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

ENVIRONMENTAL ASSESSMENT (EA NV-040-08-11)
October 09, 2008

Quarter Circle Five Ranch (Operator No. 2704551)
Term Permit Renewal
White Rock Allotment (0902)

Location: Ely, Nevada
Applicant/Address:

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I. INTRODUCTION

Background Information

This environmental assessment (EA) addresses the impacts to public land resources from a proposal to renew the term grazing permit for Quarter Circle Five Ranch on the White Rock Allotment (0902). This EA fulfills the National Environmental Policy Act (NEPA) requirement for site-specific analysis of resource impacts. Both the proposed action and alternatives to the proposed action are considered. This EA also analyzes information to determine whether to prepare an Environmental Impact Statement (EIS) or issue a "Finding of No Significant Impact" (FONSI). A FONSI documents why implementation of the selected action will not result in environmental impacts that significantly affect the quality of the human environment.

This EA is tiered to and incorporates by reference the Ely District Record of Decision and Approved Resource Management Plan (RMP) to manage the public lands administered by the Bureau of Land Management's Ely District Office (August 20, 2008).

Standards and Guidelines for Grazing Administration were developed by the Northeastern Great Basin Resource Advisory Council (RAC) and approved by the Secretary of the Interior on February 12, 1997. Vegetation Guidelines were approved in March 2004, and added as Appendix A. The Standards and Guidelines reflect the stated goals of improving rangeland health while providing for the viability of the livestock industry, all wildlife species, and wild horses and burros in the Northeastern Great Basin Area. 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. A thorough discussion of Standards and Guidelines is presented in BLM Handbook H-4180-1 (Rangeland Health Standards). The Northeast Great Basin RAC Standards and Guidelines are available for public review in the Schell Field Office.

This EA also summarizes information from the associated Standards Determination Document (SDD – Appendix I) that evaluates whether current livestock management practices are conforming to the approved Standards and Guidelines for Rangeland Health for the White Rock Allotment.

The term grazing permit under consideration authorizes grazing use within the White Rock Allotment. Specifically, the permit authorizes use within two pastures of the allotment – Water Canyon Native and South Preston Seeding. Cattle are the authorized kind of livestock. The permit would be for a period not to exceed ten years. The base property for the Quarter Circle Five Ranch permit would be privately owned land near Lund, Nevada in White River Valley. The permit area is situated in the central portion of the Ely District BLM, approximately 20 - 25 miles south of Ely, Nevada (White Pine County - Figures 1 & 2). The permit area occurs within the White River North (160A), and White River Central (160B) Watersheds. The current term permit for Quarter Circle Ranch on the White Rock Allotment has been issued for the period 3/01/2006 to 2/28/2016. The current forage allocation of 2,128 cattle AUMs has been in effect since 3/01/2006 following a grazing transfer whereby Quarter Circle Five Ranch transferred the Steptoe Valley portion of the cattle grazing permit to Blue Diamond Oil Company. The forage allocation of 2,128 AUMs is in accordance with a grazing decision issued for the allotment on June 28, 1995. The forage allocation is also consistent with a grazing agreement reached between BLM and Quarter Circle Five Ranch signed in July 1995.

A grazing decision is essentially a document that determines whether changes in livestock management practices are necessary for a defined administrative area. Further information on grazing changes implemented by the FMUD issued in 1995 are presented in the ***Range*** portion of the affected environment in this EA.

Holistic Resource Management

According to the Grazing Decision of 1995 which carried forward the 1994 agreement, the Quarter Circle Five Permit (formerly the Van C. Gardner and Van J. Gardner permits) is authorized to make use according to the principles of Holistic Resource Management (HRM) and to use the HRM model as its guide as related to livestock grazing management within specific use areas of the White Rock Allotment. Livestock use is to be made in accordance with an annually submitted biological plan. Season of use is flexible, on a year long basis and is based on HRM principles. The biological plan is to be reviewed and approved annually by the authorized officer prior to implementation. The 1995 grazing decision stated " The management actions implemented in accordance with HRM are expected to achieve the Land Use Plan (LUP) objectives as identified in this Proposed Multiple Use Decision".

An evaluation and determination of the rangeland health has been conducted during the permit renewal process. The permit renewal project proposal for the Quarter Circle Five permit was presented to a BLM interdisciplinary ID team on March 26, 2008. At this meeting the resource specialists discussed the known resource issues and concerns on the allotment. The interdisciplinary team (consisting of Rangeland Management Specialists, Wildlife Biologist, Weeds Specialist, Archaeologist, Watershed Specialist, Wilderness Specialist, Soils Specialist, and others) individually or collaboratively utilized several scientifically based documents and official publications to complete the assessment. These documents include the Western White Pine County Soil Survey (USDA-SCS), Range Site Descriptions (USDA-SCS 2003), Interpreting Indicators of Rangeland Health (USDI-BLM et al. 2005), Sampling Vegetation Attributes (USDI-BLM et al. 1996), the Nevada Rangeland Monitoring Handbook (USDA-SCS et al. 1984 and 2006), Utilization and Residual Measurements, and The National Range and Pasture Handbook (USDA NRCS 2003). For a complete list of references, see Appendix IV. The interdisciplinary team also used rangeland monitoring data, electronic data files, professional observations, and photographs to evaluate achievement of the Standards and conformance to the Guidelines.

All scientifically based documents and rangeland monitoring data are available for public inspection at the Ely Field Office during business hours.

"Standard Riparian Functioning Condition Checklists" (USDI-BLM 2000) have not been completed for those two pastures of the White Rock Allotment grazed by Quarter Circle Five Ranch. There are no public land riparian systems present on these pastures. Cattle use of the allotment is dependent on wells, water on private land, or water provided from ephemeral flows from the Egan Mountain Range with no associated riparian habitat.

Standards Achievement

The rangeland health evaluation of the White Rock Allotment has been based on rangeland monitoring data that is summarized in the Standards Determination Document that is associated with this Term Permit Renewal EA (Appendix I). As a result of the I.D. Team assessment and monitoring data review, it has been determined that one of three Standards for Rangeland Health is being achieved on the White Rock Allotment. One of three Standards is not being achieved. The third Standard is not applicable. A summary of this finding for the allotment follows:

1. Upland Sites Standard (Achieved)
2. Riparian and Wetland Sites Standard (Not applicable)
3. Habitat Standard (Not achieved, not making significant progress towards)

Guidelines Conformance

As a result of the assessment and monitoring data review, it has been determined that current livestock grazing management practices conform to the Guidelines. This finding is summarized as follows:

Current livestock management practices conform to Guidelines 1.1 and 1.3. Guideline 1.2 is not applicable to the assessment area at this time. Management practices also conform to Guideline 3.3. Management practices do not conform to Guidelines 3.1, 3.2, and 3.6. Guidelines 3.4 and 3.5 are not applicable to the assessment area at this time. Refer to Appendix I for the Guidelines Conformance Review on page 31.

Are livestock a contributing factor to not achieving the Standards?

Existing grazing management practices and levels of grazing use on public lands within the White Rock Allotment are significant causal factors or contributing factors in failing to achieve the Habitat Standard. The non-achievement of this Standard is also caused by other factors or conditions (refer to the Standards Determination Document).

Causal Factors – Habitat Standard

X Livestock are a contributing factor to not achieving the Standard
□ Livestock are not a contributing factor to not achieving the Standard
X Failure to achieve the Standard is also related to other issues or conditions

Need for the Proposal

The need for the proposal is to fully process the renewal of the term grazing permit for Quarter Circle Five Ranch on the White Rock Allotment in accordance with all applicable laws, regulations, and policies with terms and conditions of grazing use that conform to the Standards and Guidelines for Grazing Administration and the other pertinent land use objectives for livestock use. The grazing permit would be renewed for a period not to exceed ten years. Title 43 of the Code of federal Regulations (CFR) Section 4130.2(a), effective March 24, 1995, states "Grazing permits or leases shall be issued to qualified applicants to authorize use on the public lands and other lands under the administration of the Bureau of Land Management that are designated as available for livestock grazing through land use plans." Quarter Circle Five Ranch meets all of the qualifications to graze livestock on public lands

administered by the BLM according to Chapter 1 of BLM Manual H-4110, "Qualifications, Permitted Use, and Allotment Transfers."

Relationship to Planning

The proposed action is consistent with the Federal, State, and local laws, regulations, policies, and plans to the maximum extent possible. The proposed action would be in conformance with the Ely District Record of Decision and Approved Resource Management Plan (RMP) dated August 2008 and signed August 20, 2008. The proposed action implements livestock management decision LG-5 (p. 87 ROD). The proposed action would also be consistent with the objectives of the President's Healthy Forests Initiative for Wildfire Prevention and Stronger Communities (August 22, 2002). The project is also consistent with the White Pine County Public Lands Policy Plan of July, 2007 which states the following:

- "Agricultural production is necessary to help maintain the historical, cultural and economic viability of White Pine County." (page 21)

The proposed action has been analyzed within the scope and intent of the following agreements, and is in compliance with the acts, regulations, plans, and executive orders listed below:

- State Protocol Agreement between the Bureau of Land Management, Nevada and the Nevada State Historic preservation Office (1999).
- Migratory Bird treaty Act (1918 as amended) and Executive Order 13186 (1/10/01).
- 1973 Endangered Species Act
- Greater Sage Grouse Conservation Plan for Nevada and Eastern California (June 30, 2004)
- White Pine County Portion (Lincoln/White Pine Planning Area) Sage Grouse Conservation Plan (April 12, 2004).
  The proposed action would also be in conformance with the White Pine County Elk Management Plan approved March 1999, 2007 revision.

Relationship to Bureau of Land Management Guidance

The Proposed Action also complies with Nevada BLM Instruction Memorandum (IM) No. NV-2006-0034, which provides guidance to facilitate the preparation of grazing permit renewal Environmental Assessments (EAs) as per the requirement set forth in BLM Washington Office IMs WO 2003-071 and WO 2004-126. It also complies with the requirements outlined in the following policies, handbooks, and manuals:

Migratory Bird Treaty Act – Interim Management Guidance (BLM IM 2008-050).

- BLM Manual 8400 – Visual Resources Management
- BLM Handbook 4180-1 (Rangeland Health Standards).

Identification of Issues (Scoping)

In order to identify potential issues, internal scoping was conducted for this permit renewal proposal by resource specialists during a meeting held March 26, 2008 at the Ely BLM Field Office. At that time, the BLM wildlife biologist indicated concerns about the sensitive species greater sage grouse and wondered

if current livestock management was compatible with sage grouse objectives for the term permit renewal area. No other resource value issues were identified. Meeting participants identified that external consultation would include general public notification via the Ely BLM web page, plus hard copies of the EA mailed directly to interested publics who have requested one. Also, it was determined that Native American Coordination would need to occur. Additionally, the public has been invited to provide input concerning this action and will continue to be afforded the opportunity to provide comments. Thus far, no issues have been identified as a result of public scoping.

II. DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

Proposed Action – No Fundamental Changes

In order to meet the need for the proposal, the BLM would fully process and issue a new term grazing permit to Quarter Circle Five Ranch (operator 2704551) and authorize livestock grazing on two pastures of the White Rock Grazing Allotment. The allotment includes approximately 80,513 public land acres. Those two pastures permitted to Quarter Circle Five include approximately 20,000 public land acres (Figure 1). The current term permit and allotment information follows:

Quarter Circle Five Grazing Permit:

Allotment Number Name/Pasture	Livestock Number/Kind	Grazing Period Begin End	% Public* Land (Billing)	Type Use	AUMs**
0902 White Rock/					
Water Canyon Native	114 Cattle	03/01 – 02/28	100	Active	1368
South Preston Seeding	63 Cattle	03/01 – 02/28	100	Active	756
Total					2124

* The allotment is billed at 100% public land through the Rangeland Administrative Billing System (RAS).
** The active permitted use for Quarter Circle Five Ranch totals 2,128 active AUMs. The 1,368 and 756 AUMs presented is a rounded figure based on the livestock numbers and grazing period presented above.

The allotment summary as it appears on the current term permits is as follows:

Quarter Circle Five Ranch

	Permitted Use		
Allotment	Active	Suspended	Total
0902 White Rock	2128	0	2128

The proposed action is to renew the grazing permit without any fundamental changes to the terms and conditions of the permit (status quo). The cattle numbers, season of use, and areas of use would remain the same. Quarter Circle Five Ranch would continue to be allowed to operate according to the principles of Holistic Resource Management with a flexible season of use. Appendix II lists the specific terms and conditions that would be included as part of the grazing permit. Allowable use levels for key forage species would be included in the new permit. Allowable use levels are a quantification of Land Use Plan vegetative objectives and are a clarification of the grazing terms and conditions. The issuance of the term grazing permit would be for a period not to exceed ten years.

Change in Management Practices Alternative

The BLM interdisciplinary team, in cooperation and coordination with the grazing permittee, has proposed an alternative for the Quarter Circle Five Permit. This alternative is primarily based upon comments received from the grazing permittee at a meeting held at the Ely BLM Office on September 23, 2008. According to this alternative, the season of use would remain year-long, however grazing would occur primarily during the winter period, from October through February. The range would be rested during March. Some spring grazing may occur during April. Grazing use would still occur according to the principles of Holistic Resource Management. Each year grazing use would be contingent upon submittal of an annual biological plan requiring approval by the authorized officer. No changes would be made to stocking level (AUMs), area of use, or season of use. The grazing schedule would remain as presented above.

Proposed Action - Monitoring

Rangeland monitoring data would continue to be collected for the White Rock Allotment to determine if the livestock management practices as authorized by this permit renewal are conforming to the Standards and Guidelines for Rangeland Health and other vegetative and multiple use objectives for the allotment. Monitoring and data collection would continue in the form of establishing key areas, measuring utilization levels, ecological condition, vegetation cover, frequency trend, observed apparent trend, actual use reports, climate studies, professional observation, photos, and compliance checks. Monitoring may also continue according to broad watershed assessment of the White River North and White River Central Watersheds.

Prior to authorizing annual grazing use, monitoring would be conducted to determine forage availability, grazing use areas and grazing management practices. Following the grazing period, monitoring would be conducted to determine overall utilization levels and grazing use patterns.

The term permit renewal area would also be monitored on a periodic basis by both BLM and the grazing permittee for noxious weeds or non-native invasive species. Control treatments would be initiated on noxious weed populations that become established in the project area. Further mitigation measures for weeds are identified in the Noxious Weed Risk Assessment in Appendix III.

If a future monitoring evaluation results in a determination that additional changes in grazing management practices are necessary for compliance with the Standards for Rangeland Health, the grazing permit or lease would be reissued subject to revised terms and conditions.

Other Alternatives

Since the proposed action is to renew the grazing permit without any changes (status quo), the proposed action and the "no action alternative" are one in the same. Thus the "no action alternative" will not be further addressed.

Alternatives Considered but Eliminated from Further Analysis - No Grazing Alternative

The No Grazing alternative was addressed in the Ely Resource Management Plan Final Environmental Impact Statement (RMP-FEIS). The EIS analyzed the impacts of grazing through a proposed action and alternatives. Not issuing term grazing permits was considered as an alternative but eliminated from detailed analysis. Since the alternative of no livestock grazing was fully described and analyzed in the Ely RMP-FEIS, the effects of not renewing the term grazing permit are not analyzed in this document. The decision in the RMP was that livestock grazing would be maintained until the allotments that have not been evaluated are evaluated. Therefore 43 CFR 4130.2(a) and 4130.2(e)(3) requires the issuance of grazing permits to qualified applicants that accept the proposed terms and conditions of the permit or lease.

No additional site specific alternatives are necessary for analysis since there are no unresolved conflicts concerning alternative uses of available resources.

III. DESCRIPTION OF THE AFFECTED ENVIRONMENT

General Environmental Setting

The White Rock Allotment encompasses approximately 80,513 public land acres. Those two pastures permitted to Quarter Circle Five Ranch include approximately 20,000 public land acres (Figures 1, 2). Private unfenced land occurs along Water Canyon Creek in the Water Canyon Native Pasture.

The term permit renewal area is situated in the northern portion of White River Valley north and east of Lund and Preston, Nevada. The term permit renewal area occurs on the west side of the Egan Mountain Range. The Water Canyon Native Pasture by Lund is fenced on the north, west, and east sides. The west side generally borders Highway 318. Small portions of the native pasture also occur on the west side of the highway ("Substation" and "Lane's Triangle Pastures"). The South Preston Seeding, also called the North Group Seeding (1966), consists of approximately 1,200 acres and is fenced on the north, west, and south sides. The east side merges with native range of the Egan Mountain Range. The allotment is located entirely within White Pine County, Nevada, in the central portion of the Ely BLM District approximately 20 to 30 miles southwest of Ely, Nevada. Elevations range from about 5,750 feet north of Lund to about 9,000 feet in the upper reaches of Eph Creek. The topography of the area is typical of that found in the Basin and Range Physiographic Province of the western United States. The geographic aspect of the allotment occurs on gentle sloping alluvial fans and relatively flat lands. Jakes Wash is a major feature of the allotment, running from northwest to southeast through the middle of the area. Average annual precipitation is 6 – 14inches. Salt desert shrub plant communities occur in the lower portions of the allotment. Sagebrush/perennial grass communities and like communities that contain varying densities of pinyon/juniper trees occur on the benches. Some pinyon/juniper woodland

sites occur in the allotment on the east side of the seeded area. Much of the land to the east of the seeding is steep, rocky terrain unsuitable for grazing.

The term permit renewal area occurs within the White River North and White River Central Watersheds. The allotment also occurs within the Central Nevada Basin and Range (028B) Major Land Resource Area (MLRA).

The grazing permit renewal area does not occur within a Wild Horse Herd Management Area. The grazing permit renewal does not occur within Wilderness or a Wilderness Study Area.

A. Mandatory Items for Consideration:

Mandatory Items of the human environment, which must be considered because of requirements specified in statute, regulation, executive order or Bureau policy, are listed in Table 1. Other elements that may be affected by the proposed action are further described in this Environmental Assessment (EA). Those mandatory items to which there is no or negligible effect beyond those disclosed in the RMP/Grazing EIS are also listed in Table 1. These resource values (no or negligible effect) are not considered further in the Environmental Consequences section of this EA, however these resource values (no or negligible effect) may be discussed further in the Affected Environment section of this EA.

Table 1. Mandatory Items for Consideration and Rationale for Detailed Analysis for the Proposed Action or Elimination from Further Consideration

Mandatory Items	No or Negligible Effect beyond those disclosed in the RMP/Grazing EIS	May Effect	Not Present	Rationale
Air Quality	X			Normal livestock behavior and grazing associated motor vehicle traffic can cause transient dust to become airborne and release combustion exhaust. The effects are transient and contribute negligibly to air quality degradation. Livestock are known to emit air pollutants such as methane, and manure may produce NO_x. However, cattle and manure on the range are so dispersed that this also has a negligible effect on air quality.
Areas of Critical Environmental Concern (ACEC)			X	Resource not present.
Cultural Resources	X			Site Specific review of known Cultural Resources within the renewal area did not reveal any sites of particular concern for impacts from livestock grazing. Typical impacts to Cultural Resources were disclosed in the Egan RMP/FEIS.
Environmental Justice	X			No minority or low-income groups would be affected by disproportionately high and adverse health or environmental effects identified in the proposed action area.

Floodplains and Wetlands			X	Resource not present.
Migratory Birds	X			Several species of migratory birds are known to have a distribution that overlaps with the proposed action area. It would be highly unlikely that livestock would cause a direct impact (i.e. stepping on) a nest or bird given the nature of birds and the low density of livestock. Indirect impacts of grazing from habitat alteration of vegetative communities are possible. However, grazing at the low density and implementing livestock management actions would reduce potential indirect impacts. Long term population trends of migratory birds should not be affected.
Native American Religious Concerns	X			No concerns have been identified through consultation & coordination.
Noxious Weeds & Invasive Non-Native Species		X		Weeds specialist has identified "could affect". Surface disturbing activities resulting from the proposed action may increase the risk of establishment or spread of these species in the term permit renewal area.
Prime or Unique Farmlands			X	Resource not present
Riparian Areas			X	Public land riparian areas are not present in the permit area
Federally listed and Proposed Threatened & Endangered Species	X			There are no listed or proposed Threatened and Endangered species currently known to occur within the identified 2 pastures of the White Rock Allotment. Information is gathered from the Nevada Department of Wildlife and Nevada Natural heritage Program databases.
State listed sensitive and BLM Special Status Species		X		The greater sage grouse (*Centrocercus urophasianus*), ferruginous hawk (*Buteo regalis*), and White River Catseye (Cryptantha welshii) are the only listed special status species identified as being present in the term permit renewal area. The sage grouse is currently under a status review by the U.S. Fish & Wildlife Service to determine if the species warrants protection under the Endangered Species Act.
Wastes (Hazardous or Solid)			X	No hazardous or solid wastes exist on the term permit renewal area, nor would any be introduced.
Water Quality (Surface or Ground Water)	X			No surface water within the area is used for domestic drinking water. Domestic wells are not present. Ground water in a deep aquifer would not be impacted. The allotment does not overlap any municipal or private drinking water watersheds
Wild Horses and Burros			X	Allotment not in a Wild Horse Herd Management Area
Wild & Scenic Rivers			X	Resource not present
Wilderness/WSA			X	Resource not present

In addition to the Mandatory Items, the BLM considers other resource values and uses that occur on public lands, or issues that may result from the implementation of the proposed action. The potential

resource values and uses, or non-critical elements that may be affected are listed in Table 2. A brief rationale for either considering or not considering the element further is provided. The elements that are considered in the EA are described in the Affected Environment (Section 3) and are analyzed in the Environmental Consequences (Section 4).

Table 2. Other Resource Values and Issues, and Rationale for Detailed Analysis for the Proposed Action

Resource or Issue	No or Negligible Effect beyond those disclosed in the RMP/Grazing EIS	Potentially Affected	Rationale
Range/Livestock Grazing/Standards and Guidelines		X	Range and livestock grazing would be affected. One Standard is not achieved, but significant progress is being made towards achievement.
Vegetation		X	Vegetation could be impacted positively or negatively by the proposed action.
Soils	X		Soils are not addressed in the Egan RMP. There could be positive or negative impacts to soils as a result of the proposed action.
Wildlife	X		The allotment provides habitat for elk, mule deer, and pronghorn antelope. The allotment receives year long elk and antelope use. Deer use occurs primarily in winter and early spring. The allotment is within NDOW hunt management areas 221 & 222. The allotment also provides habitat for coyotes, rabbits, badgers, bobcats, fox, sagebrush obligate birds, and other small mammals and reptiles,The proposed project or alternative should continue to provide the current level of habitat for the species presently occurring there. Wildlife habitat would be maintained by the quantity and availability of forage and cover resulting from good cattle distribution. To the extent that moderate livestock grazing stimulates new plant growth, that growth will be available for wildlife.
Recreation		X	May be affected. Wildlife related recreation could be enhanced.
Visual Resources	X		The proposed permit renewal is consistent with Visual resource Management (VRM) Class 2,3, and 4 objectives for this area.
Social & Economic Values		X	Renewing the permit would have economic impacts to the permittee and the county.
Water Quantity		X	Would maintain water quantity for livestock and wildlife.

Based on the above two tables, the following resource values have been identified by the BLM interdisciplinary team as resources in the affected environment that need further site specific discussion than that provided in the above two tables:
Mandatory Items - *Cultural Resources**,** Noxious Weeds and Invasive Non-Native Species, and Special Status Species.*

Other Resource Values - *Range/Livestock/Standards and Guidelines, Vegetation, Soils, Recreation, Social and Economic Values, and Water Quantity.*

A discussion of both classes of values follows:

Mandatory Items

Cultural Resources

A Cultural Resources Inventory Needs Assessment has been prepared and signed for this permit renewal. A cultural resources sensitivity map has been generated for the White Rock Allotment showing that cultural resource sensitivity varies from low to medium. Prehistoric cultural resources (habitation/non habitation sites; lithic scatters, projectile points; isolates; camp areas) may be found in areas adjacent to spring sites, ridge tops and nearby hills throughout the Ely District.

All ground disturbing activities that may occur within the term permit renewal area would be subject to all federal and State cultural resources laws and regulations, including the Archaeological Resources Protection Act of 1979 review, Section 106 review, and if needed, State Historic Preservation Office (SHPO) consultation as per BLM Nevada's implementation of the protocol for cultural resources. No ground disturbing activities are currently planned by BLM for the term permit renewal area.

Noxious Weeds and Invasive, Non-Native Species

The Ely weeds inventory (Weedpoints_20080107) indicates that there are noxious weeds present on public lands in the term permit renewal area of the White Rock Allotment. The following species are found within the boundaries of and along roads leading to the White Rock Allotment:

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

The invasive annual grass cheatgrass (Bromus tectorum) is present in the permit renewal area. Small patches of the invasive species halogeton (Halogeton glomeratus) also occur in the allotment, primarily along roadways. The invasive species Russian thistle (Salsola kali) also occurs in small scattered

populations in the allotment. A noxious weed risk assessment is included as Appendix III to this document. The risk assessment indicates a moderate risk (32) for the spread of noxious weeds with continued livestock grazing.

State listed Sensitive and BLM Special Status Species

The White Rock Allotment is within the Butte Valley population management unit for greater sage grouse. Three active leks have been located within the term permit renewal pastures. Of these active leks, two are located within the Water Canyon Native Pasture. One is located within the South Preston Seeding. The Water Canyon Native Pasture also has two leks for which the status is unknown; recent lek population counts have been zero, but it is unknown if the leks have been fully abandoned. Other sage grouse leks may be located within a two mile radius of either the Water Canyon Native Pasture or the South Preston Seeding. The entire allotment is identified as summer, winter, yearlong, and nesting/early brood rearing habitat.

Several ferruginous hawk nest sites have been found in juniper trees in the Water Canyon Native Pasture of the White Rock Allotment.

In the southeastern portion of the allotment, White River Catseye (Cryptantha welshii) may potentially occur. This forb is a biennial or short lived perennial forb that is found in dry, open, sparsely vegetated outcrops, with sandy to silty or clay soils and calcareous or carbonate deposits. Such areas are usually knolls or gravelly hills and often provide little preferred forage for livestock.

Given known habitat associations and current conditions, other state or BLM listed Sensitive or Special Status Species may be present within the allotment. Such species may occur as transients or unknown indigenous populations, including, but not limited to burrowing owl, loggerhead shrike, or pygmy rabbit. However, no other special status or sensitive species has been reported within the allotment.

Other Resource Values:

Range/Livestock/Standards and Guidelines

The White Rock Allotment is currently permitted for cattle grazing. Historically, grazing has been a common activity in eastern Nevada since the late 1800s. Both cattle and sheep grazing occurred on this allotment. Cattle use occurred yearlong and sheep use occurred primarily during the winter period. The current permit for cattle use is described above under the **Proposed Action** on page 6. Licensed use records, adjudication records, scientific and popular literature all indicate the area has been grazed heavily since the late 1800s.

Quarter Circle Five Ranch begins the grazing year by turning out cattle in spring in either the Water Canyon Native Pasture or the South Preston Seeding. At this time the operation begins irrigating private hay fields. Quarter Circle Five Ranch traditionally trailed cattle to Steptoe Valley around June. Since the grazing transfer with Blue Diamond Oil Corporation, this is no longer done. The operation has used leased private meadows near McGill during summer months. In fall or winter, cattle are turned out again to the Water Canyon Native Pasture or the South Preston Seeding. The seeding is often used prior to cattle going onto the forest (U.S. Forest Service grazing permit) in June or following forest use in fall

(September through November). The small pastures to the west of Highway 318 ("Substation" and "Lane's Triangle Pastures") were licensed for short term grazing during the spring of 2008.

The current forage allocation for the White Rock Allotment is based on range survey work done in the 1960s. Also during the late 1960s, crested wheatgrass seedings were established in the area of the allotment to restore AUMs of grazing that had been reduced as a consequence of actions taken in 1945 and 1965. A grazing agreement was reached with Quarter Circle Ranch in 1994 that called for a voluntary 30% reduction in active AUMs for a period of three years (1994-1996). A multiple use grazing decision issued June 1995 confirmed the agreements. The current forage allocation is based on the 1995 decision (see page 6 above). The 1995 decision also created a pasture grazing system with licensing by pasture as well as seasons of use and stocking levels by pasture. Other terms and conditions of grazing use were implemented according to the decision.

In February 2006, Quarter Circle Five Ranch transferred 2,228 active AUMs of permitted cattle grazing to Blue Diamond Oil Corporation. This portion of the QCF grazing permit covered cattle grazing in four pastures all in Steptoe Valley on the east side of the Egan Mountain Range. This left the 2,128 AUMs currently permitted to QCF in White River Valley.

Licensed Use – White Rock Allotment – Quarter Circle Five Ranch

A detailed summary of licensed grazing use by Quarter Circle Five Ranch can be found in the SD on page 42.

The 1995 grazing decision implemented changes in active permitted use (AUMs), permanent designated areas of use and use boundaries, period of use, and management practices for the White Rock Allotment. The reduction in active AUMs was placed in voluntary non-use for conservation and protection of the federal range. According to the grazing decision, Van C. Gardner and Van J. Gardner (predecessors to QCF permit) were given the flexibility to graze the public lands within the designated use areas on a yearlong basis not to exceed 4,356 AUMs. Livestock use was to be made in accordance with an annually submitted biological plan. The decision stated that the management actions implemented in accordance with HRM were expected to achieve the Land Use Plan (LUP) objectives as identified in the Proposed Multiple Use Decision.

The Habitat Standard is not being achieved on the term permit renewal area of the White Rock Allotment. Current livestock management practices are not in conformance with the Guidelines. Current livestock grazing practices are a causal factor in failing to achieve the Habitat Standard (see the Standards Determination Document Appendix I).

Vegetation

The White Rock Allotment occurs within Major Land Resource Area (MLRA) 028B – Central Nevada Basin and Range Area. The rangeland ecological sites within the allotment have been described, classified, and studied by the Natural Resource Conservation Service (NRCS). Vegetation is typical of that found in eastern Nevada. The four primary vegetation types within the allotment are salt desert shrub, black sagebrush, northern desert shrub (big sagebrush types), and pinyon-juniper woodlands. One fenced crested wheatgrass seeding (South Preston Seeding) occurs in the permitted area. The

dominant native plants and trees include several species of native sagebrush, big and small rabbitbrush, antelope bitterbrush, winterfat, shadscale, Indian ricegrass, needleandthread grass, bluebunch wheatgrass, bluegrass, basin wildrye, bottlebrush squirreltail, globemallow, utah juniper, singleleaf pinyon, and other native perennial grasses and forbs. The invasive annual grass cheatgrass is present in portions of the allotment. There are no known sensitive plant species in the allotment.

Soils

The soils in the White Rock Allotment are primarily loamy soils, derived from material eroded from the Egan Range Mountain Block. The soils are primarily alluvial, occurring on the gently sloping alluvial fans on the west side of the Egans. Finer textured soils occur in Jakes Wash, a primary topographic component of the Water Canyon Native Range. The allotment occurs primarily on an area dominated by soils on fan piedmonts (General Soil Mapping Unit No. 11 – Palinor-Shabliss-Blimo Association). The allotment also occurs in an area dominated by soils on hills and mountains (General Soil Mapping Unit No. 24 – Cavehill-Haunchee-Hyzen Association and Unit No. 23 – Birchcreek-Segura-Pioche Association). Soil types vary through the allotment. Over 28 Soil Mapping Units (SMUs) have been identified in that portion of the White Rock Allotment permitted to QCF. The four major SMUs in the allotment are SMUs 372, 282, 1280, and 1151. Together these mapping units represent about 35% of the land area of the allotment.

Some soils are duripan soils that have a restrictive layer going to 20" deep. This restrictive layer limits plant rooting depth. The soils are moderately susceptible to wind or water erosion. The soils on the benches and higher elevation sites are generally less susceptible to erosion than the more fragile silts near the valley bottom (derived from lacustrine sediments). Soils in the White Rock Allotment vary in depth, percolation rates, and water holding capacity.

Recreation

The term permit renewal area is generally isolated and undeveloped with no modern recreational facilities. Recreation in this area includes large and small game hunting, wildlife observation and photography, hiking, horse back riding, primitive camping, fossil collection, and off highway vehicle (OHV) exploration.

Social and Economic Values

The farming and ranching life style has been and continues to be important in White Pine County and the State of Nevada. The local economy of White Pine County has been dependent on farming and ranching activity. Taxes generated from agricultural activity benefit the county.

Water Quantity

Water quantity for livestock grazing varies annually according to climatic conditions. Livestock watering in the term permit renewal area generally occurs on wells and on private ground along Water Canyon Creek. Water at Rye Grass and Conoco Wells (native range) and at North Group Seeding Well (South Preston Seeding) has been reliable and consistent from 2000 to 2008. Water provided by Water Canyon Creek on private ground has varied with drought conditions and has not always been available,

even during the spring grazing period. Rarely, ephemeral water is available in the native pasture from Rowe and Eph Creeks or in the South Preston Seeding from Eph Creek. No water hauling was required to be authorized in the renewal area during the 2000 to 2008 grazing period.

IV. ENVIRONMENTAL CONSEQUENCES

The environmental consequences of grazing were analyzed in the Ely District Record of Decision and Approved Resource Management Plan (RMP) of August 20, 2008. The "proposed action" and the "change in season of use alternative" are within the array of options identified for the alternatives and proposed action as analyzed in the RMP. There have been no major changes made associated with the proposed term permit renewal from the rangeland management actions presented in the RMP. The proposed action and alternative are not substantially different than the actions analyzed in the RMP. The following site specific analysis discusses the environmental consequences (impacts) associated with the proposed action and change in season of use alternative.

Since the proposed action is to renew the grazing permit without any fundamental changes (to stocking level, season of use, or areas of use), the proposed action and the "no action alternative" (status quo) are one in the same. Thus there is no need to present the impacts of a "no action alternative." Cumulative impacts are discussed at the end of this section.

The environmental consequences of the following resources, which have been identified as "mandatory items" have been identified by resource specialists as potentially affected by the proposed action:

Anticipated Impacts of the Proposed Action - Mandatory Items

1) Noxious Weeds and Invasive, Non-Native Species

Proposed Action

The grazing permit renewal and the resulting livestock management practices could result in an increase in noxious weeds to the area of the permit renewal. The Risk Factor for spread of noxious weeds is moderate at the present time (See Appendix III for the Noxious Weed Risk Assessment). Localized areas of livestock concentration or disturbance could increase the risk for spread of noxious weeds. Watering locations and salt block sites (if present) are of particular concern of new weed infestations due to concentration of livestock around those sites and the amount of ground disturbance associated with that. Grazing use by livestock could cause an increase in invasive plants such as cheatgrass, halogeton, Russian thistle, or mustard, depending on climate, stocking level, timing of grazing, presence or absence of fire, and other factors. The permit renewal area would be monitored on a regular basis by both BLM and the grazing permittee for noxious weeds or invasive nonnative species. Control treatments would be initiated on noxious weed populations that become established in the project area.

Change in Management Practices Alternative

According to this alternative, impacts to noxious weeds and invasive, non-native species would be the same as those listed above.

3) State listed Sensitive and BLM Special Status Species

Proposed Action

Of eight active sage grouse leks located in the White Rock Allotment, three are located within the term permit renewal area. Of these three active leks, two are located within the Water Canyon Native Pasture. One is located within the South Preston Seeding. Licensed use records indicate spring grazing by Quarter Circle Five Ranch has had the potential to conflict with sage grouse breeding activity, although spring grazing has not occurred directly near leks. Cattle grazing in either native range or the South Preston Seeding that has resulted in little remaining grass cover or cured residual forage (as indicated by utilization studies) is not achieving land use plan, Sage Grouse Conservation Plan, or RAC objectives for sage grouse. This problem has been aggravated by persistent drought in eastern Nevada. The grazing permittee has coordinated with the BLM Range Specialist during some years to take partial voluntary non-use on the permit in consideration of drought and sage grouse objectives.

Since ferruginous hawks nest primarily in live juniper trees, livestock are unlikely to directly impact the hawk or their nests. Dispersed grazing at appropriate levels would not be expected to significantly impact the hawk's prey base, nor that of incidental use of other raptors (i.e. flying overhead for hunting. Proper grazing management could improve grass and forb vegetative communities, thereby improving habitat for small prey species.

During normal years or above average production years, the current livestock management practices may result in the improvement of habitat for these species. With limited spring use and good cattle distribution, light grazing pressure in the term permit renewal area may benefit sage grouse that may be present in the area by increasing herbaceous vegetative production and nesting cover. Improved vegetation production and cover has also been shown to increase chick forage and insect production. The proposed action would not likely contribute to the need to list any sensitive species as threatened or endangered.

Given the areas that the White River Catseye is found and that the species appears to tolerate or even increase with transient disturbances within its habitat, such as animal trampling, it is unlikely the proposed grazing would negatively impact the species.

Change in Management Practices Alternative

Impacts to State listed Sensitive and BLM Special Status Species are expected to be similar to but less than those listed above for the proposed action. By primarily grazing during the winter grazing period (October through February), there would be less potential for cows to disrupt sage grouse breeding, nesting, and early brooding behavior. Providing for spring rest of key herbaceous forage species should increase the type of vegetative cover that is recognized as an objective for sage grouse habitat.

Anticipated Impacts of the Proposed Action - Other Resource Values

The following resource values have also been identified by resource specialists as potentially affected by the proposed action:

1. Range/Livestock/Standards and Guidelines

Proposed Action

According to the proposed action, grazing would continue much as it has in the past. Livestock management practices would remain the same or similar to what they have been. Quarter Circle Five Ranch would continue to manage livestock according to holistic resource management practices and would continue to be offered the flexibility to license during a yearlong grazing period. Cattle distribution would continue to be influenced by the location of wells, Water Canyon Creek, and annual climatic events. The permittee would be expected to continue to coordinate with BLM on an annual basis to identify cattle numbers, areas of use, and season of use. Utilization of key forage plants is expected to be moderate or less, with occasional heavy grazing in the crested wheatgrass seedings during drought years. Moderate use stimulates new plant growth. It is possible that local areas of over-utilization of key forage plants could result from use by cattle, or combined use by cattle and elk. This possibility would be monitored and actions taken to correct the problem.

Maintaining the permit would allow the targeted use of cheatgrass early in the grazing season. Utilization of cheatgrass would help prevent wildfire. Wildfire in this allotment would lead to a loss of native plants, an increase in cheatgrass, and a return to a frequent cheatgrass fire cycle that destroys wildlife habitat. The proposed action would achieve or continue to make progress towards achieving and conforming to the Standards and Guidelines for Rangeland Health and the other multiple use resource objectives for the allotment.

Change in Management Practices Alternative

According to this alternative, Quarter Circle Five Ranch would continue to manage livestock according to holistic resource management practices, however grazing use would primarily occur during the winter grazing period. Grazing use during the spring critical growth period would be expected to be less than recent historical use during this period. This alternative would require the livestock operator to adjust the overall management of his grazing operation. The targeted use of cheatgrass early in the grazing season would still be an option, dependent upon approval from the authorized officer. The permittee would be expected to continue to coordinate with BLM on an annual basis to identify cattle numbers, areas of use, and season of use. Utilization of key forage plants is expected to be moderate or less, with occasional heavy grazing in the crested wheatgrass seedings during drought years.

2. Vegetation

Proposed Action

The term permit renewal would be expected to lead to vegetation impacts such as maintaining current vegetation composition and cover, maintaining vegetation production and forage availability, stimulation of new growth, the grazing of older age class wolfy native perennial grasses or crested wheatgrass, and stabilization of rangeland condition and trend. Deferred cattle use along with distribution of grazing would allow native plants to produce seed. During many recent drought years native plants have not produced much seed. Disturbed areas of vegetation of approximately ½ to one acre could develop around wells. These areas are already degraded, as shown by photographs.

Vegetation would be crushed and potentially disappear from these locations.

The term permit renewal would be expected to help prevent catastrophic wildfire and the beginning of a frequent cheatgrass fire cycle. By maintaining grazing on the allotment the cheatgrass fine fuels could be held to manageable levels.

Cattle grazing on native range and in the crested wheatgrass seedings is expected to be equal to or less than the allowable use levels for key forage plants as identified in the terms and conditions of the proposed permit renewal. The allowable use levels are based on the land use plan, the Nevada Rangeland Monitoring Handbook, and general range science that recognizes moderate levels of grazing as beneficial to healthy rangelands. Local areas of heavy use could result, especially during drought years. Actions would be taken to correct this result. General range science recognizes moderate levels of grazing as beneficial to healthy rangelands.

Change in Management Practices Alternative

Impacts to vegetation according to the change in management practices alternative would be expected to be similar to those impacts identified for the proposed action. However, vegetation cover, production, and seed production may increase during the spring grazing period as a result of a focus on winter grazing. These attributes are also dependent on annual conditions. Vegetation composition may also improve with an increase in the herbaceous component of native grasses and forbs relative to the native shrubs. Long term range trend may thus also improve. It would be expected that there would be an increase in residual cured forage for the winter grazing period as a result of less spring use.

3. Soils

Proposed Action

The impacts to soils are expected to be minimal from implementing the proposed action. However the permit renewal action could result in positive or negative impacts to soils. Generally, grazing would not be concentrated in any one location, but would be dispersed and distributed throughout the native pasture and crested wheatgrass seeding. Maintenance of vegetation production and appropriate vegetation canopy and ground cover would tend to maintain good soil/water relations. Soils would maintain structure, water holding capacity, and percolation characteristics. Wind or water erosion would be expected to be minimal. There could be soil disturbance and compaction to the fine textured soils in Jakes Wash in the Water Canyon Native Pasture due to hoof action during the critical spring growth period, generally March through May. This could vary with annual climatic conditions. There could be some effects to soil structure, water holding capacity, and percolation characteristics. This could lead to some wind or water erosion. Disturbed, compacted areas of soil of approximately 1/4 acre or less could develop near waters in the allotment or other areas where cattle or cattle and elk concentrate over time. These areas would be monitored and actions taken to correct the problem.

Change in Management Practices Alternative

Impacts to soils according to the change in management practices alternative would be expected to be similar to those impacts identified for the proposed action. Generally it is expected there would be less

disturbance to soil characteristics as a result of this alternative, because of reduced grazing levels during the spring critical growth period, when soils can be soft and susceptible to impacts. Generally, biological crusts would be less disturbed by this alternative. When the ground is frozen or covered by snow during winter, soils and crusts are not as susceptible to disturbance. Maintenance or improvement of vegetation production and appropriate vegetation canopy and ground cover would tend to maintain or improve good soil/water relations. Disturbed, compacted areas of soil of approximately 1/4 acre or less could develop near waters in the allotment or other areas where cattle or cattle and elk concentrate over time. These areas would be monitored and actions taken to correct the problem.

4. Wildlife

Proposed Action

The project, as proposed, should continue to provide the current level of habitat for the species presently occurring there. Wildlife habitat would be expected to be maintained or enhanced by the quantity and availability of forage and cover resulting from good cattle distribution. To the extent that moderate livestock grazing stimulates new plant growth, that growth will be available for wildlife. The habitat for sagebrush obligate species such as songbirds would not change. Water availability would continue for wildlife at the three well developments maintained by the permit. Because water would not be provided year-round at water locations, some stress may result to localized wildlife populations when the water is shut off. Some wildlife drownings could occur even though wildlife escape ramps would be placed in the troughs.

Change in Management Practices Alternative

Impacts to wildlife as a result of this alternative would be the same or similar to those for the proposed action.

5. Recreation

Proposed Action

There would be minimal impacts to existing recreational activities as a result of the term permit renewal. To the extent that wildlife populations benefit, wildlife-related recreation such as hunting, wildlife viewing, antler collection, and photography would be enhanced. The permit renewal is not expected to lead to increased off-highway vehicle (OHV) use in the area.

Change in Management Practices Alternative

Impacts to recreation values as a result of this alternative would be the same or similar to those for the proposed action.

6. Social and Economic Values

Proposed Action

Lifestyles of local residents would not be impacted. The farming and ranching life style would continue in White Pine County. Taxes generated from the agricultural activity associated with the proposed action would continue to benefit the county. The proposed term permit renewal would provide economic benefits for the livestock permittee in this area by maintaining the grazing permit and by maintaining the economic stability and efficiency of their overall operation. The proposed permit renewal would facilitate livestock management.

General impacts to social and economic values have also been addressed in the Egan RMP/FEIS.

Change in Management Practices Alternative

General impacts to social and economic values would be similar to those for the proposed action. The economic value of the overall cattle operation may change with the expected reduction in spring cattle use.

7. Water Quantity

Proposed Action

Water quantity varies according to climatic conditions. Implementing the proposed term permit renewal action would generally maintain water quantity and availability for livestock and wildlife, or any other resource value in the allotment. Generally grazing occurs in association with water wells and on private ground and does not have to be hauled to tanks and troughs. Water hauling for livestock may be authorized on a temporary basis which could also benefit wildlife.

Change in Management Practices Alternative

Impacts to water quantity as a result of this alternative would be similar to those for the proposed action. However there may be less water available to wildlife during the spring grazing period with the expected reduction in spring use by cattle. Wildlife would be expected to water at native sources. It would not be expected that both Conoco Well and Rye Grass Well would be pumped for cattle use every spring. It is expected that temporary water hauling for cattle during the winter grazing period, if such is approved and authorized, would increase the water availability for wildlife.

Cumulative Impacts

The purpose of the cumulative analysis in the EA is to evaluate the significance of the Proposed Action's contributions to cumulative impacts. A cumulative impact is defined under federal regulations as follows:

Cumulative impacts are impacts to the environment or resource values that result from the incremental or combined impact of the Proposed Action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively important actions taking place over a period of time (40 CFR 1508.7).

According to the 1994 BLM Handbook "Guidelines for Assessing and Documenting Cumulative Impacts," the cumulative analysis can be focused on those issues and resource values identified during scoping that are of major importance. Sage grouse have been identified during scoping as an important resource value. Sage grouse are discussed below. No other issues or resource values of major importance were identified during the EA scoping period. However, since the scoping period the Southern Nevada Water Authority Groundwater Development Project has been identified as an important issue. This issue is also discussed below. A general discussion of past, present, and reasonably foreseeable future actions is also presented.

Past Actions

There have been limited previous actions occurring in the project area. Historical mineral mining has occurred on the east side of Ward Mountain, a few miles east of the Water Canyon Native Pasture. There has been no historical oil or gas production and minimal oil exploration in the area. There are no known reclaimed oil exploration pads in the Water Canyon Native Pasture or the South Preston Seeding. Woodcutting and pinyon nut gathering have been minimal. Hunting, trapping, wildlife viewing, and other recreational activities including OHV use have been common in the area, in part due to the geographic position of the allotment near Lund, Preston, and Ely, Nevada. Small two track roads associated with these activities occur on the landscape. Wildfires have not been frequent or catastrophic. The Jakes Fire (K-212) of 2001 burned approximately 5 acres in the northeast portion of the Water Canyon Native Pasture. That portion of the fire was not fenced or seeded. Wildlife use, particularly elk use, has been common in the area, but has not fundamentally altered the plant communities. Livestock grazing has been intensive historically and together with climate, drought, lack of wildfire, road establishment, and/or other factors, may be a contributing factor to the current dominance of shrubs and the presence of invasive plant species. Allotment boundary fences have been constructed to improve livestock management and provide for improved administration of rangelands. Water wells and fences have been constructed over the years. Rangeland monitoring has been a common activity in the area, including monitoring by both BLM and the Nevada Division of Wildlife (NDOW) for sage grouse.

A hard rock mineral exploration project was completed in September, 2007 to the north of the Water Canyon Native Pasture. The "South Ely Project" (N83622) covered approximately one acre and occurred in the Dark Peak Allotment. Two of five test holes were bored and sampled. Results were negative. Approximately 0.25 miles of new two track road were constructed for the project and approximately 1.00 miles of existing road was improved. The project area is believed to be reclaimed by contouring and seeding. One of the exploratory holes was drilled in Rowe Canyon, at the north border of the North Preston Seeding.

Dring the late 1960s, crested wheatgrass seedings were established in the area of the allotment to restore AUMs of grazing that had been reduced as a consequence of actions taken in 1945 and 1965. A grazing agreement was reached with Quarter Circle Ranch in 1994 that called for a voluntary 30% reduction in active AUMs for a period of five years (1994-1999). A multiple use grazing decision issued June 1995 confirmed the agreements. The 1995 decision also created a pasture grazing system with licensing by pasture as well as seasons of use and stocking levels by pasture. Nevada Division of Wildlife made extensive written comments to BLM concerning the grazing evaluation and grazing decision of 1995 in regards to sage grouse values.

Present Actions

Current activities or projects occurring in the project area are very limited. There is no oil and gas exploration, or wind energy testing. There is no current mineral mining. Woodcutting, pinyon nut gathering, and trapping are minimal. OHV use is common in the area and is commonly associated with hunting and antler hunting. Other recreational activity such as hiking, back packing, primitive camping, bird watching, horseback riding, and similar activities are minimal. There is common use of the small two track roads in the area. Other than the Jakes Fire of 2001 (K212), there have been no recent wildfires. Current livestock grazing and wildlife use are not intensive in the area. There are no current gravel operations. The permitted area continues to be monitored to determine if grazing management practices are meeting the healthy rangelands, watershed, and vegetative objectives for the allotment. The permitted area continues to be monitored by both BLM and NDOW for sage grouse.

Reasonably Foreseeable Future Actions

It is reasonable to expect that the grazing permit as proposed by this EA would become active and cattle would be permitted to graze the White Rock Allotment. Dozens of grazing term permit renewals are expected to be completed each year through 2009 and during subsequent years in the Ely District BLM. Rangeland monitoring is expected to continue in about the same manner and scope as it has in the past. Monitoring would continue to evaluate the rangeland ecological sites to determine if Rangeland Health Standards and other vegetative objectives are being achieved. Monitoring for sage grouse by both BLM and NDOW is expected to continue. OHV use is expected to continue to be a common use in the area, particularly associated with hunting and antler hunting.

Southern Nevada Water Authority (SNWA) has applied to the BLM for rights-of-way to construct and operate a groundwater development project. The Clark, Lincoln, and White Pine Counties Groundwater Development Project is currently undergoing environmental analysis and is expected to be operational by 2014. SNWA has applied for water in the Cave Valley Hydrographic Basin, which occurs in both White Pine and Lincoln Counties. Groundwater development maps indicate a potential water exploratory area within this basin that occurs from 20 to 30 miles south of the permitted grazing area. SNWA has also applied for water in the Spring Valley Hydrographic Basin, which also occurs in both White Pine and Lincoln Counties. Maps indicate a potential water exploratory area that occurs from 14 to 20 miles east of the grazing area.

The number and exact location of water wells and associated pipelines and infrastructure is not known at this time. The scientific community and many individuals have speculated that the groundwater development could lead to drying of the earth surface and a consequent change or loss to the vegetation resource. Riparian systems including streams, springs, and seeps with riparian vegetation could also dry up. This would have a direct impact on livestock grazing, soils, vegetation, and wildlife in the allotment.

Outside of the SNWA project, no other public lands actions are planned for the project area in the near future. There are no anticipated increases in mining, oil & gas development, wind energy testing, solar power, woodcutting, pinyon nut gathering, OHV use, hunting, trapping, recreational camping or hiking, horse back riding, or fossil collection in the area in the reasonably foreseeable future.

The Ely District Approved Resource Management Plan and record of Decision was signed on August 20, 2008. According to the new RMP, which covers both the Egan and Schell Field Office areas, resource management would occur on a watershed basis. The area of the proposed action occurs within the White River Watershed. Assessment of the White River Watershed is expected to be accomplished by BLM within the next ten years. This assessment will determine if further changes in grazing management practices are needed to conform to the Standards and Guidelines for Rangeland Health. The assessments may also recommend sagebrush restoration treatments or other vegetative treatments designed to maintain or improve ecological health.

Cumulative Impacts Conclusion

No cumulative impacts of major concern are anticipated in the near future to resource values as a result of the proposed project in combination with any other past, current, or reasonably foreseeable future projects or activities. There should be no noticeable overall changes to the affected environment. Implementation of the proposed action or alternative would continue to achieve or make progress towards achieving and conform to Rangeland Health Standards. Local areas of heavy use of key forage species could result from cattle use or combined use by cattle and elk. If this is the case some soil erosion could occur and optimum habitat for sage grouse nesting and early brood rearing would not be maintained. This situation would continue to be monitored and actions taken to correct the problems. As the SNWA groundwater project gets underway, rangeland monitoring of the ecological sites is expected to intensify to determine if project development and aquifer pumping events have an effect on resource values in the area.

V. PROPOSED MITIGATING MEASURES

Appropriate mitigation has been included as part of the proposed action (mitigation measures for weeds are identified in the Noxious Weed Risk Assessment in Appendix 3). The terms and conditions (Appendix II) of the term grazing permit would mitigate anticipated impacts. No additional mitigating measures are proposed based on this environmental analysis.

VI. SUGGESTED MONITORING

Appropriate monitoring has been included in the proposed action. No additional monitoring has been suggested by the BLM interdisciplinary team, the grazing permittees, or the interested public at this time.

VII. CONSULTATION AND COORDINATION

Public Interest and Record of Contacts

There is a general public interest in the proper grazing management of public lands. Quarter Circle Five Ranch has a strong interest in this grazing permit renewal.

On February 12, 2008 the Quarter Circle Five Ranch Permit Renewal proposal was presented to a Tribal coordination meeting at the Ely BLM Field Office. No concerns were identified during this meeting. There were no questions or comments regarding the proposal from the Tribal participants. On March

26, 2008 the project was presented to the Ely BLM internal scoping team and at that time the sage grouse issue was identified.

A scoping letter was mailed to the grazing permittee regarding the permit renewal action on February 28, 2008, requesting comments by March 14, 2008. No written comments were received concerning this letter. Jeff Gardner of QCF indicated during a telephone conversation that he wants to be fully involved in the process. A project summary of this term permit renewal was posted on the BLM website on April 2, 2008. No comments have been received to date regarding the posting.

On September 23, 2008 a meeting with the grazing permittees of the White Rock Allotment was held at the Ely District BLM Office. At this meeting, Jeff Gardner indicated that he would like to continue grazing the allotment primarily during the winter period while keeping the option open to graze a short period in spring.

This preliminary EA will be posted for a fifteen day public review and comment period on the Ely BLM external website. A hard copy of the EA will also be mailed to those interested publics who have requested it, and who have expressed an interest in range management actions on the White Rock Allotment. Changes in the EA based upon public input will be made as appropriate.

Interested publics will again be notified by mail or e-mail when the final EA is completed and the Decision Record/Finding of No Significant Impact (DR/FONSI) is signed. These documents will also be mailed to interested publics that have requested a hard copy. The signed DR/FONSI initiates a 15 day protest period and a 30 day appeal period.

Before including addresses, phone numbers, e-mail addresses, or other personal identifying information in comments, you should be aware that the entire comment – including personal identifying information- may be made publicly available at any time. While you can ask us in your comment to withhold your Before including addresses, phone numbers, e-mail addresses or other identifying information in personal identifying information from public review, we cannot guarantee that we will be able to do so.

The Ely Field Office mails an annual Consultation, Cooperation, and Coordination (CCC) Letter to individuals and organizations that have expressed an interest in rangeland management related actions. Those receiving the annual CCC Letter have the opportunity to request from the Field Office more information regarding specific actions. Those requesting notification of range improvement actions are requested to respond if they want to receive a copy of the final EA and signed Decision Record/Finding of No Significant Impact. The following individuals and organizations, who were sent the annual CCC letter in January 2007 or January 2008, have requested additional information regarding rangeland related actions or programs within the White Rock Allotment:

Steven Carter
Kena and Pat Gloeckner
Holland & Hart LLP
Rob Mrowka
Nevada Cattlemen's Association
Russel Peacock
John McLain, Resource Concepts, Inc.

SNWA Environmental Resources Division
SNWA Deputy Counsel
SNWA Ranch Manager
Cindy MacDonald
Sustainable Grazing Coalition
Laurel Marshall
Steve Foree, Nevada Division of Wildlife
Nevada State Clearinghouse
Western Watersheds Project, Katie Fite

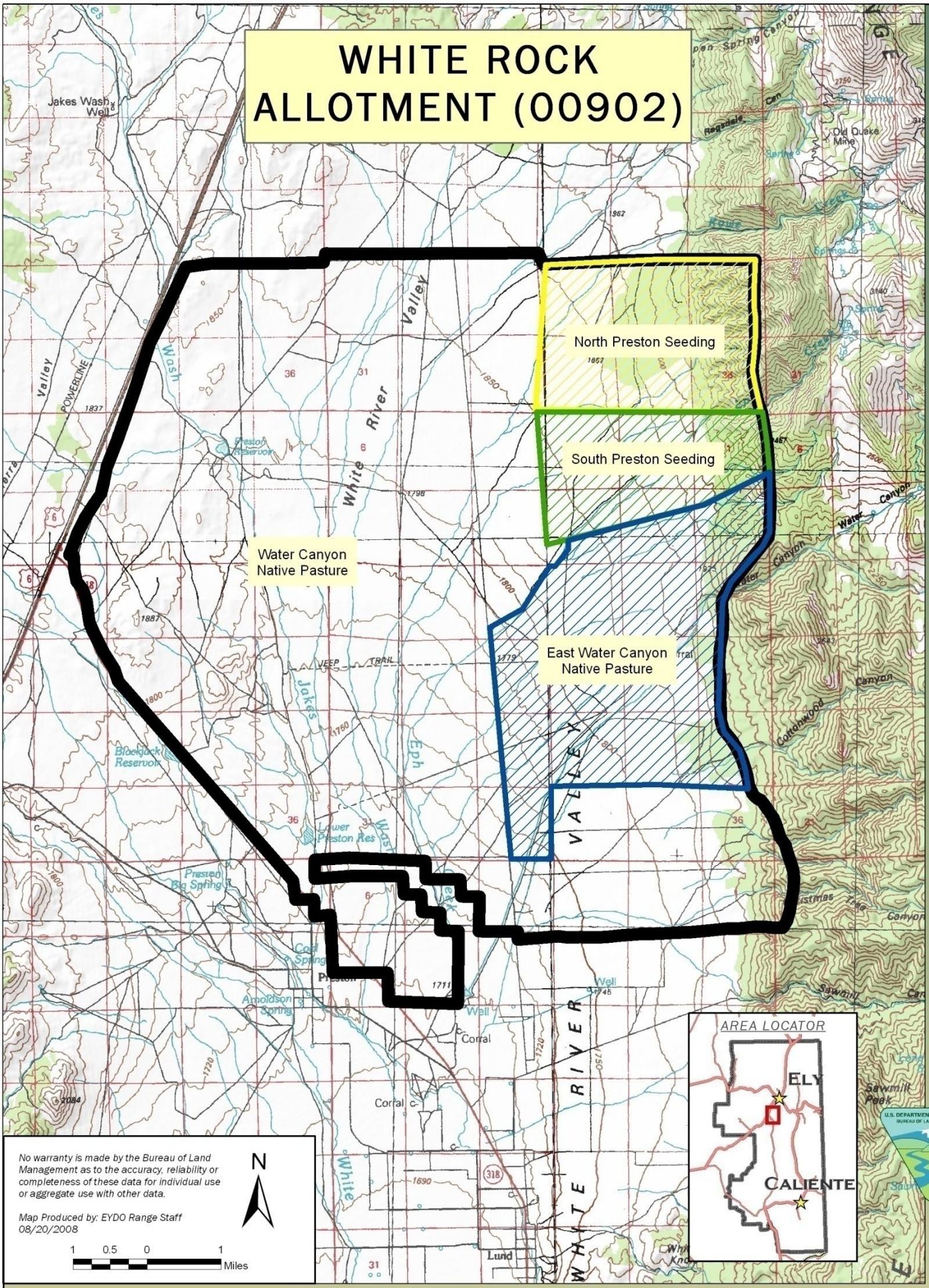
Record of Personal Consultation and Coordination

Jeff Gardner
Gary Sprouse
Norris Hendrix, NL Ranch
Russel Peacock

B. Internal District Review

Dave Jacobson	Wilderness
Kalem Lenard	Recreation, Visual Resources
Mark Lowrie	Rangeland Resources/ Environmental Coordination/ Wildlife
Bonnie Million	Noxious Weeds
Elvis Wall	Native American Religious Concerns
Gina Jones, Sheri Wysong	Environmental Coordination
Deborah Koziol, Paul Podborny	Wildlife/T&E Species/Riparian/Migratory Birds
Lorie Lesher	Cultural Resources
Melanie Peterson	Hazardous and Solid Wastes
Kari Harrison	Soil/Water/Air
Gary Medlyn	Watershed Assessment
Chris Mayer	Environmental Coordination/Range
Craig Hoover	Administering Range Specialist
Kyle Hansen	Environmental coordination

WHITE ROCK ALLOTMENT (00902)



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.

Map Produced by: EYDO Range Staff
08/20/2008

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BLM

Ely District Office

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

STANDARDS DETERMINATION DOCUMENT
Quarter Circle Five Ranch Term Permit Renewal
White Rock Allotment (0902)

Standards and Guidelines Assessment

Standards and Guidelines for Grazing Administration were developed by the Northeastern Great Basin Area Resource Advisory Council (RAC) and approved by the Secretary of the Interior on February 12, 1997. Standards and Guidelines reflect the stated goals of improving rangeland health while providing for the viability of the livestock industry, all wildlife species and wild horses and burros in the Northeastern Great Basin Area. 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 (SDD) evaluates and assesses livestock grazing management achievement of the Standards and conformance to the Guidelines for the White Rock Allotment (0902), in the Ely District BLM. This SDD evaluates rangeland health. 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. The White Rock Allotment encompasses approximately 80,513 public land acres and is the permitted grazing allotment for the Quarter Circle Five Ranch (Operator No. 2704551) term permit renewal. Those two pastures of the allotment permitted to QCF (Water Canyon Native and South Preston Seeding) together encompass approximately 20,000 acres. The White Rock Allotment has been classified by Land Use Planning Documents as a category "I" (improve) allotment.

The permit renewal project proposal for the Quarter Circle Five Ranch permit on the White Rock Allotment was presented to a BLM interdisciplinary ID team on March 26, 2008. At this meeting the ID team discussed the known resource issues and concerns on the allotment. An assessment of the rangeland health has been conducted during the permit renewal process. Standards for Rangeland Health have been reviewed and evaluated by the BLM ID team for the White Rock Allotment. The interdisciplinary team (consisting of Rangeland Management Specialists, Wildlife Biologist, Weeds Specialist, Soil/Water/Air Specialist, Archaeologist, Watershed Specialist, Recreation Specialist, and others) individually or collaboratively utilized several scientifically based documents and official publications to complete the assessment. These documents include the Western White Pine County Soil Survey (USDA-SCS), Rangeland Ecological Site Descriptions (USDA-SCS 2003), Interpreting Indicators of Rangeland Health (USDI-BLM et al. 2005), Sampling Vegetation Attributes (USDI-BLM et al. 1996), the Nevada Rangeland Monitoring Handbook (USDA-SCS et al. 1984), Utilization Studies and Residual Measurements, and the National Range and Pasture Handbook (USDA NRCS 2003). For a complete list of references, see Appendix IV. The interdisciplinary team also used rangeland monitoring data, electronic data files, maps, professional observations, and photographs to evaluate achievement of the Standards and conformance with the Guidelines. A complete list of references is included as an appendix to this SDD.

Rangeland monitoring is conducted at key areas and representative study sites in the term permit renewal area. The key areas and study sites have been selected based on accessibility, soil mapping units (SMU), representative rangeland ecological sites, livestock use patterns, and permittee input. The term

permit renewal area has been monitored for vegetation condition and rangeland health periodically since the 1960s. The primary evaluation period for this Standards Determination Document is considered to be from 2000 through 2007. "Current livestock grazing management practices" are considered to be those practices implemented during this period. A small amount of data prior to 2000 is also considered in this SDD. All scientifically based documents and rangeland monitoring data are available for public inspection at the Ely Field Office during business hours.

PART 1. STANDARD CONFORMANCE REVIEW

Standard # 1. Upland Sites

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

Soils indicators:

- ❖ Canopy and ground cover, including litter, live vegetation and rock, appropriate to the potential of the site.

Determination:

X Achieving the Standard
□ Not achieving the Standard, but making significant progress towards
□ Not achieving the Standard, not making significant progress towards

Guidelines Conformance:

X In conformance with the Guidelines (See Part 3. Guideline Conformance Review – p. 27)
□ Not in conformance with the Guidelines

Conclusion:

Standard achieved (marginally achieved). Vegetation cover studies, ecological condition studies, utilization studies, licensed use records, photographs, and professional observations indicate the majority of that portion of the White Rock Allotment permitted to QCF Ranch (one native pasture and one crested wheatgrass seeding) is achieving the Upland Sites Standard. The amount of canopy and ground cover, including litter, live vegetation, and rock, are appropriate to ecological site potential (see page 37). However the type or composition of live vegetative canopy is inappropriate to site potential at several areas including WR-01, WR-05, WR-06, and WR-07. These rangeland ecological sites have transitioned to a shrub dominant state and are lacking in native perennial grasses and forbs. Soil conditions are optimum when a healthy herbaceous understory is present to protect soils. The Ely Field Office Soils Specialist has commented that the lack of an herbaceous understory can alter water infiltration and permeability rates. Utilization levels of key forage plants have varied during the evaluation period. Utilization has generally been in conformance with the Guidelines for Rangeland Health, is within the range that scientific literature and experience indicates should allow for recovery, and has been in accordance with Nevada Rangeland Monitoring Handbook guidelines. Utilization has also generally been in conformance with the new Ely District Resource Management Plan (August,

2008) and the June 1995 Grazing Decision. Key forage utilization accomplished in both salt desert shrub range (028BY084NV and 028BY013NV) and black sagebrush range (028BY011NV) has been generally moderate or less during the assessment period. This promotes litter to stabilize upland sites. Biological crusts are present at four of five key areas monitored (see page 37). There is no indication of excess surface compaction or trampling of soils at four of five areas monitored. Professional observations indicate generally stable soils, not eroded, with no plant pedestalling, where percolation and infiltration could be appropriate to site potential. Key Areas in the term permit renewal area are on landform slopes less than 5%. Mild slopes are contributing to stable soil conditions.

Standard #2. Riparian and Wetland Sites

Riparian and wetland areas exhibit a properly functioning condition and achieve State water quality criteria

This Standard was not evaluated since there are no public land riparian systems present in that portion of the White Rock Allotment permitted to Quarter Circle Five Ranch

Standard #3. Habitat

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.

Habitat indicators:

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

Determination:

□ Achieving the Standard
□ Not achieving the Standard, but making significant progress towards
X Not achieving the Standard, not making significant progress towards

Guidelines Conformance:

□ In conformance with the Guidelines
X Not In conformance with the Guidelines (See Part 3. Guideline Conformance Review – p. 36)

Livestock As A Causal Factor:

X Livestock are a contributing factor to not achieving the Standard
□ Livestock are not a contributing factor to not achieving the Standard
X Failure to achieve the Standard is also related to other issues or conditions

Conclusion:

The Habitat Standard is not achieved on native range, and significant progress is not being made towards achievement. Vegetation cover studies, ecological condition studies, frequency trend studies, photographs, and professional observations indicate portions of the White Rock Allotment native range are not achieving the Habitat Standard, due to inappropriate plant composition at certain key areas. Plant composition is one of five indicators used to determine achievement of this Standard. The shrub composition at Key Areas WR-01, WR-05, WR-06, and WR-07, all in the Water Canyon Native Pasture, is too high (see pages 37-40, 47). These sites have transitioned to shrub dominance and lack a desired native perennial grass and forb component, indicating a potential transition to a woody shrub dominant state. Shrubs should compose from 35% to 65% of the plant communities in this term permit renewal area according to the rangeland ecological site descriptions for the area.

Professional observations gathered from several site visits to Wyoming sagebrush rangeland ecological sites in the Water Canyon Native Pasture also indicate a large portion of these sites to be shrub dominant with an absence of native perennial grasses and forbs in the understory.

Vegetation structure is inappropriate in the term permit renewal area to the extent that certain key areas and other areas are in a shrub dominant state with a native grass and forb component that is below ecological site potential. The shrub life form is over abundant and the native perennial grass life form or forb life form is lacking. However the variation in vegetation structure over the entire term permit renewal area is good, as indicated by topographic diversity and the variation in soil mapping units and rangeland ecological sites.

Range monitoring data (line intercept vegetation cover studies) and professional observation indicate vegetation cover and ground cover are marginally adequate to sustain healthy soils and appropriate infiltration and permeability rates (see Upland Sites Standard above). Vegetation height and age classes are diverse. A diversity of native shrubs, grasses, and forbs are present over the allotment as a whole as indicated by the Native Plant Species Table on page 50. However plant composition is inappropriate at key areas showing an absence of native herbaceous understory.

Vegetation productivity has been recorded at above favorable year levels for Key Area WR-01 (Silty 8-10" site) in 1998 and 2005. Productivity has been recorded at above normal year levels at Key Areas WR-02 and WR-06 (shallow calcareous loam 8-10" site) in 1998, 2005, and 2007. Productivity has been below unfavorable year levels at Key Area WR-05 (coarse silty 6-8" site) in 2007. Productivity has been below unfavorable year levels at Key Area WR-07 (silty 8-10" site) in 2007. About 98% of the vegetative production has been shrub growth with the exception of Key Area WR-02.

Invasive species are present in the term permit renewal area. The invasive annual grass cheatgrass is present in portions of the allotment and particularly became prominent in 2005 (cheatgrass production is summarized on page 49). Cheatgrass production varies from year to year. The invasive annuals halogeton, Russian thistle, and some mustards are present, primarily along roadways. Vegetation productivity has been normal or better at Key Areas WR-01 (2005 & 1998), at WR-02 (2005 & 1998), and at WR-06 (2007). Productivity has been below that expected for the ecological site in an unfavorable year at Key Areas WR-05 and WR-07 (2007). Vegetation nutritional value has not been monitored, however nutritious, palatable plant species are present to meet the physiological

requirements of livestock and wildlife, even during the winter period. No concerns have been presented by the grazing permittees, interested publics, or the division of wildlife (NDOW) related to animal condition.

The native plant communities have not crossed a threshold to the "cheatgrass/annual grass infested state" where a significant amount of cheatgrass occurs in a shrub dominated community. The plant communities are still considered somewhat resilient and resistant to invasive annual introduction. Vegetation treatments should be considered to maintain soils, vegetation resiliency, resistance, watershed health, and native species diversity of portions of the term permit renewal area. The understory herbaceous component needs to be maintained or improved to achieve desired plant community objectives, which would help prevent the spread of halogeton, cheatgrass, or other invasive species into these ecological sites. The South Preston Seeding should continue to be monitored to ensure grazing use complies with active permitted use and allowable use levels.

The presence of cheatgrass in native rangeland ecological sites has become a common condition through many allotments and watersheds in the Ely District. The fine fuels of cheatgrass increase the risk for a wildfire disturbance in sagebrush range that would result in elimination of native plants from rangeland ecological sites. Cheatgrass control measures (e.g. herbicide) may be appropriate for this allotment in the future.

Significant progress is not being made towards achievement of the Habitat Standard because movement towards achieving the Habitat Standard is not at an acceptable level of rate and magnitude and is not effective as practicable. Due to shrub dominance, the vegetative resources lack capability to maintain or improve in the term permit renewal area. Declining range trend has been recorded at Key Areas WR-01, WR-05, and WR-07.

The current holistic resource management grazing system has been implemented according to the past grazing decisions. The current grazing system has generally been in compliance with allowable use levels for key forage species in the term permit renewal area. Use of Indian ricegrass or winterfat has often been light or less. The grazing permittee has cooperated with BLM to defer grazing use, to rotate areas of grazing, and has taken partial voluntary non-use in consideration of drought years.

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

Grazing related questions as part of the determination process

1. Is it more likely than not that existing grazing management practices or levels of grazing use are significant factors in failing to achieve the Standards or conform with the Guidelines? Yes.

2. Is it more likely than not that existing grazing management needs to be modified to ensure that the Fundamentals of rangeland health are met, or making significant progress toward being met? An alternative has been presented in this EA which proposes a change in management practices.

Standard # 1. Soils.

No. The Upland Sites Standard for stable soils and hydrologic function is being achieved.

Standard # 2. Riparian and Wetland Sites

No. This Standard is not applicable to the term permit renewal area, since there are no public land riparian systems on this portion of the White Rock Allotment.

Standard # 3. Habitat

Yes. Livestock are a contributing factor to not meeting this Standard on both native range and the South Preston Seeding, because use levels have at times exceeded those recommended for healthy sage grouse nesting and early brooding habitat and for a healthy watershed with an appropriate composition of native grasses and forbs. Heavy grazing use has occurred during the critical spring growth period some years. KFPM utilization studies also show use by cattle or combined use by elk and cattle within the term permit renewal area have often been within allowable use levels.

The failure to achieve plant composition goals (ecological site potential) is also attributable to drought, historic heavy livestock grazing from 1870-1990, lack of natural wildfire, climate change, road construction, or other factors.

A grazing agreement was reached in 1994 that called for a 30% reduction in grazing use for a five year period. This agreement was carried forward to the grazing decision of 1995. Terms and conditions of grazing use were implemented according to the decision. The permittee has been willing to take substantial non-use during drought years.

PART 3. GUIDELINE CONFORMANCE REVIEW

GUIDELINES:

1.1 Management practices will maintain or promote upland vegetation and other organisms and provide for infiltration and permeability rates, soil moisture storage, and soil stability appropriate to the ecological site within management units.

1.2 When grazing practices alone are not likely to restore areas of low infiltration or permeability, land management treatments should be designed and implemented where appropriate.

1.3 Management practices are adequate when significant progress is being made toward this Standard.

Current livestock grazing management practices conform with Guidelines 1.1 and 1.3. Guideline 1.2 is not applicable to the assessment area at this time.

GUIDELINES:

3.1 Management practices will promote the conservation, restoration, and maintenance of habitat for threatened and endangered species, and other special status species as may be appropriate.

3.2 Intensity, frequency, season of use and distribution of grazing use should provide for growth and

reproduction of those plant species needed to reach long-term land use plan objectives. Measurements of ecological condition and trend/utilization will be in accordance with techniques identified in the Nevada Rangeland Monitoring Handbook.

3.3 Grazing management practices should be planned and implemented to allow for integrated use by domestic livestock, wildlife, and wild horses consistent with land use plan objectives.

3.4 Where grazing practices alone are not likely to achieve habitat objectives, land treatments may be designed and implemented as appropriate.

3.5 When native plant species adapted to the site are available in sufficient quantities, and it is economically and biologically feasible to establish or increase them to meet management objectives, they will be emphasized over non-native species.

3.6 Management practices are adequate when significant progress is being made toward this Standard.

Current livestock grazing management practices conform with Guideline 3.3. Livestock management practices do not conform to Guidelines 3.1, 3.2, and 3.6. Guidelines 3.4 and 3.5 are not applicable to the assessment area at this time.

VEGETATION MANAGEMENT GUIDELINES

Current livestock management practices are not in conformance with Salt Desert Shrublands Guideline # 1 which states:

"Grazing should generally be limited to very early season grazing or dormant season rather than year round. If very early season grazing is permitted or prescribed to control cheatgrass early in spring, grazing should be terminated early enough to allow perennial plant species to set seed."

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

Proposed Action

1. Maintain the overall current season of use for cattle grazing for the permit from 03/01 to 02/28.
2. Quarter Circle Five Ranch would continue to submit an annual biological plan in accordance with holistic resource management principles which would require authorized officer approval.
3. Maintain the current stocking level of 1,368 cattle AUMs for the Water Canyon Native Pasture and 756 AUMs for the South Preston Seeding (2,128 AUMs total).
4. An allowable use level will be established as 40% of the current year's growth by weight for spring use (3/1 – 5/31) of the key native species Indian ricegrass in the Water Canyon Native Pasture of the White Rock Allotment. This is to help achieve sage grouse habitat objectives in the pasture. An allowable use level will be established as 50% of the current year's growth by weight for yearlong use of Indian ricegrass in the Water Canyon Native Pasture. Utilization will be measured at established key grazing areas or other sites representative of the dominant vegetation in the allotment.
5. An allowable use level will be established as 50% of the current year's growth by weight for

winterfat for year-long use in the Water Canyon Native Pasture. Utilization will be measured at established key grazing areas or other sites representative of the dominant vegetation in the allotment.
6. An allowable use level will be established as 50% of the current year's growth by weight for spring use of crested wheatgrass in the South Preston Seeding. An allowable use level will be established as 60% for use through 02/28. Utilization will be measured at established key grazing areas or other sites representative of the grazing patterns in the seeding.
7. Grazing use on the White Rock Allotment shall be in accordance with the final multiple use decision dated June, 1995.
8. The permittee(s) will be responsible for continued maintenance of the existing fences and water developments as assigned in the June 1994 agreement.
9. Coordinate with the grazing permittee on an annual basis to implement grazing management practices that (a) maintain sufficient residual vegetation and litter, (b) promote attainment or maintenance of proper functioning condition, and (c) meet desired plant physiological and reproductive requirements.

Change in Management Practices Alternative

According to this alternative, the season of use would remain year-long, however grazing would occur primarily during the winter period, from October through February. The range would be rested during March. Some spring grazing may occur during April. Grazing use would still occur according to the principles of Holistic Resource Management. Each year grazing use would be contingent upon submittal of an annual biological plan requiring approval by the authorized officer. No changes would be made to stocking level (AUMs), area of use, or season of use. The grazing schedule would remain as presented on page 7.

Other Resource Specialists

Mark Lowrie Soil/water/air/floodplains/riparian/wetlands	Date
Bonnie Waggoner Noxious and invasive non-native species	
Lorie Lesher Cultural resources	
Deborah Koziol Wildlife/migratory birds/special status animals/plants	

Dave Jacobson
Wilderness Values/ACEC/Special designations

Kalem Lenard
VRM/recreation

Melanie Peterson
Hazardous and solid wastes

Elvis Wall
Native American religious concerns

Gina Jones
Ecology/environmental coordination

Gary Medlyn
Watershed assessment

Craig Hoover
Administering Range Specialist

Prepared by:

Mark Lowrie, Rangeland Management Specialist _____
Date

Reviewed by:

Kyle Hansen, Supervisory Natural Resource Specialist __
Date

Reviewed by:

Chris Mayer, Supervisory Rangeland Management Specialist _____
Date

I concur:

/s/Jane Peterson _____
Jane Peterson
Field Manager
Schell Field Office

Date

Standards Determination Document
Appendix I
Monitoring Data for the White Rock Allotment

Findings*: **Monitoring data results describing current resource conditions for Key Areas and study sites in the term permit renewal area of the White Rock Allotment as they relate to the above Upland Sites Standard and soils indicators are as follows:***

Major Land Resource Area and Soils

The White Rock Allotment occurs within Major Land Resource Area (MLRA) 028B, the Central Nevada Basin and Range Area. The allotment occurs primarily on an area dominated by soils on fan piedmonts (General Soil Mapping Unit No. 11 – Palinor-Shabliss-Blimo Association). The allotment also occurs in an area dominated by soils on hills and mountains (General Soil Mapping Unit No. 24 – Cavehill-Haunchee-Hyzen Association and Unit No. 23 – Birchcreek-Segura-Pioche Association). Soil types vary through the allotment. Over 28 Soil Mapping Units (SMUs) have been identified in that portion of the White Rock Allotment permitted to Quarter Circle Five Ranch. The five major SMUs in this portion of the allotment are SMUs 372, 282, 1280, 1151, and 232. Together these mapping units represent about 35% of the land area of the allotment. Key Areas WR-01 and WR-07 in the Water Canyon Native Pasture (Jakes Wash) occur in SMU 232 (Linoyer-Heist-Tulase Association). Key Area WR-02 in the Water Canyon Native Pasture occurs in SMU 282 (Palinor Very Gravelly Loam 2 to 15% slopes). Key Area WR-05 in the Water Canyon Native Pasture (Jakes Wash) occurs in SMU 356 (Heist-Wintermute Association). Key Area WR-06 in the native pasture occurs in SMU 372 (Automal gravelly silt loam 2 to 4% slopes).

Line Intercept Vegetation Cover Data

Vegetation cover data was gathered in the term permit renewal area of the White Rock Allotment in July 2007, June and August 2005, August 2002. This study is called the Line Intercept Vegetation Cover Study. This cover study measures the foliar (canopy) cover of shrubs and forbs and the basal crown cover of native grasses. Vegetation cover is a linear measure, expressed in feet, along a 100 foot tapeline. A linear measurement of plant litter is also made. Observations are recorded on the cover study form regarding the presence or absence of biological surfaces, whether or not the soils are compacted or trampled by animals, and whether cheatgrass is present. Photographs were taken for most if not all of the cover studies. The results are presented in Table 1 as follows:

Table 1. Line Intercept Vegetation Cover Data - White Rock Allotment

Key Area/ Date	Location	Ecological Site	Vegetation Cover/Litter	Biological Surfaces	Soil Compaction/ Infiltration
WR-01/ 8/2/2005	Water Canyon Native Pasture	028BY013NV*	21.96 feet/ 0.93 feet	Black biotic Crust present	Baked, fissured silt clay
WR-01/ 8/1/2002	Water Canyon Native Pasture	028BY013NV*	19.59 feet/ Not measured	No observations	No observations
WR-02/ 6/28/05	Water Canyon Native Pasture	028BY011NV*	19.59 feet/ 5.33 feet	Little to none	No excess trampling or compaction
WR-02/ 8/1/02	Water Canyon Native Pasture	028BY011NV*	18.24 feet/ Not measured	No observations	No observations
WR-05/ 7/12/07	Water Canyon Native Pasture	028BY084NV*	5.91 feet/ 3.43 feet	Present & common in shrub interspaces	No observations
WR-06/ 7/12/07	Water Canyon Native Pasture	028BY011NV*	14.53 feet/ 7.65 feet	Minor amounts Present near shrubs	No excess trampling or compaction of soils
WR-07/ 7/12/07	Water Canyon Native Pasture	028BY013NV*	7.31 feet/ 8.38 feet	Black & white crust in interspaces	Silty soil moderately worked by cattle

* Key Areas WR-01 and WR-07 are located within a silty 8-10" rangeland ecological site (028BY013NV – winterfat/Indian ricegrass).
Key Area WR-02 and WR-06 are located within a shallow calcareous loam 8-10" rangeland ecological site (028BY011NV – black sagebrush/Indian ricegrass-needleandthread).
Key Area WR-05 is located within a coarse silty 6-8" rangeland ecological site (028BY084NV – winterfat/Indian ricegrass).

Canopy and Ground Cover Compared to Rangeland Ecological Site Potential

The canopy and ground cover at the upland Key Grazing Areas in the permit renewal area of the White Rock Allotment were found to be similar to the potential of the ecological sites. Key Areas WR-01 and WR-07 are located within a silty 8-10" rangeland ecological site (028BY013NV). Winterfat and Indian ricegrass dominate the plant community. Approximate ground cover (basal and crown) is 10 to 20 percent. This compares to 22% and 20% at WR-01 in 2005 and 2002 and 7% at WR-07 in 2007 (2007 was a drought year). Key Areas WR-02 and WR-06 are located within a shallow calcareous loam 8-10" rangeland ecological site (028BY011NV). Black sagebrush, Indian ricegrass, and needleandthread dominate the plant community. Approximate ground cover (basal and crown) is 15 to 20 percent. This compares to 20% and 18% at WR-02 in 2005 and 2002 and 15% at WR-06 in 2007. Key Area WR-05 is located within a coarse silty 6-8" rangeland ecological site (028BY084NV). Winterfat and Indian ricegrass dominate the plant community. Approximate ground cover (basal and crown) is 10 to 20%. This compares to 6% at WR-05 in 2007 (drought year).

The relative percent composition of native plant species according to the line intercept vegetation cover studies for the White Rock Allotment are as follows:

<u>Key Area WR-01 – 8/2/2005</u>

Total cover of all vegetation = 21.96 feet (of 100 feet).

Vegetation composition by percent along the 100 foot transect is as follows:

Species	Percent Composition
Winterfat	61.6%
Halogeton	35.3%
Cheatgrass	01.8%
Mustard	01.2%
Burweed	00.1%

The following range notes were made on the line intercept cover form:

Cover was read 25 yards east of the frequency trend transect. Halogeton has come in strong at this key area. Many winterfat plants are dead that average 2 to 3" dead stalks. What has killed the winterfat? A few budsage plants are present in the area. Mustard & cheatgrass are present in moderate or less amounts. Shadscale is present, especially on west side of winterfat wash. Black biotic crust is present on baked, fissured clay silt. Area has been worked hard by cows in the past.

Key Area WR-01 – 8/1/2002

Total cover of all vegetation = 19.59 feet (of 100 feet).
Vegetation composition by percent along the 100 foot transect is as follows:

Species	Percent Composition
Winterfat	99.4%
Squirreltail grass	00.5%
Indian ricegrass	00.05%

The following range notes were made on the line intercept cover form:

Winterfat plants are dry & brittle but nor extremely stressed. Moderate leader growth apparent. Perennial grasses are infrequent not much 2002 growth. Not much halogeton production due to drought condition.

Key Area WR-02 – 6/28/05

Total cover of all vegetation = 19.59 feet (of 100 feet).
Vegetation composition by percent along the 100 foot transect is as follows:

Species	Percent Composition
Black sagebrush	69.6%
Cheatgrass	20.4%
Needlegrass	03.8%
Small mustard	02.5%
Indian ricegrass	01.6%
Perennial weed	00.8%
Perennial forb	00.6%
Rabbitbrush	00.5%
Miner's candle	00.2%
Buckwheat	00.2%

The following range notes were made on the line intercept cover form:

Bottlebrush squirreltail, winterfat, and milk vetch were present in the area although not encountered in the transect. Cheatgrass is prolific in the area, estimate about 25% of the current year's plant community production. Stable gravelly soil,

fine textured, some black biotic crust in place…not much plant pedestalling…light to moderate cow tracks from this spring in the area. No excess trampling or compaction. When this burns goodbye native community hello cheatgrass.

Key Area WR-02 – 8/1/2002

Total cover of all vegetation = 18.24 feet (of 100 feet).
Vegetation composition by percent along the 100 foot transect is as follows:

Species	Percent Composition
Black sagebrush	91.9%
Indian ricegrass	06.9%
Needlegrass	00.7%
Squirreltail grass	00.5%

The following range notes were made on the line intercept cover form:

Black sagebrush and perennial grasses are extremely brittle and stressed. No 2002 growth. Orhy plants show dead centers

Key Area WR-05 - 7/12/2007

Total cover of all vegetation = 5.91 feet (of 100 feet).
Vegetation composition by percent along the 100 foot transect is as follows:

Species	Percent Composition
Winterfat	99.2%
Indian ricegrass	00.8%

The following range notes were made on the line intercept cover form:

Biotic crust is present & common in shrub interspaces. Shadscale is very droughty & producing few leaves. Litter beneath the shrubs was measured. Cover is inappropriate to ecological site potential….no grasses or forbs.

Key Area WR-06 – 7/12/2007

Total cover of all vegetation = 14.53 feet (of 100 feet).
Vegetation composition by percent along the 100 foot transect is as follows:

Species	Percent Composition
Black sagebrush	95.2%
Small rabbitbrush	03.4%
Phlox	01.4%

The following range notes were made on the line intercept cover form:

Perennial grasses are relatively infrequent in the area. No excess trampling or compaction of the soils. Minor amounts of biotic crust are present, primarily beneath shrubs. Native grass is infrequent. Shrubs are in poor vigor & droughty. Species present but not encountered in the transect include globemallow, prickly pear cactus, mormon tea, spiny hopsage.

Key Area WR-07- 7/12/2007

Total cover of all vegetation = 7.31 feet (of 100 feet).

Vegetation composition by percent along the 100 foot transect is as follows:

Species	Percent Composition
Winterfat	41.2%
Shadscale	58.4%
Bluegrass	00.4%

The following range notes were made on the line intercept cover form:

Halogeton growth from last year not counted. Very little live canopy cover of shadscale is present (drought). Very few biotic crusts are present in the shrub interspaces or beneath shrubs. Cured halogeton to 10" is common. Silty soil has been moderately worked by cattle. Some rabbit sign – not much. Slight pedestalling of plants.

Professional Observations – 8/2/2005

Overall in the term permit renewal area, soils were observed to be stable. Soil surfaces were stabilized by litter and organic matter. Biotic crusts such as lichens and mosses were generally present. Soils were not compacted or trampled, indicating appropriate infiltration and percolation of water. Generally, native plants were not pedestalled, indicating minimal wind or water erosion of topsoil. The invasive non-native annual grass cheatgrass was present in varying densities. The frequency or size of rocks was not recorded.

Forage Utilization – White Rock Allotment – Water Canyon Native Pasture

On July 3, 2008 a key forage plant method utilization transect (KFPM) was completed at Key Area WR-02 in native black sagebrush range for herbivory use to date. A photo was taken, the use cage moved, and the witness post reestablished. Use of Indian ricegrass was 1% and use of winterfat was 0%. Professional observations noted on the utilization form included the following:

Winterfat inside the use cage was of good vigor to 10" tall. Ricegrass in the cage also of good vigor to 14" tall. Black biotic crust was common in the shrub interspaces. No use to very slight thus far in grazing year. This area has been rested from cattle grazing.

On May 31, 2006 five key forage plant method (KFPM) utilization transects were conducted in the Water Canyon Native Pasture for use on the key forage species winterfat and Indian ricegrass to date. Use of winterfat ranged from 32% to 50% and averaged 41% (moderate) for the three key areas where it occurred. Use of Indian ricegrass ranged from 0% to 39% and averaged 13% for the three key areas where it occurred. Use was by cattle. Professional observations noted on the utilization forms included the following:

At Key Area WR-01 in Jakes Wash, winterfat in the use cage was of good vigor to 8" tall. Indian ricegrass in the cage was of fair vigor to 10" tall. The cage was moved & photos taken. At Key Area WR-07 west of Conoco Well in Jakes Wash winterfat in the use cage was of good vigor with current annual growth to 7" tall. At Key Area WR-05 in north jakes Wash near Preston Reservoir winterfat in the cage was of good vigor to 10" tall. Native perennial grass was very infrequent in the area. The use cage was moved & photos taken. At Key Area WR-06 Indian ricegrass in the use cage was of excellent vigor to 12" tall. Needlegrass in the use cage was also of good vigor to 11" tall. Cheatgrass & mustard are common in the area. Very little seed production on Orhy.

On August 2, 2005 a utilization transect was read for the key species winterfat and Indian ricegrass at Key Area WR-01. Use of winterfat was 9% and use of ricegrass was 4% to date. Professional

observations noted on the utilization forms included the following:
Winterfat inside the use cage was of good cured vigor, producing lots of seed, to 14" seedstalks. Cattle did not use this area much if any this spring.

On June 28, 2005 a utilization transect was read for the key species winterfat, Indian ricegrass, and needleandthread at Key Area WR-02 for herbivory use to date, after the growing season. Use of winterfat was 35%, use of ricegrass was 36%, and use of needlegrass was 12%. Professional observations noted on the utilization forms included the following:

Indian ricegrass inside the use cage was of good vigor growth averaging 9" tall. Winterfat was also of good vigor with growth averaging 10" tall.

On March 15, 16, and 22, 2005 extensive key forage plant method (KFPM) utilization transects were conducted in the Water Canyon Native Pasture for use on the key forage species winterfat and Indian ricegrass during the 2004 grazing year. Some 35 use transects were completed during the three day period.

On March 15, 20 KFPM utilization transects were completed in the pasture. Use of winterfat ranged from 52% to 88% and averaged 65% (heavy) for the eight areas where it occurred. Use of Indian ricegrass ranged from 24% to 84% and averaged 53% (moderate) for the seven areas where it occurred. In general Indian ricegrass was noted as very infrequent throughout the pasture and not enough of it was present to obtain a valid utilization sample at 13 of the 20 transects.

On March 16, 7 KFPM utilization transects were completed in the pasture. Use of winterfat ranged from 68% to 74% and averaged 77% (heavy) for the three areas where it occurred. Use of Indian ricegrass was 60% at the one area where it occurred. Indian ricegrass was not present at three areas and only one plant was recorded at three other areas.

On March 22, 9 KFPM utilization transects were completed in the pasture. Use of winterfat ranged from 44% to 64% and averaged 54% (moderate) for the three areas where it occurred. Not enough winterfat occurred at two areas and was not a key species at four other areas. Use of Indian ricegrass ranged from 18% to 76% and averaged 56% for the four areas where it occurred. Not enough Indian ricegrass occurred at five areas to obtain a meaningful sample.

Forage Utilization – White Rock Allotment – South Preston Seeding (North Group Seeding)

On July 3, 2008 five key forage plant method (KFPM) transects were conducted in the South Preston Seeding for use on crested wheatgrass for the spring of 2008. Photographs were taken and the key area cage was moved. Use of crested wheatgrass ranged from 11% to 38% and averaged 26% for the five readings. Professional observations noted on the utilization forms included the following:

Crested wheat inside the use cage of fair vigor with seedstalks to 24" tall. Leaves not that thick or dense this year. 100% cow use this location. Sandberg's bluegrass, erigeron, phlox and needlegrass are native species also growing here with the crested wheatgrass. No cheatgrass, Russian thistle, or halogeton present. Poverty weed (Iva axillaris) grows in small quantities along the dry ephemeral creekbed. East of the key area use cage (transect no. 2) black sagebrush, needlegrass, milk vetch, and bluegrass are growing with agcr. Black sagebrush and needlegrass are minor components. 95% cow use, 5% elk use estimated. At 0.7 miles east of the use cage amongst sparse juniper, miner's candle was also present in the seeding. 90% cow use, 10% elk use estimated. A little rabbit use also.

Also on July 3, 2008 two KFPM transects were conducted in native sagebrush range to the east of the South Preston Seeding. There was a mix of black sagebrush and Wyoming sagebrush present and scattered juniper trees. Use of Indian ricegrass was 26% at one transect. Use of bluebunch wheatgrass was 33% and use of needlegrass was 10% at a second transect. An excellent cliffrose shrub component was present in the area. Young serviceberry shrubs were noted as common in the area. Good native plant species diversity was also noted in the area, with no invasive plant species present.

On April 17, 2007 six key forage plant method (KFPM) transects were conducted in the South Preston Seeding for use on crested wheatgrass for the 2006 grazing year. Photographs were taken and the key area utilization cage was moved. Use of crested wheatgrass ranged from 58% to 86% and averaged 76% (heavy) for the six transects. Use was primarily by cattle. Professional observations noted on the utilization forms included the following:

Several young agcr plants were growing near transect No. 1. The seeding has the look of uniform severe use. No standing stubble height of cured forage. Lots of litter on the ground. At Key Area SPS-01 green leaves beneath the cured forage on plants in the use cage were growing to 7" – good vigor. Cured seedstalks to 18" tall. Four doe and one buck antelope in the seeding today.

On March 16, 2005 six key forage plant method (KFPM) transects were conducted in the South Preston Seeding for use on crested wheatgrass for the 2004 grazing year. Photographs were taken. Use of crested wheatgrass ranged from 74% to 86% and averaged 79% (heavy) for the six transects. Use was primarily by cattle. Professional observations noted on the utilization forms included the following:

At transect No. 1, some seedstalks were left, but no cured stubble. Heavy cow droppings in the area. Heavy grazing indicated for the 2004 grazing year. There is an area of about 20 acres near the corral used severely. In the southwest portion of the seeding, the range has the look of heavy & severe use for last year. Greening up nice now. At 0.5 miles east of the North Group Well a few seedstalks were left but little stubble height. At the utilization cage 0.5 to 0.6 miles north of the seeding, crested wheatgrass inside the cage with numerous seedstalks & cured forage… currently twice the green up inside the cage on the rested plant as outside in the grazed seeding.

Frequency Trend Studies

Frequency trend studies have been established on two native key grazing areas in the Water Canyon Native Pasture of the White Rock Allotment. The study at Key Area WR-01 was established and read on October 6, 1988 and again read on August 19, 1992 and August 2, 2005 (overall 17 year difference). The study at Key Area WR-02 was established and read on August 19, 1992 and again read on July 3, 2008 (16 year difference).

Frequency trend studies involve measuring the frequency of occurrence of plant species that occur in a rectangular sampling area. A sampling frame divided into 3", 10", and 20" square plots is placed at 200 sampling locations within the overall rectangular area. The presence of plant species is recorded as a dot tally on a standardized form.

Table 8. Frequency Trend Data - White Rock Allotment

Key Area	Years Read	Significant Changes	Indicated Trend
WR-01	88/92/2005	Less Indian ricegrass	Declining
		Less bottlebrush squirreltail	
		Less winterfat	
		More halogeton	
		More annual weeds	

Key Area	Years Read	Significant Changes	Indicated Trend
WR-02	92/2008	More Indian ricegrass More needleandthread Less black sagebrush More small rabbitbrush	Upward

Observed Apparent Trend Studies

An observed apparent trend study was completed at Key Area WR-01 on March 15, 2005. Rangeland ecological site characteristics were scored for plant vigor, seedling establishment, surface plant litter, pedestalling of plants, and presence and condition of gullies. The key area rated 10 points resulting in a downward trend. General comments were "area is in a definite downward trend".

Mule Deer Habitat Studies

Two mule deer winter habitat studies were conducted in native range of the White Rock Allotment in the vicinity of the term permit renewal area in July, 2001. Both Line Intercept Vegetation Cover Studies and Density Board Form Studies were conducted at each of the two sites. Photographs were taken. The results are presented in Table 2 as follows:

Table 2. Mule Deer Winter Habitat Studies, White Rock Allotment

Pasture	***Study Area Name/Location***	***Ecological Site***	***Habitat Rating Score/ Condition***	***Notes***
East Water Canyon Native	DW-WR-222-06/ T. 13N., R. 62E., Sec. 23 SE1/4 NW1/4	Wyoming sage site	72.03/Good	Soil surface 30-40% gravel with good cryptogamic crust.
South Four Pipe Native	DW-WR-222-03/ T. 12N., R. 64E., Sec. 18 NW1/4 SW1/4	Mountain brush site	60.27/Fair	Bitterbrush, Utah serviceberry, and wild currant shrubs all present

Licensed Use – Quarter Circle Five Ranch Permit

Current active permitted use on the White Rock Allotment for Quarter Circle Five Ranch (QCF) on the Water Canyon Native Pasture is 1,368 AUMs. License records indicate the following information for this pasture from 2005 to 2008:

Pasture	Cattle Number	Season	AUMs
Water Canyon Native	550	4/15 – 5/31/05	850
	200	1/1/06 – 2/28/06	388
Water Canyon Native	200	3/1 – 5/14/06	493
	200	3/26 – 5/31/06	440

Voluntary non-use taken in fall 2006

Water Canyon Native	130	4/1 – 5/31/07	261
	200	11/1 -12/31/07	401
	200	1/1/08 – 1/31/08	204
Water Canyon Native	100	4/18/08 – 4/30/08	43

The above information indicates QCF licensed a total of 1238 AUMs in 2005, 933 AUMs in 2006, 866 AUMs in 2007, and 43 AUMs during the spring of 2008. Use averaged 1012 AUMs in the pasture for the three year period 2005 through 2007. This is about 74% of active permitted use. Prior to 2006, QCF Ranch also had permitted AUMs in the Steptoe Valley portion of the White Rock Allotment (prior to the transfer to Blue Diamond Oil Corporation), and licensed use records generally indicate licensed use by the allotment as a whole, not by pasture. The following data is for licensing by QCF on the entire White Rock Allotment, when active permitted use was 3,456 AUMs.

Allotment	Year	AUMs
White Rock	2005	2959
	2004	4161
	2003	4663
	2002	2999
	2001	3540
	2000	4796

Licensed Use – White Rock Allotment- Quarter Circle Five – South Preston Seeding (North Group Seeding).

Current active permitted use on the South Preston Seeding for QCF is 756 AUMs. License records indicate the following information for this seeding pasture from 2005 to 2008:

Pasture	Cattle Number	Season	AUMs
South Preston Seeding	500	4/1 – 4/15/05	247
South Preston Seeding	200	5/15 - 5/31/06	112
	200	10/20 – 10/31/06	79
	330	11/1 – 12/24/06	586
Voluntary non-use taken in spring 2007			
South Preston Seeding	100	10/10 – 10/19/07	33
	150	10/20 – 12/15/07	281
South Preston Seeding	100	5/1 – 5/31/08	102

The above information indicates QCF licensed a total of 247 AUMs in 2005, 777 AUMs in 2006, 314

AUMs in 2007, and 102 AUMs during the spring of 2008. Use averaged 446 AUMs in the pasture for the three year period 2005 through 2007. This is about 59% of active permitted use.

The Habitat Standard is not being achieved on the term permit renewal area of the White Rock Allotment, however current livestock grazing is in conformance with the Guidelines. Current livestock grazing practices are not a causal factor in failing to achieve the Habitat Standard (see the Standards Determination Document Appendix I).

Findings*: Monitoring data results describing current resource conditions for Key Areas and study sites in the term permit renewal area of the White Rock Allotment as they relate to the above Habitat Standard and habitat indicators are as follows:*

Ecological Condition

Ecological condition data for the term permit renewal area of the White Rock Allotment was gathered and reviewed for key areas on June 28, 2005, August 2, 2005, and July 12, 2007. The data is summarized below:

White Rock Allotment– Ecological Condition Summary

Study Site/ Date	Ecological Site	Location/ Pasture	Dominant Vegetation	Percent Native Shrubs	Percent Native Grass	Percent Native Forbs	Trend	Similarity* Index	Production** Lbs./acre
WR-01 8/2/2005	028BY013NV	N: 4318008 E: 666950 Water Canyon	Winterfat Indian ricegrass	98.8%	01.2%	0.0%	Declining	18%	801
WR-01 6/24/1998	028BY013NV	N: 4318008 E: 666950 Water Canyon	Winterfat Indian ricegrass	98.1%	01.9%	0.0%	Not apparent	Mid to Late Seral	1439
WR-02 6/28/2005	028BY011NV	N: 4313668 E: 671093 Water Canyon	Black sagebrush Indian ricegrass Needleandthread	71.2%	27.6%	1.2%	Not apparent	67%	510
WR-02 6/24/1998	028BY011NV	N: 4313668 E: 671093 Water Canyon	Black sagebrush Indian ricegrass Needleandthread	74.3%	24.0%	1.7%	Improving	Late Seral	470
WR-05 7/12/2007	028BY084NV	N: 4319895 E: 666748 Water Canyon	Winterfat Indian ricegrass	100%	0.0%	0.0%	Declining	57%	263
WR-06 7/12/2007	028BY011NV	N: 4319773 E: 668343 Water canyon	Black sagebrush Indian ricegrass Needleandthread	98.9%	0.4%	0.8%	Not apparent	25%	529
WR-07 7/12/2007	028BY013NV	N: 4315836 E: 667762 Water canyon	Winterfat Indian ricegrass	100%	0.0%	0.0%	Declining	63%	113

* The similarity index is a numerical value given to the resemblance between current vegetative composition & production and the ecological site potential composition & production.

** Production in lbs. per acre is a measure of the production of all native species recorded at the Key Area within the ecological site. Normal year production for the 028BY013NV (silty 8-10") is 500 lbs. per acre. Favorable year production is 700 lbs. per acre. Unfavorable year production is 350 lbs. per acre. Normal year production for the 028BY011NV (shallow calcareous loam 8-10") is 450 lbs. per acre. Favorable year production is 600 lbs. per acre. Unfavorable year production is 250 lbs. per acre. Normal year production for the 028BY084NV (coarse silty 6-8") is 700 lbs. per acre. Favorable year production is 900 lbs. per acre. Unfavorable year production is 400 lbs. per acre.

At WR-01 on 8/2/2005 cheatgrass produced 13 lbs. per acre. Halogeton produced 618 lbs. per acre. Production for the site including cheatgrass and halogeton was 1440 lbs. per acre.
At WR-01 on 6/24/1998 cheatgrass was not present. Halogeton produced 1029 lbs. per acre. Production for the site including halogeton was 2468 lbs. per acre.
At WR-01 in 1992 and 1988 cheatgrass and halogeton are not present.

At WR-02 on 6/28/2005 cheatgrass produced 330 lbs. per acre. Production for the site including cheatgrass and mustard was 853 lbs. per acre.
At WR-02 on 6/24/1998 cheatgrass produced 24 lbs. per acre. Production for the site including cheatgrass was 494 lbs. per acre.
At WR-05 on 7/12/2007 there was no cheatgrass or halogeton present.
At WR-06 on 7/12/2007 there was no cheatgrass or halogeton present.
At WR-07 on 7/12/2007 there was no cheatgrass or halogeton present.

An ecological status write up sheet (NV 4400-13) and total annual yield & composition record were completed for Key Area WR-01 on 8/19/1992. Annual production for the site was 156 lbs. per acre. Winterfat produced 147 lbs., or 94% of production. Indian ricegrass 6 lbs., 4%; Bottlebrush squirreltail 3 lbs., 2%. 1992 was a drought year. Professional observations on the forms indicated lots of halogeton in the winterfat shrub spaces, no winterfat or ricegrass seedlings observed, currently in a drought year.

An ecological status write up sheet (NV 4400-13) and total annual yield & composition record were completed for Key Area WR-01 on 10/6/1988. Annual production for the site was 489 lbs. per acre. Winterfat produced 379 lbs., or 77% of production. Indian ricegrass 10 lbs., 3%; Bottlebrush squirreltail 100 lbs., 20%. Professional observations on the forms indicated that ricegrass and bottlebrush squirreltail may have been set back from early spring use. A utilization factor was not used on the yield record.

An ecological status write up sheet (NV 4400-13) and total annual yield & composition record were completed for Key Area WR-02 on 8/21/1992. Annual production for the site was 235 lbs. per acre. Black sagebrush produced 164 lbs., or 70% of production; Winterfat 7 lbs., 3%; Indian ricegrass 45 lbs., 19%; Bottlebrush squirreltail 5 lbs., 2%; Needleandthread 14 lbs., 6%. Professional observations on the forms indicated that plant vigor is fair to good considering the current drought, no seedling of any plant specie was observed, grass density is estimated to be above average in the condition transect area compared to the rest of the Water Canyon Pasture. A utilization factor was not used on the yield record.

Ecological Processes

Direct measures of the status of ecological processes are difficult or expensive to measure due to the complexity of the processes and their interrelationships. Therefore, biological and physical attributes are often used as indicators of the functional status of ecological processes and site integrity. Based on the positive vegetative attributes of the allotment as presented by monitoring data, the hydrologic cycle, nutrient cycle, and energy flow are being maintained. In addition to range monitoring data, qualitative observations and professional judgment indicate ecological processes are adequate for the vegetative communities.

Vegetation Distribution

Professional observation as well as soil mapping unit data and ecological site descriptions indicates vegetation distribution (patchiness, corridors) to be appropriate in the term permit renewal area. The vegetation composition changes along the elevation gradient and plant communities are separated by hills and washes on the west side of the Egan Mountains. There is a mosaic and a "mix" of plant communities and ecological sites, including sites dominated by black sagebrush, Wyoming sagebrush, big sagebrush, greasewood, mountain mahogany, and crested wheatgrass. Pinyon and juniper trees and associated understory species are scattered through the upper elevations of the allotment. There are many travel corridors present for grazing animals in the washes and drainage bottoms between the hills. Escape cover is present for grazing animals in these areas.

Vegetation Nutritional Value

It is assumed that nutritional value of the available forage in the area is adequate to sustain animal needs, even in the winter period. No losses of cattle due to malnutrition have been reported by the cattle operator in this allotment. Cattle seem to thrive on this allotment. The condition of cattle has been excellent in the Water Canyon Native and South Preston Seeding Pastures. Deer habitat has been reported to be good. Deer and elk winter range in the east portion of the South Preston Seeding has been observed to be excellent, with an abundance of native browse present.

Native Plant Species – White Rock Allotment

A combination of all of the range monitoring studies accomplished in the term permit renewal area over the last few years indicate a diversity of native upland vegetation is present in the Water Canyon Native Pasture and the South Preston Seeding. The following table lists the native upland plant species that have been observed in the term permit renewal area:

Table 3. Native Plant Species - White Rock Allotment – Grasses, Forbs, and Shrubs

Common Name	Symbol		Common Name	Symbol
Indian ricegrass	Achy		Indian paintbrush	Casti2
Needleandthread	Heco26		Lupine	Lupin
Galleta grass	Hija			
Squirreltail grass	Elel		Desert snowberry	Sylo
Sandberg's blueg.	Pose		Littleleaf mahogany	Cein7
Bluebunch	Pssp		Curlleaf mahogany	Cele3
Threeawn grass	Arist		Mountain sagebrush	Artrv
Thickspike	Elma7		Big sagebrush	Artr2
Thurber's needleg.	Acth7		Black sagebrush	Arno4

Nevada bluegrass	Pone		Wyoming sagebrush	ArtrW
Muttongrass	Pofe		Shadscale	Atco
Western wheatg.	Pasm		Winterfat	Krla
Basin wildrye	Leci4		Bud sagebrush	Pide4
			Greasewood	Save4
Buckwheat	Eriog		Bailey greasewood	SaveB
White stoneseed	Liru4		Mormon tea	Epne
Hawksbeard	Crac2		Douglas rabbitbrush	Chvi8
Balsamroot	Basa3		Downy rabbitbrush	Chvip4
Globemallow	Sphae		Fourwing saltbush	Atca2
Penstemon	Penst		Broom Snakeweed	Gusa2
Eriogonum	Eriog		Horsebrush	Tetra3
Phlox	Phlox		Spiny hosage	Grsp
Loco (milkvetch)	Astra		Antelope bitterbrush	Putr
Aster	Aster		Pricklygilia	Lepu
Goldenweed	Haplo2		Serviceberry	Amut
Scarlet globem.	Spco		Cliffrose	Come
Blazingstar	Mentz		Kochia	Kochia
Princes plume	Stanleya		Wax currant	Rice

The following precipitation data by year is presented for the Ely Weather Station (Yelland Field) as summarized by the National Oceanic and Atmospheric Administration. The precipitation totals are for crop year precipitation, or that moisture (including snow) measured from September through June. This is effective moisture for plant growth. The average crop year precipitation for the Ely Station for the thirty year period 1977 – 2006 is 8.44 inches. Ten of the twelve years listed below are below this average. This represents drought conditions.

Year	Crop Year Precipitation
1997	7.83
1998	10.00
1999	7.18
2000	6.70
2001	5.26
2002	4.42
2003	6.88
2004	5.45
2005	12.20
2006	8.32
2007	5.62
2008	4.14

Appendix II
Grazing Permit Terms and Conditions

Terms and Conditions of Authorized Use – Quarter Circle Five Ranch – Proposed Action

Allotment Number Name/ Pasture	Livestock Number/Kind	Grazing Period Begin End	% Public Land	Type Use	AUMs
0902 White Rock					
Water Canyon Native	114 Cattle	03/01 – 02/28	100	Active	1368
South Preston Seeding	63 Cattle	03/01 – 02/28	100	Active	756

The allotment summary is as follows:

Allotment	Active	Suspended	Total
0902 White Rock	2128	0	2128

The grazing permit is for 2128 active AUMs authorized use.

Terms and Conditions:

In accordance with 43 CFR 4130.3-2, the following terms and conditions will be included in the grazing permit for Quarter Circle Five Ranch on the White Rock Allotment:

Stipulations Common To All Allotments:

1. Livestock numbers identified in the term grazing permit are a function of seasons of use and permitted use for each allotment. Deviations from those livestock numbers and seasons of use may be authorized on an annual basis where such deviations would not prevent attainment of the Multiple-Use Objectives for the allotment.

2. Deviations from specified grazing use dates will be allowed when consistent with Multiple-Use Objectives. Such deviations will require an application and written authorization from the authorized officer prior to grazing use.

3. Pursuant to 43 CFR 10.4 (G) the holder of this authorization must notify the authorized officer by telephone, with written confirmation, immediately upon discovery of human remains, funerary objects, sacred objects, or objects of cultural patrimony (as defined at 43 CFR 10.2). Further, pursuant to 43 CFR 10.4 (C) and (D), you must stop activities in the immediate vicinity of the discovery and protect it from your activities for 30 days or until notified to proceed by the authorized officer.

4. The authorized officer is requiring that an actual use report (Form 4130-5) be submitted within 15 days after completing your annual grazing use.

5. The payment of your grazing fees is due on or before the date specified in the grazing bill. This date is generally the opening date of your allotment. If payment is not received within 15 days of the due date, you will be charged a late fee assessment of $25 or 10 percent of the grazing bill, whichever is greater, not to exceed

$250. Payment with Visa, MasterCard or American Express is accepted. Failure to make payment within 30 days of the due date may result in trespass action.

6. Grazing use will be in accordance with the Northeastern Great Basin Area Standards and Guidelines for grazing administration as developed by the Northeastern Great Basin Resource Advisory Council and approved by the Secretary of the Interior on February 12, 1997. Grazing use will also be in accordance with 43 CFR Sub-part 4180 - Fundamentals of Rangeland Health and Standards and Guidelines for Grazing Administration.

7. If future monitoring data indicates that Standards and Guidelines for Grazing Administration are not being met, the permit will be reissued subject to revised terms and conditions.

8. The permittee must notify the authorized officer by telephone, with written confirmation, immediately upon discovery of any hazardous or solid wastes as defined in 40 CFR Part 261.

9. The permittee is responsible for all maintenance of assigned range improvements including wildlife escape ramps for both permanent and temporary water troughs.

Additional Terms and Conditions:

The following allowable use levels apply for all herbivory – cattle, elk, deer, antelope, rabbit, or other animal use.

1. Quarter Circle Five Ranch will be allowed to practice livestock management through a holistic resource management approach. An annual biological plan will be submitted to BLM for each grazing year, which would require authorized officer approval.
2. An allowable use level will be established as 40% of the current year's growth by weight for spring use (3/1 – 5/31) of the key native species Indian ricegrass in the Water Canyon Native Pasture of the White Rock Allotment. This is to help achieve sage grouse habitat objectives and rangeland health objectivesin the pasture. An allowable use level will be established as 50% of the current year's growth by weight for yearlong use of Indian ricegrass in the Water Canyon Native Pasture. Utilization will be measured at established key grazing areas or other sites representative of the dominant vegetation in the allotment.
3. An allowable use level will be established as 50% of the current year's growth by weight for winterfat for year-long use in the Water Canyon Native Pasture. Utilization will be measured at established key grazing areas or other sites representative of the dominant vegetation in the allotment.
4. An allowable use level will be established as 50% of the current year's growth by weight for spring use of crested wheatgrass in the South Preston Seeding. An allowable use level will be established as 60% for use through 02/28. Utilization will be measured at established key grazing areas or other sites representative of the grazing patterns in the seeding.
5. Grazing use on the White Rock Allotment shall be in accordance with the final multiple use decision dated June, 1995.
6. The permittee(s) will be responsible for continued maintenance of the existing fences and water developments as assigned in the June 1994 agreement.

Terms and Conditions of Authorized Use – Quarter Circle Five Ranch – Change in Management Practices Alternative

Allotment Number Name/ Pasture	Livestock Number/Kind	Grazing Period Begin End	% Public Land	Type Use	AUMs
0902 White Rock					
Water Canyon Native	114 Cattle	03/01 – 02/28	100	Active	1368
South Preston Seeding	63 Cattle	03/01 – 02/28	100	Active	756

The allotment summary is as follows:

Allotment	Active	Suspended	Total
0902 White Rock	2128	0	2128

The grazing permit is for 2128 active AUMs authorized use.

Terms and Conditions:

In accordance with 43 CFR 4130.3-2, the following terms and conditions will be included in the grazing permit for Quarter Circle Five Ranch on the White Rock Allotment:

All terms and conditions on pages 51 and 52 above would apply and the following term and condition would be added:

Grazing use will occur primarily during the winter period, from October through February. The range will be rested during March. Some spring grazing may occur during April. Grazing use will still occur according to the principles of Holistic Resource Management. Each year grazing use will be contingent upon submittal of an annual biological plan requiring approval by the authorized officer.

RISK ASSESSMENT FOR NOXIOUS & INVASIVE WEEDS

Term Grazing Permit Renewals for NL Ranch & Joseph Peacock
White Rock Allotment
White Pine County, Nevada

On January 24th, 2008 a Noxious & Invasive Weed Risk Assessment was completed for NV-040-08-10 term grazing permit renewals for NL Ranch and Joseph Peacock in the White Rock allotment in White Pine County, NV approximately 20 miles south and west of Ely, Nevada. The current term permit for NL Ranch authorizes 394 AUMs of cattle use with a season of use from 3/01 to 10/15. The current term permit for Joseph Peacock authorizes 872 AUMs of cattle use with a season of use from 3/01 to 10/15. Grazing use occurs in four fenced pastures of the allotment and cattle numbers and season of use vary by pasture. The issuance of the new term grazing permits would be for a period of ten years. At this time the proposed action would be to renew the permit without any changes to the terms and conditions, however changes to the terms and conditions of the permit may be proposed, depending on the evaluation of the range monitoring data.

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 and along roads leading to the White Rock allotment:

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

There is also probably cheatgrass (*Bromus tectorum*), halogeton (*Halogeton glomerus*), and Russian thistle (*Salsola kali*) scattered along roads in the area.

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 term permit renewal area, watering locations and salt block sites (if present) 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.

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 White Rock allotment this could have an adverse impact to the native plant communities since the most of the allotment is currently considered to be 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: _____ xx/xx/2008

Bonnie Waggoner — Date

Ely District Noxious & Invasive Weeds Coordinator

Appendix IV - List of References

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