United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Ely District Office
702 North Industrial Way, HC 33 Box 33500
Ely, NV 89301
http://www.blm.gov/nv/st/en/fo/ely_field_office.html

In Reply Refer To:
9210 (NVL0044)

Dear Interested Public,

The Bureau of Land Management (BLM) is proposing to conduct a habitat improvement and fuels reduction project along the foothill benches on the east side of the Shell Creek Range and on the southwest end of the Antelope Range in North Spring Valley. The project area is located in Townships 21 North, Range 66 East; Township 22 North, Range 65 East; Township 22 North, Range 66 East; Township 23 North, Range 65 East; Township 23 North, Range 66 East and Township 24 North, Range 65 East; Mount Diablo Meridian (MDM); White Pine County, Nevada. The proposed project occurs on public lands managed by the BLM Ely District's Schell Field Office.

The objectives of this project are to reduce pinyon and juniper density within sagebrush ecological sites in order to improve sage grouse habitat, sagebrush ecological condition, improve Fire Regime Condition Class (FRCC) rating within the project area, and reduce hazardous fuels. The project area is approximately 23,676 acres of which an estimated 70 to 80 percent (approximately 16,600 to 19,000 acres) would be treated.

Attached is the Decision Record, Finding of No Significant Impact and the Final Environmental Assessment (EA) that has been prepared to analyze the environmental effects of the proposed action and alternatives. The Preliminary Environmental Assessment was mailed to the public on June 17th, 2010 and posted to the Ely District BLM web site on June 24th, 2010. Comments were requested by July 15th, 2010. Three comments were received during this period. Those comments and the responses to those comments are listed within the EA. The final Environmental Assessment is posted on the Ely District web site: http://www.blm.gov/nv/st/en/fo/ely_field_office.html.

If you have any questions, please contact Matt Rajala, Fire Planner at (775) 289-1821.

Thank you for participating in the planning process for this project.

Sincerely,
/s/ Tye Petersen
Tye Petersen
Fire Management Officer
Ely District Office

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DECISION RECORD
Stonehouse Habitat Improvement and Fuels Reduction Project

Background

The Bureau of Land Management has completed planning and an environmental assessment (EA) to conduct a sagebrush improvement and hazardous fuels reduction project approximately 45 miles northeast of Ely, Nevada. The objective of the project is to reduce pinyon and juniper within sagebrush ecological sites to improve the overall vegetative composition within the ecological site potential and improve the health, vigor and production of perennial grass, forb and shrub species. The accomplishment of this objective will improve habitat for sage grouse and big game within the area and reduce the risk for catastrophic wildfire within the area. The total project area is approximately 23,676 acres, of which an estimated 70-80 percent would be treated (16,600 to 19,000 acres). On July 19, 2010 a Finding of No Significant Impact (FONSI) for the Stonehouse Habitat Improvement and Fuels Reduction Project was signed. The FONSI was based on environmental effects disclosed in the EA (DOI-BLM-NV-L020-2008-0028-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 attached to this decision.

Decision

It is my decision to implement the Stonehouse Habitat Improvement and Fuels Reduction Project as described in the proposed action of the attached EA (DOI-BLM-NV-L020-2008-0028-EA). All actions, design features and 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 Resource Management Plan (2008). This decision complies with the Healthy Forest Restoration Act (2003). The decision is consistent with plans and policies of neighboring local, county, state and federal agencies and governments including the Final Programmatic Environmental Report- Vegetation Treatments on Bureau of Land Management Lands in 17 Western States (approved in 2007), Lincoln County Elk Management Plan (2003), The Northeastern Great Basin Resource Advisory Council Standards and Guidelines (1997), the North Spring Valley and Antelope Valley Watershed Evaluation Report (2005), the Implementation Strategy for North Spring Valley, Antelope Valley, Steptoe A and North Antelope Valley (2006) and all supplemental authorities listed in Appendix A of the H-1790-1.

Rationale

The decision to implement the proposed action of the Stonehouse Habitat Improvement and Fuels Reduction EA was selected as it will best meet the purpose and need for action. Pinyon and juniper removal within the project area will improve the ecological condition of the sagebrush community, reduce the fuel loading, and reduce the risk of large uncontrolled wildfires. Future natural fires will be less extensive, smaller and of lower intensity and severity. 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 and the Fire Regime Condition Class will revert to natural (historic) ranges. The proposed action will facilitate the accomplishment of the purpose and need for proposal much quicker compared to the no action alternative presented in the EA.

The alternative action (Herbicide) and the no action alternative were not selected because they failed to accomplish the purpose outlined for the proposed action.

Public Involvement

A letter describing the project proposal was mailed to groups and individuals on July 21, 2008 who have expressed an interest in participating in habitat improvement and hazardous fuels reduction projects as well as State and Federal wildlife agencies. The project was originally presented at the Native American Coordination meeting on November 7, 2008 and again on March 20, 2010.

During the preliminary scoping period, comments and questions were received in the form of letters and e-mails from four individual/groups. One individual expressed concern about his private property and the possible damage of the project to his access road, pipeline and water supply. These concerns have been considered and the access road, pipeline and drainage of concern will be avoided. One individual expressed opposition about any project that would involve grinding or chipping potential fuel wood. The Nevada State Clearinghouse received one comment from the Division of State Lands who expressed support for the project. One group expressed objection to the proposed project. Comments received from the final organization were generally related to other land uses not within the scope of the purpose and need for this project.

The preliminary EA was mailed to interested public on June 17th, 2010. Due to changes in the proposed action the preliminary EA was mailed to everyone on the original mailing list as well as all individuals who expressed an interest in being added to the mailing list since the original mailing. The public review and comment on the preliminary EA ended on June 15, 2010. During the review and comment period responses were received from three individuals/agencies. White Pine County Commissioners and the Public Land Users Advisory Committee expressed support for the project. The US Fish and Wildlife Service supported the project and made recommendations for monitoring and maintenance. The third comment letter came from

Southern Nevada Water Authority who expressed concern about piezometers in the area and the "stonehouse" located on private property adjacent to the project. Avoidance of the piezometers and notification of SNWA of implementation has been incorporated into the document. The potential impacts to the "stonehouse" were considered and were determined not to be at a level that required detailed analysis.

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_____ *_7/19/2010_____*
Tye Petersen Date
Fire Management Officer
Ely District Office

Attachments:
Finding of No Significant Impact (FONSI)
Stonehouse Habitat Improvement and Fuels Reduction Project (DOI-BLM-NV-L020-2008-0028-EA)

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In Reply Refer To:
9210 (NVL0044)

Finding of No Significant Impact
Stonehouse Habitat Improvement and Fuels Reduction Project
DOI-BLM-NV-L020-2008-0028-EA

Finding of No Significant Impact

I have reviewed the attached environmental assessment (EA) for the proposed Stonehouse Habitat Improvement and Fuels Reduction Project DOI-BLM-NV-L020-2008-0028-EA, dated July 2010. 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 will not have negative significant impacts on the quality of the human environment and that an Environmental Impact Statement (EIS) is not required.

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 analyzed in this EA is located on the foothill benches along the east side of the Schell Creek Range and the southwest portion of the Antelope Range in the North Spring Valley Watershed. The project area is located in Township 21 North, Range 65 East; Township 21 North, Range 66 East; Township 22 North, Range 65 East; Township 22 North, Range 66 East; Township 23 North, Range 65 East; Township 23 North, Range 66 East and Township 24 North, Range 65 East; Mt. Diablo Base and Meridian (MDB&M); White Pine County, Nevada. The primary vegetation within the project area consists of sagebrush communities with encroaching stands and individual pinyon and juniper trees. The total project area perimeter includes approximately 23,676 acres, of which an estimated 70 to 80 percent would be treated. All of the lands within the project area perimeter are public lands administered by the Bureau of Land Management (BLM).

The proposed action does not have impacts or influence outside the watersheds within which the project occurs. The proposed action does not have any regional or global implications that would expand the context of the impacts.

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 environmental assessment has considered both beneficial and adverse impacts of the proposed project. The analysis contained within the attached environmental assessment reflects an equal evaluation of all foreseeable impacts associated with the alternatives. In general the impacts associated with the Stonehouse Habitat Improvement and Fuels Reduction Project are considered to be improving the quality of the human environment through proactive treatments and fuels management. Temporary displacement of livestock and wildlife is considered to be a minor and short term impact in relation to the long term benefit on improved habitat.

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 reducing the potential for crown fire that could occur within the pinyon and juniper that has become established on sagebrush ecological sites. Treatment designs and mitigating measures incorporated into the proposed action will minimize impacts to public health and safety. Public health and safety could be compromised if vegetation treatments are not implemented in the area. Vegetation, soils, wildlife habitat and other watershed values will be at substantial risk to wildfire (especially crown fire) due to continuing encroachment and establishment of pinyon and juniper on sagebrush ecological sites. Soils will be at immediate risk to wind and water erosion in the event a large, uncontrolled wildfire event occurred.

The treatments will be conducted according to BLM safety standards. Workplace hazard risks assessments will be completed by the workforce supervisor prior to on-the-ground activities.

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 improve the overall vegetative composition within the proposed 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 establishment of pinyon and juniper within the sagebrush ecological site could place the area at risk to decreasing vegetative composition, health, vigor and production of perennial grass, forb and shrub species. This would increase the site vulnerability to an uncontrolled wildfire which would also increase the chance of erosion and/or the establishment of noxious or invasive weeds following a large wildfire.

Cultural resources and the potential impacts to those resources within the area have been considered and it has been determined that the proposed action would not have an impact upon them. Eligible cultural resources would be avoided or impacts mitigated as necessary before any surface disturbing treatments are initiated.

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

The methods of vegetation treatment activities are scientifically accepted, and are commonly employed to meet resource or management objectives. The effects of hazardous fuels reduction are well known and documented and are not highly controversial in that reduced fuel loading, equates to reduced fire severity and intensity. Other projects have occurred within the same watershed and the watersheds immediately adjacent to the proposed project area. Monitoring of these projects supports the accomplishment of the purpose and need through the proposed action. The effects from implementing the proposed action are well known and documented, and are not considered 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.

There are no known effects of the proposed action identified in the EA that are considered uncertain or involve unique or unknown risks. All vegetation treatment methods proposed are accepted standard management practices that have been successfully implemented in similar vegetation types within the same watershed and the watersheds immediately adjacent to the proposed project area.

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 proposed action will not establish a precedent for future actions with significant effects and does not represent a decision in principle about a future consideration. All future hazardous fuels reduction and/or sagebrush improvement projects, if they occur would be subject to the same NEPA standards and independent decision making.

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 have occurred within the same watershed and the interrelation of impacts have been disclosed and analyzed within the EA. Currently the only other proposed action within the watershed is located on the Humboldt Toiyabe National Forest located adjacent to the proposed project area. This project and any other project proposed within the North Spring Valley Watershed would be required to comply with the NEPA and the requirements therein. This would include analyzing the cumulative

impacts of the proposed action with any past or present actions including the Stonehouse Habitat Improvement and Fuels Reduction Project.

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. A cultural resource inventory will be completed prior to implementation and ground disturbing activities would avoid all eligible sites. The proposed action attempts to mimic the landscape and restore a "natural" interface between rangeland and woodland ecological types. Due to this the proposed action would not have an impact on the historic setting or feeling of resources within the area.

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.

/s/ Tye Petersen — *7/19/2010*

Fire Management Officer
Ely District Office

Date

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

Preliminary Environmental Assessment
DOI-BLM-NV-L020-2008-0028-EA
July 2010

Stonehouse Habitat Improvement and Fuels Reduction Project

Township 21 North, Range 65 East
Township 21 North, Range 66 East
Township 22 North, Range 65 East
Township 22 North, Range 66 East
Township 23 North, Range 65 East
Township 23 North, Range 66 East
Township 24 North, Range 65 East
Mount Diablo Base and Meridian, White Pine County, Nevada

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

BLM

TABLE OF CONTENTS

1.0 BACKGROUND

1.1 Introduction

The purpose of this Environmental Assessment (EA) is to evaluate and disclose the direct, indirect and cumulative impacts of the Proposed Action and alternatives to resources present. The project area analyzed in this EA is located on the foothill benches along the east side of the Schell Creek Range and the southwest portion of the Antelope Range in the North Spring Valley Watershed. The project area is located in Township 21 North, Range 65 East; Township 21 North, Range 66 East; Township 22 North, Range 65 East; Township 22 North, Range 66 East; Township 23 North, Range 65 East; Township 23 North, Range 66 East and Township 24 North, Range 65 East; Mt. Diablo Base and Meridian (MDB&M); White Pine County, Nevada (Map 1).

The primary vegetation within the project area consists of sagebrush ecological communities with established stands of singleleaf pinyon pine (*Pinus monophylla*) and Utah juniper (*Juniperus osteosperma*). Perennial grass density is below site potential on a majority of the project area. The total project area perimeter includes approximately 23,676 acres, of which an estimated 70 to 80 percent (approximately 16,600 to 19,000 acres) are targeted for treatment. All of the lands within the project area parameter are public lands administered by the Bureau of Land Management (BLM).

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 singleleaf pinyon pine and Utah juniper on sagebrush ecological sites is a concern as it is decreasing habitat values for several wildlife species and increasing the volume of hazardous fuels.

1.2 Purpose and Need for Action

The purpose of the Proposed Action is to reduce pinyon and juniper density on sagebrush ecological sites in order to restore natural ecological site conditions, reduce hazardous fuels, and improve understory species composition and diversity, wildlife habitat and other values within the North Spring Valley Watershed.

The need for the proposal results from monitoring data which indicates a dominance of pinyon and juniper on the project site which should be comprised of approximately 40 to 60 percent perennial grasses and 5 to 10 percent forbs when at the ecological site potential (USDA – NRCS, 2003). This shift in vegetation composition has resulted in a loss of suitable habitat for sensitive species and other wildlife. As the sites become dominated by pinyon and juniper their susceptibility to large-scale stand replacing wildland fires is increased. Results of a stand replacing wildfire within this ecological type usually result in a complete alteration of vegetation and wildlife diversity.

Figures 1 is an aerial photograph from 2006 of pinyon and juniper encroachment within the proposed project area. Figure 2 is an aerial photograph from 2006 that depicts what is considered to be a "natural" transition from woodland to rangeland sites. The monitoring data above is supported by the aerial photographs below.

BLM

Ely District Office

AREA LOCATOR

Ely

Caliente

Map 1 - Project Area

Project Area

US Highways

State Highways

Unpaved Roads

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.

Map Produced by: EYDO Fuels Staff
06/09/2010

N

Miles

0 0.375 0.75 1.5 2.25 3

Figure 1 – Aerial photograph of pinyon and juniper encroachment within the proposed project area.

Figure 2 – Aerial photograph of the "natural" transition from woodland to rangeland sites.

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 proposed project area has been rated at FRCC3 (highly departed). This indicates that fire regimes have been highly altered from their historical range. Fire frequencies are departed from historical frequencies by multiple return intervals. Risk of losing key ecosystem components is high. Vegetation attributes have been highly altered from their historical range. There is a need to assure each fuel type with the project area is within the natural regime. The goal is to meet FRCC1 for each fuel type or biophysical setting within the project area.

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

- Reduce pinyon and juniper establishment on sagebrush ecological sites in order to improve the overall vegetative composition within the ecological site potential, and improve the health, vigor and production of perennial grass, forb and shrub 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 North Spring Valley Watershed and meet FRCC 1
- Restore the historic disturbance regime within the project area and the North Spring Valley watershed

Resource management objectives include the following:

Short Term (immediately post treatment)

- Reduce the canopy cover of single-leaf pinyon and Utah juniper by at least 75 percent on black sagebrush (*Artemisia nova*), wyoming big sagebrush (*Artemisia tridentata wyomingensis*) and mountain big sagebrush (*Artemisia tridentata vaseyana*) ecological sites on an estimated 23,676 acres. Short term objectives would be to remove hazardous fuels that could potentially lead to an uncontrolled wildfire that would permanently alter the vegetative community.

Long Term (5 to 10 years post treatment)

- Increase the percent composition by weight (lbs/acre) of perennial grasses to a minimum of 50 to 75 percent of the ecological site potential on black sagebrush and mountain big sagebrush ecological sites within 5 to 10 years following completion of the proposed treatments. Long term objectives would be to move the vegetative community to primarily a FRCC rating of 1 and restore the function of natural wildland fire to the ecosystem.

The targeted areas for treatment would include those areas identified in the North Spring Valley and Antelope Valley Watershed Evaluation Report (2005) where pinyon and juniper trees have become established on sagebrush ecological sites. The project would be completed when funding and resources become available.

1.3 Relationship to Planning

The Proposed Action and Alternative Action are in conformance with, and tiers to the analysis completed for the *Ely Proposed Resource Management Plan and Final Environmental Impact Statement (November 2007)* 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 described in the Ely District Approved Resource Management Plan:

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.

- ✓ 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 desire 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)

Management Actions – Fish and Wildlife (General Wildlife Habitat Management)

- ✓ WL-1**:** Emphasize management of priority habitats for priority species. (See the discussion on Vegetation Resources for the desired range of conditions for the various vegetation communities. (Page 35)

Management Actions – Fish and Wildlife (Elk, Mule Deer, Pronghorn Antelope, and Rocky Mountain Bighorn Sheep Habitats)

- ✓ WL-6**:** Where appropriate, restrict permitted activities in big game calving/fawning/kidding/lambing grounds and crucial summer range from April 15 through June 30. (Page 35)
- ✓ WL-8**:** Focus restoration projects initially in priority habitats (i.e., calving/fawning/kidding/lambing grounds, crucial summer range, and crucial winter range), and then in other seasonal habitats within a watershed. (Page 35)
- ✓ WL-9**:** Manage elk habitat by implementing the actions and strategies identified in the Central Nevada, Lincoln County, and White Pine County Elk Management Plans that the Ely District Office has the authority to implement, and that are consistent with watershed restoration strategies. (Page 35)

Monitoring – Fish and Wildlife - Baseline wildlife use patterns and estimated population levels will be calculated using information collected annually by the Nevada Department of Wildlife. These will be compared with post-treatment use patterns and population numbers to determine relative effectiveness of watershed restoration. Forage production will be monitored on an allotment basis during livestock allotment evaluations. Annual livestock and wild horse utilization records gathered by Ely District Office staff and wildlife observations reported by the Nevada Department of Wildlife and Ely District Office will be used to determine possible issues. Conflicts between livestock, wild horses, and wildlife will be resolved during the assessments and subsequent management actions including appropriate management level adjustments in herd management areas, cooperative habitat management actions with Nevada Department of Wildlife, and grazing permit renewals. Impacts to wildlife populations will take into account changes in herd management objectives as set by the Nevada Department of Wildlife.

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 Units 111 and 112.

- ✓ 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. The following strategies have been identified under "Goals, Objectives and Strategies" of the plan:

- ✓ Strategy 2.2.3 (page 21) "Identify all sagebrush communities that are now dominated by pinyon-juniper or where pinyon-juniper is becoming established and prioritize for projects."
- ✓ 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 3.2.1 (page 22) "Identify all sagebrush sites that have become dominated by pinyon and juniper and prioritize for projects."
- ✓ Strategy 3.2.3 (page 22) "Use all appropriate means (e.g., fire, mechanical, chemical, etc.) to treat pinyon and juniper sites that have the potential to support sagebrush habitats."
- ✓ 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 4.2.7 (page 23) "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."

North Spring Valley and Antelope Valley Watershed Evaluation Report (2005) and the *Implementation Strategy for North Spring Valley, Antelope Valley, Steptoe A and North Antelope Valley* (2006) An interdisciplinary team completed a watershed assessment where indicators were reviewed within the watershed related to the Standards and Guidelines outlined by the Northeastern Great Basin Resource Advisory Council. From this review interdisciplinary team members made recommendations for improvement which were later addressed in the implementation strategy. The Proposed Action and Alternative Action are in compliance with the objectives and recommendations outlined within the implementation strategy.

1.4 Scoping and Issues

Scoping is a process where internal and external input is solicited on issues, impacts, data needs, and potential actions to be addressed related to the purpose and need of an action. Scoping also provides a mechanism for feedback on the purpose and need or actions from other agencies, organizations, tribes, local governments and the public. The BLM Ely District maintains annual mailing lists for actions related to projects of this type.

Public (external) scoping for this project was conducted by mailing a letter to general public, and state, county and other federal agencies that have expressed interest in vegetation treatment projects. The letter described the project location and size, summarized treatment goals, current vegetation in the area, and suggested some proposed treatments that may occur in the area. Local Native American Tribes were also consulted during the scoping period.

Issues are a point of disagreement, debate, or dispute with an action based on some anticipated environmental effect. Issues are those that have cause and effect relationship with the Proposed Action or alternatives. Issues analyzed in this document are focused on those necessary to make a reasoned decision on the best way to use a resource, to resolve an unwanted resource condition or to determine significance of impacts. The identification of issues for this environmental assessment was accomplished by considering the resources, including those covered by supplemental authorities, which could be affected by implementation of the Proposed Action or any of the alternatives. Scoping was conducted within the interdisciplinary team as well as through involvement with the public. Resources that were identified as potentially impacted include:

- Vegetation
- Wildlife; Migratory Birds; Special Status Species (Federally Listed and Proposed Threatened and Endangered Species and BLM Sensitive Species)
- Soils
- Riparian and Wetland Areas
- Livestock Grazing
- Fire and Hazardous Fuels
- Invasive, Non-Native Species (Including Noxious Weeds)
- Wild Horses and Bureaus

Resources which were considered but determined to be not present; not potentially impacted by the Proposed Action, Alternative Action or the No Action Alternative; or not impacted to a degree that requires detailed analysis include the following:

- Air Quality
- Areas of Critical Environmental Concern
- Cultural Resources
- Environmental Justice
- Farm Lands (Prime or Unique)
- Floodplains
- Human Health and Safety (Herbicide Projects)
- Native American Religious Concerns
- Threatened and Endangered Species
- Special Status Plants and Wildlife
- Wastes, Hazardous or Solid
- Water Quality, Surface/Ground
- Wild and Scenic Rivers
- Wilderness
- Special Designations Other Than Wilderness
- Visual Resource Management
- Land Uses

- Recreation
- Paleontological Resources
- Water Rights
- Mineral Resources
- Commercial Products

There were no impacts of the Proposed Action or any of the action alternatives on energy development or production.

Global climate change has the potential to alter the climatic characteristics of the site over a period of time, the degree of change is currently unknown. This could in turn lead to changes in the flora present at the proposed project area. Maintaining biological diversity and function is generally considered to maintain resilience to change agents including climate change (Pellant 2007). Restoring the proposed project area to FRCC1 would help to protect the area from large-scale wildland fires that could result in the establishment of invasive annual grasses. While it is recognized that carbon sequestration of woodlands is much higher than that of shrublands the carbon sequestration of native shrub communities is greater than in annual communities that reburn at a high frequency (Pellant 2007). In the balance, it is anticipated that long term carbon sequestration would be higher within a native diverse shrub community adapted to the site then a system that is dominated by invasive annuals that burns at a high frequency. At this time it is not possible to determine the degree of change to base assumptions upon for analysis purposes. It is not possible to conduct a meaningful analysis based on the amount of data available and the global nature of the issue. It is however generally believed that the proposed project is not expected to contribute to climate change and would only increase the resilience of the plant community to changes in the climate. Due to these reasons climate change is not carried forward as an issue for detailed analysis within this document.

2.0 DESCRIPTION of PROPOSED ACTION and ALTERNATIVES

2.1 Introduction

The Schell Field Office explored and objectively evaluated all reasonable alternatives that met the underlying need for the Proposed Action. This chapter will present the alternatives as well as compare and contrast them in relation to each other. The purpose and need as well as objectives listed in chapter 1 will form the baseline for which alternatives are developed. Alternative actions were developed in response to unresolved conflicts regarding available resources on public lands, as such there is one action alternative proposed. The No Action Alternative is provided for baseline comparison of the impacts of the Proposed Action.

2.2 Proposed Action

The proposal is to conduct a pinion and juniper treatment on selected areas along the southwest end of the Antelope Range and on selected areas along the east side of Schell Creek Range. The targeted areas for treatment include areas identified in the *North Spring Valley and Antelope Valley Watershed Evaluation Report (2005)* and further described in the *Implementation Strategy for the North Spring Valley, Antelope Valley, Steptoe A, and North Antelope Valley (2006)* where pinyon and juniper trees have become established on sagebrush ecological sites. The total project area would include approximately 23,676 acres. An estimated 70 to 80 percent (approximately 16,600 to 19,000 acres) would be targeted for treatment (Map 2).

The treatment along the southwest end of the Antelope Range would be hand cut with chainsaws. Treatment would occur during the fall/winter months (September-February). Within the polygon stringers of trees alongside the major drainages islands of older trees, and any trees exhibiting old growth characteristics as described within 2.4.5.2 Veg 9.4., Page 2.4-7 of the Ely Proposed RMP and Final Environmental Impact Statement would be left. All other pinyon and juniper within the treatment area would be cut. It is anticipated that approximately 80 to 90 percent would be treated. Arrangement and distribution of stringers and islands would be determined prior to implementation and try to mimic the natural arrangement depicted within figure 1.

Treatments on the east bench of the Schell Creek Range would be treated with a combination of Ely anchor chain and other mechanical methods such as brush hog and chainsaw. Within the polygon there is a mixture of dense pinyon and juniper intermixed with areas where the trees are thin to non-existent. Areas where the trees are thin and areas inaccessible to the equipment would be hand cut with chainsaws or mechanically treated with equipment suited for the terrain such as a brush hog.

The west edge of the anchor chaining treatment would include runners of trees along the drainages and islands of trees to maintain diversity for wildlife and to achieve a natural appearance to meet VRM objectives. Figure 3 represents a "natural" appearance of the interface between woodland sites above and rangeland sites below with runners of trees along the drainages. Figure 3 is a photo taken from the highway of the same location as Figure 2. Prior to project implementation stringers and islands would be mapped in a mosaic fashion. Remaining trees would remain in an arrangement similar to that depicted in Figures 2 and 3. Any woody species other then pinyon and juniper that are encountered within the treatment areas would not be intentionally removed. Areas that are identified to have a mountain mahogany component would not be chained and would be treated in a means that is selective such as brush hog or hand cutting.

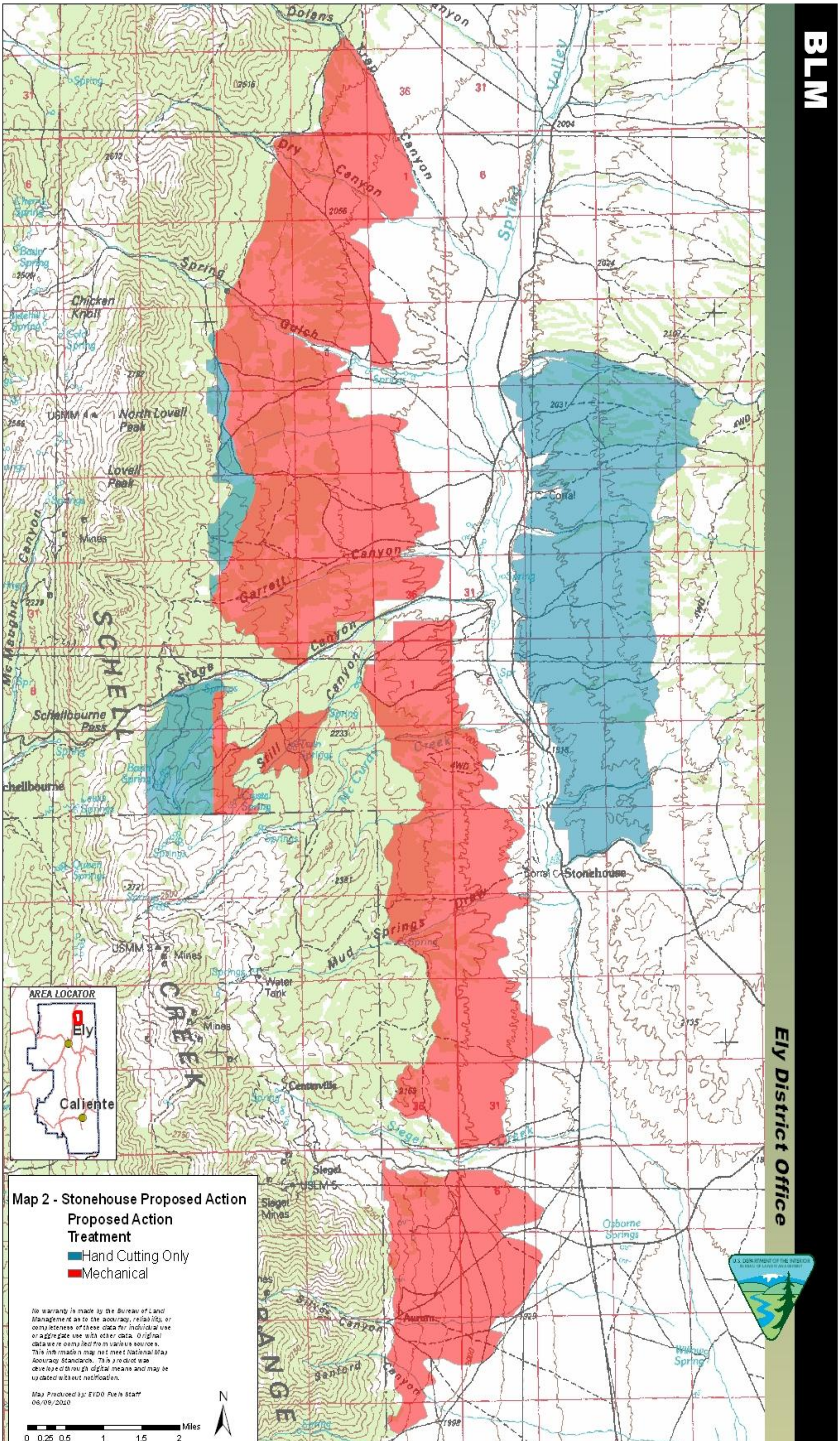
Map 2 - Stonehouse Proposed Action
Proposed Action
Treatment
Hand Cutting Only
Mechanical
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.
Map Produced by: EYDO Fuels Staff
06/09/2010
Miles
0 0.25 0.5 1 1.5 2
N
AREA LOCATOR
Ely
Caliente
BLM
Ely District Office
U.S. DEPARTMENT OF THE INTERIOR
Dolans
Dry Canyon
Spring
Gulch
Chicken Knoll
North Lovell Peak
Lovell Peak
Garrett
Canyon
Stage
Schellbourne Pass
Schellbourne
SCHELL CREEK RANGE
Still
McCurdy
Creek
Mud
Springs
Draw
Water Tank
Mines
Centerville
Siegel
Siegel Mines
Sanford
Canyon
Stonehouse
Corral
Spring Valley
Osborne Springs
Willow Spring

Figure 3 – Image depicting the "natural" interface from woodland sites above to rangeland sites below with runners of trees along washes and in depressions.

The western boundary of the project area overlaps a designated Pinenut collection area. Areas that are designated for pinenut collection would hand thinned with chainsaws and only the Juniper would be removed. All pinyon pine within these areas would be left. No chaining would take place within these areas. Treatments would be conducted during the fall/winter months (September to February). Throughout the treatment biomass may be left on site for natural decomposition or may be removed either as a part of a stewardship project or as fuel wood for the public.

Scatter height for areas treated with hand cutting would be a maximum of 24 inches. The authorized officer and appropriate technical specialist may determine that excess biomass left on site in certain locations would restrict movement for sage grouse and other wildlife. If this occurs these areas may be piled and/or burned or prescribe some other form of biomass utilization such as a stewardship project.

There is no mapped pygmy rabbit habitat within the proposed project area. However, to minimize impacts to potential pygmy rabbit habitat within the proposed treatment area, all washes that contain Wyoming big sage dominated communities would be hand thinned.

All treatment areas that create surface disturbance would be inventoried for cultural resources to identify eligible (Historic Properties) and sensitive sites prior to implementing treatments. Identified cultural sites would be recorded and evaluated to determine eligibility for the National Register of Historic Places. Eligible cultural resources would be avoided or impacts mitigated as necessary before any surface disturbing treatments are initiated. A standard 30 meter buffer would be in place for any treatments utilizing heavy equipment. If determined appropriate by the authorized officer and appropriate technical specialist the sites would be cut with chainsaws and the vegetation would be

lopped and scattered. Avoidance areas that would not be treated would be irregularly shaped and blended with the landscape.

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

Management of weeds are outlined in the Weed Risk Assessment and would include best management practices to prevent spread and early detection; and treatments to control current populations and any new weed populations discovered during the life of the project. Treatments could include biological controls, targeted grazing, mechanical controls and herbicide. For biological controls only the release of USDA - Animal and Plant Health Inspection Service approved insects or pathogens would be used and would be accompanied by a BLM Biological Control Agent Release Proposal. For targeted grazing the type of animal selected would be matched appropriately with the target species and to adequately meet the desired prescription of the area. The animals would be closely observed to control the intensity and duration of the grazing to avoid grazing impacts on desirable species. Mechanical treatments may include hand pulling, mowing, cutting using hand or chainsaw, and prescribed burns. Herbicide treatments would require a Pesticide Use Report submitted to the BLM Nevada State Office prior to implementation. Herbicide treatments for weeds would include the potential use of all BLM approved herbicides and surfactants, both in the BLM Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement and Record of Decision (BLM 2007) and any herbicides approved in the future using the protocol for identifying, evaluating, and using new herbicides as described in that EIS. Depending on chemical, size of the area and acceptable amount of drift; applications of treatments could include backpack application, pack animal tank application, ATV/UTV tank application, truck tank application, and aerial application.

If any mining sites or dumps are discovered within the project area, thinning operations would avoid these sites in order to minimize risk from hazardous materials. Any such discoveries would be reported to the appropriate Ely District BLM Hazardous Materials Specialist for inspection and potential treatment.

All utility lines and other rights-of-way (ROW) structures would be avoided during thinning operations. Above ground structures associated with buried utility lines would also be avoided in association with the thinning activities. Any potential ROW holders in the immediate vicinity of the treatments would be notified prior to conducting any thinning activities.

All known raptor nests have been avoided with project design. Should any raptor nests be discovered prior to implementation the appropriate buffer would be determined by the authorized officer and appropriate technical specialist. All treatment actions would comply with the *Migratory Bird Treaty Act – Interim Management Guidance* (Instruction Memorandum 2008-050) or the most current policy at the time of the treatments.

No new roads would be constructed or created during project implementation. Off-road travel with heavy equipment would occur during tree thinning activities. Loading and unloading any equipment would occur on existing roads to minimize off-road disturbances and impacts. If determined necessary,

signs would be posted along roads within or adjacent to the treatment areas in regards to travel restrictions in order to assist in mitigating impacts from future cross country travel. In the event that the area is open to fuel wood gathering there would be no new roads authorized. Future travel management is to conform to the decisions outlined within the RMP.

Seeding would occur in areas where understory vegetation is not sufficient to recover or become established. These areas are normally where relative grass and forb cover is 10 percent or less. Seed would be applied aerially during the fall and winter. In the areas proposed for chaining, seed would be applied after the first pass of the chain and prior to the second pass. In areas to be thinned, seed would be applied within the year of treatment. The seed mix for the area would be as proposed by the Nevada Division of Wildlife and listed below:

- Indian ricegrass
- Bluebunch wheatgrass
- Thickspike wheatgrass
- Needle and Thread grass
- Globemallow
- Small Burnett
- Antelope Bitterbrush

The proposed treatment area occurs within the Antelope Herd Management Area (HMA). The HMA is scheduled to be gathered in the January of 2011. If possible the treatment of the area would take place at approximately the same time as the wild horse gather to minimize the impacts of wild horse grazing on the treated area.

Livestock grazing would not be scheduled within the treatment areas during implementation of the selected alternative. Livestock grazing could resume immediately within treatment areas that maintain 10 percent or more of grass and forb cover. Livestock grazing would not be allowed to occur within treatment areas that have 10 percent or less of grass and forb cover for two complete growing seasons or until the following vegetation objectives have been achieved:

- The establishment of at least 6 desirable (species that accomplish the purpose and need and/or are listed within the recommended seed mixture), perennial plants per 9.6 square foot hoop or ten percent perennial vegetative cover

Progress towards meeting vegetation objectives would be measured from selected monitoring sites using random density 9.6 square foot plots. Monitoring sites would be established within one year following treatment completion and measured annually during the livestock grazing closure period. The closure period 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 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.

The treatment areas would be monitored following project implementation to determine success towards meeting resource management objectives. All monitoring techniques would follow BLM approved methods. 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 would be marked and recorded. Common methods which may be used include, but are not limited to, line point intercept for cover, belt transect with a macro-plot for density and photographs. At a minimum all sites utilized to record the pre-treatment data would be incorporated into the monitoring of the treatment. The methodologies utilized within the pre-treatment monitoring would be carried through post treatment monitoring. Additional methodologies and sites may be employed as appropriate.

Sage grouse leks that are within the boundaries of the proposed treatment would be monitored for 3 years following the treatment. There are two leks within the boundary and neither are monitored as trend leks by the Nevada Division of Wildlife. Both leks were last monitored in 2009 and were active.

Existing facilities located within the proposed project area will be inspected and any damages as a result of the Proposed Action would be repaired. Within the project boundary there are several range improvement projects including fences and water developments.

Within and adjacent to the proposed project area there are two piezometers that are maintained by the Southern Nevada Water Authority (SNWA) in accordance with a stipulated agreement with Department of Interior agencies. Prior to the implementation of any phase of the proposed action SNWA would be informed so that the changes within the landscape can be recorded and incorporated into the piezometer log data.

2.3 Alternative Action

The Alternative Action is to conduct chemical treatments using a pellet form of the herbicide Tebuthiuron (trade name Spike 20P) on selected areas along the east side of the Schell Creek Range and southwest end of the Antelope Range. The targeted areas for treatment would include areas identified in the North Spring Valley and Antelope Valley Watershed Evaluation Report (2005) where pinyon and juniper trees have become established on sagebrush ecological sites. The total project area would include approximately 10,422 acres. An estimated 50 to 60 percent (approximately 5200 to 6250 acres) would be targeted for treatment (Map 3).

Tebuthiuron is an herbicide that primarily affects woody species (e.g., pinyon, juniper, sagebrush and other shrubs). The herbicide would be applied using aerial (helicopter or airplane) resources. The pilot would be required to have a pesticide applicator's license and the aircraft would need to be equipped to precisely dispense the herbicide. 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 Sheet provided for Spike 20P would also be adhered to.

Application rates and procedures would follow directions as listed on the herbicide specimen label for sagebrush, pinyon and juniper. Target areas for herbicide treatment would be those areas where pinyon and juniper have established on sagebrush ecological sites and sites where older, decadent, even-aged

BLM

Ely District Office

AREA LOCATOR

Ely

Caliente

Map 3 - Alternative Action

Alternative Action

Project Area

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Map Produced by: EYDO Fuels Staff
06/09/2010

0 0.25 0.5 1 1.5 2 Miles

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stands of sagebrush exist. Any areas containing stands of antelope bitterbrush would be avoided to the extent possible.

The preferred time of application would be during the fall prior to the first snow fall, however, the herbicide could be applied during any time as long as the ground is not frozen, water saturated or snow covered. The project would be conducted during calm weather conditions to avoid herbicide (pellet) drift.

The project design would include a "no application" buffer zone of at least 100 feet from drainage bottoms and 300 feet around springs and perennial water sources. There are several springs located within the proposed project area boundaries. However, there are no perennial or intermittent streams, only ephemeral washes.

The standard operating procedures and project design features as listed in Chapter 2 – Alternatives, Pages 2-1 through 2-40 in the *Final Programmatic EIS - Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States (2007)* would be incorporated. The above incorporated project design features provide prescriptions for herbicide treatment along with appropriate mitigating measures.

Herbicide effectiveness of Tebuthiuron depends on the soil depth and texture and the amount of clay and organic matter content of the soil. Information from the most current soil survey would be utilized or soil samples would be collected and tested at various locations in major vegetation types within the treatment area to determine soil properties and appropriate herbicide application rates in order to meet the objectives of the project.

Vegetative monitoring, in order to determine treatment effectiveness, would be conducted in the same manner as identified under the Proposed Action.

No new roads would be constructed or created during project implementation. No off-road travel would occur during herbicide application (aerial application). 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. Travel management is to conform to the decisions outlined within the RMP.

Livestock grazing would not be scheduled within the treatment area during herbicide application but grazing could resume following herbicide application. Seeding would not occur on the chemical treatment area.

Management of weeds are outlined in the Weed Risk Assessment and would include best management practices to prevent spread and early detection; and treatments to control current populations and any new weed populations discovered during the life of the project.
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.

The treatment areas would be monitored following project implementation to determine success towards meeting resource management objectives in the same manner as identified under the Proposed Action.

2.4 No Action Alternative

The No Action Alternative is the continuation of the current management situation. Under the No Action Alternative, there would be no treatments implemented within the proposed project areas. Habitat, range and fuel loading trends would continue as is.

2.5 Alternatives Considered but Eliminated from Detailed Analysis

Prescribed Fire
One alternative considered was prescribed burning to thin or remove pinyon and juniper which has established on sagebrush sites. This alternative was eliminated from detailed analysis because of the inability to prevent the burning of the existing shrub and grass understory, therefore, it would not meet the identified needs of the proposal. Prescribed burning is an alternative which preferably would be utilized in situations where treatment areas occur on higher elevation north slopes that favor positive response from understory grasses and shrubs.

Removal of Livestock
This alternative was considered and eliminated from detailed analysis because it does meet the purpose and need. The removal of livestock from the proposed project area would not have the desired effect of reducing pinyon and juniper encroachment within sagebrush ecological sites.

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

3.1 Introduction

This Chapter will present the current affected environment and impacts to the issues identified for the alternatives described in chapter 2 above. It will present the current conditions of the resources that areas potentially impacted as well as describe the direct, indirect and cumulative impacts of each action upon that resource. Direct impacts are those that are defined by 40 CFR 1508.8(a) as effects "which occur at the same time and place". Indirect impacts are those that are defined by 40 CFR 1508.8(b) as effects "which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." 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.

3.2 General Description

The project area analyzed in this EA occurs within the North Spring Valley Watershed and is located on the foothill benches along the east side of the Schell Creek Range and the southwest portion of the Antelope Range. The project area is located in portions of Township 21 North, Range 65 East, Township 21 North, Range 66 East; Township 22 North, Range 65 East; Township 22 North, Range 66 East; Township 23 North, Range 65 East; Township 23 North, Range 66 East and Township 24 North, Range 65 East; MDB&M; White Pine County, Nevada. Elevations range from approximately 6,396 to 7,544 feet and slopes range from an estimated 2 to 15 percent. Annual precipitation levels average from approximately 8 to 14 inches. The primary vegetation within the project area consists of sagebrush communities being encroached upon by pinyon and juniper.

3.3 Vegetation

Affected Environment

The primary vegetation within the project area consists of pinyon and juniper and decadent sagebrush communities. Perennial grasses occur at levels below ecological site potential. Native, perennial, cool-season [1] grasses within the proposed project area include species such as indian ricegrass (*Achnatherum hymenoides*), bluebunch wheatgrass (*Pseudoroegneria spicata*), needle and thread (*Hesperostipa comata*), bottlebrush squirreltail (*Elymus elymoides*) and bluegrasses (*Poa sp*). Warm-season [2] grasses are not common within the project area. Undesirable, non-native, annuals such as cheatgrass (*Bromus tectorum*) occur within the proposed project area. Native shrubs include curl-leaf mountain mahogany (*Cercocarpus ledifolius*) wyoming big sagebrush (*Artemisia tridentata wyomingensis*), black sagebrush (*Artemisia nova*), mountain big sagebrush (*Artemisia tridentata vaseyana*), rabbitbrush (*Chrysothamnus sp.*) and nevada tea (*Ephedra nevadensis*). The primary tree species are singleleaf pinyon pine (*Pinus monophylla*) and utah juniper (*Juniperus osteosperma*). Curlleaf mountain-mahogany (*Cercocarpus ledifolius*) is also present as a secondary tree species. There has been an overall reduction in the production and vigor of perennial, cool-season grasses within the proposed treatment areas and in some

[1] cool-season plant A plant that makes most or all of its growth during the winter and early spring when ambient air temperatures are cooler (American Society for Range Management, 1964).
[2] warm-season plant A plant that makes most or all of its growth during the spring and summer (American Society for Range Management, 1964).

areas, sagebrush communities have become even-aged, mature, decadent stands with minimal to no understory. Pinyon and juniper is becoming established on sagebrush ecological sites within the proposed treatment area.

Vegetative cover data was collected at the following 10 sites within the proposed project area boundary from June through October 2003 and is summarized in the following tables:

Table 1 – Stonehouse Monitoring Data

MONITORING DATA			Existing Vegetative Composition			Potential Vegetative Composition *		
Plot	Location	Ecological Site	Grasses	Forbs	Shrubs/Trees	Grasses	Forbs	Shrubs/Trees
PJ-39	T23NR65E S22 SWSW	R028BY094NV	17%	1%	82%	60%	5%	35%
BL-45	T23NR65E S27 NENE	R028BY008NV	2%	2%	96%	55%	5%	40%
BL-46	T23NR65E S34 SWNE	R028BY006NV	10%	7%	83%	60%	5%	35%
MT-25	T22NR65E S10 NWSW	R028BY046NV	23%	20%	57%	40%	10%	50%
LO-0	T22NR65E S10 SESW	R028BY037NV	37%	2%	61%	50%	10%	40%
BL-0	T22NR66E S5 NWNW	R028BY011NV	3%	3%	94%	50%	5%	45%
BL-78	T22NR66E S17 NWSE	R028BY010NV	4%	4%	92%	50%	5%	45%
BL-58	T22NR65E S1 NESE	R028BY011NV	27%	69%	4%	50%	5%	45%
BL-26	T22NR65E S24 SESE	R028BY045NV	31%	8%	61%	40%	5%	55%
BL-65	T22NR65E S25 NENE	R028BY045NV	22%	9%	69%	40%	5%	55%

MONITORING DATA SUMMARY			* Percent of Site Potential * (Existing Conditions)		
Plot	Location	Ecological Site	Grasses	Forbs	Shrubs/Trees
PJ-39	T23NR65E S22 SWSW	R028BY094NV	28%	20%	234%
BL-45	T23NR65E S27 NENE	R028BY008NV	4%	40%	240%
BL-46	T23NR65E S34 SWNE	R028BY006NV	17%	140%	237%
MT-25	T22NR65E S10 NWSW	R028BY046NV	58%	200%	114%
LO-0	T22NR65E S10 SESW	R028BY037NV	74%	20%	153%
BL-0	T22NR66E S5 NWNW	R028BY011NV	6%	60%	209%
BL-78	T22NR66E S17 NWSE	R028BY010NV	8%	80%	204%
BL-58	T22NR65E S1 NESE	R028BY011NV	54%	138%	9%
BL-26	T22NR65E S24 SESE	R028BY045NV	78%	160%	111%
BL-65	T22NR65E S25 NENE	R028BY045NV	55%	180%	125%

* Potential Vegetative Composition as described in the Ecological Site Descriptions

Impacts

Under the Proposed Action, vegetative conditions are expected to move towards the outlined goals and objectives in chapter 1 following implementation of the proposed vegetation treatments. The removal of pinyon and juniper trees on sagebrush ecological sites should reduce the competition to existing or seeded herbaceous and shrub species. The health, vigor, recruitment and production of perennial grasses, forbs and shrubs should improve to 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 pinyon and juniper on sagebrush ecological sites should assist in improving ecological conditions within the project area. It is expected that the plant species diversity and the plant species composition should be in better balance with the native wildlife needs when at ecological site potential. The expansion of pinyon and juniper woodlands and drought-related impacts have reduced the overall health, vigor, recruitment and production of a variety of grass and shrub species and disrupted the historic natural plant succession [3]. Improving the health, vigor and diversity of the proposed project area would help to maintain vegetation that is adaptable and resilient to disturbances. This resilience helps to prevent catastrophic change within the ecosystem such as establishment of invasive annual grasses (Pellant 2007). The removal of pinyon and juniper trees should reduce the risk of large catastrophic stand replacing wild fires.

The proposed treatments should help move the watershed toward FRCC1 by reducing fuel loading and continuity. In areas where biomass is left on the ground (e.g. chaining and mastication areas), residual woody vegetation should provide protection to regenerating grasses. Felled and scattered trees should also continue to provide protective cover for wildlife species. The decomposition of woody plant material should also improve soil nutrient content which could enhance the recruitment, establishment and long-term viability of the grass and shrub community, as well as provide protection to the soil resource. The Proposed Action is also expected to assist the North Spring Valley Watershed in conforming to the Standards and Guidelines for Nevada's Northeastern Great Basin and the Fundamentals of Rangeland Health (Title 43 CFR 4180) by improving soil protection, vegetative diversity, 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 Alternative Action, vegetative response may take 3 to 5 years due to the time required for the herbicide effects to occur. More standing woody vegetation is expected to remain under the Alternative Action for an undetermined period of time. The affected woody plants are expected to remain standing following the effects of the herbicide, until such time that standing dead plant material degrades and falls naturally. The residual woody vegetation should continue to provide some protective cover for wildlife species. Once the affected woody vegetation degrades and falls to the ground, some protection

[3] succession change in the vegetative composition of an ecosystem due to plant response from human-induced impacts and natural changes in the environment

should be provided from grazing and browsing to the existing grasses and shrubs by the remaining stems. As mentioned under the Proposed Action, the decomposition of woody plant material should also improve soil nutrient content which could enhance the recruitment, establishment and long-term viability of the existing grass and shrub community, as well as provide protection to the soil resource. The Alternative Action is expected to increase the potential for intense wildfire behavior for the short term, as dead needles would be present for approximately 3 to 5 years. Once the needles drop, the potential for intense fire behavior should be reduced by eliminating the chance for crown fires. Fuel types which consist of standing tree canopy present a unique fire hazard with the potential for crown fires. Crown fires typically burn at higher wind speeds and are more difficult to control. Under dry conditions and at high wind speeds, the possibility of total vegetative loss from intense wildfire is greater.

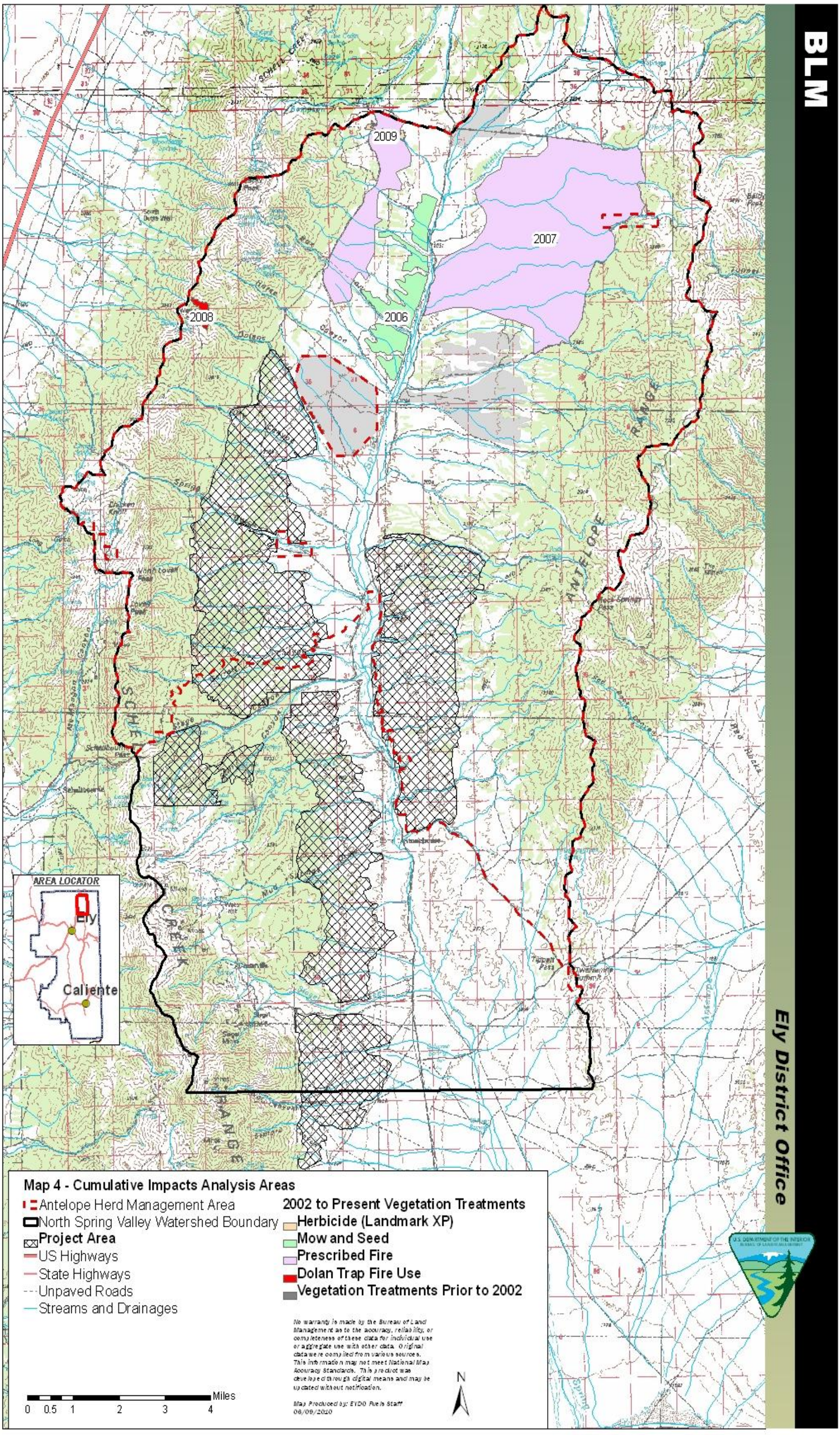
Under the Alternative Action, there is a high probability of mortality to sagebrush and other shrubs as a result of effects of the herbicide. Mortality on sagebrush is generally high following the application of Spike. Mortality on deeper rooted shrubs such as antelope bitterbrush is generally much lower. Sagebrush is an important component of the primary ecological site within the project area and the use of Spike could result in a high mortality rate on sagebrush species. Sagebrush is also important for assisting with snow retention which reduces evaporation, increases overall ground water infiltration and aids in retaining more water for herbaceous species.

Conformance with the Standards and Guidelines for Nevada's Northeastern Great Basin and the Fundamentals of Rangeland Health (Title 43 CFR 4180) would be expected within the treatment areas under the Alternative Action.

Under the No Action Alternative, vegetative conditions are expected to remain the same for the short-term and decline in condition over the long-term. The health, vigor, recruitment and production of native and non-native, perennial grasses and native shrubs could decline in the long-term. This would be due to a combination of factors including grazing and browsing by livestock, wild horses and wildlife due to a reduction in palatable forage; competition for nutrients, sunlight and water with older, decadent shrubs and the establishment of pinyon and juniper. Future drought related factors could also contribute to the decline in condition of upland vegetative communities. The establishment of pinyon and juniper onto sagebrush ecological sites could continue and the older, decadent even-aged shrub communities could further decline in health and vigor affecting the recruitment and establishment of new grasses, forbs and shrubs which are important for grazing, browsing, soil protection, soil stability and other watershed values. This reduction in the health and vigor of the native vegetation may lead to an increase in non-native invasive species that would further degrade the range and habitat values within the area. The No Action Alternative may eventually prevent portions of the allotments within the project area from conforming to the Standards and Guidelines for Nevada's Northeastern Great Basin and the Fundamentals of Rangeland Health (Title 43 CFR 4180).

Cumulative Impacts

The cumulative impacts analysis area for vegetative impacts is defined by the North Spring Valley watershed (see Map 4). There is a small section of the proposed action that extends to the south outside


BLM
Ely District Office
2009
2007
2006
2008
SCHELL CREEK RANGE
ANTELOPE RANGE
SPRING VALLEY
AREA LOCATOR
Ely
Caliente
Map 4 - Cumulative Impacts Analysis Areas
Antelope Herd Management Area
North Spring Valley Watershed Boundary
Project Area
US Highways
State Highways
Unpaved Roads
Streams and Drainages
2002 to Present Vegetation Treatments
Herbicide (Landmark XP)
Mow and Seed
Prescribed Fire
Dolan Trap Fire Use
Vegetation Treatments Prior to 2002
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.
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of the defined watershed this area is closely related in vegetation and ecological function to the watershed.

There have been several vegetation treatments that have taken place within the North Spring Valley Watershed. Many of these treatments were completed prior to the watershed assessment (2002), evaluation (2005) and implementation strategy (2006). Projects completed prior to 2002 are considered to have been incorporated into the watershed assessment and taken into consideration when developing the recommendation that future treatments within the proposed project area were needed. Vegetation treatments completed between 2002 and present include burning, herbicide and mechanical treatment of approximately 10,231 acres located approximately 1.5 miles to the northeast of the proposed treatment. Of the total acres approximately 45% of the area was treated which totals 4600 acres. The Dolan Trap fire, a wildfire use fire, occurred approximately 1.5 miles to the northwest of the proposed treatment area at a higher elevation and consumed 81 acres. The Humboldt Toiyabe National Forest has proposed a vegetation treatment that would be located to the south and west of the proposed treatment area. Past treatments have served to move vegetative communities toward the desired condition outlined within the watershed evaluation. It is anticipated that any future treatments would also move vegetative communities toward the desired future condition.

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. Long term changes in ecological conditions affect vegetative diversity and habitat quality. Past actions to adjust livestock and wildlife use on vegetation combined with present and future actions to implement various fuels and vegetation treatments in the North Spring Valley Watershed should allow for an improvement in vegetative recruitment, establishment, production, vigor and diversity and help facilitate the establishment of the natural (historic) fire regime and improve habitat conditions for many species of wildlife. Implementing the Proposed Action, Alternative Action or a combination thereof, combined with present and future actions, should improve the overall condition of vegetative communities, their resiliency to future disturbance and provide a mosaic of differing ecological conditions. After implementation of the Proposed Action or Alternative Action, future wildfires should resemble the natural fire regime.

3.4 Wildlife; Migratory Birds; Special Status Species (Federally Listed and Proposed Threatened and Endangered Species and BLM Sensitive Species)

Affected Environment

The proposed project area lies within yearlong habitat for elk, mule deer, and pronghorn antelope. There has been no crucial summer or winter range or calving/fawning/kidding grounds identified in the proposed project area for mule deer and pronghorn. The east-central portion of the treatment area overlaps crucial elk summer range. There is no occupied bighorn sheep habitat in or near the proposed project area.

The distribution of several migratory bird species overlaps the proposed project area; therefore, migratory bird breeding, nesting and foraging activities most likely occur throughout the proposed project area. There are a number of migratory bird species that must be considered under the Migratory Bird Treaty Act- Interim Management Guidance (Instruction Memorandum No. 2008-0500 based on known habitat associations, which include both sagebrush shrublands and pinyon and juniper woodlands. Some of these species include sagebrush shrubland species such as the sage sparrow

(*Amphispiza belli*) and Brewer's sparrow (*Spizella breweri*); pinyon and juniper woodland species such as the gray vireo (*Vireo vicinior*) and pinyon jay (*Gymnorhinus cyancephalus*), and other species such as the ferruginous hawk (*Buteo regalis*) and loggerhead shrike (*Lanius ludovicianus)*. Sage sparrows nest on the ground or in low shrubs during mid-April to July, and Brewer's sparrows nest in low shrubs during late May to July. Pinyon jays nest in trees during March to early June, and gray vireo from early April to late August. Ferruginous hawks nest mostly in scattered trees in sagebrush shrublands from April to July. Loggerhead shrike nest in a variety of habitats from late April to mid-July.

There are no federally listed, proposed, or candidate species found within the proposed project area.

There are several BLM sensitive bat species that may roost in pinyon and juniper trees, or forage in pinyon and juniper woodlands. Some of these species include the silver-haired bat (*Lasionucteris noctivagans*), hoary bat (*Lariurus cinereus*), long-eared myotis (*Myotis evotis*), long-legged myotis (*Myotis volans*), and Townsend's big-eared bat (*Corynorhinus townsendii*). Some species migrate and others are year-round residents.

All of the project area has been identified as sage grouse (*Centrocercus* urophasianus) nesting, summer, and winter habitat within the Schell/Antelope Population Management Unit (PMU). According to NDOW trend data Sagegrouse have shown a downward trend for 2008 and 2009 which is most likely attributed to the previous drought years. Two active leks ~~**and one lek of "unknown" status**~~ occur within the proposed project area. Three additional active leks **and two leks of "unknown" status** are within two miles of the proposed project area (see Map 5). .

Other raptor species, beside ferruginous hawk, include red-tailed hawk (*Buteo jamaicensis*), Coopers hawk *(Accipiter cooperii*), northern harrier (*Circus cyaneus*), and American kestrel (*Falco sparverius*). It is expected that incidental use (i.e. raptors flying overhead for hunting) by these species occurs in the general project area.

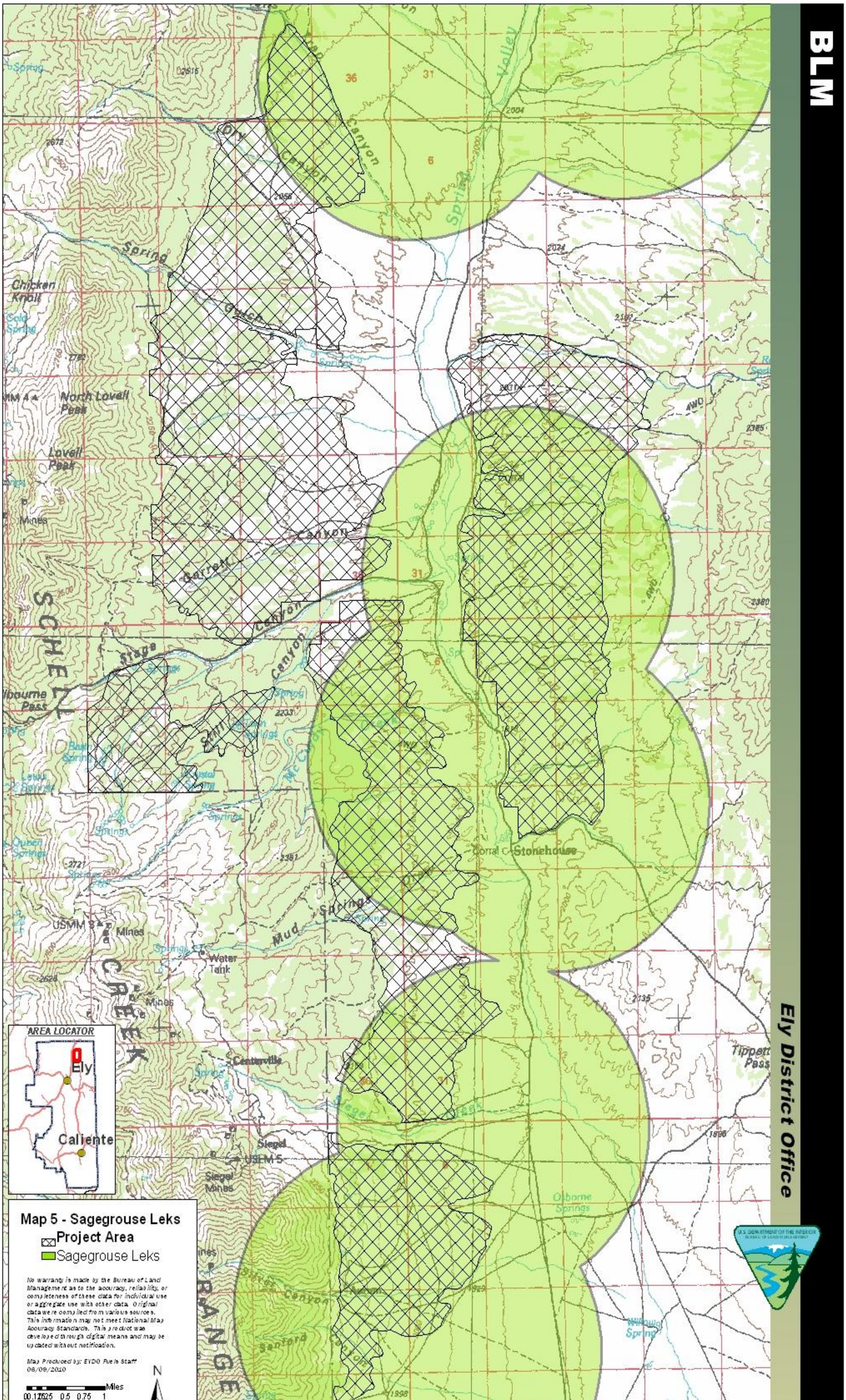
The relicit dace, a BLM sensitive fish species, is found in Spring Valley Creek at Hank Vogler's ranch, and in the spring ponds around the "Stonehouse". All of the sites are on private land, but adjacent to the proposed project area.

Impacts

Under the Proposed Action, individual animals would be disturbed and may be displayed from the area during the time the actual thinning treatments are being done. The treatments would leave a mosaic pattern of vegetation in the area, with natural woodland sites being undisturbed and shrub/perennial grass communities targeted for restoration. A mosaic pattern is expected to benefit wildlife populations by allowing for greater vegetative diversity, diverse age-class distribution and a patchiness effect which provides thermal and protective cover.

Implementation of the Proposed Action would assist the Spring Valley Watershed in conforming with the Northeastern Great Basin Rangeland Health Standard 3 (Habitat) which states the following:

"*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.*


BLM
Ely District Office
U.S. DEPARTMENT OF THE INTERIOR
Map 5 - Sagegrouse Leks
Project Area
Sagegrouse Leks
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.
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Miles
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Caliente
SCHELL CREEK RANGE
Dry Canyon
Spring Gulch
Chicken Knoll
North Lovell Peak
Lovell Peak
Barrett Canyon
Stage Canyon
Mud Springs
Stonehouse
Centerville
Siegel
Siegel Mines
Water Tank
Mines
Tippett Pass
Osborne Springs
Willow Spring
Valley
4WD

As indicated by:

Vegetation composition (relative abundance of species);
Vegetation structure (life forms, cover, heights or age classes);
Vegetation distribution (patchiness, corridors);
Vegetation productivity and vegetation nutritional value"

Because the mechanical treatments would occur in the fall and winter months outside of the breeding and nesting season, no active nests would be destroyed or birds (eggs, nestlings or possibly adults) taken. Based on the scope of the proposed project in terms of the area of impact and the current and expected habitat conditions, it is likely the project will improve the habitat for some migratory bird species while decreasing the habitat value for other species. Reducing pinyon and juniper trees on sagebrush sites, improving the production of perennial grasses and improving the vigor of forbs and shrubs would favor species such as the sage sparrow and Brewer's sparrow. There would be little to no effect on species such as the pinyon jay, juniper titmouse and black-throated gray warbler populations since the proposed treatments would occur on sagebrush ecological sites, and there are many acres of dense pinyon and juniper woodlands in the mountains adjacent to the proposed project area. The proposed action would benefit the gray vireo since it prefers open pinyon and juniper woodlands. The populations of different migratory bird species would not decrease, but may even increase because of the improved habitat resulting from the Proposed Action.

There would be no impact to federally listed, proposed, or candidate species because there are none found within the proposed project area.

Some individual bats that may be roosting in the pinyon and juniper trees at the time the treatments are done would be disturbed, displaced, or killed. Because there are adjacent woodlands, bats would have suitable habitat to move into during and after treatment. There would be no effect to bat populations as a result of the Proposed Action.

There would be no direct impacts to sage grouse breeding, nesting, and brood-rearing activities because the mechanical treatments would occur in the fall and winter months. The quality of sage grouse nesting and brood-rearing habitat would improve because of the increase in perennial grasses, forbs and shrubs in sagebrush communities that are presently dominated by pinyon and juniper trees. In addition, reducing trees would decrease perches for raptors that may prey on sage grouse especially when they are strutting on nearby leks.

There would be no impact to nesting raptors because the treatments would avoid active nest sites, and because the mechanical treatments would be done in the fall and winter months. Improving sagebrush communities would improve the prey base (i.e., small mammals) for raptors.

There would be no direct impact to relicit dace or relict dace habitat found in Spring Valley Creek at Hank Vogler's ranch and in the spring ponds around the "Stonehouse" as a result of the proposed action because the treatments would occur on the benchlands away from these private lands. Indirect impacts would include reduced sedimentation from the proposed project area because of increased vegetation cover under the Proposed Action.

Under the Alternative Action, there would also be an overall net benefit to mule deer, elk, pronghorn antelope and sage grouse populations within the project area by improving vegetative production, regeneration, diversity and vigor as mentioned under the Proposed Action. There would be a net overall

increase in perennial grasses and regeneration in the existing forb and shrub community. Woodland sites would remain and continue to provide soil protection on those sites as well as thermal protection and escape cover for many species. Under the Alternative Action, a primary concern is that there is a high probability of mortality to sagebrush and other shrubs as a result of effects of the herbicide. Mortality on sagebrush is generally high following the application of Spike. Mortality on deeper rooted shrubs such as antelope bitterbrush is generally much lower. Sagebrush is an important component of the primary ecological site within the project area and the use of Spike will likely result in a high mortality rate on sagebrush species. Wildlife such as mule deer and pronghorn antelope are highly dependent on sagebrush for winter browse and cover. Sage grouse are highly dependent on sagebrush for forage, thermal and protective cover, nesting habitat and brood habitat. The removal of a large portion of the sagebrush community would have less favorable effects on mule deer, pronghorn antelope, sage grouse and other bird species than the Proposed Action.

According to the *Final Programmatic EIS - Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States (2007) page 4-105,* impacts to wildlife are generally considered to be low in relation to pollinators and direct contact with other wildlife. The potential ingestion of vegetation sprayed with tebuthiuron at the maximum rate poses a risk to mammalian herbivores. At moderate to low levels of application the ingestion of vegetation that has been sprayed poses a low acute risk and chronic risk to mammalian herbivores.

Progress towards meeting the objectives is expected to occur at a less rapid rate than under the Proposed Action.

There would be no direct impact to relicit dace or relict dace habitat found in Spring Valley Creek at Hank Vogler's ranch and in the spring ponds around the "Stonehouse". The buffers applied to the application of spike from washes would prevent the transportation of the chemical within the waterways. The vegetation alteration would occur on the benchlands away from these private lands. Indirect impacts would include reduced sedimentation from the proposed project area because of increased vegetation cover under the Proposed Action.

Implementation of the Alternative Action is expected to have overall less favorable benefits to wildlife populations, the associated habitat conditions and result in slower progress in conforming with Rangeland Health Standard 3 (Habitat) as mentioned above under the Proposed Action.

Under the No Action Alternative, resource conditions are expected to stay the same for a short-term period. The continued establishment of pinyon and juniper onto sagebrush ecological sites and a decline in the production, vigor and diversity of grass, forb and shrub species would result in a further decline in habitat conditions. Forage values would continue to decline in terms of both nutrition and palatability. The build-up of pinyon and juniper and increase in the amount of decadent stands of sagebrush communities could result in an eventual large, uncontrolled wildfire which has the potential to eliminate large acreages of existing habitat for an undetermined period of time. The increase in pinyon and juniper on sagebrush ecological sites would result in a decline in the local sage grouse populations through a reduction in food availability and a decrease in suitable nesting cover. Sage grouse are further affected by pinyon and juniper establishment on sagebrush habitats. The increase in pinyon and juniper on sagebrush habitats potentially limits available strutting grounds, summer habitat and nesting habitat.

The desired range of conditions suggests that approximately 22 percent of these communities should be in the shrub dominant state and 72 percent in the herbaceous dominant state. Presently the watershed analysis indicates that approximately 67 percent of the present vegetation is in the shrub dominant state.

The desired condition would afford habitat resilience and meet habitat needs for sagebrush obligates. Under the No Action Alternative, conformance with Rangeland Health Standard 3 is not expected to be met over the long-term within the proposed project area.

Cumulative Impacts

Cumulative impacts to wildlife are closely tied to vegetative impacts and alterations in habitat. The cumulative impacts analysis area for wildlife is considered to be the same as under vegetation and is the North Spring Valley Watershed boundary.

Past vegetative treatments, as described for cumulative impacts for vegetation, and water developments within the watershed have increased forage production, water availability and distribution for wildlife. The Humboldt Toiyabe National Forest has proposed a vegetation treatment that would be located to the south and west of the proposed treatment area. Present land use activities within the watershed such as livestock grazing, road construction, road maintenance, recreation activities, range improvement projects, wildfire and rights-of-way construction have potentially altered wildlife habitat or affected wildlife behavior and distribution. Most of these activities are expected to continue to some degree in the future and would continue to impact wildlife in a similar fashion. However, as additional forage is provided through vegetative treatments, competition for resources and habitat would decrease, providing long-term cumulative benefits to wildlife. The Proposed Action would have the most immediate impact in relation to increasing the vigor of sagebrush communities. The alternative action would have a similar impact as the Proposed Action but would take place over a longer period of time.

The incorporation of BLM policy and guidance on species such as sage grouse; raptors; pygmy rabbits; and migratory birds as design criteria would help to reduce overall impacts to the species.

3.5 Soils

Affected Environment

The soil mapping units within the project area include the Wala-Tarnach Association, Palinor-Urmafot-Urmafot Very Shallow Association, Cropper-Birchcreek-Segura Association, Eoj-McIvey Association, Palinor-Urmafot Association, Palinor-Tulase-Izar Association, Automal-Izar-Palinor Association, Atlow-Tarnach Association, Checkett-Grube Association, Eastwell-Shabliss-Izar Association, Urmafot-Betra-Shree Association, Urmafot Association and the Tarnach Association (USDA – NRCS, 2005).

The primary soil mapping unit along the Schell Creek Range on the west side of the proposed project area is the Palinor-Urmafot Association. This unit occurs from 6,200 to 7,450 feet in elevation and within the 8 to 14 inch precipitation zone. These soils occur on slopes from 2 to 15 percent. The soil association is comprised primarily of gravelly loams. These soils have moderate permeability [4] and have very high runoff potential.

The primary soil mapping unit along the southwest end of the Antelope Range on the east side of the proposed project area is the Eastwell-Shabliss-Izar Association. This unit occurs from 6,300 to 6,850 feet in elevation and within the 8 to 10 inch precipitation zone. These soils occur on slopes from 4 to 30

[4] permeability The movement of water and air through the soil which is affected by all soil characteristics such as texture, structure and consistence (Land Judging in Oklahoma, 1979).

percent. The soil association is comprised primarily of gravelly sandy loams, gravelly fine sandy loams and very gravelly loams. These soils have moderate permeability and have very high runoff potential.

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).

Impacts

Under the Proposed Action, there should be minimal soil erosion expected from implementation of the thinning and chaining treatments. The thinning and chaining treatments would target pinyon and juniper trees which have established on sagebrush ecological sites. Under the thinning treatment, minimal to no impacts are expected to the existing grass and shrub communities which should remain on the site and provide for soil protection and stability. Under the chaining treatment, impacts to the existing grass community and younger shrub communities are also expected to be minimal. Chaining should remove the targeted pinyon and juniper trees and older, decadent shrubs on the project site. Under the chaining treatment, impacts to soils should result in some soil scarification and furrowing to depths up to approximately 4 to 6 inches. The uprooting of targeted trees could create holes or impressions where the root mass occurred but should eventually fill in or level out over time. The grasses and younger, more vigorous shrubs should remain and continue to provide for soil protection and stability and the trees and larger, more decadent shrubs which are chained should be left on the landscape in a scattered fashion. The scattered material should provide a protective layer for soils from erosion and promote soil fertility by increasing organic matter over time through decomposition.

Biomass from grinding treatments should assist in preventing soil erosion and improve soil water holding capacity. The recruitment and establishment of perennial grasses and native shrubs following both the thinning and chaining treatments should further promote soil health over the long term along with assisting the ecological sites in achieving site potential. A diverse vegetative understory of grasses, forbs and shrubs assists in preventing soil erosion by minimizing bare spots. Over the long term, standing plant density, plant biomass and litter is expected to increase which should stabilize and protect the soil resource. No new roads would be constructed or created during the treatments so future soil disturbance from vehicular travel should be limited.

Under the Alternative Action, erosion potential could increase as the effects from the herbicide occur, as vegetation would not likely be able to intercept raindrop or overland flow impact. Erosion impact potential should be minimal for the first few years, as vegetation should be removed at a slower rate over a period of time. The impacts should be the greatest after the second year of implementation when herbicidal effects to vegetation are noticeable. Once perennial grasses and native shrubs have increased on the treated sites, erosion and runoff potential is expected to be minimal.

Under the No Action Alternative, current erosion rates and trends should remain the same. If trees continue to establish on sagebrush ecological sites, the perennial grass and shrub component could continue to be reduced. Continued tree establishment could out-compete understory grasses and shrubs leaving unoccupied spaces of bare ground. This competition from trees could reduce the amount of vegetation available to stabilize and protect soils. Soil erosion rates could increase under this action. This trend in vegetation increases the likelihood of large catastrophic high intensity wildfire events. Changes to the current soil conditions resulting from such events include; removal of protective vegetative cover, prolonged soil hydrophobicity and excess volatilization of soil chemical components. These changes result in increased risk of soil erosion and less vegetative establishment within the burned

area, which prolongs the erosion potential. If the grass and shrub component continues to be reduced over time and a high intensity wildfire event occurs in the area, regeneration from vegetation could be minimal after a fire and the likelihood of cheatgrass establishment becomes much greater. Soils could be more vulnerable to erosion due to the absence of desirable, perennial grasses and native shrubs which provide much greater protection to soils than undesirable annuals due to root depth and longevity. Higher erosion rates could occur and increased potential for gully formation. Sedimentation in lower drainage areas is expected to occur under such a situation.

Cumulative Impacts

The cumulative impacts analysis area for soils is limited to the proposed project area combined with drainages that intersect the project area downstream to and including Spring Valley Creek to a point not beyond the intersection with Snow Bank Creek. Disturbances impacting drainages upstream from the proposed project area are included when considering the current condition of the drainage as it intersects the proposed project area.

Past actions, including vehicle travel and grazing, have increased soil erosion within the area. Areas that are becoming dominated by pinyon and juniper with reduced understory would have a heightened soil erosion risk. The risk becomes greater if large unplanned disturbances such as wildfires, wind events or precipitation events were to occur. The Humboldt Toiyabe National Forest has proposed a vegetation treatment that would be located to the south and west of the proposed treatment area. Through planned treatments bringing the FRCC to class one, natural disturbances should be smaller in size, less intense, less severe and more manageable.

Cumulative impacts from implementing the Proposed Action, Alternative Action or a combination thereof combined with present and future actions should improve the overall stability of soils and their resistance to erosion. Improving soil cover and stability by improving vegetative conditions through the implementation of various treatments should improve soil stability and aid in offsetting land uses within the area that are increasing soil erosion. This reduction in erosion would lead to a reduction in sedimentation downstream from the proposed treatment area.

3.6 Riparian and Wetland Areas

Affected Environment

There are several springs, including Crystal Spring and Twin Springs, located in the Still Canyon drainage within the small, west central polygon of the proposed project area. Of the springs that have been evaluated, two are in Proper Functioning Condition (PFC) and one is functioning-at-risk. A 19 acre riparian rehabilitation treatment has been conducted around the Twin Springs location and up the drainage. There are six springs located around the McCurdy Garden area in the southernmost portion of the proposed project area. All of the springs which have been evaluated are in PFC. There are no perennial or intermittent streams, only ephemeral washes within the proposed project area boundaries. However, Stage Canyon and Siegel Creek are perennial streams located adjacent to portions of the proposed project area. Spring Valley Creek and the spring ponds around the "Stonehouse" are large riparian areas in the valley bottom adjacent to the proposed project area.

Impacts

Under the Proposed Action, the removal of pinyon and juniper trees which occur near springs should increase spring flow and improve riparian functioning condition at the springs. Over the long term, the establishment of desirable species on areas that are currently dominated by undesirable vegetation or with vegetation at levels less than site potential should provide soil protection and stability. This would reduce the potential for accelerated soil erosion rates during flooding and other natural weather events and in turn, reduce the potential for sedimentation into nearby riparian areas.

Implementation of the Proposed Action should help springs in maintaining PFC or making 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 PFC 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 Alternative Action, herbicides should not impact riparian or wetland areas due to a "no treatment" buffer zone of at least 100 feet from drainage bottoms and 300 feet around springs and perennial water sources that would be implemented near these areas. Adherence to the Standard Operating Procedures and Project Design Features for Herbicide Applications as identified in the *Final Programmatic Environmental Impact Statement (EIS) - Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States* (2007) should help in mitigating impacts to riparian and wetland areas. The impacts of the alternative action would occur to woody vegetation outside of the no-treatment buffer and would not directly impact vegetation adjacent to riparian areas. The Alternative Action should help to maintain existing spring sources as woody vegetation mortality increases over 3-5 years and less ground water is utilized. Over a 3-5 year period, the absence or lower levels of desirable herbaceous and shrubs species is expected to result in reduced soil protection and stability which should increase the potential for soil erosion. The soil erosion could likely result in an increase of future sedimentation into nearby riparian areas. Long term impacts of the Alternative Action would be an

increase in ground cover and desirable species that would increase soil stability and resistance to erosion. Overall, the implementation of the Alternative Action should assist in maintaining PFC or making progress towards achieving PFC at spring sources and assist in conforming with Rangeland Health Standard 2 (Riparian and Wetland Sites).

Under the No Action Alternative, adverse impacts to riparian and wetland areas are expected to occur over time with a continued increase in the establishment of pinyon and juniper and other upland species in these zones. The establishment of these species could reduce the opportunity for the establishment of desirable riparian species, and decrease perennial surface water flow at springs. Impacts to riparian and wetland areas could also occur in the event that a large wildfire burned and resulted in large scale vegetative destruction. Following an event of this nature, major run-off events could impact drainages and riparian areas through soil deposition and erosion patterns. Erosion potential following an uncontrolled wildfire could be high due to the potential size and intensity of a wildfire, particularly on those sites with a dense pinyon and juniper fuel type which are capable of producing crown fires. Under a natural wildfire event, water flow at spring sources could increase more than or similar to the Proposed Action and Alternative Action due to widespread vegetation removal that could occur. The decreased water intake by burned vegetation could cause flow at spring sources to increase, although sedimentation that could occur as a result of erosion associated with a large wildfire could potentially destroy existing riparian vegetation.

The No Action Alternative may not assist springs in maintaining PFC or making progress towards achieving PFC over the long term and conforming with Rangeland Health Standard 2 (Riparian and Wetland Sites).

Cumulative Impacts

The cumulative impacts analysis area for riparian areas and wetlands is defined by the project boundary and the riparian areas and drainages that are located downstream extending to and including Spring Valley Creek to a point not beyond the intersection with Snow Band Creek.

Some of the past and present actions within the analysis area that have had an impact on riparian/wetland areas within the North Spring Valley Watershed include livestock and wild horse grazing, low water levels, hummocking, water developments, road construction and maintenance, noxious and invasive weed infestations, casual recreation and fence construction, . Most of these actions have been taken into account during the watershed assessment and when making the recommendations for treatment. Current land uses would be expected to be managed as prescribed under the current RMP. There are no other proposals within the analysis area. Impacts resulting from the Proposed Action would lead to an improvement in riparian function within the project area. The Proposed Action would help to prevent large scale wildfires that could potentially result in degraded riparian function within the proposed project area as well as off site.

The Alternative Action would improve riparian function within the project area although not to the degree that the Proposed Action would. Vegetation surrounding the riparian areas would not be treated and would remain as is. The risk of wildfire would be reduced with similar impacts within the watershed as the Proposed Action.

The No Action Alternative would not improve riparian function within the watershed. The establishment of pinyon and juniper within sagebrush ecological sites would increase the risk of large

uncontrolled wildland fires. This could result in a loss of riparian function within the propose project area as well as within the watershed.

3.7 Livestock Grazing

Affected Environment

Livestock grazing in the region has evolved and changed considerably since it began in the 1870's. Past grazing practices are one factor that has contributed to the current existing environment. At the turn of the century, large herds of livestock grazed on unreserved public domain in uncontrolled open range. Eventually, the range was stocked beyond its capacity, causing changes in plant, soil and water relationships. Some speculate that the changes were permanent and irreversible, turning plant communities from grasses and other herbaceous species to shrubs and trees. Protective vegetative cover was reduced, and more runoff brought erosion, rills and gullies. In response to these problems, livestock grazing reform began in 1934 with the passage of the Taylor Grazing Act. Subsequent laws, regulations and policy changes have resulted in adjustments in livestock numbers, season of use and other management actions. The proper management of livestock grazing is one of many important factors in ensuring the protection of public land resources.

The project area lies within portions of the Schell Creek and Spring Valley Use Areas of the Tippett Allotment No. 10106 and within portions of the West Pasture Use Area of the Tippett Pass Allotment No. 20107 (see Map 6). The Tippett and Tippett Pass allotments support a traditional and historical lifestyle for the livestock permittees. The permittees are dependent on these allotments to help generate a portion of their annual income. The permitted grazing use on these allotments is presented in Tables 2 and 3.

Table 2 - Tippett Allotment No. 10106

Use Area	Livestock Number and Kind	Season of Use	Permitted Use (AUMs)
Schell Creek	1,000 Sheep	7/1-9/30	604
Spring Valley	113 Cattle	5/1-10/31	684
	2,800 Sheep	4/16-6/30	1,399
	1,000 Sheep	7/1-9/30	605

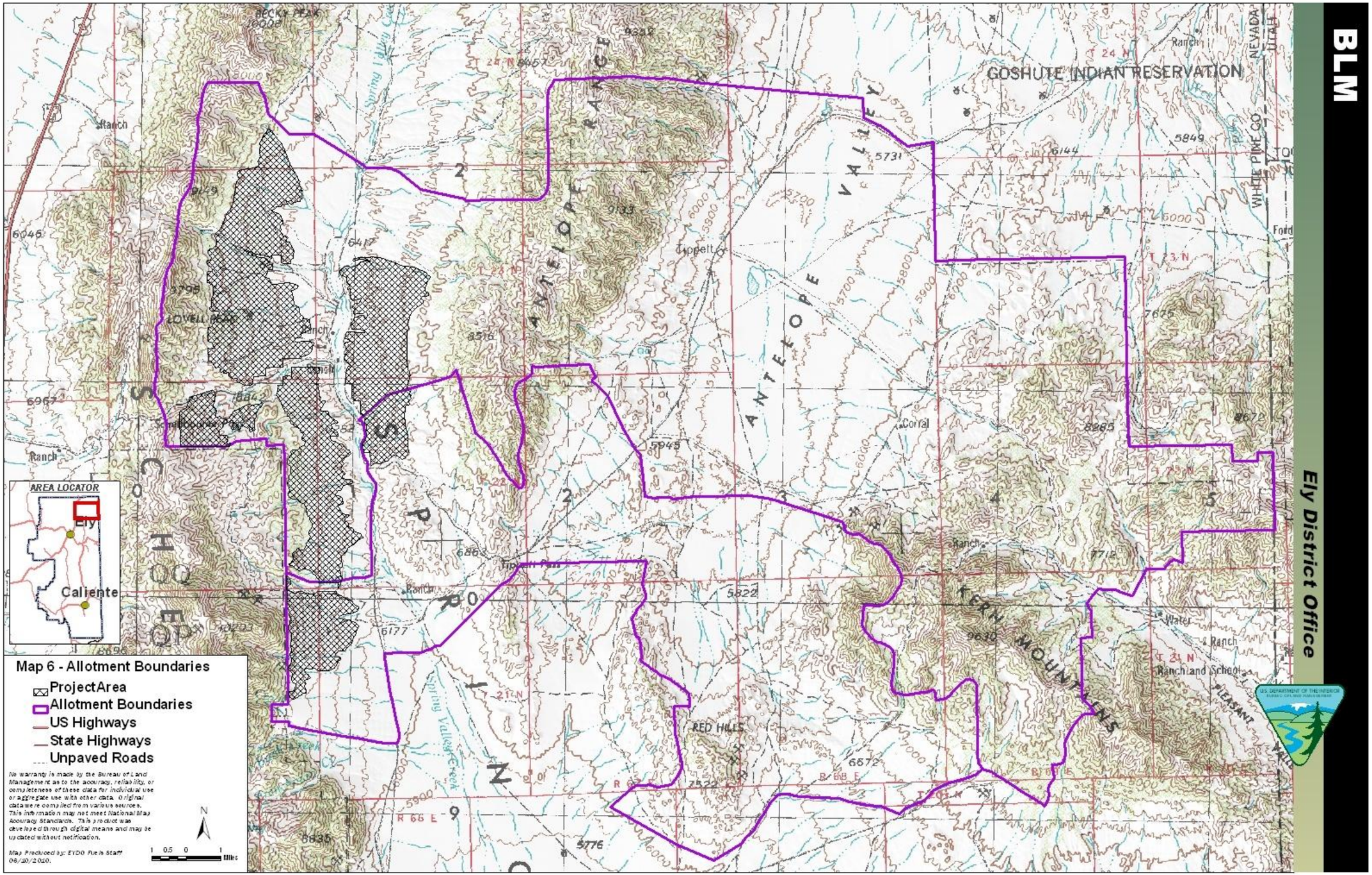
Table 3 - Tippett Pass Allotment No. 20107

Use Area	Livestock Number and Kind	Season of Use	Permitted Use (AUMs)
West Pasture	748 Sheep	10/1-3/15	817

The permittee on the Tippett Allotment is Need More Sheep Company. The primary use on the allotment is spring and summer cattle use, and fall and early winter sheep use.

The permittee on West Pasture Use Area of the Tippett Pass Allotment is Need More Sheep Company. The primary use on the West Pasture Use Area is fall, winter and spring sheep use.

An agreement addressing livestock grazing management and establishment of appropriate management level for wild horses was reached with Tippett Pass Allotment permittee and BLM, and implemented in October, 2001. The agreement made adjustments to livestock grazing by adjusting season of use, identifying specific use areas and AUMs for sheep and cattle, and placing some AUMs into voluntary


BLM
Ely District Office
GOSHUTE INDIAN RESERVATION
ANTELOPE RANGE
ANTELOPE VALLEY
TERN MOUNTAINS
RED HILLS
LOVELL PEAK
BECKY PEAK
Tippett
Ranch
Corral
Water
Ranchland School
Spring Valley Creek
WHITE PINE CO.
NEVADA
UTAH
AREA LOCATOR
Ely
Caliente
Map 6 - Allotment Boundaries
ProjectArea
Allotment Boundaries
US Highways
State Highways
Unpaved Roads
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.
Map Produced by: EYDO Fuels Staff 06/30/2010.
N
0 0.5 1 Miles

non-use. Prior to the agreement, season of use was yearlong, and total permitted AUMs were not separated by kind of livestock. Utilization levels of key forage species, and mitigation measures were implemented to avoid sage grouse habitat during the spring mating/brooding period. The agreement identified that an evaluation of resource conditions and management actions would be conducted in three years to determine if non-use AUMs could be activated.

The Final Multiple Use Decision (FMUD) was issued Full Force and Effect for the Tippett Allotment on July 17, 1990 and subsequently appealed. An Addendum to the Chin Creek, Tippett, and Sampson Creek Allotment Evaluations, which incorporated data collection since the original evaluation was finalized on September 20, 1990. An out of court settlement was reached and signed June 5, 1992. On June 8, 1992, counsel for the BLM filed a Stipulation to Vacate and Set Aside in Part Notice of Final Multiple Use Decision involved in the appeals. The appeals were withdrawn and proceedings dismissed.

Existing projects which occur within the proposed project area include the Unnamed Windmill, the Henroid-Robison Drift Fence and the Twin Springs Riparian Chainsaw Treatment. The Henroid Allotment Seeding, Robinson Allotment Seeding, a Forest Service Seeding and several cattle guards, wells and private fences occur adjacent to or in close proximity to the proposed project area boundaries.

Impacts

Under the Proposed Action, rangeland conditions are expected to improve following implementation of the proposed vegetation treatment. The health, vigor, recruitment and production of perennial grasses, forbs and shrubs should improve which could provide a more palatable and nutritional source of forage for livestock and wildlife and also protect the soil resource and other associated watershed values. The removal of established pinyon and juniper trees on sagebrush ecological sites should assist in improving ecological conditions within the proposed project area. There are no proposed changes to the grazing schedules as approved through the Term Permits and authorized within the RMP. Implementation of the Proposed Action should assist those portions of allotments within the project area in conforming with Standard No. 1 of the Standards and Guidelines for Nevada's Northeastern Great Basin Area and the Fundamentals of Rangeland Health (Title 43 CFR 4180) by increasing the quantity and quality of herbaceous vegetation, and assisting those ecological sites in progressing toward achieving the desired future condition. Long-term viability of the vegetative treatments could be expected so long as utilization levels are within acceptable limits and the season of use corresponds with plant phenology characteristics. Any adjustments in stocking levels, the incorporation of management guidelines such as utilization levels or other modifications to the existing permits would require further NEPA analysis, and would be conducted at the time the permits expire and are analyzed under the permit renewal process. Current utilization level thresholds identified in the existing permit should allow for proper vegetation management. Livestock grazing would not be scheduled within the treatment areas during implementation of the selected alternative. Livestock grazing would not be allowed to occur within treatment areas that are seeded for two complete growing seasons or until the vegetation objectives have been achieved. The removal of livestock during this time period may impact permittees in the short-term, but should be beneficial to permittees in the long-term as a result of overall improved vegetative conditions and forage values. Implementation of the Proposed Action should assist in mitigating any potential future conflicts among livestock, wild horses and wildlife.

Under the Alternative Action, long term impacts to livestock performance should be very similar to those impacts described above under the Proposed Action. As mentioned under the Proposed Action, no reduction or increase in livestock permitted use is proposed as a result of increased forage available from the project. The potential for meeting vegetation objectives through herbicide application (Alternative

Action) is expected to be similar to the thinning treatment (Proposed Action). The short term impacts and long term resource benefits are also expected to be very similar. Impacts to the permittees' grazing schedules should be very minimal under the Alternative Action. The aerial application of spike is anticipated to last for three days during which livestock would not be allowed on the proposed treatment area. Livestock grazing could resume following the application of the Spike pellets.

Under the No Action Alternative, there should be no short term impacts to the current livestock grazing on the Tippett and Tippett Pass allotments. In the long term, forage species for livestock could continue to diminish as pinyon, juniper, sagebrush and undesirable annuals increased in density and desirable grasses and forbs declined. Forage quality and quantity could decline over the long term. The health, vigor, recruitment and production of perennial grasses and native shrubs could decline in the long-term due to a combination of factors including continued grazing and browsing use by livestock, wildlife and wild horses and competition for nutrients, sunlight and precipitation with older, decadent shrubs and expanding pinyon and juniper woodlands. Future drought related factors could also contribute to the decline in condition of upland vegetative communities. The expansion of pinyon and juniper woodlands onto sagebrush ecological sites could continue and the older, decadent even-aged shrub communities could further decline in health and vigor affecting the recruitment and establishment of new grasses, forbs and shrubs. Grazing areas could be reduced over a period of time. The potential for reductions in permitted grazing use could exist as forage quantity and value declines. Conformance with Standard No. 1 of the Standards and Guidelines for Nevada's Northeastern Great Basin Area and the Fundamentals of Rangeland Health (Title 43 CFR 4180) may not be met over the long term due to the continued declines in the quantity and quality of herbaceous vegetation and preventing those ecological sites from achieving the potential natural community.

Cumulative Impacts

Cumulative impacts to grazing are closely tied to the impacts to vegetation. The cumulative impacts analysis area for grazing is the North Spring Valley Watershed excluding the Humboldt Toiyabe National Forest.

Adjustments within the allotments in the North Spring Valley Watershed have reduced livestock numbers to the present levels listed under the affected environment. These reductions were in response to overgrazing and loss of forage, drought and administrative actions.

The Proposed Action and Alternative Action could mitigate impacts to vegetation, soils and water relationships by improving the health, vigor and recruitment of perennial grasses, forbs and shrubs; increasing ground cover to improve soil stability, reduce erosion potential and improving water quality; and increasing the quantity and quality of forage for livestock use which could promote herd health and economic stability. Over a period of time, forage conditions should improve which could benefit long term livestock grazing management.

The No Action Alternative would maintain the current condition of vegetation within the allotment. As communities continue to become dominated by pinyon and juniper the loss of understory vegetation components would reduce available forage for livestock and wildlife. This trend would continue to increase the risk of large uncontrolled wildfire within the proposed project area that could result in a complete loss of forage in the short term as well as a complete alteration of the vegetation present and a permanent loss of forage from the allotment.

3.8 Fire and Hazardous Fuels

Affected Environment

The proposed project area is within the Schell, Northern Benches and Northern Mountains Fire Management Units (FMUs).

Historically, fire played a regular disturbance role in the ecosystem of the North Spring Valley area and adjacent mountains. Fire exclusion has occurred throughout the west since Europeans arrived, which is thought to have affected the natural role of fire. Vegetation volume has increased, and vegetative composition has changed as a result of this natural disturbance alteration resulting in late seral stage sagebrush communities with increasing dead to live woody material and decreasing understory grasses and forbs as well as invasion by pinyon and juniper. Fires prior to European settlement once carried through native fine fuels and created structural and age class diversity in sagebrush sites. According to Miller and Tausch (2001), infrequent fires in the past 130 years have allowed pinyon and juniper to establish on sagebrush sites. This fuel type presents a unique fire hazard that is substantially different from the historical fire regime. Wildland fires within this fuel type are typically wind driven crown fires that are of high intensity and severity resulting in a continuous stand replacing event. Wildland fires that exhibit this behavior are difficult and costly to control. Fire history and fire effects in the Great Basin are a vital component of resource health. There is evidence to support the existence of repeated wildland fires in eastern Nevada. It is not uncommon to find thin lines of charcoal exposed in arroyo cuts, marking episodes of prehistoric burning. Often, more than one episode is visible in the exposure. In the pinyon and juniper woodlands, ancient burned-out stumps can sometimes be found among mature stands of trees.

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

Impacts

Under the Proposed Action, a short term increase in the risk of high severity and intensity wildfires is expected as trees begin to dry. During the period between chaining and the needles dropping there will be an increase in hazardous fuels. Chaining minimizes this impact as it crushes the vegetation and keeps the fuel bed closer to the ground. Over the long term fire behavior should be decreased as a result of reduced fuel loading. Future natural fires within the proposed project area should be less extensive and smaller in size. Smaller wildfires should be easier to manage, reducing the risk to multiple natural resources, private lands, private withholdings, physical structures associated with ROWs and aesthetic values. Future fires should mimic natural severity. The danger of large, uncontrolled wildfires should be reduced under this alternative. Under the Proposed Action, over time the FRCC should be within the natural (historic) range. Studies have shown that fuels treatments conducted prior to a large, uncontrolled fire event reduce fire burn severity and extreme fire behavior. These treatments modify stand structure and extreme wildfire behavior. In a report written by the Apache-Sitgreaves National Forest in 2002 titled, "Rodeo-Chediski Fire Effects Report", studies showed the lessening of burn severity on treated areas prior to a wildfire burning through the area.

Under the Alternative Action, the herbicide treatment should increase the amount of standing dead material and decrease the quantity of live fuel for the short-term. The increase in the quantity of

standing dead material could potentially result in higher intensity burns in the area. The risk associated with this type of treatment should be the highest during the period prior to needle fall on the pinyon and juniper trees. The risk should be the lowest following needle fall and after a majority of the dead shrub branches have come in contact with the soil surface from physical forces and decomposition factors. The Alternative Action should result in higher fuel loads and higher intensity fires (if ignited) for at least a 3-5 year period. In the long-term, impacts to fire behavior and fuel loading should be similar to that described under the Proposed Action.

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 the burn intensity potential. The risk of a large, uncontrolled wildfire could remain much greater. If a wildfire does occur in the area, fuel loading and the associated fire intensity should be reduced. The No Action Alternative should result in high fuel loading and fire intensity potential in the long-term.

Cumulative Impacts

The cumulative impacts analysis area for fire is the proposed project area and the North Spring Valley Watershed. Past and present actions that have contributed to impacts on wildland fire and hazardous fuels include; livestock grazing, casual recreation, past fuels and habitat improvement projects, rights of ways, road proliferation and wildland fires. Reasonably foreseeable future actions within the proposed project area include the continuance of livestock grazing and casual recreation as presently managed and wildland fires. The Humboldt Toiyabe National Forest has proposed a vegetation treatment that would be located to the south and west of the proposed treatment area. Under current conditions the potential exists for large-scale high intensity and high severity wildfire events in the North Spring Valley Watershed. At this point in time there are no other treatments proposed within the cumulative impacts analysis area. Watershed monitoring data may indicate that areas within the watershed are in need of vegetation treatments to prevent catastrophic wildfire events, restore historical vegetative conditions and fire return intervals.

The Proposed Action and Alternative Action would have similar long-term cumulative impacts in that they would reduce the amount of fuel loading within the treated area and reduce the risk of large-scale wildfire events within the watershed. Improving the health and vigor of the area to be treated would reduce the live to dead fuel ratio and in turn would reduce wildland fire intensity and severity. The treatments would bring vegetative conditions within the area into FRCC1 where natural processes should be able to maintain the function of the ecosystem. In the short term the Alternative Action would increase the threat of wind driven crown fires as standing dead fuels are created to a greater degree than the Proposed Action. This impact would diminish as the needles fall and in the long term the impact would be the same as the Proposed Action. The No Action Alternative would maintain the current vegetation trend towards pinyon and juniper dominated sites and an elevated risk for large-scale intense wildfires.

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

Affected Environment

There are noxious weed infestations documented within and adjacent to the project area boundary (see Appendix A). The species found within the project area boundaries include bull thistle (*Cirsium vulgare*) and Canada thistle (*Cirsium arvense*). The noxious weeds found along roads and in drainages near the proposed project area boundaries include musk thistle (*Carduus nutans*), scotch thistle

(*Onopordum acanthuim*), whitetop/hoary cress (*Lepidium draba*), black henbane (*Hyoscyamus niger*), Russian knapweed (*Acroptilon repens*), spotted knapweed (*Centaurea stoebe*), tall whitetop (*Lepidium latifolium*), bull thistle and Canada thistle. Cheatgrass (*Bromus tectorum*) is an invasive, annual species which also occurs within the project area. It is expected that halogeton (*Halogeton glomeratus*) and Russian thistle (*Salsola kali*) also occur within and/or adjacent to the proposed project area.

Impacts

Under the Proposed Action, noxious weeds which have been identified outside the proposed project area could become established within the new disturbance. In areas with reduced levels of existing perennial grasses and forbs; cheatgrass or other invasive or noxious species could establish or increase prior to the increase in desirable, perennial grasses, forbs and shrubs.

New species could be introduced to the area as a result of vehicles, heavy equipment and activities associated with the use of the vehicles and equipment. The design features of the proposed action including preventive measures during implementation; treating areas where weeds spread; and improving native vegetation, all of which would decrease impacts to weeds.

Under the Alternative Action, there would be minimal to no surface disturbing activities which should reduce the potential for the spread of noxious weed species. If minimal desirable perennial grasses and forbs exist on some isolated areas the application of herbicide could potentially allow for the establishment of noxious weeds and invasive species due to a delay of desirable species establishment and exposed soil surface. However, it is expected that a majority of the treatment area should respond to the chemical over a three to five year period and on an even scale allowing for the progression and increasing the existing perennial understory species prior to the establishment of noxious weeds and most invasive species The design features of the proposed action including preventive measures during implementation; treating areas where weeds spread; and improving native vegetation, all of which would decrease impacts to weeds.

Under the No Action Alternative, noxious 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 noxious weeds and invasive species establishment following a natural disturbance (e.g., wildfire) due to the lack of competition from desirable, perennial grasses and forbs. Increased open spaces created by increasing pinyon and juniper establishment could allow noxious weeds and invasive species to increase even without disturbance. Increasing the density of woodlands could also increase the size and effect of a potential wildfire, which indirectly could provide large areas for noxious weeds and undesirable species to establish following a wildfire event.

Cumulative Impacts

The cumulative impacts analysis area for Noxious and Invasive Weeds is the project area combined with the potential weed transportation routes (roads and washes) that intersect the project area. This land uses described within the affected environment would be expected to continue and to be managed under the current RMP. While it is recognized that disturbances can facilitate the establishment of noxious and invasive weeds, due to processes outlined in the design features no cumulative effects are anticipated.

3.10 Wild Horses and Burros

Affected Environment

The proposed project area is within the Antelope wild horse Herd Management Area (HMA). The Appropriate Management Level (AML) for the entire HMA is 324 wild horses. The Ely District's Antelope HMA is managed with the Elko District's adjacent Antelope Valley HMA located on the east side of highway 93. Wild horses move freely across public lands. The proposed project area is used by wild horses on a regular basis.

Impacts

Under both the Proposed Action and the Alternative Action, additional forage should be provided and the habitat structure should be changed for wild horse populations. Currently, wild horses in the North Spring Valley Watershed use the pinyon and juniper for shelter and escape cover. The pinyon and juniper are important habitat components for wild horses, but the proposed treatment should not eliminate enough protective and escape cover to affect the existing wild horse population. The proposed treatment should result in a subsequent increase of perennial, herbaceous plants which are important for the maintenance of wild horses, rangeland health and multiple other watershed values.

Wild horses are not expected to be harmed by aerial application of herbicide. Wild horses are also not expected to be harmed by chaining, as they should avoid these activities. The possibility of temporary displacement during treatment activities could occur, but wild horses would likely return to the treatment area once the treatment activities were complete.

Grazing by wild horses within the newly seeded area could potentially limit the success of the treatment. It is anticipated that the overall size of the treatment would provide an overabundance of forage initially and that grazing by wild horses would be dispersed and have a minimal impact on the establishment of new vegetation. To further minimize this impact design criteria has been incorporated into the proposed action to attempt to time the seeding with the next upcoming gather.

Under the No Action Alternative, no changes in management would occur. Habitat for wild horses should continue to change resulting in more pinyon and juniper woodlands, more decadent shrubs and less perennial, herbaceous plants for forage. There could be increased user conflict among livestock, wildlife and wild horses due to competition for desirable forage. Rangeland health could continue to decline which could affect multiple watershed values over the long-term.

Cumulative Impacts

The cumulative impact analysis area for considering Wild Horses is the HMA within the North Spring Valley Watershed.

Past and current actions on wild horses within the North Spring Valley Watershed include past gathers, seedings and water developments. Actions affecting wild horses have included livestock grazing; road construction and maintenance; recreation activities including off-highway travel, fence construction; uncontrolled wildfire and rights-of-way construction. Most of these activities are expected to continue to some degree in the future and could continue to impact wild horses in a similar fashion. However, as additional or improved forage value is provided through vegetative treatments, competition for resources and habitat could decrease, providing long-term cumulative benefits to wild horses. BLM policy and

guidance on wild horses and the implementation of appropriate management levels (AML) should help to reduce overall impacts.

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. Design features that have been incorporated into the Proposed Action as design criteria include considerations for sage grouse, migratory birds, pygmy rabbits, raptors, livestock grazing, range improvement projects, historic and cultural resources, noxious weeds and invasive species, and water quality. All impacts discussed in chapter three represent the residual impacts of the Proposed Action with appropriate design criteria in place.

5.0 SUGGESTED MONITORING

Appropriate monitoring has been incorporated into the Proposed Action and the Alternative 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. Future monitoring would be used to determine if, and when, resource management objectives have been achieved. Monitoring information would be used to determine when livestock grazing could continue within the project area. 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 July 21, 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. The Ely District Native American Coordinator discussed the Proposed Action and alternatives with Native American Tribes on November 7, 2008 and again on 05/20/2010 and no concerns were identified. Consultation and coordination also occurred with the grazing permittee on the Tippet and Tippet Pass allotments and partner agencies such as NDOW.

The Ely District Office fuels staff coordinated with the Nevada Division of Wildlife in the development of the project as well as the development of the seed mixture.

During the public scoping period comments received from the following individuals;

- Reese Tietje – Nevada State Clearing House comments were limited to the Division of State Lands who were in support of the proposed treatments.
- Clarence Bundy – Concerned about his private property, possible damage to his pipeline, reducing water flow and the access road to his private property. Avoidance of these facilities has been incorporated into the project design.
- Wayne Summers – Opposed to the proposed project that would involve the grinding and chipping of trees.

An additional comment letter was received form Katie Fite of Western Watersheds and was received after the conclusion of the official scoping period, however the comments have been considered.

- Katie Fite – These comments were submitted on behalf of Western Watersheds and were opposed to the Proposed Action or Alternative Action. Several of the comments were well beyond the scope of this analysis (see Chapter 1 for definition of scope). Any comment related to land management level decisions in regards to alternative land uses were considered to be beyond the scope of the analysis (i.e. – grazing, noxious and invasive weeds). The interaction of land uses and resources present with the Proposed Action have been evaluated by the BLM and disclosed within this environmental assessment. These resources have been evaluated by the appropriate technical specialist utilizing BLM approved techniques and methodologies.

The BLM did receive requests from agencies, groups and individuals to remain on the project mailing list and to receive notification of the status as the project changes. Due to changes in the proposed action the Preliminary Environmental Assessment (PEA) was mailed to everyone on the scoping mailing list as well as everyone who had expressed an interest since the scoping period. The PEA was posted to the website on June 24th, 2010. Comments on the PEA were requested by July 15th, 2010. Three comment letters were received during this period. These comments as well as the BLM Ely District's response and changes to the document are listed in Table 4. Changes to the EA from the PEA in Chapters 1-5 are placed in **bold text.**

Nevada State Clearinghouse was e-mailed the link to the posted document on June 28. 2010. The Nevada State Clearinghouse responded on July 14, 2010 stating that they had no comments.

As per the *To Promote the Conservation of Migratory Birds* Memorandum of Understanding signed on April 12th, 2010 Steve Abele at the US Fish and Wildlife Service was notified of the availability of the PEA. Mr. Able's comments were one of the three and are presented in Table 4.

Two parties who commented on the PEA have requested to receive the Final Environmental Assessment. These parties will receive the Final Environmental Assessment and the document will be posted on the Ely Districts Website with associated decisions and documents.

Internal District Review

Jeff Fenton	Fire Management Specialist (Fire, Fuels, Vegetation)
Brett Covlin	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)
Mindy Seal	Natural Resource Specialist (Noxious Weeds, Invasive Species)
Benjamin Noyes	Wild Horse and Burro Specialist (Wild Horses)
Kalem Lenard	Outdoor Recreation Planner (VRM, Recreation)
Dave Jacobson	Wilderness Planner (Wilderness Values)
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)

Table 4 – Preliminary Environmental Assessment Comments

Commenter	Comment	Response	Changes in Document
USFWS - Steve Abele	US Fish and Wildlife Service is in support of the project for the benefits to the landscape. Suggested including maintenance of the treatment to maintain the positive impacts to the landscape. Also suggested the monitoring of all leks within the boundaries of the proposed action.	Maintenance of the treatment may be required at a later date. At the time that it is determined appropriate the action would be required to comply with the provisions of NEPA and CEQ guidance.	No Changes
USFWS - Steve Abele	US Fish and Wildlife Service suggested the monitoring of all leks within the boundaries of the proposed action.	The monitoring of the leks should be included.	2.2 Proposed Action, Page 17 - The monitoring of the two active leks within the boundary of the proposed project has been incorporated into the proposed action.

Southern Nevada Water Authority (SNWA)	SNWA monitors two piezometers within the general area of the project. They request to be informed of when and where implementation is beginning to maintain the dates with the piezometer recordings. SNWA requests that the piezometers be discussed within the Environmental Assessment.	Agree that the piezometers should be acknowledged and discussed.	2.2 Proposed Action, Page 17 - Discussion of the piezometers and requirements to inform SNWA of project implementation have been incorporated into the proposed action.
Southern Nevada Water Authority (SNWA)	SNWA pointed out that the "Stonehouse" is a "well known historic structure" located in the general area. They request that the analysis include consideration of the impacts to the historic setting or feeling of the "Stonehouse". They request that it be identified whether or not the "Stonehouse" would be included in a Class III survey with an associated determination of its eligibility to the National Register of Historic Places.	Impacts of the proposed action were addressed within the analysis of the proposed action. It was determined that the proposed project would mimic the natural landscape and not impact the historic setting or feeling of the "Stonehouse". For visitors who are at the "stonehouse" the majority of the proposed project area is blocked by the local topography. Due to this the Stonehouse would not be included in a class III survey, nor would a determination be made as to its suitability for listing in the national register of historic places.	No Changes
White Pine County	White Pine County Board of Commissioners is supportive of the project.	No Response	No Changes

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APPENDIX I

RISK ASSESSMENT FOR NOXIOUS & INVASIVE WEEDS

Stone House Habitat Improvement and Fuels Reduction Project
White Pine County, Nevada

On July 2nd, 2008 a Noxious & Invasive Weed Risk Assessment was completed for the Stone House habitat improvement and fuels reduction project located in North Spring Valley, Nevada. The proposal is to conduct tree thinning on selected areas along the east side of the Schell Creek Range and along the southwest end of the Antelope Range. The targeted areas for treatment would include areas identified in the North Spring Valley and Antelope Valley Watershed Evaluation Report (2005) where pinyon and juniper trees have become established on sagebrush ecological sites. The total project area would include an estimated 23,676 acres. An estimated 70 to 80 percent (approximately 16,600 to 19,000 acres) would be targeted for treatment. The thinning treatments could be conducted by, but not limited to, the following methods or a combination of the following methods:

- manual methods (chainsaw) and/or mechanical methods such as a chaining with the Ely anchor chain or with a bull hog, feller buncher or similar piece of equipment that masticates trees.
- The thinning treatments could be conducted by chemical treatments using a pellet form of the herbicide Tebuthiuron (trade name Spike 20P) along selected areas during the fall months prior to snowfall.
- The thinning treatments could be conducted by prescribed burning, preferably during the fall months prior to snowfall.

No field weed surveys were completed for this project. Instead the Ely District weed inventory data was consulted. The following species are found within the project area:

Cirsium arvense	Canada thistle
Cirsium vulgare	Bull thistle

The following species are found along roads and drainages leading to the area:

Acroptilon repens	Russian knapweed
Carduus nutans	Musk thistle
Centaurea stoebe	Spotted knapweed
Cirsium arvense	Canada thistle
Cirsium vulgare	Bull thistle
Hyoscyamus niger	Black henbane
Lepidium draba	Hoary cress
Lepidium latifolium	Tall whitetop
Onopordum acanthium	Scotch thistle

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 2004.

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

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

For this project, the average factor rates as Moderate (5) at the present time. This project has a range of ratings for this factor depending on the treatment method selected. The hand removal and herbicide methods have a Low (3) rating due to the minimal amount of ground disturbance associated with those treatments. The heavy machinery methods have a Moderate (5) rating due to the amount of ground disturbance and the possibility of transporting weed seeds on the vehicle tracks. The prescribed burn method has a Moderate (7) rating due to the tendency of cheatgrass to easily invade burn sites.

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

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

Both options of this project rate as High (8) at the present time. If new infestations establish within the project area this could adversely impact those native plant communities since the proposed treatment areas are currently considered to be mostly weed-free. Also, any increase of cheatgrass could alter the fire regime in the area.

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

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

For this project, the Risk Rating is Moderate (40). This indicates that the project can proceed as planned as long as the following measures are followed:

- Prior to entering public lands, the contractor will provide information and training regarding noxious weed management and identification to all personnel who will be affiliated with the implementation and maintenance phases of the project. The importance of preventing the spread of weeds to uninfested areas and importance of controlling existing populations of weeds will be explained.

- To eliminate the transport of vehicle-borne weed seeds, roots, or rhizomes all vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities; or for authorized off-road driving will be free of soil and debris capable of transporting weed propagules. All such vehicles and equipment will be cleaned with power or high pressure equipment prior to entering or leaving the work site or project area. Cleaning efforts will concentrate on tracks, feet and tires, and on the undercarriage. Special emphasis will be applied to axels, frames, cross members, motor mounts, on and underneath steps, running boards, and front bumper/brush guard assemblies. Vehicle cabs will be swept out and refuse will be disposed of in waste receptacles. Cleaning sites will be recorded using global positioning systems or other mutually acceptable equipment and provided to the Field Office Weed Coordinator or designated contact person.
- Reclamation would normally be accomplished with native seeds only. These would be representative of the indigenous species present in the adjacent habitat. Rationale for potential seeding with selected nonnative species would be documented. Possible exceptions would include use of non-native species for a temporary cover crop to out-compete weeds. Where large acreages are burned by fires and seeding is required for erosion control, all native species could be cost prohibitive and/or unavailable.

Reviewed by: /s/Bonnie M. Million 7/2/2008

Bonnie M. Million Date

Ely District Noxious & Invasive Weeds Coordinator

Stone House Fuels Reduction

Documented Noxious & Invasive Weed Infestations