strategies to achieve plant composition within the desired range of conditions for vegetation communities, and emphasize plant and animal community health at the mid scale (watershed level). (Page 26)
- ✓ VEG-6: Emphasize the conservation and maintenance of healthy, resilient and functional vegetation communities before restoration of other sites. (Page 27)
- ✓ VEG-7: Determine seed mixes on a site-specific basis dependent on the probability of successful establishment. Use native and adapted species that compete with annual invasive species or meet other objectives. (Page 27)
- ✓ VEG-17: Integrate treatments to: (1) Establish and maintain the desired herbaceous state or early shrub state where sagebrush is present along with a robust understory of perennial species; and (2) Prioritize treatments toward restoration of sagebrush communities on areas with deeper soils and higher precipitation (Page 31)
- ✓ VEG-18: Manage native range to meet the requirements of wildlife species. Management will focus on maintaining or establishing diversity, mosaics and connectivity of sagebrush between geographic areas at the mid and fine scales. (Page 31)

Parameter – Riparian/Wetlands Desired Range of Conditions: The Ely District Office is directed to follow the appropriate rangeland health standards. The Northeastern Great Basin Resource Advisory Council states "Riparian and wetland areas exhibit a properly functioning condition and achieve state water quality criteria." In addition to achieving proper functioning condition (PFC), composition, structure and cover of riparian vegetation will occur within capabilities of the site. Ground cover and species composition will be appropriate to the site. Riparian areas with free-flowing water (i.e. undeveloped springs) that are non-functional or functioning at risk will show improving trends toward PFC. (Page 32 and 33)

- ✓ VEG-23: Promote vegetation structure and diversity that is appropriate and effective in controlling erosion, stabilizing stream banks, healing channel incisions, shading water, filtering sediment and dissipating energy, in order to provide for stable water flow and bank stability. (Page 33)
- ✓ VEG-24: Focus management actions on uses and activities that allow for the protection, maintenance and restoration of riparian habitat. (Page 33)

Monitoring – Vegetation Resources Vegetation communities in both treated and untreated areas will be monitored to determine progress toward attaining desired range of conditions. Monitoring to determine success in meeting vegetation management objectives will shift to measuring cover, composition and structure of the community (i.e. the parameters essential for identification of phases within the state and transition model concept). Periodic measurements of vigor and productivity will continue and will utilize standard methodologies (National Research Council 1994; Swanson 2006). (Page 33)

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

White Pine County Public Lands Policy Plan (2007 Revision) Policy 9-5: Identify habitat needs for wildlife species, such as adequate forage, water, cover, etc. and provide for those needs so as to, in time, attain appropriate population levels compatible with other multiple uses as determined by public involvement. (Page 27)

White Pine County Elk Management Plan (2007 Revision) The plan was developed by the White Pine County Elk Management Technical Review Team (TRT). The plan identified vegetation conversion projects by NDOW management units that would improve wildlife habitat by creating a more diverse mixture of grasses, forbs and shrubs. The project area lies within NDOW Management Unit 221.

- ✓ Policy 9-5 (page 17) "Identify habitat needs for wildlife species, such as adequate forage, water, cover, etc., and provide for those needs so as to, in time, attain appropriate population levels compatible with other multiple uses as determined by public involvement."
- ✓ Policy 9-7 (page 18) "Support habitat restoration to improve wildlife habitat when compatible with other uses."

White Pine County Sage Grouse Conservation Plan (2004) The plan was developed by a Coordinated Resource Management Steering Committee comprised of the State of Nevada, the Forest Service, the National Park Service, the Bureau of Land Management, private property owners, Native American tribes and the public. On page 15 of the plan, the following strategies have been identified under "Goals, Objectives and Strategies":

- ✓ Strategy 2.2.4 (page 21) "Increase the amount and improve condition of sagebrush habitats by implementing projects suggested by and agreed to by local planning groups."
- ✓ Strategy 3.1.9 (page 21) "Identify decadent sagebrush stands and apply management treatments to replace the decadent sagebrush with young, healthy, robust plants."
- ✓ Strategy 3.2.2 (page 22) "Increase the amount and improve condition of sagebrush habitats by implementing projects suggested by and agreed to by local planning groups."
- ✓ Strategy 3.2.4 (page 22) "Use all appropriate means (e.g., fire, mechanical or chemical methods) to treat senescent or degraded sagebrush communities to restore age class diversity."

- ✓ Strategy 3.3.1 (page 22) "Properly implement the Ely BLM District Managed Natural and Prescribed Fire Plan to benefit the ecological processes and systems associated with healthy sagebrush communities."
- ✓ Strategy 4.1.1 (page 23) "In cooperation with landowners, identify private lands within PMUs that may include sage grouse habitat."
- ✓ Strategy 4.2.7 (page 23) "Propose, plan and design habitat treatments for the benefit of multiple species, including sage grouse."

Lincoln County Public Land Management and Use Plan (1997), Lincoln County Master Plan (2007) and Lincoln County Code Requirements (2009)

Lincoln County Elk Management Plan (2006 Revision) The plan was developed by Lincoln County Elk Management TRT. One of the objectives of the TRT is to "Provide adequate habitat (i.e., food, water, cover, and space) for existing and future elk populations." The project area lies within NDOW Management Unit 221.

- ✓ Habitat Enhancement Action 1 (page 17) "Enhance habitat to create more diverse plant communities to meet multiple use objectives."
- ✓ Habitat Enhancement Action 1 (page 18) "Use best available method for habitat enhancement projects given constraints for the identified area (i.e., prescribed natural fire, prescribed burning, wildland fire use, spraying, chaining, riling, chopping, etc.) including seeding the area if necessary."
- ✓ Habitat Enhancement Action 2 (page 18) "In any seeding project (i.e., maintenance of an existing project, new project, fire rehabilitation, etc.) recommend use of native species except when other species would better help attain desired plant communities."

Lincoln County Sage Grouse Conservation Plan (2004)

- ✓ Strategy 2.2.4 (page 16) "Increase the amount and improve condition of sagebrush habitats by implementing projects suggested by and agreed to by local planning groups."
- ✓ Strategy 3.1.8 (page 16) "Encourage the reseeding of disturbed areas (e.g., resulting from chainings, fires, etc.) with appropriate native seed mixes."
- ✓ Strategy 4.1.1 (page 18) "In cooperation with landowners, identify private lands within PMUs that may include sage grouse habitat."
- ✓ Strategy 4.2.7 (page 19) "Propose, plan and design habitat treatments for the benefit of multiple species, including sage grouse."

Northeastern Great Basin Resource Advisory Council Standards and Guidelines (1997) "Habitats exhibit a healthy, productive, and diverse population of native and/or desirable plant species, appropriate to the site characteristics, to provide suitable feed, water, cover and living space for animal species and maintain ecological processes. Habitat conditions meet the life cycle requirements of threatened and endangered species."

Mojave – Southern Great Basin Resource Advisory Council Standards and Guidelines (1997) "Habitats and watersheds should sustain a level of biodiversity appropriate for the area and conducive to appropriate uses. Habitats of special status species should be able to sustain viable populations of those species."

1.4 Issues

Issues are impacts or potential impacts to the human environment. The identification of issues for this EA was accomplished by considering the resources that could be affected by implementation of the proposed action or any of the alternatives, as well as through involvement with the public and input from an interdisciplinary team. The issues identified were vegetation, soils, invasive/non-native species, riparian, water quality and fire/fuels.

2.0 DESCRIPTION of PROPOSED ACTION and ALTERNATIVES

2.1 Proposed Action

The proposal is to conduct a mechanical treatment (mowing), followed by a chemical treatment (aerial application of Tordon 22K and 2,4-D; ground broadcast treatment of Weedar 64) within the project area in order to reduce the densities of rubber rabbitbrush communities on sagebrush and basin wildrye dominated ecological sites. A 100 foot buffer around riparian and wetland areas would be provided for during the aerial chemical application of Tordon 22K and 2,4-D. Areas around wetland and riparian areas would be treated through a ground broadcast application using Weedar 64, an aquatically approved herbicide. Wind speeds, precipitation events and other environmental factors would be considered during the application processes to prevent herbicidal drift or potential runoff. The project area would then be seeded with a seed mixture comprised of perennial grasses and forbs adapted to the site using a Truax "No Till" drill. The total project area would include approximately 1,100 acres. An estimated 75 percent (825 acres) would be targeted for treatment. The proposed treatment schedule would be as follows:

- Mowing treatment would be conducted during the summer/fall of 2009
- Chemical treatment would be conducted during the late spring/early summer of 2010
- Drill seeding would be conducted during the fall of 2010

The proposed seed mixture would be applied at approximately 12 pounds per acre and would be comprised of the following species, based on funding and seed availability.

- Basin wildrye (*Leymus cinereus*)
- Thickspike wheatgrass (*Elymus lanceolatus*)
- Western yarrow (*Achillea millefolium*)
- Blue Flax (*Linum perenne*)
- Eski Sainfoin (*Onobrychis viciifolia*)

Tordon (active ingredient: 4-amino-3,5,6-trichloropicolinic acid and potassium salt) is a highly translocated, selective herbicide active through both foliage and roots on many broadleaf herbaceous weeds and woody plants. 2,4-D (active ingredient: 2,4-Dinitrotoluene) is a selective, foliar-absorbed, translocated, phenoxy herbicide used mostly in post-emergence applications and is effective in controlling many annual and perennial broadleaf weeds. Once absorbed 2,4-D is translocated within the plant and accumulates at the growing points of roots and shoots where it inhibits growth. Weedar 64 (active ingredient: 2,4-Dichlorophenoxyacetic acid and dimethylamine salt) is an aquatically approved herbicide used primarily to control certain broadleaf weeds. The Tordon and 2,4-D herbicides would be applied using aerial (helicopter or airplane) resources. The pilot would be required to have a current Nevada pesticide applicator's license and the aircraft would need to be equipped to precisely dispense

the herbicide. The Weedar 64 would be applied through a ground broadcast application within a 100 foot buffer around riparian and wetland areas. The applicator would also be required to have a current Nevada pesticide applicator's license. A Pesticide Use Proposal (PUP) would be completed and authorized prior to completing the treatment. Standards and guidelines for storage facilities, posting and handling, accountability and transportation as listed in BLM Handbook 9011 (Pesticide Storage, Transportation, Spills and Disposal) Section II would be followed. Items listed in the Material Safety Data Sheets (MSDS) provided for Tordon, 2,4-D and Weedar 64 would also be adhered to. Application rates and procedures would follow directions as listed on the herbicide specimen labels for rubber rabbitbrush. Target areas for both mowing and herbicidal treatments would be those areas where rubber rabbitbrush has established on sagebrush and basin wildrye ecological sites and sites. The preferred time of application would be in late May or early June. Rubber rabbitbrush can be susceptible to herbicides such as 2,4-D, but results vary widely according to the type of treatment, rate of application and the date and year of treatment. Relative effectiveness also depends on the amount of new twig growth and subsequent rainfall. The highest success rates are obtained when plants have at least 3 to 4 inches of new growth and when soil moisture exceeds 13 percent. Rubber rabbitbrush may be less susceptible to herbicides during drought years when new growth may be minimal (Tirmenstein, D. 1999). The project area would be inspected prior to the chemical treatment to solidify those areas targeted for each specific treatment in order to achieve the desired resource management objectives. Mitigation measures outlined in the *Final PEIS - Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States (2007)* would be followed during all stages of the project.

The *Ely District Office Noxious Weed Prevention Schedule* and mitigation measures identified in the *Risk Assessment for Noxious and Invasive Weeds* would be adhered to during all phases of project implementation.

No new roads would be constructed or created during project implementation. Off-road travel with heavy equipment would occur during mowing 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.

Livestock grazing would not be scheduled within the treatment area during mowing or chemical treatment activities. Following the mowing treatment (summer/fall of 2009), livestock grazing could resume within the permitted use until the chemical treatment was conducted (late spring/early summer of 2010). Livestock grazing could resume within the permitted use 30 days following chemical application until the drill seeding occurred. Livestock grazing would not be allowed within the treatment area following seeding for two complete growing seasons or until the following vegetation objectives have been achieved:

- The establishment of at least 6 desirable, perennial plants per 9.6 square foot hoop or 10 percent perennial vegetative cover

The closure period within the treatment area may be extended pending the rate of progress towards vegetative establishment. No new fencing is being proposed in order to prevent livestock from entering the treated areas. The livestock grazing permittee would be required to keep livestock out of the treatment area by employing other means of livestock control (e.g., herding or removing livestock from the allotments). Livestock grazing could resume as normally scheduled after the closure period, or when vegetation cover objectives have been met. An interdisciplinary team would conduct a review of resource monitoring data and objectives to determine if and when livestock grazing should be allowed to

occur within the project area. If environmental factors prevent attainment of resource management objectives following the mandatory rest period, an interdisciplinary team would review resource monitoring data and determine an appropriate grazing regime with the permittee. Any terms and conditions specific to livestock grazing within the project area would also be discussed and included in any annual grazing authorization.

Vegetative transects were established and monitored within the project area in June of 2009 (pre-treatment) and would be monitored following project implementation (post-treatment) to determine success towards meeting the long-term resource management objectives. The monitoring techniques utilized BLM approved methods. Vegetative establishment would be monitored to determine if the project is promoting soil protection, providing forage and protective cover and improving the overall ecological and watershed conditions. All vegetative trend monitoring site locations were marked and recorded. 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 Office Noxious Weed and Invasive Species Coordinator in order to be included on the treatment schedule as soon as possible.

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 project area.

2.3 Alternatives Considered but Eliminated from Detailed Analysis

Prescribed burning was considered as an alternative to reduce rubber rabbitbrush on sagebrush and basin wildrye ecological sites. This alternative was eliminated from detailed analysis because of the ability of rubber rabbitbrush to re-sprout from the crown following fire disturbance. Recovery of rubber rabbitbrush after fire is described as "rapid" or "very rapid" and recovery may occur by means of vigorous sprouting aided by the release of nutrients after fire (Tirmenstein, D. 1999). Prescribed fire would not meet the need for the action.

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

3.1 General Description

The project area occurs within the Cave Valley Watershed. Elevations at the project site average approximately 6,000 and slopes are estimated at less than 5 percent. Annual precipitation levels average from approximately 10 to 14 inches. The primary vegetation within the project area consists of rubber rabbitbrush communities. Big sagebrush is also present on the site. Understory, herbaceous, species consist of basin wildrye, Baltic rush, Nebraska sedge, western yarrow, common dandelion and bluegrass. A description of the affected environment, followed by the environmental consequences for each resource is described below in Sections 3.2 – 3.7. The geographic scope for the cumulative impacts analysis for each resource is the Cave Valley Watershed. The identification of issues is summarized in the following table:

| Resource/Concern | Analyzed? | Rationale for Analysis or Dismissal from Analysis |
|---|-----------|--|
| Air Quality | No | Short-term dust during implementation |
| Cultural Resources | No | Eligible cultural sites would be avoided |
| Forest/Rangeland Health | No | No conflicts with guidance in Northeastern Great Basin Resource Advisory Council's Standards/Guidelines |
| Migratory Birds | No | Mowing and drill seeding would occur outside breeding/nesting and fledging; chemical application would be short-term (1 day); Tordon 22K practically non-toxic to birds; 2,4-D and Weedar 64 has lower toxicity to birds |
| Native American Religious Concerns | No | None identified |
| FWS listed or proposed threatened (T) or endangered (E) species or critical habitat | No | None present |
| Wastes, Hazardous or Solid | No | All mitigation measures in 2007 EIS, standards/guidelines in BLM Handbook 9011, MSDS and herbicide specimen labels for Tordon 22K; 2,4-D and Weedar 64 would be adhered to |
| Water Quality, Drinking/Ground | Yes | Developed well, riparian seeps and perennial spring |
| Wilderness | No | Not within wilderness area |
| Environmental Justice | No | No minority or low income populations identified near or within project vicinity |
| Floodplains | No | Not within major floodplain |
| Wetlands/Riparian | Yes | Perennial spring with yearlong surface water; riparian vegetation present |
| Invasive, Non-Native Species | Yes | Potential for establishment of non-native or invasive species |
| Special Status Animals other than those listed or proposed by FWS as T/E | No | Summer sage grouse habitat, short-term sage grouse displacement but sufficient summer habitat nearby; Hardy pyrg (<i>Pyrgulopsis marcida</i>) spring snail occurs in perennial spring, petitioned for listing under ESA, mitigation to avoid and protect riparian areas sufficient to protect spring snail |
| Special Status Plants other than those listed or proposed by FWS as T/E | No | None present |
| Wild Horses | No | Not within wild horse herd management area |
| Fish and Wildlife | No | Short-term displacement but sufficient habitat nearby; no critical habitat identified within project area |
| Vegetation | Yes | Short-term impacts until vegetative establishment |
| Soils | Yes | Short-term impacts until vegetative establishment |
| Fire and Fuels | Yes | Project area in FRCC 2; needs to meet FRCC 1 |
| Special Designations other than Wilderness | No | None present |
| Visual Resource Management (VRM) | No | Primarily VRM 2; minimal VRM 4; treatment would occur in a mosaic pattern to meet VRM objectives |
| Livestock Grazing | No | Minimal impacts anticipated to grazing management; project area comprises only less than ½ to 2 percent of total acreage on 3 allotments; Cave Valley Ranch initiated project with plans of resting private property until ecological conditions improve |
| Land Uses | No | Structural range improvements would be avoided; no other ROWs present |
| Recreation | No | No affects on recreation in the area; minimal to no recreation within project area |
| Paleontological Resources | No | None present |
| Water Rights | No | Water rights to Urrutia Well to Mull Revocable Trust; no new water rights applications filed as a result of project |
| Mineral Resources | No | No active or pending mining claims present |
| Commercial Products | No | None present |

3.2 Vegetation

Affected Environment

The primary vegetation within the project area consists of mature rubber rabbitbrush communities. Big sagebrush is also present on the site. Understory, herbaceous, species consist of basin wildrye, Baltic rush, Nebraska sedge, western yarrow, common dandelion and bluegrass. Perennial grasses occur at levels below ecological site potential. There has been an overall reduction in the production and vigor of perennial, cool-season grasses within the treatment area. Rubber rabbitbrush has become established on ecological sites which were historically dominated by sagebrush and basin wildrye when at or near site potential.

The primary ecological site which occurs in the bottoms is identified as a Loamy Bottom 10-14 Inch Precipitation Zone, 028BY003NV, ARTRT/LECI4 (USDA – NRCS, 2003). The potential vegetative composition is approximately 85 percent grasses, 5 percent forbs and 10 percent shrubs.

The primary ecological site which occurs in the upper side draws is identified as a Loamy Fan 12+ Inch Precipitation Zone, 028BY082NV, ARTR2/LECI4-HECO26 (USDA – NRCS, 2003). The potential vegetative composition is approximately 70 percent grasses, 10 percent forbs and 20 percent shrubs.

Resource Monitoring was conducted by the BLM to determine the existing percent species composition by weight on a representative site within the project area at Township 9 North, Range 64 East, Section 6 NW ¼. The data was collected on the primary ecological site within the project area (Loamy Bottom 10-14 Inch Precipitation Zone, 028BY003NV, ARTRT/LECI4). The monitoring data is summarized in the following:

| Species | % Composition | % Allowable at Site Potential |
|---|---------------|-------------------------------|
| Baltic rush (<i>Juncus balticus</i>) | 35.1 | 0-2 |
| common dandelion (<i>Taraxacum officinale</i>) | 3.1 | 0 |
| western yarrow (<i>Achillea millefolium</i>) | 8.9 | 0 |
| basin wildrye (<i>Leymus cinereus</i>) | 10.3 | 70-80 |
| rubber rabbitbrush (<i>Chrysothamnus nauseosus</i>) | 42.6 | 0-2 |

| Existing Vegetative Composition | | | Potential Vegetative Composition | | |
|---------------------------------|-------|--------|----------------------------------|-------|--------|
| Grasses | Forbs | Shrubs | Grasses | Forbs | Shrubs |
| 45.4% | 12.0% | 42.6% | 85% | 5% | 10% |

The percentage of grasses, forbs and shrubs which should comprise the site when the site is at its potential is relative to environmental factors which are most suitable for certain vegetative species. These factors include, but are not limited to, soil texture, soil depth, slope, aspect and precipitation.

Environmental Consequences

Under the Proposed Action, the health, vigor, recruitment and production of perennial grasses, forbs and shrubs should move toward ecological site potential and provide a more palatable and nutritional source of forage for livestock and wildlife and also protect the soil resource and other associated watershed values. Reducing the establishment of rubber rabbitbrush on sagebrush and basin wildrye ecological sites could assist in allowing sagebrush and other native vegetation to establish. Under the mowing treatments, minimal to no impacts are expected to the existing grass communities which would remain

on the site and provide for soil protection and stability. The existing forb communities are limited, but would be removed by the chemical application. However, seeding the treatment area with desirable, perennial forb species should allow for the re-establishment of forbs within the project area. Some of the existing mature sagebrush plants which are established within the rubber rabbitbrush stands may be mowed but seed dispersed from the mature plants along with the younger, shorter plants should allow for continued establishment and recruitment of sagebrush.

It is expected that the plant species diversity and the plant species composition should be in better balance with the endemic native wildlife needs when at ecological site potential. The expansion of rubber rabbitbrush has reduced the overall health, vigor, recruitment and production of a variety of grass and shrub species and disrupted the desired plant succession. The proposed treatments should help the project area meet FRCC 1 by reducing fuel loading and continuity. The decomposition of woody plant material should add nutrients to the soil which should enhance the recruitment, establishment and long-term viability of the grass and shrub community, as well as provide protection to the soil resource. The Proposed Action is also expected to assist portions of the Cave Valley Watershed in conforming with the Standards and Guidelines for Nevada's Northeastern Great Basin and the Fundamentals of Rangeland Health (Title 43 CFR 4180) by protecting soils, increasing vegetative diversity, improving habitat quality and other watershed values. Rangeland Health Standard 1 (Upland Sites) states the following:

"Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate and land form.

As indicated by:

Indicators are canopy and ground cover, including: litter, live vegetation and rock, appropriate to the potential for the site."

Under the No Action Alternative, vegetative conditions are expected to remain the same for the short-term and further decline in condition over the long-term as densities of rubber rabbitbrush increase. The health, vigor, recruitment and production of native, perennial grasses, forbs and other shrubs could decline in the long-term due to competition with rubber rabbitbrush for water, nutrients and sunlight. The continued establishment of rubber rabbitbrush could result in the decline in ecological site conditions due to the reduction of perennial grasses, forbs and other shrubs which are important for grazing, browsing, soil protection, soil stability and other watershed values. The No Action Alternative may also eventually prevent portions of the allotments within the project area from conforming with the Standards and Guidelines for Nevada's Northeastern Great Basin and the Fundamentals of Rangeland Health (Title 43 CFR 4180).

Cumulative Impacts

Cumulative impacts 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. Past actions affecting vegetation resources within the Cave Valley Watershed include approximately 9,500 acres of mechanical habitat treatments and fuels reduction projects, approximately 3,500 acres of wildfire and prescribed burning, approximately 210 acres of wildfire rehabilitation, along with livestock, wild horse and wildlife uses. These activities have created varying ecological conditions. Long-term changes in ecological conditions affect vegetative diversity and habitat quality. The potential exists for future wildfire events and wildland fire use for resource benefits to occur, although it cannot be determined how many fires could occur or the acreage that may be affected. Under many situations, uncontrolled

wildfires affect continuous expanses of vegetation and habitat, leaving minimal mosaic to the burn pattern. Rehabilitation efforts are generally expensive and difficult due to the lack of species diversity in many plant communities which have burned. Implementing the Proposed Action, combined with past, present and future actions, should assist vegetative communities in moving toward site potential, provide resiliency to future disturbance and provide a mosaic of differing ecological conditions which should help facilitate the establishment of the natural (historic) fire regime, provide habitat conditions for many species of wildlife and reduce and minimize the overall cumulative impacts.

3.3 Soils

Affected Environment

The primary soil mapping units within the project area include the Duffer-Kolda Association and the Tulse-Pern Association (USDA - NRCS, 1998 and 2007). The project area is within Major Land Resource Area (MLRA) 28B. The physiographic, climatic, soils and vegetative characteristics of these sites are outlined in USDA - NRCS Ecological Site Guides (2003).

The Duffer-Kolda Association occurs from 5,800 to 6,200 feet in elevation and within the 8 to 9 inch precipitation zone. These soils occur on slopes from 0 to 2 percent. The soil association is comprised primarily of silt loams. These soils have slow to moderately slow permeability and have very slow runoff potential.

The Tulse-Pern Association occurs from 6,000 to 6,500 feet in elevation and within the 10 inch precipitation zone. These soils occur on slopes from 0 to 4 percent. The soil association is comprised primarily of silt loams. These soils have moderate permeability and have slow to medium runoff potential.

Environmental Consequences

Under the Proposed Action, there should be minimal soil erosion expected from implementation of the mowing and chemical treatments. The mowing and chemical treatments would target rubber rabbitbrush which has established on sagebrush and basin wildrye ecological sites. The mowing of mature shrubs within the project area would leave the basal portion of the shrubs along with their deep root structure embedded into the soil. The embedded root structure and mowed wood material, along with the existing grasses and other plants should allow for soil stability until such time that the herbaceous understory increased in density and ground cover. It is expected that the basin wildrye and other existing grass communities should increase in density and ground cover quite rapidly due to lower competition and the overall site conditions. The establishment of the seeded perennial grasses and forbs should also provide for valuable soil protection.

The chemical application would remove the limited, existing forb communities and a majority of the shrubs on the site. However, seeding the treatment area with desirable, perennial forb species following the chemical treatment should allow for the re-establishment of forbs within the project area. Some of the existing mature sagebrush plants which are established within the rubber rabbitbrush stands may be mowed but the root mass would remain embedded in the soil. Seed dispersed from the mature plants and the presence of the younger, shorter plants should allow for soil protection during the time vegetative succession advanced toward site potential.

No new roads would be constructed or created during the treatments. Therefore, future soil disturbance from vehicular travel should be limited.

Under the No Action Alternative, impacts to soils from erosion are expected to be minimal in the absence of wildfire. Rubber rabbitbrush can be an important structural and ecological component in stable and disturbed plant communities. Its ability to stabilize soil and reduce wind and water erosion preserves habitat for other shrubs, forbs and grasses. This shrub is an excellent plant for erosion control because it has deep roots, produces heavy litter and is able to establish on severe sites (Aldon, Pase 1981; McArthur, 1995). In the presence of fire, impacts to soil erosion from wind and water are expected to increase until such time the rubber rabbitbrush re-established on the site. Recovery of rubber rabbitbrush after fire is described as "rapid" or "very rapid" and recovery may occur by means of vigorous sprouting aided by the release of nutrients after fire (Tirmenstein, D. 1999). However, adverse impacts to soil erosion could occur during the recovery period following fire in the event of a high wind or flooding event.

Cumulative Impacts

Past actions affecting soils within the Cave Valley Watershed include approximately 9,500 acres of mechanical habitat treatments and fuels reduction projects, approximately 3,500 acres of wildfire and prescribed burning and approximately 210 acres of wildfire rehabilitation. The potential exists for future wildfire events and wildland fire use for resource benefits to occur, although it cannot be determined how many fires could occur or the acreage that may be affected. Under many situations, uncontrolled wildfires affect continuous expanses of vegetation and soils, leaving minimal mosaic to the burn pattern. Rehabilitation efforts are generally expensive and difficult. Past actions, such as from wildfires, have increased soil erosion on areas outside the project area. Past actions, combined with the lack of treatments within the project area have increased soil erosion vulnerability, especially if large unplanned disturbances such as wildfires, wind events or precipitation events were to occur. The implementation of present and future fuels treatments could increase soil stability in the area as vegetative diversity and ground cover should persist. Through planned treatments, natural disturbances should be smaller in size and manageable and should reduce soil erosion levels over the long term. Implementing the Proposed Action, combined with past, present and future actions should assist in increasing understory vegetative species which should provide soil stability, their resistance to erosion and minimize the overall cumulative impacts.

3.4 Riparian and Wetland Areas

Affected Environment

A perennial spring occurs on private land within the project area approximately ½ mile north of Parker Station. Riparian vegetation such as Baltic rush is present, as well as species such as basin wildrye which is adaptable to sites such as swales, drainages and floodplains. There are numerous ephemeral washes which drain into the project area. One well also occurs within the project area.

Environmental Consequences

Under the Proposed Action, the removal of rubber rabbitbrush on sites within the project area is expected to increase potential riparian habitat which occurs along the spring, bottoms and surrounding ephemeral washes. The removal of upland species such as rubber rabbitbrush is expected to result in an increase in desirable riparian species over the long term and may result in the eventual presence of surface water along the bottom and ephemeral washes. An increase in surface water should encourage the establishment of desirable riparian woody species, riparian grasses or riparian grass-like species which could provide bank cover and stability on soils which are vulnerable to scouring and degradation

from natural activities such as flooding. The establishment of desirable riparian species should assist in improving a deep wash which is present on the site. Over the long term, the establishment of riparian herbaceous and shrub species should assist in providing soil protection and stability which could reduce the potential for soil erosion during flooding and other natural weather events and in turn, reduce the potential for sedimentation into nearby riparian areas. The 100 foot buffer around riparian and wetland areas during the aerial chemical application of Tordon 22K and 2,4-D and the ground broadcast use of Weedar 64, an aquatically approved herbicide, should eliminate any potential chemical impacts to riparian areas. Wind speeds, precipitation events and other environmental factors would also be considered during the application processes to prevent herbicidal drift or potential runoff.

Implementation of the Proposed Action may assist in promoting surface water development and help any potential riparian areas in maintaining PFC or make progress towards achieving PFC over the long term and conforming to Rangeland Health Standard 2 (Riparian and Wetland Sites) which states the following:

"Riparian and wetland areas exhibit a properly functioning condition and achieve state water quality criteria.

As indicated by:

Stream side riparian areas are functioning properly when adequate vegetation, large woody debris, or rock is present to dissipate stream energy associated with high water flows. Elements indicating proper functioning condition such as avoiding accelerating erosion, capturing sediment and providing for groundwater recharge and release are determined by the following measurements as appropriate to the site characteristics:

- *Width/Depth ratio;*
- *Channel roughness;*
- *Sinuosity of stream channel;*
- *Bank stability;*
- *Vegetative cover (amount, spacing, life form);*
- *Other cover (large woody debris, rock)*

Natural springs, seeps, and marsh areas are functioning properly when adequate vegetation is present to facilitate water retention, filtering, and release as indicated by plant species and cover appropriate to the site characteristics.

Chemical, physical and biological water constituents are not exceeding the State water quality Standards."

Under the No Action Alternative, a reduction in riparian and wetland areas is expected to occur over time with a continued increase in the establishment of rubber rabbitbrush within the project area. The continued presence and establishment of rubber rabbitbrush could reduce the opportunity for the establishment of desirable riparian species and the potential for perennial surface water flow within the project area. The lack of desirable riparian vegetation could allow for an increase in soil scouring and degradation from natural activities such as flooding or other natural weather events. Soil erosion could result in the increase of future sedimentation into other nearby riparian areas. The No Action Alternative may not assist in maintaining PFC or making progress towards achieving PFC on riparian areas and in conforming to Rangeland Health Standard 2 (Riparian and Wetland Sites).

Cumulative Impacts

Some of the past and current actions on riparian/wetland areas within the Cave Valley Watershed include grazing impacts, reduced water levels and soil impacts such as compaction and erosion. Other actions to riparian areas include water diversions from pipelines, road construction and maintenance, noxious weed infestations, recreational activities including off-road travel, fence construction along riparian areas (creates livestock trailing affects), uncontrolled wildfire and rights-of-way construction. Most of the existing activities are expected to continue to some extent in the future and could continue to impact riparian/wetland areas in a similar fashion. Implementing the proposed action, combined with similar past, present and future actions should encourage the establishment or increase of riparian vegetation on riparian sites and encourage potential surface water flow. Current vegetative treatments combined with future vegetative treatments should assist in approving overall riparian/wetland health and minimize the overall cumulative impacts.

3.5 Fire and Hazardous Fuels

Affected Environment

Historically, the Cave Valley area and adjacent mountains 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. Fire history and fire effects in the Great Basin are a vital component of resource health.

A majority of the project area has been rated at FRCC 2 (moderate departure). 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. Vegetation attributes have been moderately altered from their historical range. There is a need to assure that the fuel type occurring within the project area is within the natural regime. The goal is to meet FRCC 1 for the fuel type within the project area.

The project area is within the Dry Lake Fire Management Unit (FMU).

Environmental Consequences

Under the Proposed Action, fire behavior should be decreased in the event of a wildfire as a result of reduced fuel loading. Future natural fires within the project area should be less extensive and have reduced intensity due to a change in the fuel type. Ecological conditions are expected to be restored following a lower intensity fire due to the ability of native grasses and other plants to respond favorably to a low to moderate intensity fire. A lower intensity fire should be easier to manage, reducing the risk to natural resources, private lands, private withholdings, physical structures associated with ROWs and aesthetic values. Under the Proposed Action, the FRCC should be within the natural (historic) range.

Under the No Action Alternative, fuel conditions could continue to increase and accumulate beyond levels representative of the natural (historic) fire regime which could increase burn intensity potential. Ecological conditions may not be restored to the site potential due to the ability for rubber rabbitbrush to re-sprout following fire. Recovery of rubber rabbitbrush after fire is described as "rapid" or "very rapid" and recovery may occur by means of vigorous sprouting aided by the release of nutrients after fire

(Tirmenstein, D. 1999). Under the No Action Alternative, fuel loading and fire intensity potential could remain the greatest in the long-term and fires could be more difficult to manage.

Cumulative Impacts

Past actions affecting fire and fuels within the Cave Valley Watershed include approximately 9,500 acres of mechanical habitat treatments and fuels reduction projects, approximately 3,500 acres of wildfire and prescribed burning and approximately 210 acres of wildfire rehabilitation which have altered FRCC within the watershed. Implementation of the proposed action along with future habitat and fuels reduction projects, wildfire events, wildland fire use for resource benefit and fire rehabilitation would assist in achieving FRCC 1 within the watershed. The implementation of planned disturbances should assist in reducing the risks of large, uncontrolled wildfires. Overall, the cumulative impacts from all past, present and future actions should be minimal and FRCC I could be achieved over the long term.

3.6 Invasive, Non-Native Species (Including Noxious Weeds)

Affected Environment

The BLM defines a weed as a non-native plant that disrupts or has the potential to disrupt or alter the natural ecosystem function, composition and diversity of the site it occupies. A weed's presence deteriorates the health of the site, it makes efficient use of natural resources difficult and it may interfere with management objectives for that site. It is an invasive species that requires a concerted effort (manpower and resources) to remove from its current location, if it can be removed at all. "Noxious" weeds refer to those plant species which have been legally designated as unwanted or undesirable. This includes national, state, county and local designations.

According to the Ely District weed inventory data, the only species occurring within the project area boundaries is whitetop or hoary cress (*Lepidium draba*). Other species found along roadways and drainages leading to the project area include Russian knapweed (*Acroptilon repens*), bull thistle (*Cirsium vulgare*) and whitetop or hoary cress (*Lepidium draba*). There is also probably cheatgrass (*Bromus tectorum*), halogeton (*Halogeton glomeratus*) and Russian thistle (*Salsola kali*) scattered along roads in the area. The area was last inventoried for noxious weeds in 2003.

A *Risk Assessment for Noxious and Invasive Weeds* was completed for the project proposal in July of 2008 and two factors were analyzed. The "*likelihood of noxious/invasive weed species spreading to the project area*" (Factor 1) was analyzed and considered a moderate risk. This was determined due to noxious/invasive weed species being located immediately adjacent to or within the project area. It was determined that project activities are likely to result in some areas becoming infested with noxious/invasive weed species even when preventative management actions are followed. It was suggested that preventative control measures should be developed for the project to reduce the risk of introduction or spread of noxious weeds into the area. The "*consequences of noxious/invasive weed establishment in the project area*" (Factor 2) was also assessed and considered a high risk. It was determined that there was a high probability for the establishment of noxious/invasive weeds within the project, the expansion of noxious/invasive weeds to areas outside the project area and for competition between noxious/invasive weeds and native plant communities. The overall risk rating for the project was moderate. It was suggested that preventative management measures should be developed for the project to reduce the risk of introduction or spread of noxious weeds into the area. Preventative management measures should include seeding the project area to occupy disturbed sites with desirable species. The project area should be monitored for at least 3 consecutive years in order to provide for the

control of newly established populations of noxious weeds and implement follow-up treatment for previously treated infestations. Based on the overall risk rating, it was determined that the project could be implemented as long as the following mitigation measures were followed:

- *BLM would identify and flag noxious weed infestations prior to the entry of vehicles and equipment into the project area for avoidance measures*
- *BLM would provide information and training on noxious weed management and identification to all personnel affiliated with project implementation and maintenance*
- *All vehicles and heavy equipment used for project implementation and inspection would be properly cleaned of plant material, soil and other debris prior to entering or leaving project area*
- *The project area would be seeded with a native seed mixture indigenous to the area; non-native species may be used to out-compete weeds or if native seed is unavailable or cost prohibitive*
- *Mixing of herbicides and cleaning of herbicide containers and spray equipment would be conducted only in areas that are safe distances from environmentally sensitive areas and water*
- *The Standard Operating Procedures in the 2007 Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States Final EIS would be adhered to*

Environmental Consequences

Under the Proposed Action, noxious and non-native, invasive weeds which have been identified within or outside the project area could become established or increase within the area in the short-term following the mowing treatment due to perennial grasses and forbs at levels less than site potential. However, the chemical treatment which targets rubber rabbitbrush may also be effective in controlling noxious, broadleaf weeds. The establishment of seeded desirable, perennial grasses and forbs should also prevent the establishment of noxious and invasive species over the long-term.

Another way that new species could be introduced to the area could result from vehicles, heavy equipment and activities associated with the use of the vehicles and equipment. Conformance with the Ely District Noxious Weed Prevention Schedule and mitigation measures identified in the Risk Assessment for Noxious and Invasive Weeds should reduce the risk of noxious weeds and non-native, invasive species establishment.

Under the No Action Alternative, noxious and non-native, invasive weeds may eventually increase into the targeted treatment area, particularly along traveled roads. Declining understory species in sagebrush and woodland sites could increase the risk of weed species establishment following a natural disturbance (e.g., wildfire) due to the lack of competition from desirable, perennial grasses and forbs. Existing noxious weed infestations within or adjacent to the project area could spread throughout the area.

Cumulative Impacts

Past actions affecting noxious weeds and invasive species within the Cave Valley Watershed include approximately 9,500 acres of mechanical habitat treatments and fuels reduction projects, approximately 3,500 acres of wildfire and prescribed burning, approximately 210 acres of wildfire rehabilitation and other disturbances such as livestock and wild horse use, road construction and maintenance, recreation activities including off-road travel, fence construction and rights-of-way construction. The possibility of future wildfire in the area is expected, as is additional fuels management activities. Following past wildfires, undetected stands of noxious weeds have been discovered within the burned area and control actions have been initiated. This effect could be expected in the Cave Valley area following proposed or

future unplanned disturbances due to nearby infestations discovered outside the project area. With planned disturbances such as fuels reduction projects, opportunities for detecting additional noxious weed infestations prior to treatment could occur. Implementing the Proposed Action should assist the vegetative community in competing with and prevent noxious weeds and invasive species establishment through the development of a more vigorous, diverse and productive community. Completing additional vegetative treatments throughout the watershed over the long-term, followed by seeding if necessary, should reduce the potential of noxious weed and invasive species establishment over a large area. All past, present and future treatments should make areas more resistant to noxious weeds and invasive species establishment by increasing the density and composition of perennial understory species reducing the overall cumulative impacts.

3.7 Water Quality

Affected Environment

It is expected that the current water quality within the project area or in areas adjacent to the project area is meeting State standards.

Environmental Consequences

Under the Proposed Action, there is a possibility that some degree of soil erosion related to localized intense rain events could result in short-term impacts to water quality. It is anticipated that the impacts should be short, not lasting long after the initial sediment influx or the initial high water flow. Any runoff events resulting after the implementation of the Proposed Action should not increase the frequency or intensity of events outside the natural range of variability. With the anticipated increase in the perennial grass and forb understory, soil surface erosion from precipitation events should be reduced which could reduce impacts to water quality. The mitigation measures outlined in the Final Programmatic EIS - Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States, the standards and guidelines outlined in BLM Handbook 9011 (Pesticide Storage, Transportation, Spills and Disposal) Section II and the MSDS and herbicide specimen labels for Tordon 22K and 2,4-D would be adhered to in order to avoid impacts to water quality. The 100 foot buffer around riparian and wetland areas during the aerial chemical application of Tordon 22K and 2,4-D and the ground broadcast use of Weedar 64, an aquatically approved herbicide, should eliminate any potential chemical impacts to water quality. Wind speeds, precipitation events and other environmental factors would also be considered during the application processes to prevent herbicidal drift or potential runoff.

Under the No Action Alternative, long-term effects could result in reduced water quality if watershed stability were decreased through a decline in ecological conditions and accelerated soil erosion potential on the treatment site. Under the No Action Alternative, herbaceous ground cover is expected to remain at levels below the ecological site potential and further decline if rubber rabbitbrush densities increase. With a decline in herbaceous ground cover, the potential for soil surface erosion could increase over the long-term and could adversely impact water quality on sites within the general project area.

Cumulative Impacts

Past, present and reasonably foreseeable future actions within the Cave Valley Watershed should have minimal impact on water quality above the range of natural variability. Future treatment actions combined with present actions should allow for overall watershed stability provided that the treatments are conducted in manageable acreages and in areas where ecological conditions are in a downward

trend. Assisting vegetative communities in moving toward ecological site potential and promoting overall watershed stabilization should reduce the amounts of sediment that could be deposited into riparian and wetland areas. Combining past, present and future treatments should minimize overall cumulative impacts to water quality.

4.0 PROPOSED MITIGATION MEASURES

Appropriate mitigation measures have been incorporated into the Proposed Action and the Alternative Action and none are proposed in response to the anticipated impacts. Mitigation measures include considerations for noxious weeds/invasive species, riparian/wetland areas and water quality.

5.0 SUGGESTED MONITORING

Appropriate monitoring has been incorporated into the Proposed Action and no additional monitoring is suggested. Monitoring has been implemented to establish baseline conditions and to measure the effects of the proposed treatments over a period of time. Monitoring would also be used to determine if, and when, resource management objectives have been achieved. An interdisciplinary team, including members of the public expressing interest, would be included in the monitoring efforts. Monitoring information would be collected, analyzed and interpreted using BLM approved methods. Monitoring data would be available for review at the BLM Ely District Office.

6.0 CONSULTATION and COORDINATION

Public Interest and Record of Contacts who Commented

On August 11, 2008, 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. A notice was placed in BLM Nevada News on August 20, 2008 and under "NEPA" at http://www.blm.gov/nv/st/en/fo/ely_field_office.html in August of 2008. The project was also presented at the Native American Coordination Meeting on March 19, 2009. Consultation and coordination also occurred with the grazing permittees on the Cave Valley Ranch, Sheep Pass and Shingle Pass allotments; project partners (Cave Valley Ranch and RMEF) and partner agencies such as NDOW.

The only comments received during the initial planning stages and public scoping period were from the project partners. The BLM did receive requests from agencies, groups and individuals to remain on the project mailing list.

The preliminary EA was mailed to interested public on July 27, 2009. The public review and comment on the preliminary EA ended on August 10, 2009. The only comments received during the review and comment period was from the Nevada State Clearinghouse and the Lincoln County Planning Department. The Nevada State Clearinghouse indicated they were supportive of the project as written. The Lincoln County Planning Department indicated that they were supportive of the project as long as the project did not discourage or prohibit agriculture, wildlife habitat, community stability, local custom and culture, present and future economic stability, grazing rights, private improvements on public lands, mining rights, floodplains, recreational opportunities, access and water rights stability. It was determined that none of the applicable resources or special uses would be discouraged or prohibited. The Lincoln County Planning Department also requested that the BLM ensure that the project proposal

was consistent with the Lincoln County Public Land Management and Use Plan (1997), Lincoln County Master Plan (2007) and Lincoln County Code Requirements (2009). It was determined that the project proposal is consistent with these plans.

Internal District Review

| | |
|-------------------|--|
| Jeff Fenton | Fire Management Specialist (Fire, Fuels, Vegetation) |
| Chelsy Simerson | Rangeland Management Specialist (Livestock Grazing) |
| Mark D'Aversa | Hydrologist (Riparian/Wetlands/Floodplains; Soil/Water/Air) |
| Paul Podborny | Wildlife Biologist (Wildlife; Migratory Birds; T&E and Special Status Species) |
| Bonnie Million | Noxious Weed Coordinator (Noxious Weeds, Invasive Species) |
| Benjamin Noyes | Wild Horse and Burro Specialist (Wild Horses) |
| Elizabeth Townley | Outdoor Recreation Planner (VRM, Recreation) |
| 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/NEPA Coordinator (NEPA Compliance) |

7.0 REFERENCES

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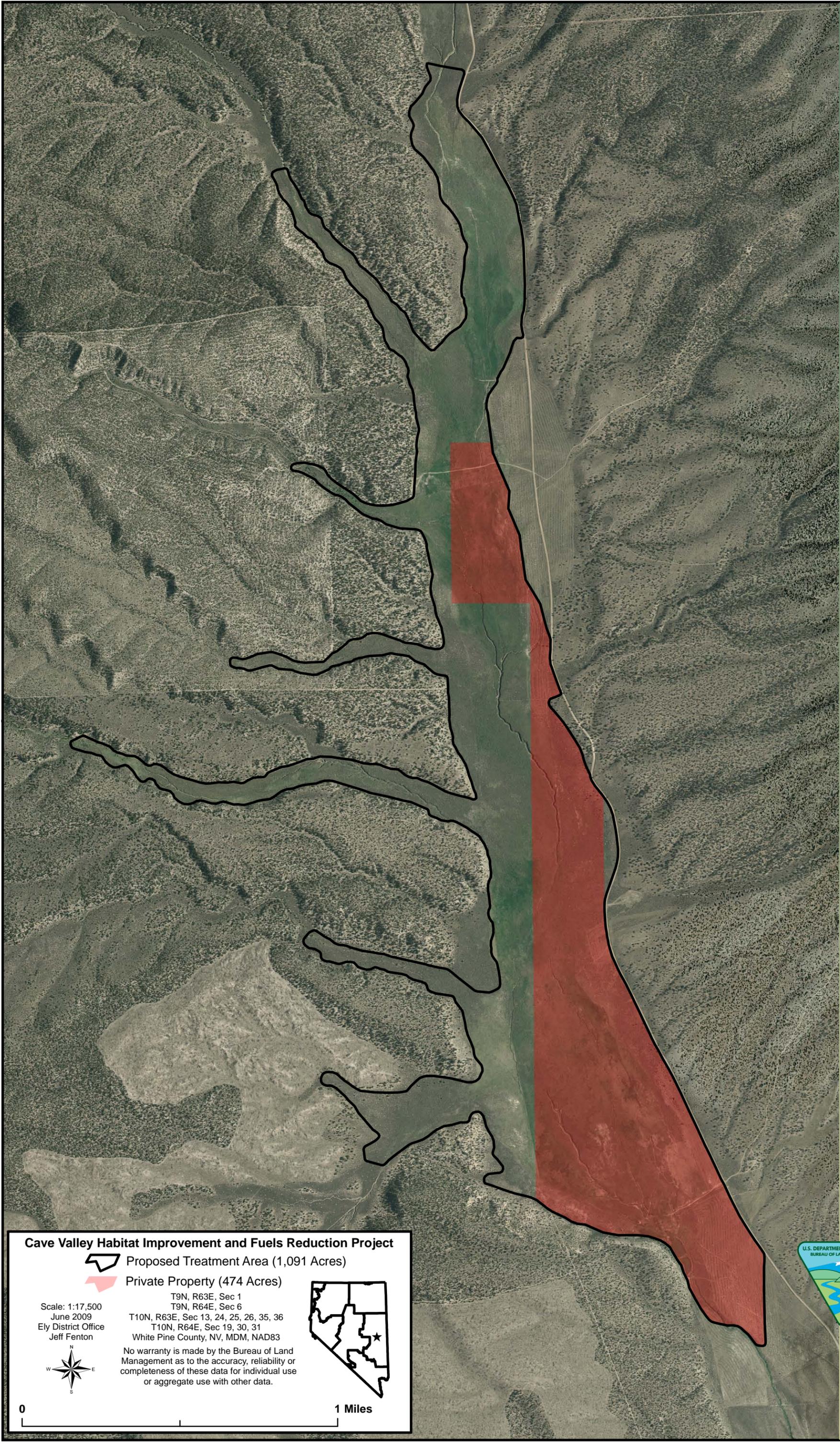
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Cave Valley Habitat Improvement and Fuels Reduction Project

 Proposed Treatment Area (1,091 Acres)

 Private Property (474 Acres)

Scale: 1:17,500
June 2009
Ely District Office
Jeff Fenton

T9N, R63E, Sec 1
T9N, R64E, Sec 6
T10N, R63E, Sec 13, 24, 25, 26, 35, 36
T10N, R64E, Sec 19, 30, 31
White Pine County, NV, MDM, NAD83



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