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

Draft Environmental Assessment

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Grazing Permit Renewal
For the
Crestline Allotment
(11023)

Lincoln County, Nevada

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1.0 Introduction

This document identifies issues, analyzes alternatives, and discloses the potential environmental impacts associated with the proposed term grazing permit renewal for Malin Gardner (275099) and authorize livestock grazing on the Crestline Allotment (11023). No other permittees that hold grazing privileges are on the allotment. This Environmental Assessment (EA) fulfills the National Environmental Policy Act (NEPA) requirement for site-specific analysis of resource impacts. The Bureau of Land Management (BLM) considered both the proposed action and alternatives to the proposed action.

This EA tiers to and incorporates by reference the Ely District Resource Management Plan that was approved August 2008. The Mojave-Southern Great Basin Resource Advisory Council developed Standards and Guidelines for Grazing Administration that the Secretary of the Interior approved on February 12, 1997.

The BLM assessed the rangeland health during the permit issuance process. The BLM range staff conducted a review of the monitoring data. As a result of this review, the BLM did not identify any changes in the livestock management practices.

The BLM range staff will continue to collect monitoring data for the Allotment including utilization (use pattern mapping and key area), ecological condition, trend and cover. If a future assessment results in a determination that changes are necessary for compliance with the Standards and Guidelines, the BLM will reissue the permit or lease subject to revised terms and conditions.

1.1 Background

The Crestline allotment is located within the Caliente Field Office in Lincoln County, Nevada. The Crestline allotment is approximately 18 miles southeast from the city of Panaca, Nevada. Single-leaf pinyon and Utah juniper dominate this site. Black sagebrush and bitterbrush are the principal understory shrub species in any parts of the allotment. The most prevalent understory native grasses are blue-bunch wheatgrass, bottle-brush squirrel-tail, blue grama, needle-n-thread, and Indian ricegrass. An overstory canopy of zero to ten percent is assumed representative of tree dominance on this site in the pristine environment. Currently the allotment has closer to ten to 25 percent tree canopy cover. Wildfire is a natural disturbance that strongly influenced the structure and composition of the climax vegetation of this woodland site.

Multiple land uses occur on private and public lands located in the Crestline allotment and influence grazing operations as well as ecological processes. The Union Pacific rail line operates through the allotment from south to north restricting animal movement and dividing the allotment into east and west pastures. The Lincoln County Landfill is located in the northwest corner of the allotment. Private land located in the southeast portion of the allotment is used for farming which includes a pivot irrigation system and some dry-land pasture. These private lands provide a majority of the forage and water in the area.

There is one active grazing permit that has 540 Animal Unit Months[1] (AUMs), and it is used for cattle grazing on the Crestline allotment. Of the 540 AUMs, 485 are suspended leaving 55 active AUMs. The season of use is March 1 to February 28. Average actual use over the last five years

has been about 70% of the active AUMs (39 used out of 55 active), all of which occurs on the east side due to water limitations.

There are a total of 3,661 acres in the Crestline allotment; of this, 2,395 acres are public land, 1,200 acres are in private ownership, and 1,633 acres are slated for disposal to be added to the Lincoln County Landfill private acres. Water for the east side of the allotment is provided by overflow from irrigation on the private farmland located within the allotment and is fenced. Water is also available in the Lafe's Reservoir located in the southern end of the east side. However, water availability in the reservoir is dependent on the time of year and precipitation. The reservoir lies on the boundary of the Crestline allotment and the Enterprise allotment to the south. The private land within this part of the allotment is used for the Lincoln County Landfill and is fenced. The west side of the allotment is not currently grazed due to the lack of water. A reservoir is located on the southern end of the allotment. However, it currently does not hold water, presumably due to infiltration of the reservoir bottom. It is likely that the increased tree dominance in the area is altering hydrology contributing to the unavailability of water. According to the Fire Regime Condition Class (FRCC) the Crestline allotment is highly departed from what it should be (See FRCC map in Appendix I). About 96.6% of the allotment is a FRCC Class of 3, the most highly departed from ideal conditions, approximately 1.3% is in a FRCC Class of 2, highly departed from ideal conditions, and about 2.1% is in a FRCC Class of 1, not very departed from ideal conditions. The condition of this area is typical of a late seral pinyon/juniper woodland where the co-dominance of shrubs and trees is transitioning to a strictly tree dominated site. At this point ecological processes begin to change with a decrease in the amount of precipitation that reaches the ground and conversely an increase in overland water flows and erosion during heavy precipitation events. Soil stability is reduced due to the reduction of shrub, forb, and grass species, which serve as palatable forage species for wildlife, horse, and livestock. The BLM implemented a 700 acre juniper treatment project in 1958, but the effects of this treatment are no longer present and the community is once again at an advanced stage of pinyon/juniper development with little to no understory.

The Crestline allotment falls within 16-18 inches of annual precipitation range. The precipitation data (Appendix I) collected at the Crossroads and Enterprise rain can locations, show an average of 10.8-11.7 inches annually within the last 11 years (2000-2011); though there are several months each year where the rain cans are unable to be read due to road conditions and soil moisture, this could account for the difference.

The BLM range staff based the assessment on rangeland monitoring data that summarized within Appendix II of this document. Because of the assessment and monitoring data review, the BLM determined that the Standards and Guidelines for Rangeland Health are currently being achieved on the Crestline Allotment. A summary of this finding for the Crestline Allotment follows:

Table 1.2 Summary of Assessment of the Mojave-Southern Great Basin Area Standards for the Crestline Allotment.

Standard	Status
1. Soils	Achieved
2. Ecosystem Components Standard	Achieved
3. Habitat and Biota Standard	Achieved

(See Appendix II for Standards Determination Document)

1.2 Introduction of the Proposed Action

The proposed action is to issue a new term grazing permit for Malin Gardner (operator 275099); and authorize livestock grazing on the Crestline Allotment. The current term permit and allotment information follows:

Standards and Guidelines for Grazing Administration were developed by the Mojave-Southern Great Basin Resource Advisory Council (RAC) and approved by the Secretary of the Interior on February 12, 1997. The AUL and BMP would assist in achieving and maintaining these standards.

BLM range staff collected and analyzed monitoring data; and completed an assessment of the rangeland health for the Crestline Allotment in 2011-2012, through a Standards Determination Document (SDD) (Appendix II).

1.3 Need for the Proposed Action

The need for the proposal is to authorize grazing use on public lands in a manner which satisfies the Federal Land Policy and Management Act (FLPMA) while being consistent with multiple use, sustained yield and the Nevada's Mojave-Southern Great Basin Area Standards for Rangeland Health; to manage livestock in accordance with all applicable laws, regulations, and policies; and to renew the term livestock grazing permit on the Crestline Allotment while introducing management practices, along with specific terms and conditions, directed toward the attainment and/or continued achievement of the Standards and Guidelines for Grazing Administration.

1.3.1 Objectives for the Proposed Action

- To renew the grazing term permit for Malin Gardner (275099) and authorize livestock grazing on the Crestline Allotment (11023) in accordance with applicable laws, regulations, and land use plans (LUP) on 2,395 acres of public land.

- To improve and maintain vegetative health and growth conditions on the allotment while maintaining achievement of the Standards and Guidelines for rangeland health as approved and published by Mojave-Southern Great Basin RAC.

1.4 Relationship to Planning

The proposed action is in conformance with the Ely District Record of Decision and Approved Resource Management Plan (RMP) signed August 20, 2008, which states, "Manage livestock grazing on public lands to provide for a level of livestock grazing consistent with multiple use, sustained yield, and watershed function and health." In addition, "To allow livestock grazing to occur in a manner and at levels consistent with multiple use, sustained yield, and the standards for rangeland health (p. 85-86)."

Management Action LG-1 states, "Make approximately 11,246,900 acres and 545,267 animal unit months available for livestock grazing on a long-term basis."

Management Action LG-5 states, "Maintain the current grazing preference, season-of-use, and kind of livestock until the allotments that have not been evaluated for meeting or making progress toward meeting the standards or are in conformance with the policies are evaluated. Depending on the results of the standards assessment, maintain or modify grazing preference, seasons-of-use, and type of livestock and grazing management practices to achieve the standards for rangeland health. Changes, such as improved livestock management, new range improvement projects, and changes in the amount and kinds of forage permanently available for livestock use, can lead to changes in preference, authorized season-of-use, or kind of livestock. Ensure changes continue to meet the RMP goals and objectives, including the standards for rangeland health."

1.5 Relationship to Other Laws, Regulations, and Plans

The proposed action complies with the following:

- State Protocol Agreement between the Bureau of Land Management (BLM), Nevada and the Nevada State Historic Preservation Office (October 26, 2009)

- National Historic Preservation Act (Public Law 89-665; 16 U.S.C. 470 as amended through 2000)

- Mojave-Southern Great Basin Resource Advisory Council (RAC) Standards and Guidelines (12 February 1997)

- Lincoln County Public Land Use Plan (2010)
- Migratory Bird Treaty Act (1918 as amended) and Executive Order 13186 (see below)

- Executive Order 13186: Responsibilities of Federal Agencies to Protect Migratory Birds (2001)

- The National Environmental Policy Act of 1969 (42 U.S.C. §§ 4321-4347, January 1, 1970, as amended 1975 and 1994)

- The Federal Land Policy and Management Act of 1976 (43 U.S.C. §§ 1701-1782, October 21, 1976, as amended 1978, 1984, 1986, 1988, 1990-1992, 1994 and 1996)

1.6 Tiering

This document is tiered to the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (Ely PRMP/FEIS, Volumes I and II) (November 2007).

1.7 Relevant Issues and Internal Scoping/Public Scoping

The Ely District Office mails an annual Consultation, Cooperation, and Coordination (CCC) letter to individuals and organizations who have expressed an interest in rangeland management related actions. Those receiving the annual CCC letter have the opportunity to request, from the District Office, more information regarding specific actions (e.g., term permit renewals).

On December 16, 2011, the Ely BLM mailed the annual CCC letter that notified interested parties of the livestock grazing term permit renewals scheduled for 2012.

On February 22, 2012, the BLM sent a letter to local Native American tribes requesting comments regarding the permit renewal process for the Crestline Allotment.

On June 5, 2012, a BLM held an internal meeting in coordination between the Caliente Field Office the Ely BLM District Office. BLM resource specialists reviewed and scoped the term permit renewal proposal for the Crestline Allotment to identify any relevant issues. The BLM resource specialists identified no potential issues.

On May 30, 2012, the BLM sent the permittee a letter informing them of the proposed term permit renewal process scheduled for their allotment during 2012. No comments were received.

2.0 Alternatives Including the Proposed Action

2.1 Proposed Action

The Bureau of Land Management, Caliente Field Office proposes to renew the term grazing for Malin Gardner (275099) and authorize livestock grazing on the Crestline Allotment (11023). The issuance of the term grazing permit would be for a period of ten years.

The Proposed Action is to maintain the Active Use of 55 AUMs from May 1 to October 31 grazing period in accordance with the current term permit. However, the BLM would base the authorization of 55 AUMs, during any given year, based on annual forage availability.

The Proposed Action would also add other terms and conditions to the permit that would aid in achieving and maintaining the Mojave-Southern Great Basin Standards. No other changes to the permit would be made.

2.1.1 Current Permit

The BLM issued the current term grazing permit, for the Crestline Allotment (11023) for the period February 24, 2011 to September 30, 2020 in accordance with public law 11-322, an extension of public law 111-242 Continuing Appropriations Act. Table 2.1.1and Table 2.1.2 below, display the current term grazing permit information in tabular format.

Table 2.1.1 Current Term Grazing Permit for the Crestline Allotment

Allotment Number Name 11023 Crestline Permittee Name	Livestock Number/Kind	Grazing Period Begin End	% Public Land	Type Use	AUMs
Malin Gardner	#7/Cattle	03/1-10/31	90	Active	55

Table 2.1.2 Current Term Grazing Permit AUMs for the Crestline Allotment

Allotment Number Name 11023 Crestline	Animal Unit Months (AUMs)		
Permittee Name	Active	Suspended	Preference
Malin Gardner	55	485	540

2.1.2 Proposed Term Permit

The new term permit would contain the same mandatory terms and conditions as the current term permit (Table 2.1.1).

The following Terms and Conditions would also be added to the Term Grazing Permit:

1. Allowable Use Levels on current year's growth of upland vegetation (grasses, forbs and shrubs) within the Crestline Allotment - during the authorized grazing use period (March 1–October 31) - will not exceed 45%.

2. Livestock will be moved to another authorized pasture or removed from the allotment before utilization objectives are met or no later than five days after meeting the utilization objectives. Any deviation in livestock movement will require authorization from the authorized officer.

In relation to grazing, there would be no additional terms and conditions needed to conform to guidelines; either to make progress toward or to maintain achievement of the Standards for Rangeland Health.

The renewal of the term grazing permit would be for a period of up to ten years. If the grazing privileges associated with this term permit were transferred during this ten-year period - with no changes to the terms and conditions of the permit - the new term permit would be issued for the remainder of the 10-year period.

2.1.3 Invasive, Non-Native Species and Noxious Weeds

The BLM completed a Weed Risk Assessment for this project (Appendix V). The BLM will also monitor the term permit renewal area on a regular basis for noxious weeds or non-native invasive species. The BLM will follow the measures listed in the Weed Risk Assessment, when grazing occurs on the allotment, to minimize the spread of weeds.

2.1.4 Monitoring

The Ely District Approved Resource Management Plan (August 2008) identifies monitoring to include, "Monitoring to assess rangeland health standards will include records of actual livestock use, measurements of forage utilization, ecological site inventory data, cover data, soil mapping, and allotment evaluations or rangeland health assessments. Conditions and trends of resources affected by livestock grazing will be monitored to support periodic analysis/evaluation, site-specific adjustments of livestock management actions, and term permit renewals" (p. 88).

2.2 No Action Alternative

The No Action Alternative, for livestock grazing, permit renewals is defined as "continuing to graze under current terms and conditions" in IM-2000-022, Change 1 (re-authorized by IM-2010-063)

Therefore, the No Action Alternative would reflect the status quo. The BLM will issue the term permit without changes to grazing management, or modifications to the existing terms and conditions of the permit.

The renewal of the term grazing permit would be for a period of up to ten years. If grazing privileges were transferred during this ten-year period - with no changes to the terms and conditions of the permit - the BLM would issue the new term permit for the remainder of the ten-year period.

2.3 No Grazing Alternative

Under this alternative, the BLM would not issue a new term grazing permit, once the current term permit expired, resulting in no authorized livestock grazing on the allotment.

This alternative was also considered and analyzed in the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (November 2007) which is addressed below.

2.4 Alternatives Considered but Eliminated from Further Analysis

The Ely Proposed Resource Management Plan and Final Environmental Impact Statement (PRMP/FEIS) (November 2007) (Volume II) analyzes the Environmental Impacts of livestock grazing for the Proposed RMP and four alternatives (p.4.16-1 to 4.16-15.), including a no-grazing alternative (Alternative D). It also analyzes Environmental impacts on vegetative resources from livestock grazing under the Proposed RMP and the four alternatives (4.5-1 to 4.5-28), including the no-grazing alternative. However, the no-grazing alternative is additionally

analyzed in this EA. The following is a list of the four Alternatives contained within the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (PRMP/FEIS) (November 2007) (Volume II):

- Alternative A, The Continuation of Current Existing (No Action alternative)
- Alternative B, The Maintenance and Restoration of Healthy Ecological Systems
- Alternative C, Commodity Production
- Alternative D, Conservation Alternative (No-grazing Alternative)

3.0 Description of the Affected Environment and Associated Environmental Consequences

3.1 Allotment Information

Site-specific descriptions of portions of the affected environment are included, as needed, in the Environmental Consequences section of this EA to facilitate understanding of anticipated impacts. The Crestline Allotment (11023) encompasses 2,395 acres of public land acres, and 1,200 private land acres occur within the Crestline Allotment. The Allotment is situated in Clover Valley. The Allotment is located entirely within Lincoln County, in the north central portion of the Caliente/Ely BLM District approximately 18 miles southeast from the city of Panaca, Nevada. The Crestline Allotment is characterized by rolling hills and benches covered predominantly by Pinyon/Juniper woodlands. Generally, the precipitation level is between 16-18 inches on the allotment. Precipitation occurs primarily as winter snow or spring and fall thunderstorms and rains. Cattle are the type of livestock grazed on the allotment.

Neither the allotment nor any of its portions are located within a Wild Horse Herd Management Area (HMA), Wilderness Area, Wilderness Study Area, sage grouse habitat, or within desert tortoise habitat. There are no known riparian areas located within the allotment on BLM managed lands. Elevations range from approximately 6,450 feet within the mountainous terrain to 5,900 feet in the lower portions of the allotment.

3.2 Resources Concerns Considered for Analysis - Proposed Action

The BLM evaluated the following items for the potential for significant impacts to occur, either directly, indirectly, or cumulatively, due to implementation of the proposed action.

Consideration of some of these items is to ensure compliance with laws, statutes or Executive Orders that impose certain requirements upon all Federal actions. Other items are relevant to the management of public lands in general and to the Ely BLM in particular.

Resource Concern Considered	Issue(s) Analyzed	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
Air Quality	No	The State of Nevada classifies the air quality in Lincoln County as being "unclassifiable" since no monitoring has been conducted to determine the classification and National Ambient Air Quality Standards. The proposed action would not have a measurable effect on the air quality of Lincoln County. Any dust created would be expected to be ephemeral.
Cultural Resources	No	Impacts from livestock grazing on Cultural Resources are analyzed on page 4.9-5 of the Ely Proposed Resource Management Plan/Environmental Impact Statement (November 2007). The cultural staff will identify cultural properties impacted by grazing activities to be monitored in order to determine condition, impacts, deterioration, and use of these properties. BLM archeologists, law enforcement rangers, and trained site stewards, to identify impacts and evaluate site conditions, conduct site monitoring. As necessary, strategies are developed and implemented in order to reduce threats and resolve conflicts to the property.
Paleontological Resources	No	No currently identified paleontological resources are present in the project area.
Native American Religious Concerns and other concerns	No	On February 22, 2012, the BLM sent a letter to local Native American tribes requesting comments regarding the permit renewal process for the Crestline Allotment. Direct impacts and cumulative impacts would not occur, because there were no identified concerns through coordination.
Noxious and Invasive Weed Management	No	Livestock grazing has the potential to spread noxious and invasive weeds. The BLM completed a Weed Risk Assessment for this project (Appendix V). The design features of the proposed action in addition to the vigilant practices described in the Weed Risk Assessment will help prevent livestock grazing from spreading noxious and non-native, invasive weeds. No additional analysis is needed.
Vegetative Resources	Yes	Impacts from livestock grazing on Vegetation Resources were analyzed on page 4.5-9 in the Ely Proposed Resource Management Plan/Environmental Impact Statement (November 2007). Beneficial impacts to vegetative resources are consistent with the need and objectives for the proposed action. Analysis of the proposed action and alternatives is provided in the affected environment and environmental impacts sections.
Rangeland Standards and Health	Yes	Impacts from livestock grazing on Rangeland Standards and Health are analyzed on pages 4.16-3 through 4.16-4 of the Ely Proposed Resource Management Plan/Environmental Impact Statement (November 2007). Beneficial impacts to rangeland standards and health are consistent with the need and objectives for the proposed action. Analysis of the proposed action and alternatives is provided in the affected environment and environmental impacts sections.
Forest Health[1]	No	Cattle do not graze pinyon-juniper.
Wastes, Hazardous or Solid	No	No hazardous or solid wastes exist on the permit renewal area, nor would any be introduced by the proposed action or alternatives.
Wilderness	No	There are no Wilderness areas that are within the Crestline Allotment.
Lands with Wilderness Characteristics	No	Resource not present per the 1979 Intensive Wilderness Inventory.

Resource Concern Considered	Issue(s) Analyzed	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
Special Designations other than Designated Wilderness	No	No Special Designations occur within the project area.
Wetlands/Riparian Zones	No	There are no lentic or lotic riparian areas located within the Crestline Allotment on BLM managed lands.
Water Quality, Drinking/Ground	No	The proposed action would not affect water quality (surface or groundwater sources) or drinking water in the project area. No surface water in the project area is used as human drinking water sources and no impaired water bodies of the State on Nevada are present in the project area.
Water Resources (Water Rights)	No	The Proposed Action would not affect existing or pending water rights in the project analysis area.
Floodplains	No	The project analysis area is not included on FEMA flood maps. The resource does not exist in the proposed project area.
Migratory Birds	No	The migratory bird species that likely occur in or near the project area are listed in Appendix IV. This list includes BLM Sensitive species. It is anticipated that the portion of the Proposed Action, regarding rotational spring grazing in the south half of the allotment, and the establishment of Allowable Use Levels would aid in maintaining achievement of the Standards and Guidelines for rangeland health; thereby, maintaining or improving habitat conditions for all migratory birds of concern. There is always a possibility that cattle or horses could trample the nests, and/or developing young, of ground nesting birds during the spring nesting period. However, the potential for nest trampling is anticipated to be remote and upon occurrence, would be limited to an occasional individual or nest. If nests were lost due to trampling, birds would likely re-nest. Grazing would also reduce the height of existing vegetative structure and cover to some degree. However, with the established Allowable Use Levels it is anticipated that vegetative structure and cover would be negligibly affected. In view of the aforementioned, it is anticipated that the impacts to migratory bird populations, as a whole, would be negligible; thereby, having no adverse affect. Therefore, the BLM anticipates that the proposed action would not have a measurable effect on this resource.
U.S. Fish and Wildlife Service (USFWS) Listed or proposed for listing Threatened or Endangered Species or critical habitat.*	No	There are no known Threatened or Endangered Species that are listed or are proposed for listing or critical habitat within the Crestline Allotment.
Special Status Plant Species, other than those listed or proposed by the UFWS as Threatened or Endangered	No	There are no BLM Special Status Plant Species known to occur within the Crestline Allotment.

Resource Concern Considered	Issue(s) Analyzed	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
Special Status Animal Species, other than those listed or proposed by the UFWS as Threatened or Endangered	No	There are no BLM Special Status Animal Species known to occur within the Crestline Allotment.
Fish and Wildlife	No	Impacts from livestock grazing on Fish and Wildlife are analyzed on pages 4.6-10 through 4.6-11 in the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (November 2007). Wildlife species (plant and animal) – including sensitive species – that likely occur in or near the project area are listed in Appendix IV. Grazing would reduce the amount of available forage (grass and forbs); however, compliance with Ely Resource Management Plan standards for utilization percentages ensures that forage is present in the allotment after cattle are removed. Therefore, it is anticipated that the proposed action would have no a measurable affect this resource.
Wild Horses	No	Neither the allotment nor any of its portions are located within a Wild Horse Herd Management Area (HMA).
Soil Resources	No	Soils in the project analysis area are not prone to compaction or erosion problems; infiltration rates and soil permeability are high and soil textures are coarse throughout the area It is expected that the proposed action would not measurably affect soil resources.
Mineral Resources	No	There would be no modifications to mineral resources through the proposed action or alternatives; therefore, no direct or cumulative impacts would occur to minerals.
VRM	No	The proposed action is consistent with the VRM classification objectives for VRM classes 2, 3 and 4 within the allotment; therefore, no direct or cumulative impacts to visual resources would occur.
Recreation Uses	No	Design features identified in the proposed action would result in negligible impacts to recreational activities
Grazing Uses	Yes	Livestock grazing is analyzed in the EA.
Land Uses	No	There would be no modifications to land use authorizations through the proposed action, therefore no impacts would occur. No direct or cumulative impacts would occur to access and land use.
Environmental Justice	No	No environmental justice issues are present at or near the project area. No minority or low-income populations would be unduly affected by the proposed action or alternatives.
Areas of Critical Environmental Concern (ACEC)	No	Resource not present in allotment.
Farmlands (Prime or Unique)	No	No unique farmlands occur in the State of Nevada. If the proposed project analysis area contains soils classified as potential Prime Farmlands, the Proposed Action would not alter the physical or chemical soil characteristics that affect farmland status.

[1] Healthy Forests Restoration Act projects only

* Consultation required, unless a "not present" or "no effect" finding is made.

The resources listed within the above table, that are not present within the Crestline Allotment and, therefore, do not require a detailed analysis include: Paleontological Resources; Native American Religious Concerns; Wastes-Hazardous or Solid; Wilderness; Special Designations other than Designated Wilderness; Wetlands/Riparian Zones; Floodplains; USFWS Listed or proposed for listing Threatened or Endangered Species or critical habitat; Special Status Plant Species-other than those listed or proposed by the FWS as Threatened or Endangered; Special Status Animal Species, other than those listed or proposed by the UFWS as Threatened or Endangered; Fish and Wildlife; Wild Horses; Soil Resources; Mineral Resources; Land Uses and Environmental Justice and Areas of Critical Environmental Concern (ACEC).

According to the Ely District Approved Resource Management Plan, August 2008, it is the goal of the Ely District to identify, preserve, and protect significant cultural resources and ensure that they are available for appropriate uses by present and future generations. They are to protect and maintain these cultural resources on BLM-administered land in stable condition. To accomplish this they are to seek to reduce imminent threats and resolve potential conflicts from natural or human-caused deterioration or potential conflict with other resource uses by ensuring that all authorizations for land use and resource use will comply with the National Historic Preservation Act, Section 106. In accordance with this act, "any material remains of past human life or activities which are of archaeological interest" shall be assessed and secured "for the present and future benefits of the American People". Therefore, all ground disturbing activities related to livestock grazing (such as fence construction, road construction, water developments, etc.) within the allotment(s) associated with these Term Permit(s) will be subject to Section 106 review and, if needed, SHPO consultation as per BLM Nevada's implementation of the Protocol for cultural resources. The BLM completed a Cultural Resources Inventory Needs Assessment on June 21, 2012; a copy of this assessment is in the project file at the Caliente Field Office of the BLM.

Livestock grazing has been an historic use of federal lands, now managed by the Caliente Field Office, since the mid-19th century. The extent of effects from livestock grazing on archeological sites is difficult to determine, since extensive livestock grazing has occurred in this region for over 150 years. However, it is likely that the majority of the livestock-related impacts on cultural resources occurred prior to the passage of the Taylor Grazing Act in 1934.

The BLM conducts field investigations and maintains files of archeological sites on public lands. Analyses of existing documentation indicates that concentrated livestock activities near water sources, along fences, and in areas where livestock seek shelter, could adversely affect cultural resources.

The following are the remaining resources, listed within the above table, which are also present within the Crestline Allotment and which were assigned a "No" under the "Issue(s) Analyzed" column, because they are negligibly affected by the proposed action. However, an analysis of grazing impacts on these resources may be found in the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (November 2007), on the noted pages, and include: Air Quality; Cultural Resources (page 4.9-5); Water Resources (page 4.3-5); Watershed

Management (page 4.19-8); Fish and Wildlife (pages 4.6-10 through 4.6-11); Soil Resources (page 4.4-4). Consequently, these resources do not require a further detailed analysis.

However, the following is a detailed analysis regarding Vegetative Resources, Rangeland Standards and Health, and Grazing Uses. These three resources were assigned a "Yes" under the "Issue(s) Analyzed" column in the above table; and have been identified by the BLM interdisciplinary team as resources within the affected environment that merit a detailed analysis. An analysis of grazing impacts on the former two resources may be found in the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (November 2007), on the following noted pages: Vegetative Resources (page 4.5-9); Rangeland Standards and Health (pages 4.16-3 through 4.16-4).

3.3 Resources/Concerns Analyzed

The resources/concerns analyzed include Vegetative Resources, Rangeland Standards and Health, and Grazing Uses.

3.3.1 Vegetative Resources, Rangeland Standards and Health, and Grazing Uses

3.3.1.1 Affected Environment

Section 3.1, above, describes some basic information about the Crestline Allotment.

An assessment and evaluation of livestock grazing managements achievement of the standards and conformance to the guidelines (Standards Determination Document or SDD) was completed in conjunction with this project (Appendix II).

Standard 1 is being achieved. The upland portion of Standard 2 is being achieved, while the riparian portion of this Standard 2 is not applicable. Standard 3 is being achieved.

3.3.1.2 Environmental Consequences

Proposed Action

Under the Proposed Action, the season of use would remain the same. It is anticipated and reasonable to expect, then, that Standard 1, the upland portions of Standard 2, and Standard 3 would continue to be achieved.

The Proposed Action would also add other terms and conditions, regarding Allowable Use Levels, to the permit that would aid in achieving and maintaining the Mojave-Southern Great Basin Standards.

No Action Alternative

All of the mandatory terms and conditions of the current permit, as displayed under section 2.1.1, would remain unchanged. Therefore, the impacts of continued grazing would not be anticipated to change the attainment of standards in the Crestline Allotment.

No Grazing Alternative

For a short period of time following implementation, this may accomplish the same desired result as allowing periodic rest during the spring critical growing period for plants by allowing perennial forage plants rest during the vital phonological stages of their annual growing cycle. However, according to studies this benefit would be short-lived.

In fact, it is realized in the scientific community that, over time, grasses may become wolfy (too coarse to be palatable) from lack of grazing use (Ganskopp 2004, Anderson 1993). If this occurs, substantial forage can become wasted, because current year's growth is intermixed with older, cured materials that are nutritionally deficient and present a physical barrier to cattle grazing. Such plants would also lose vigor and become less palatable, thereby contributing to less productive rangelands for either wildlife or domestic livestock that depend on such a forage base.

Anderson (1993) elaborated on the consequences of choosing a No Grazing option. He states: "After a period of time, ungrazed herbaceous fibrous-rooted plant species become decadent or stagnant. Annual aboveground growth is markedly reduced in volume and height. Root systems likely respond the same. The result is reduction in essential features of vegetational cover, including the replacement of soil organic matter and surface residues, and optimum capture of precipitation." He also lists two other consequences: "(1) loss of quality herbaceous forage for wild herbivores, causing them to move to areas where regrowth following livestock grazing provides succulent forage (Anderson 1989), and (2) increased hazard from wildfires that can be devastating from a rangeland watershed standpoint."

Courtois et. al. (2004) found that 65 years of protection from grazing on 16 exclosures, at different locations across Nevada, resulted in relatively few differences between vegetation inside the exclosures and that exposed to moderate grazing outside the exclosures. Where differences occurred, total vegetation cover was greater inside the exclosures while density was greater outside the exclosures. Protection from grazing failed to prevent expansion of cheatgrass into the exclosures (Ely PRMP/FEIS pg. 4.5–27).

4.0 Cumulative Effects

4.1 Past Actions

Livestock grazing operations in the planning area developed during the mid to late-1800s. The Ely PRMP/FEIS summarizes livestock grazing history in the region on pages 3.16–1 to 3.16–3. Range improvements have occurred on all allotments to improve grazing management and include fencing, stockwater developments, and vegetation treatments. The Ely PRMP/FEIS summarizes wild horse history in the west, specifically on the Ely District, on pages 3.8–1 to 3.8–7. Wild horse use has occurred throughout the project area since the 1800s, this area is not a wild horse HMA.

There have been limited previous actions occurring in the project area. Historical mineral mining has been common in the area of the Crestline Allotment. There has been no historical oil or gas production and minimal oil exploration in the area. Based upon anecdotal evidence of

BLM resource staff, woodcutting and pinyon nut gathering, hunting, trapping, wildlife viewing, and other recreational activities including OHV use have been minimal on the Crestline Allotment. Small two track roads associated with these activities are not extensive and have not altered the landscape. Wildfire within the Crestline Allotment is a naturally occurring event that is part of the ecological structure as described within the ecological site descriptions (see Appendix II). Wildlife use has not been intensive in the area and has not fundamentally altered the plant communities. Elk use is increasing throughout the allotment. Permittees in the area state that there has been an increase in elk over the last decade. A great deal of elk sign is found in the western half of Crestline. It appears that elk are transitioning from the north to the water and forage in the south. In the Crestline Action Management Plan constructed by the Lincoln County Coordinated Resource Management Committee (June 1983), Nevada Department of Wildlife recommended seven head of deer were stated as an appropriate management level while elk are not mentioned. Elk management is addressed in Lincoln County Elk Management Plan (July 1999), but the current range listed for elk management are north of Crestline in the White Rock Mountains and the Wilson Creek Range.

Livestock grazing has taken place in this area since the late 1800's. There are a number of rangeland improvements to help in the distribution of livestock and ensure that an effective rest rotation system is in place to ensure standards and guidelines are met and will continue to be met. A 700 acre juniper treatment project was implemented in 1958, but the effects of this treatment are no longer present and the community is once again at an advanced stage of pinyon/juniper development with little to no understory.

Precipitation in southern Nevada is highly variable with frequent drought periods. Precipitation data collected at BLM rain gauges, for the years 2000-2011(11 years) is displayed in Table 1 in Appendix II. The variability of precipitation ranged from four inches in 2002 to 18 inches in 2004.

4.2 Present Actions

There is one permittee holding grazing privileges on the Crestline Allotment; Malin Gardner (operator 275099), with a season of use (March 1 to October 31).

Based upon observations by BLM resource specialists, current activities or projects occurring in the project area are very limited. There is no current mineral mining or oil and gas exploration. Woodcutting and pinyon nut gathering are minimal. Current livestock grazing and wildlife use are not intensive in the area. Neither the allotment nor any of its portions are located within an HMA, Wilderness Study Area or within desert tortoise habitat. There are no known riparian areas located within the allotment on BLM managed lands.

Widely dispersed incidental recreation occasionally occurs within the allotment in the form of hunting, trapping, four-wheeling (OHV) and wildlife viewing. Based upon observations by BLM resource specialists, there is only occasional use of the small two track roads in the area.

4.3 Reasonably Foreseeable Future Actions

Widely dispersed incidental recreation will continue into the future. Livestock grazing will continue under the existing grazing permit on the allotment. 1,633 acres of this allotment are slated for disposal to be added to the Lincoln County Landfill private acres. The proportion of livestock forage associated with this reduced acreage will be reviewed associated with the land disposal process. Upon expiration, the permit will be considered for renewal through site-specific NEPA analysis.

4.4 Cumulative Effects Summary

4.4.1 Proposed Action

According to page 36 of the 1994 BLM publication *Guidelines for Assessing and Documenting Cumulative Impacts*, the cumulative analysis should be focused on those issues and resource values where the incremental impact of the Proposed Action results in a meaningful change in the cumulative effect from other past, present and reasonably foreseeable future actions within the Cumulative Effects Study Area (CESA). In addition, a comprehensive cumulative impacts analysis can be found in section 4.28 of the Ely RMP/FEIS.

The CESA for this project is defined as the Crestline Allotment.

Additionally, the guidance provided in The National BLM NEPA Handbook H-1790-1 (2008), for analyzing cumulative effects issues states, "determine which of the issues identified for analysis may involve a cumulative effect with other past, present, or reasonably foreseeable future actions. If the proposed action and alternatives would have no direct or indirect effects on a resource, you do not need a cumulative effects analysis on that resource" (p.57).

A comprehensive cumulative impacts analysis can be found on pages 4.28-1 through 4.36-1 of the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (November 2007).

The proposed action in conjunction with the past, present and reasonable foreseeable future actions would result in no noticeable overall changes to the affected environment. Grazing under the proposed permit renewal would aid in maintaining achievement of the Standards for Rangeland Health, with the understanding that adjustments to grazing management would occur when any of the Standards are not being achieved. Appropriate action would be taken as soon as practicable but not later than the start of the next grazing year upon determining that existing grazing management practices or levels of grazing use on public lands are significant factors in failing to achieve the standards and conform with the guidelines (43 CFR §4180.2 (c)).

No cumulative impacts of concern are anticipated as a result of the proposed action in combination with any other existing or planned activity.

4.4.2 No Action Alternative

The no action alternative has the same cumulative effect as the Proposed Action.

4.4.3 No Grazing Alternative

The No Grazing Alternative, in combination with interrelated projects, will have no known cumulative effects on rangeland health.

5.0 Proposed Mitigation and Monitoring

5.1 Proposed Mitigation

Outlined design features incorporated into the proposed action are sufficient. No additional mitigation is proposed based on the analysis of environmental consequences.

5.2 Proposed Monitoring

Appropriate monitoring has been included as part of the Proposed Action. No additional monitoring is proposed as a result of the impact analysis.

6.0 Consultation and Coordination

6.1 List of Preparers - BLM Resource Specialists

Andy Daniels	Wildlife Biologist/Project Lead
Chris Mayer	Supervisory Rangeland Management Specialist
Travis Young	NEPA Coordinator
Andrew Daniels	Wildlife, Special Status Species, Migratory Birds
Mark D'Aversa	Soil, Water, Wetlands and Riparian, Floodplains
Cameron Boyce	Noxious and Invasive, Non-native Species
Nick Pay	Cultural Resources
Elvis Wall	Native American Cultural Concerns
Melanie Peterson	Hazardous & Solid Waste/Safety
Lisa Domina	Recreation, Visual Resources
Samuel Styles	Wilderness

6.2 Persons, Groups or Agencies Consulted

This Draft EA is being sent to the Interested Publics included on the annual Range Actions Interested Public Mailing List for 2011.

Public Notice of Availability

On December 16, 2011, the Ely BLM mailed the annual Consultation, Coordination and Cooperation (CCC) letter which notified interested parties of the livestock grazing term permit renewals scheduled for 2012.

On February 22, 2012, a letter was sent to local Native American tribes requesting comments regarding the permit renewal process for the Crestline Allotment. No comments were received.

On June 5, 2012, a BLM internal meeting was held in coordination between the Caliente Field Office the Ely BLM District Office. The term permit renewal proposal for the Crestline Allotment was presented and scoped by resource specialists to identify any relevant issues. No potential issues were identified.

On May 30, 2012, the BLM sent the permittee a letter informing them of the proposed term permit renewal process scheduled for their allotment during 2012. No comments were received.

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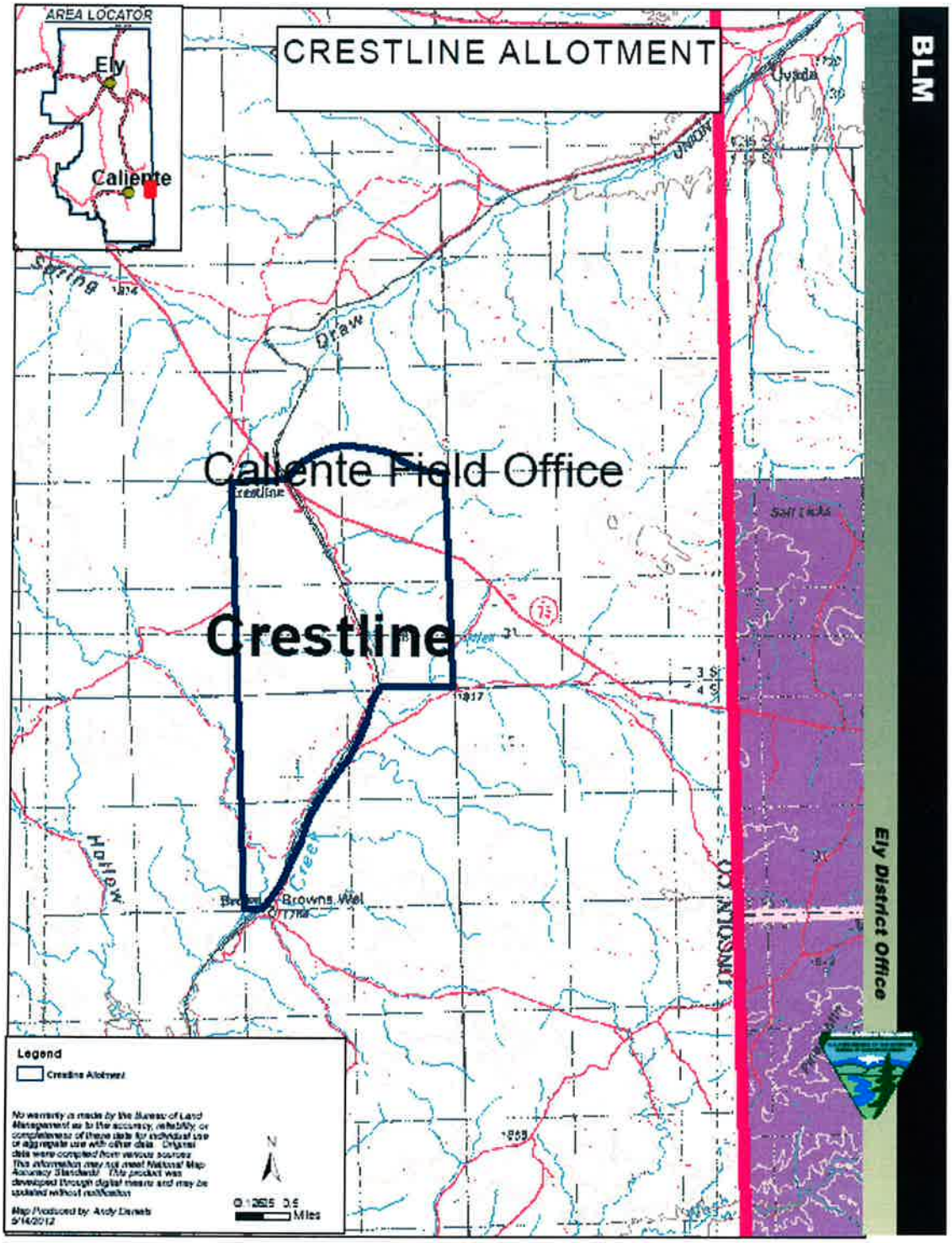
APPENDIX I
(EA)

MAPS



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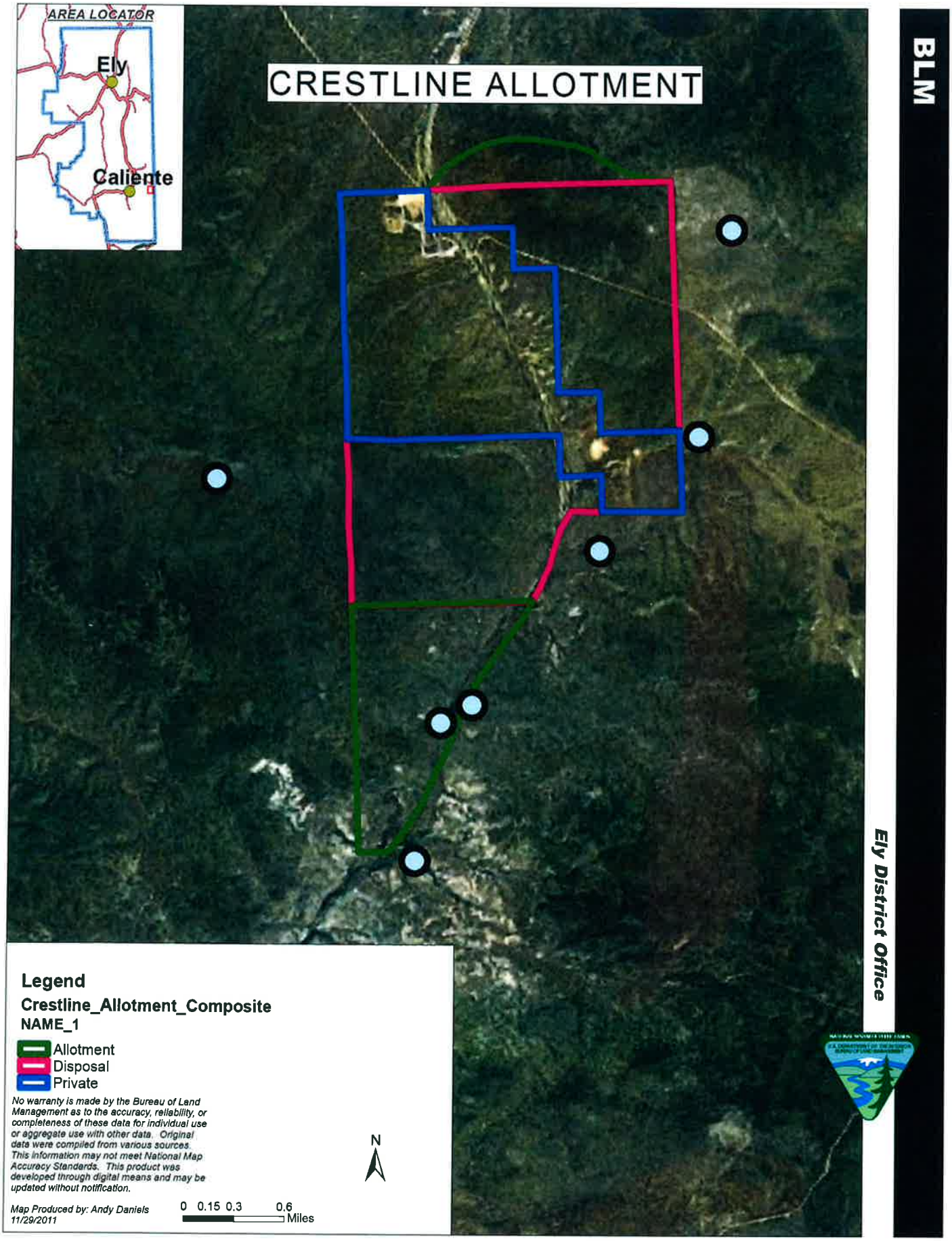
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No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.
Map Produced by: Andy Daniels
11/29/2011
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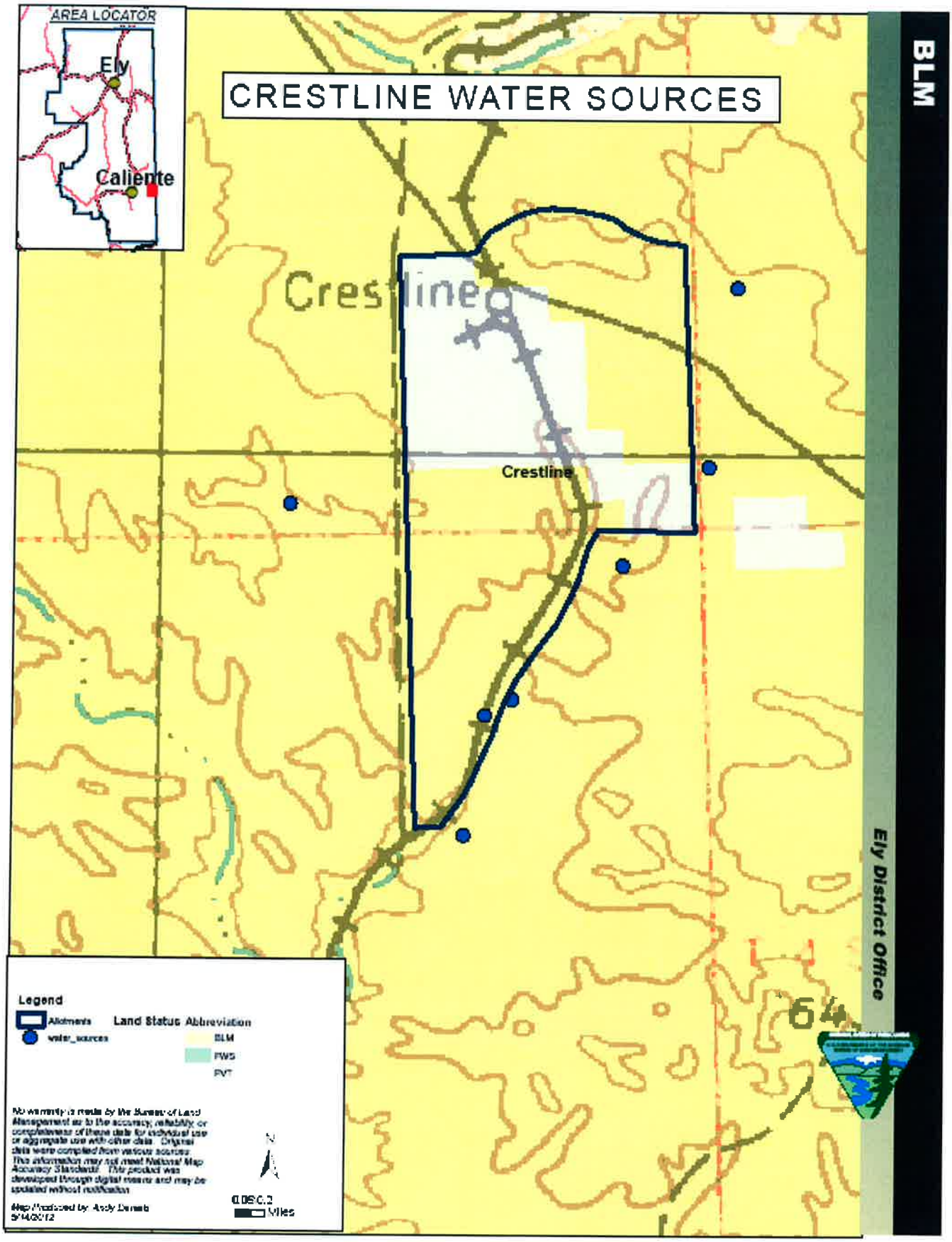
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APPENDIX II
(EA)

STANDARDS DETERMINATION DOCUMENT

Standards Determination and Evaluation Report
Crestline Allotment
Prepared by Andy Daniels

March 13, 2012

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

STANDARDS DETERMINATION DOCUMENT

Crestline Allotment (11023)

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

STANDARDS DETERMINATION DOCUMENT
Crestline Allotment (#11023)

Standards and Guidelines Assessment

The Standards and Guidelines for Nevada's Mojave-Southern Great Basin Area were developed and approved by the Mojave-Southern Great Basin Resource Advisory Council (RAC) in 1997. Standards and guidelines are likened to objectives for healthy watersheds, healthy native plant communities, and healthy rangelands. Standards are expressions of physical and biological conditions required for sustaining rangelands for multiple uses. Guidelines point to management actions related to livestock grazing for achieving the standards.

This Standards Determination Document evaluates and assesses livestock grazing management achievement of the Standards and conformance with the Guidelines for the Crestline allotment in the Ely District BLM. This document does not evaluate or assess achievement of the Wild Horse and Burro or Off Highway Vehicle Standards or conformance to the respective Guidelines.

A BLM interdisciplinary team assessed the standards for the Crestline allotment. Documents and publications used in the assessment process include the Soil Survey of Lincoln County Nevada, Meadow Valley, Ecological Site Descriptions for Major Land Resource Area 29, Interpreting Indicators of Rangeland Health (USDI-BLM et al. 2000), Sampling Vegetation Attributes (USDI-BLM et al. 1996) and the National Range and Pasture Handbook (USDA-NRCS 1997). A complete list of references is included at the end of this document. The interdisciplinary team used rangeland monitoring data, professional observations, and photographs to assess achievement of the Standards and conformance with the Guidelines.

The Crestline Allotment

The Crestline allotment is located 18 miles southeast from the city of Panaca, Nevada in Lincoln County. This site is dominated by single-leaf pinyon and Utah juniper. Black sagebrush and bitterbrush are the principal understory shrub species in any parts of the allotment. Blue-bunch wheatgrass, bottle-brush squirrel-tail, blue grama, needle-n-thread, and Indian ricegrass are the most prevalent understory native grasses. An overstory canopy of zero to ten percent is assumed representative of tree dominance on this site in the pristine environment. Currently the allotment has closer to ten to 25 percent tree canopy cover. Wildfire is recognized as a natural disturbance that strongly influenced the structure and composition of the climax vegetation of this woodland site.

Multiple land uses occur on private and public lands located in the Crestline allotment and influence grazing operations as well as ecological processes. The Union Pacific rail line operates through the allotment from south to north restricting animal movement and dividing the allotment into east and west pastures. The Lincoln County Landfill is located in the northwest corner of the allotment. Private land located in the south east portion of the allotment is used for farming which includes a pivot irrigation system and some dry-land pasture. These private lands provide a majority of the forage and water in the area.

There is one active grazing permit that has 540 Animal Unit Months[1] (AUMs), and it is used for cattle grazing on the Crestline allotment. Of the 540 AUMs, 485 are suspended leaving 55 active AUMs. The season of use is March 1 to February 28. Due to water limitations on the Westside of the allotment, grazing is limited to the east side.

There are a total of 3,661 acres in the Crestline allotment; of this 2,395 acres are public land, 1,200 acres are in private ownership, and 1,633 acres are slated for disposal to be added to the Lincoln County Landfill private acres. This would leave approximately 750 acres remaining in the allotment. Water for the east side of the allotment is provided by overflow from irrigation on the private farmland located within the allotment and is fenced. Water is also available in the Lafe's Reservoir located in the southern end of the east side. However, water availability in the reservoir is dependent on the time of year and precipitation. The reservoir lies on the boundary of the Crestline allotment and the Enterprise allotment to the south. The private land within this part of the allotment is used for the Lincoln County Landfill and is fenced. The west side of the allotment is not currently grazed due to the lack of water. A reservoir is located on the southern end of the allotment. However it currently does not hold water, presumably due to infiltration of the reservoir bottom. It is likely that the increased tree dominance in the area is altering hydrology contributing to the unavailability of water. According to the Fire Regime Condition Class (FRCC) the Crestline allotment is highly departed from what it should be (See FRCC map in Appendix I). About 96.6% of the allotment is a FRCC Class of 3, the most highly departed from ideal conditions, approximately 1.3% is in a FRCC Class of 2, highly departed from ideal conditions, and about 2.1% is in a FRCC Class of 1, not very departed from ideal conditions. The condition of this area is typical of a late seral pinyon/juniper woodland where the co-dominance of shrubs and trees is transitioning to a strictly tree dominated site. At this point ecological processes begin to change with a decrease in the amount of precipitation that reaches the ground and conversely an increase in overland water flows and erosion during heavy precipitation events. Soil stability is reduced due to the reduction of shrub, forb, and grass species, which serve as palatable forage species for wildlife, horse, and livestock. A 700 acre juniper treatment project was implemented in 1958, but the effects of this treatment are no longer present and the community is once again at an advanced stage of pinyon/juniper development with little to no understory.

Elk use is increasing throughout the allotment. Permittees in the area state that there has been an increase in elk over the last decade. A great deal of elk sign is found in the western half of Crestline. It appears that elk are transitioning from the north to the water and forage in the south. In the Crestline Action Management Plan constructed by the Lincoln County Coordinated Resource Management Committee (June 1983), Nevada Department of Wildlife recommended seven head of deer were stated as an appropriate management level while elk are not mentioned. Elk management is addressed in Lincoln County Elk Management Plan (July 1999), but the current range listed for elk management are north of Crestline in the White Rock Mountains and the Wilson Creek Range.

There are three soil associations within the Crestline allotment, the Ravendog-Fanu-Fifteenmile (570 acres), the Decan-Uana (2,316 acres), and the Wakansapa-Cedaran (775 acres) associations. There are no key areas established on this allotment. BLM staff recently selected three study

sites for line-point and line-intercept studies and utilization data collection. These areas were chosen based on their representation of the BLM lands in this allotment.

The Crestline allotment falls within 16-18 inches of annual precipitation range. The precipitation data (Appendix I) collected at the Crossroads and Enterprise rain can locations, show an average of 10.8-11.7 inches annually within the last 11 years (2000-2011); though there are several months each year where the rain cans are unable to be read due to road conditions and soil moisture, this could account for the difference.

All monitoring data and reports are available for public inspection at the Caliente Field Office during business hours. A map of the allotment is located in Appendix I of this document.

PART 1. STANDARD CONFORMANCE REVIEW

Standard 1. Soils

"Watershed soils and stream banks should have adequate stability to resist accelerated erosion, maintain soil productivity, and sustain the hydrologic cycle."

Soil Indicators:

- Ground Cover (vegetation, litter, rock, bare ground)
- Surfaces (e.g., biological crust, pavement)
- Compaction/infiltration

Riparian Soil Indicators:

- There are no riparian soils found in the Crestline allotment

Determination:

X Achieving the Standard

☐ Not Achieving the Standard, but making significant progress towards achieving

☐ Not Achieving the Standard, and not making significant progress toward standard

Causal Factors N/A

☐ Livestock are a contributing factor to not achieving the standard.

☐ Livestock are not a contributing factor to not achieving the standard

☐ Failure to meet the standard is related to other issues or conditions

Guidelines Conformance:

X In conformance with the Guidelines

☐ Not in conformance with the Guidelines

Conclusion: Standard Achieved *There are no riparian areas within the Crestline allotment; there are a few run off channels that are dry for the majority of the year and only carry water for a short duration during rainfall events. The majority of the allotment is characterized by pinyon/juniper encroached decadent sagebrush, with very little grass or herbaceous understory;*

while this does anchor the soil it does little to maintain soil productivity or sustain the hydrologic cycle of the allotment.

UPLANDS

Soil Indicators

Ground cover:

The BLM range staff determined vegetative cover by line-intercept and line-point intercept methods. Cover data by species and key soil type information can be found in Table 1 in Appendix I.

Transect Crestline01 is located in the Ravendog-Fanu-Fifteenmile soil association. The Ravendog-Fanu-Fifteenmile association is within the 1290 soil mapping unit (SMU), and ranges from stratified sandy loam to silt loam with slopes ranging from 0-8%. This soil mapping unit occurs on about 16% of the allotment and is characterized by Great Basin wildrye, creeping wildrye, western wheatgrass, Great Basin big sage brush, fourwing saltbush, and threadleaf rubber rabbitbrush. The ecological site description for this soil type is 029XY003NV; the topography is inset fans, lake plains, and axial stream floodplains. This association ranges from deep to very deep soils that are well to poorly drained; surface soils are thick, fertile and moderately fine to medium textured. The ecological site description (ESD) suggest that approximate ground cover (basal and crown) should be between 40-65%. Potential vegetative composition is about 15% shrubs, 5% forbs, and 80% grasses. Actual cover was 27.65%. Total shrub cover is 69.62%, forb cover is 0%, and grass cover is 19.89%. Tree encroachment was at 10.48% in this soil type at this transect.

Transect Crestline02 located in the Wakansapa-Cedaran soil association. The Wakansapa-Cedaran association is within the 1829 soil mapping unit (SMU), and ranges from gravelly ashy loam to very gravelly ashy loam with slopes ranging from 2-15%. This soil mapping unit occurs on about 21% of the allotment and is characterized by mountain big sage brush, Utah serviceberry, and muttongrass. The ecological site description for this soil type is 029XY164NV; the topography is mountain sideslopes on all exposures. This association ranges from bedrock to shallow soils that are well drained. The ecological site description (ESD) suggest that approximate ground cover (basal and crown) should be between 45-50%. Actual cover was 39.05%. Potential vegetative composition is about 45% shrubs, 10% forbs, 40% grasses, and up to 2% trees. Total shrub cover is 87.58%, forb cover is 0%, and grass cover is 12.16%.

Transect Crestline03 is in Decan-Uana soil association. The Decan-Uana association is within the 1201 soil mapping unit (SMU), and ranges from loam to gravelly clay loam with slopes ranging from 2-15%. This soil mapping unit occurs on about 63% of the allotment and is characterized by Great Basin big sagebrush, needle-and-thread grass, and Indian ricegrass; Stansbury's cliffrose is an important species associated with this association. The ecological site description for this soil type is 029XY029NV; the topography is rolling hills, inset fans, and upper piedmont slopes on all exposures. This association ranges from moderately deep to deep soils that are moderately well to well drained; surface soils are moderately fine to medium textured and normally more than 10 inches thick to the subsoil or underlying material. The

ecological site description (ESD) suggest that approximate ground cover (basal and crown) should be between 15-25%. Potential vegetative composition is about 40% shrubs, 5% forbs, and 55% grasses. Actual cover was 24.3%. Total shrub cover is 64.61%, forb cover is 0%, tree cover is 23.45% and grass cover is 11.93%.

Surfaces and Compaction/Infiltration:
Transect Crestline01 occurs in the Ravendog-Fanu-Fifteenmile Soil Mapping Unit. The Ecological Site Description describes the soil as a Loamy Bottom 8-12" p.z. (029XY003NV). Litter was accumulating under the shrubs and to some degree in the inner spaces between shrubs, indicating that utilization was not at unacceptable levels and that plants are able to live, die, and deposit litter on the soil surface.

Transect Crestline02 occurs in the Wakansapa-Cedaran Soil Mapping Unit. The Ecological Site Description identifies the site as a Gravelly Clay Slope 12-14" p.z. (029XY164NV). This site was predominately found in washes, where the clay soil allowed for surface runoff and the abundance of gravel helped to stabilize the soil and facilitate infiltration, this site is moderately well drained.

Transect Crestline03 occurs in the Decan-Uana Soil Mapping Unit. The Ecological Site Description describes the soil as a Loamy 10-12" p.z. (029XY029NV). The nitrification process is occurring, which is adding nutrients to the soil surface as well as increasing water infiltration.

Standard 2. Ecosystem Components

Watersheds should possess the necessary ecological components to achieve State water quality criteria, maintain ecological processes, and sustain appropriate uses.

Riparian and wetlands vegetation should have structural and species diversity characteristic of the stage of stream channel succession in order to provide forage and cover, capture sediment, and capture, retain, and safely release water (watershed function).

Upland Indicators:

- Canopy and ground cover, including litter, live vegetation, biological crust, and rock appropriate to potential of the ecological site
- Ecological processes are adequate for the vegetative communities

Riparian Indicators:

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

- Bank stability
- Vegetative cover (amount, spacing, life form)
- Other covers (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 plan species and cover appropriate to the site characteristic

Water Quality Indicators:

- Chemical, physical and biological constituents do not exceed the State water quality standards.

The above indicators shall be applied to the potential of the ecological site.

Determination:

X **Achieving the Standard**

☐ Not Achieving the Standard, but making significant progress towards achieving

☐ Not Achieving the Standard, and not making significant progress toward standard

Causal Factors N/A

☐ Livestock are a contributing factor to not achieving the standard.

☐ Livestock are not a contributing factor to not achieving the standard

☐ Failure to meet the standard is related to other issues or conditions

Guidelines Conformance:

X In conformance with the Guidelines

☐ Not in conformance with the Guidelines

Conclusion: *Standard Achieved*

UPLAND INDICATORS AND ECOLOGICAL PROCESSES

The dominant communities in the Crestline allotment are Wyoming sagebrush/bottle-brush squirrel-tail and black sagebrush/blue grama. The regional topography of the allotment is composed of a drainage basin bordered by rising piedmont slopes and rock pediments on the north, east, and south borders of the allotment. The topography leads to the development of washes and flood plains drawing rain run-off in a westerly direction. The overall topography of the allotment aids in the deposition of soils encouraging healthy sagebrush, grass communities, and stable soils.

Vegetative and ground cover in the form of woody debris and rock effectively protects the soils in the Crestline allotment. In places, understory vegetation consisted of biological crusts, blue grama grass, bottlebrush squirrel-tail, blue bunch wheatgrass, and Indian ricegrass. Soil factors such as gravels and cobbles influence the water uptake rates throughout the soil profile, reducing the water capacity and aiding in draining. Understory vegetation also adds to the porosity of the soil surface and aids in drainage.

There is a low amount of cheatgrass in most the allotment. None were observed while reading vegetation transects. In addition, the BLM staff observed no noxious weed species. The Wyoming sagebrush/bottle-brush squirrel-tail and the black sagebrush/blue grama communities have shown a resiliency to noxious weed invaders.

Biological crusts were observed in variable amounts throughout the allotment. These living organisms play a key role in the fixation of nitrogen while protecting the soils from erosion particularly where gravels do not occur on the surface.

Standard 3. Habitat and Biota:

Habitat Indicators:

- Vegetation composition (relative abundance of species)
- Vegetation structure (life forms, cover, height, or age class)
- Vegetation distribution (patchiness, corridors)
- Vegetation productivity
- Vegetation nutritional value

Wildlife Indicators:

- Escape terrain
- Relative abundance
- Composition
- Distribution
- Nutritional value
- Edge-patch snags

Determination:

X Achieving the Standard

☐ Not Achieving the Standard, but making significant progress towards achieving

☐ Not Achieving the Standard, and not making significant progress toward standard

Causal Factors N/A

☐ Livestock are a contributing factor to not achieving the standard.

☐ Livestock are not a contributing factor to not achieving the standard

☐ Failure to meet the standard is related to other issues or conditions

Guidelines Conformance:

X **In conformance with the Guidelines**

☐ Not in conformance with the Guidelines

Conclusion: *Standard Achieved*

The indicators for the Standard refer to vegetative composition, structure, distribution, productivity, and nutritional value. Vegetative conditions on the Crestline allotment suitably reflect these attributes. Conditions are suitable based on the present canopy and ground cover in

the Wyoming big sagebrush and black sagebrush communities. A fairly diverse herbaceous understory and interspatial vegetative components over a majority of the allotment serves to provide a variable forage base with suitable structure and distribution to support diverse biota. The abundant presence of these species indicates a productive and functional understory especially when looking at the site potential. The plant community as a whole is providing adequate forage to wildlife species.

The allotment provides habitat for mule deer, and elk. The allotment is used as a travel corridor for mule deer and elk. Evidence of mule deer and elk use and occupation was seen throughout the allotment and in the neighboring areas, including the city of Panaca. The sagebrush areas provide year round forage and cover. The nearby trees and topography provide important escape cover, as well as thermal protection in the summer and winter for deer and other wildlife species. The sage grouse is not known to occur on the allotment.

Juniper and pinyon are increasing on the allotment, which eventually could degrade the quality of the habitat for wildlife as site-appropriate vegetation decreases due to competition with juniper and pinyon for sunlight, nutrients, and water. Their eventual dominance on the allotment could impact the sagebrush ecosystem and the species that are dependent on it. With reduced presence of grasses and forbs available to wildlife or insect species, the biodiversity could decrease based on available suitable habitat. This risk is still several decades away for most of the allotment but is a consideration at present time.

The advent of cheatgrass as a major ecological problem in the western states has prompted BLM to become aware and improve management of it in the sagebrush ecosystem. BLM staff observed very little cheatgrass on the allotment. If the areas of OHV use expand throughout the allotment, cheatgrass may become more dominant in the innerspaces and open areas.

Generally speaking, the habitats within the allotment, of the species mentioned, are appropriate and suitable based on the vegetative structure, composition, distribution, and productivity, given the site potential. Other features such as escape terrain, thermal cover and perching and nesting habitat from both short and tall statured woody species are all desirable. The allotment offers habitat for small mammals, and assorted numerous songbirds and raptors. Lizards and snakes comprise the reptilian population and are abundant based on the number of burrows observed.

Based on the existing conditions as described, the standard for Habitat and Biota is determined to be achieved on the allotment.

PART 2. ARE LIVESTOCK A CONTRIBUTING FACTOR TO NOT MEETING THE STANDARDS? SUMMARY REVIEW:

Standard 1: Soils
N/A. The Standard is achieved.

Standard 2: Ecosystem Components
N/A. The standard is achieved.

Standard 3: Habitat and Biota
N/A. The standard is achieved.

PART 3. GUIDELINE CONFORMANCE REVIEW AND SUMMARY

Conformance to the guidelines pertaining to wild horses and burros are not determined in this document. Wherever the guidelines pertain to management practices those guidelines are assessed.

Crestline Allotment Guideline Conformance Review and Summary
Grazing is in conformance with all applicable Guidelines as provided in the Mojave-Southern Great Basin Standards and Guidelines. Based on a review of the monitoring data presented in this determination, current livestock grazing management practices in the Crestline allotment are in conformance with the Guidelines for Livestock Grazing Management. Permittees are proactively reducing grazing based on available forage and water availability. Although, currently achieving Standards, range improvement projects including water improvements to distribute grazing within this allotment may be considered on a case by case basis to help with maintaining the achievement of these standards.

PART 4. MANAGEMENT PRACTICES TO CONFORM WITH GUIDELINES AND ACHIEVE STANDARDS

Discussion:

Grazing management on the Crestline allotment already conforms to the Guidelines. All three of the Standards are achieved for the allotment. The major issue with the allotment is the practice of restricting fire, which has allowed the area to become highly departed from ideal and reference conditions. In order to ensure grazing continues to achieve the Standards, the following terms and conditions are recommended to be added to the grazing permit as best management practices.

Recommendations for Grazing Management:

1. Maximum allowable use levels would be established as follows:

- Perennial grasses: 40% current year's growth.
- Perennial shrubs, half-shrubs and forbs: 40% use on current annual production.

A conservative use limit also helps to provide forage even during periodic drought events for wildlife and livestock until conditions improve.

2. Wildlife escape ramps are required to be installed and maintained by the permittee at each trough used on the allotment.

Presently, there are no troughs used on the allotment, however this stipulation would apply if they are utilized in the future.

4. Livestock will be moved to another authorized pasture or removed from the allotment before utilization objectives are met or no later than five days after meeting the utilization objectives. Any deviation in livestock movement will require authorization from the authorized officer.

5. Implement range improvement projects that would increase grass production while reducing tree encroachment.

Interdisciplinary Team Review

Alan Kunze, Soil Scientist _____
Date

Cameron Boyce, Weeds Specialist _____
Date

Nick Pay, Cultural Specialist _____
Date

Ben Noyes, Wild Horse and Burro Specialist _____
Date

Andy Daniels, Wildlife Biologist _____
Date

Melanie Peterson, Environmental Protection Specialist _____
Date

Elvis Wall, Tribal Coordinator _____
Date

Prepared by:

Andy Daniels, Wildlife Biologist _____
Date

Reviewed by:

Chris Mayer, Lead Rangeland Management Specialist _____
Date

I concur:

_____ _____
Victoria Barr, Field Manager Date

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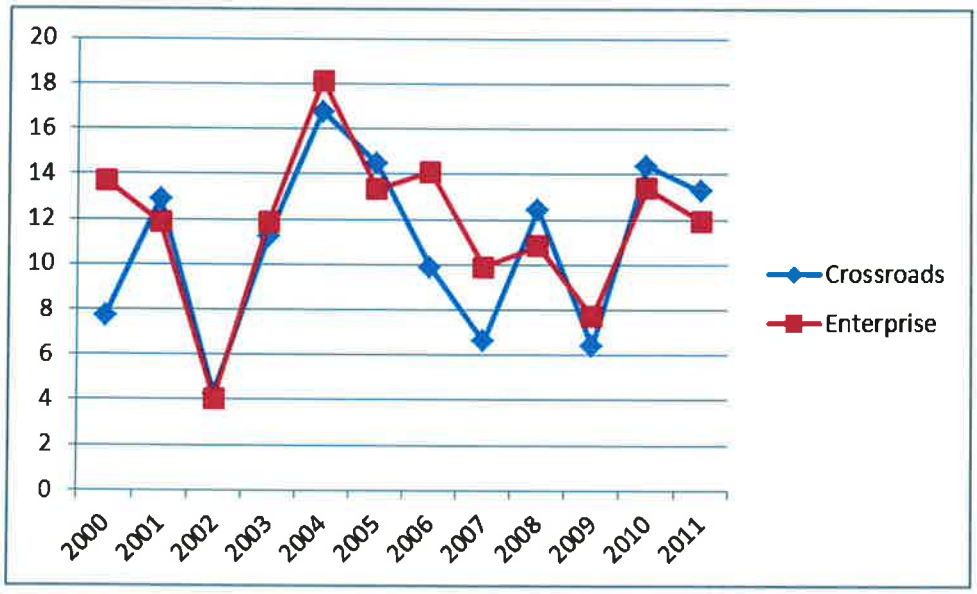
APPENDIX I

DATA ANALYSIS – CRESTLINE ALLOTMENT

1. Precipitation Data

The Crossroads rain can is located approximately four and a half miles south of the Crestline allotment and is similar in topography and elevation to the allotment. The Enterprise rain can is located six and a half miles southwest of the Crestline allotment and is similar in topography and elevation. Precipitation was recorded over the past 11 years, the average based on rain can collection data was 10.86 inches for the Crossroads rain can, and 11.73 inches for the Enterprise rain cans. The precipitation was variable however, noting a drought year in 2002.



2. Line Intercept Cover

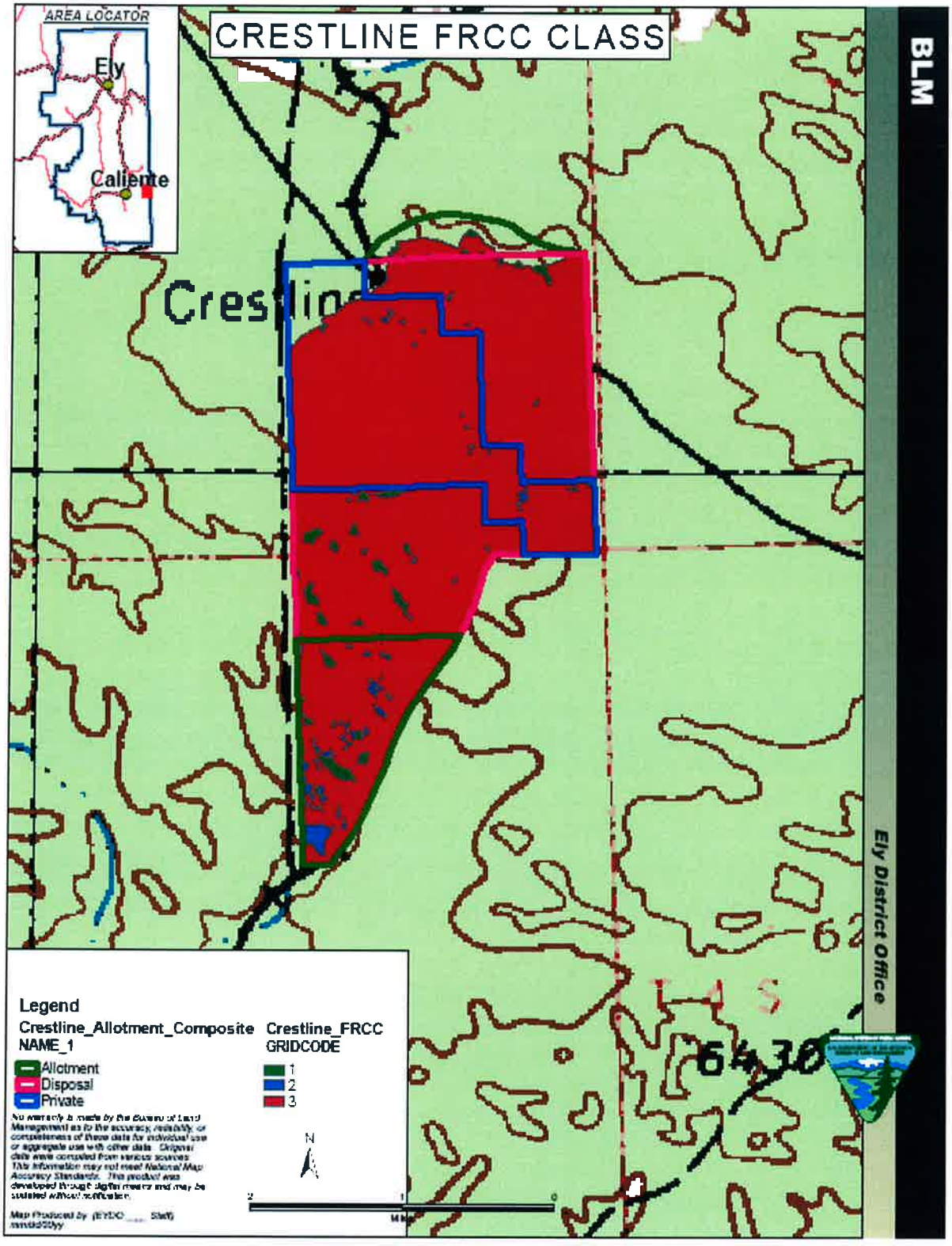
The method used to estimate cover is called Line Intercept. This method measures the dominant canopy cover and ground cover but does not measure vegetation which occurs underneath a canopy of another plant. Due to this constraint, not all species on site are represented in the table below as many grow in the shade of larger, more dominant species.

Transects Crestline01, Crestline02, and Crestline03 were selected as representative sites of the major soil mapping units and there characteristic plant communities. Transect Crestline 03 is located on the largest soil mapping unit in the allotment dominated by Wyoming big sagebrush canopy and an Indian ricegrass-needle-and-thread grass co-dominated understory, site visit and transect data showed this area to have a large component of invasive tree species such as Juniper and Pinyon. Crestline 02 is located on the remaining soil mapping unit in the allotment dominated by a mountain big sage canopy and a mutton grass understory, site visit and transect data showed a bottle-brush squirrel-tail understory. Crestline 01 is located on the smallest mapping unit with a basin big sagebrush dominated canopy and a basin wildrye understory, site

visit and transect data showed a black sagebrush dominated canopy and blue grama understory. Data is summarized in Table 1.

Table 1:

TRANSECT INFORMATION		SPECIES	COMPOSITION BY SPECIES BASED ON COVER
Crestline 01: Crestline		JUOS	10%
Range site: Ravendog-Fanu-Fifteenmile assoc. Loamy 8-12" P.Z. (R028BY003NV)		ARNO	58%
Desirable Cover For Site: 40-65%		ARTR	9.5%
Percent Cover Measured 2011: 28.5%		PUTR	4%
Elevation: 5895 Ft		BOGR	14%
COMPOSITION BY GROUPS			
TREE	10%		
SHRUBS	71.5%		
GRASSES	18.5%		
FORBS/MOSS	0		
Crestline 02: Crestline		ARTR	61%
Range site: Wakansapa-Cedaran assoc. Gravelly Clay Slope 12-14" P.Z. (R029XY164NV)		SIHY	31%
Desirable Cover For Site: 45-50%		AGSM	8%
Percent Cover Measured 2011: 55.3 %			
Elevation:5853			
COMPOSITION BY GROUPS			
SHRUBS	61%		
GRASSES	39%		
FORBS/MOSS	0%		
Crestline 03: Crestline		JUOS	16.7%
Range site: Decan-Uana assoc. Loam 10-12" P.Z. (R029XY029NV)		PIMO	7%
Desirable Cover For Site: 15-25%		ARTR	16%
Percent Cover Measured 2011: 24.3%		ARNO	48.6%
Elevation:5923		BOGR	11%
COMPOSITION BY GROUPS			
TREEE	23.5%		
SHRUBS	64.6%		
GRASSES	11.9%		
FORBS/MOSS	0%		


CRESTLINE FRCC CLASS
AREA LOCATOR
Ely
Caliente
Crestline
BLM
Ely District Office
Legend
Crestline_Allotment_Composite
NAME_1
Allotment
Disposal
Private
Crestline_FRCC
GRIDCODE
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2
3
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64
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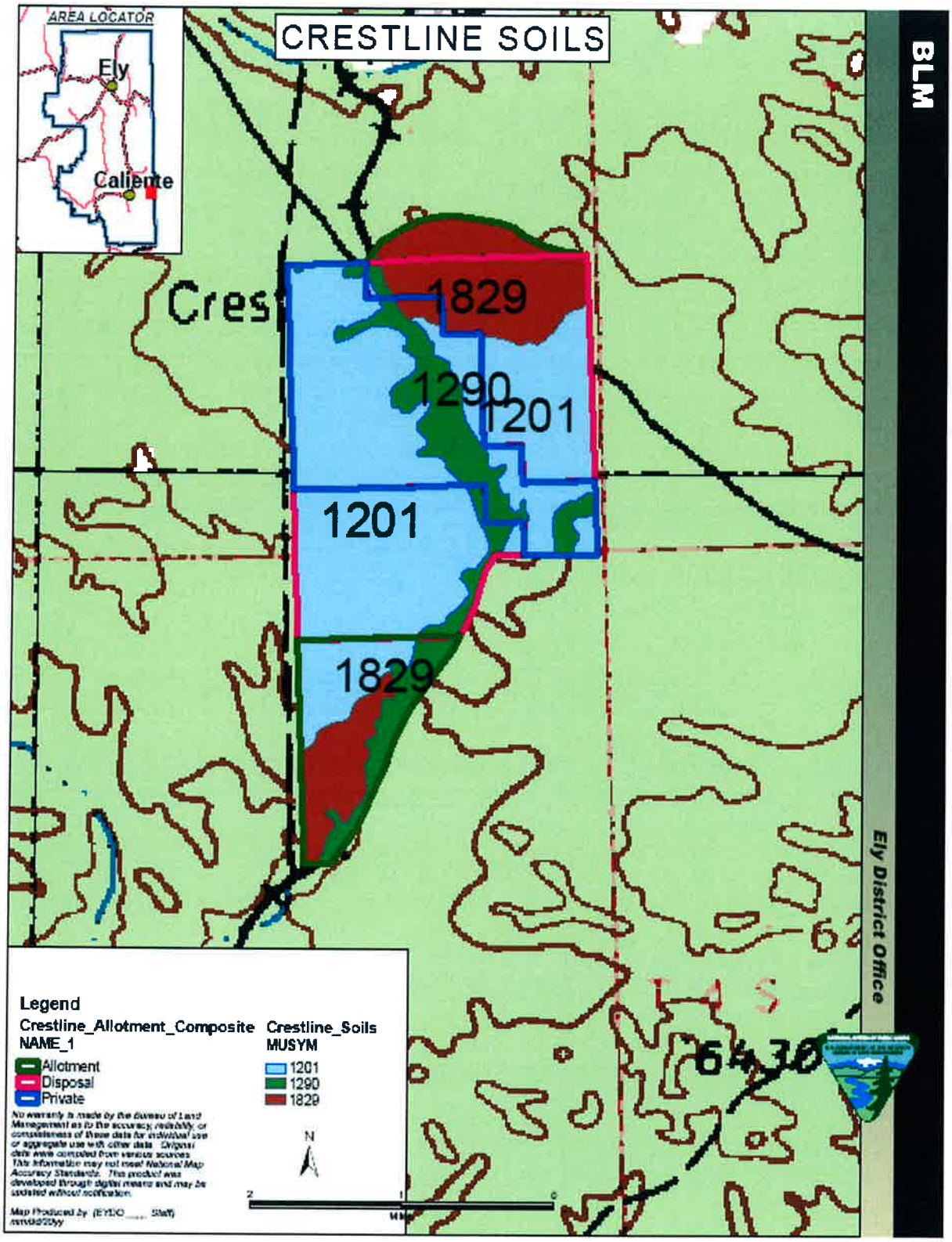

CRESTLINE SOILS
AREA LOCATOR
Ely
Caliente
BLM
Cres
1829
1290
1201
1201
1829
Ely District Office
Legend
Crestline_Allotment_Composite
NAME_1
Allotment
Disposal
Private
Crestline_Soils
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1201
1290
1829
N

APPENDIX III
(EA)

WILDLIFE SPECIES LIST

Wildlife & Plants for Crestline TPR 11/4/09
Highlighted species are BLM Sensitive Species in Nevada.

Wildlife and plant species from Ely RMP, NV Natural Heritage Data, and NDOW Diversity Data:

Mule deer (*Odocoileus hemionus*) general habitat
Elk (*Cervus elaphus*) general habitat
Pronghorn (*Antelocapra americana*) general habitat

The project would occur within NDOW Hunt Units 242. The project is the Crestline grazing allotment.

The following data reflect survey blocks and/or incidental sightings of bird species in or near the project area from the Atlas of the Breeding Birds of Nevada (Floyd et al. 2007) and NDOW Diversity Data. These data represent birds that were confirmed, probably, or possibly breeding within or near the project area. These data are not comprehensive, and additional species not listed here may be present. No survey blocks or incidental sightings occur within the project area. Survey blocks with similar vegetation as this area contained the following bird species:

Turkey Vulture (*Cathartes aura*)
Ash-throated Flycatcher (*Myiarchus cinerascens*)
American Kestrel (*Falco sparverius*)
Mourning Dove (*Zenaida maacroura*)
Common Nighthawk (*Chordeiles minor*)
Say's Phoebe (*Sayornis saya*)
Pinyon Jay (*Gymnorhinus cyanocephalus*)
Mountain Bluebird (*Sialia currucoides*)
Northern Mockingbird (*Mimus polyglottos*)
Lazuli Bunting (*Passerina cyanea*)
Black-throated Sparrow (*Amphispiza bilineata*)
Western Meadowlark (*Sturnella neglecta*)
Western Kingbird (*Tyrannus verticalis*)
Western Scrub-jay (*Aphelocoma californica*)
Bushtit (*Psaltriparus minimus*)
Rock Wren (*Salpinctes obsoletus*)
Lark Sparrow (*Chondestes grammacus*)
Spotted Towhee (*Pipilo maculatus*)
Brewer's Sparrow (*Spizella breweri*)
Gray Vireo (*Vireo vicinior*)
Brown-headed Cowbird (*Molothrus ater*)
Chipping Sparrow (*Spizella passerina*)
Common Raven (*Corvus corax*)
Gray Flycatcher (*Empidonax wrightii*)
Northern Flicker (*Colaptes auratus*)
House Wren (*Troglodytes aedon*)

House Finch (*Carpodacus mexicanus*)

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APPENDIX IV

(EA)

WEED RISK ASSESSMENT

RISK ASSESSMENT FOR NOXIOUS & INVASIVE WEEDS

Term Grazing Permit Renewal for Crestline Allotment
Lincoln County, Nevada

On January 6, 2012, a Noxious & Invasive Weed Risk Assessment was completed for the term grazing permit renewal for the Crestline allotment in Lincoln County, NV. The proposal is to fully process the renewal of the grazing permit for Malin Gardener on the Crestline Allotment (11023). The permit licenses Malin Gardner to graze up to 48 cows from 03/01-10/31 for a total of 55 active animal unit months (AUM) of use on the Crestline Allotment. The issuance of the term permit would be for a period of 10 years. The allotment is located 18 miles southeast of Panaca, Nevada. The Crestline Allotment encompasses 2,415 acres of BLM managed lands.

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 boundaries of the Crestline allotment:

Cirsium vulgare	Bull thistle
Lepidium draba	Hoary cress
Onopordum acanthium	Scotch thistle

The Crestline allotment has never been completely inventoried and was last partially inventoried for noxious weeds in 2008. It should be noted that the Crestline allotment runs along the boundary with Utah and no weed inventory data for Utah is available. While not officially documented the following non-native invasive weeds probably occur in or around the allotment: cheatgrass (Bromus tectorum), horehound (Marrubium vulgare), and Russian thistle (Salsola kali).

A list of species undocumented in the District's follows:

Arctium minus	Common burdock
Bromus diandrus	Ripgut brome
Bromus rubens	Red brome
Bromus tectorum	Cheatgrass
Ceratocephala testiculata	Bur buttercup
Convolvulus arvensis	Field bindweed
Elaeagnus angustifolia	Russian olive
Erodium circutarium	Filaree
Kochia scoparia	Kochia
Halogeton glomeratus	Halogeton
Marrubium vulgare	Horehound
Salsola kali	Russian thistle
Sysimbrium altissimum	Tumble mustard

Tragopogon dubius	Yellow salsify
Ulmus pumila	Siberian elm
Verbascum thapsus	Common mullein

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

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

For this project, the factor rates as Moderate (4) at the present time. The proposed action could increase the populations of the noxious and invasive weeds already within the allotment and could aid in the introduction of weeds from surrounding areas. Within the allotment, watering and salt block sites are of particular concern of new weed infestations due to the concentration of livestock around those sites and the amount of ground disturbance associated with that. However, the proposed action would also increase the human presence in the area and the likelihood of weed detection.

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

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

This project rates as High (8) at the present time. If new weed infestations establish within the allotment this could have an adverse impact those native plant communities since the allotment is 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 (32). This indicates that the project can proceed as planned as long as the following measures are followed:

- Prior to entering public lands, the BLM will provide information regarding noxious weed management and identification to the permit holders affiliated with the project. The importance of preventing the spread of weeds to uninfested areas and importance of controlling existing populations of weeds will be explained.
- The range specialist for the allotment will include weed detection into project compliance inspection activities. If the spread of noxious weeds is noted, appropriated weed control procedures will be determined in consultation with BLM personnel and will be in compliance with the appropriate BLM handbook sections and applicable laws and regulations.
- To eliminate the introduction of noxious weed seeds, roots, or rhizomes all interim and final seed mixes, hay, straw, hay/straw, or other organic products used for feed or bedding will be certified free of plant species listed on the Nevada noxious weed list or specifically identified by the BLM Ely Field Office.
- Grazing will be conducted in compliance with the Ely District BLM noxious weed schedules. The scheduled procedures can significantly and effectively reduce noxious weed spread or introduction into the project area.
- Any newly established populations of noxious/invasive weeds discovered will be communicated to the Ely District Noxious and Invasive Weeds Coordinator for treatment.

Reviewed by: _____ _____

Cameron Boyce — Date

Natural Resource Specialist

AREA LOCATOR
Ely
Caliente
CRESTLINE WEEDS
Crestline
Crestline
BLM
Ely District Office
Legend
Commonname
Land Status Abbreviation
BLM
FWS
PVT
SCOTCH THISTLE
WHITETOP/HOARY CRESS
Allotments
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: Andy Daniels
5/14/2012
N
Miles