

ENVIRONMENTAL ASSESSMENT

NV-040-06-044

GRAZING PERMIT ISSUANCE FOR WAHOO RANCH  
WILLARD CREEK ALLOTMENT

United States Department of the Interior  
Bureau of Land Management  
Ely Field Office

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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 Wahoo Ranch on the Willard Creek Allotment (10127). 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 is tiered to and incorporates by reference the Schell Grazing Environmental Impact Statement (EIS), released June, 1983 and the subsequent Schell Management Framework Plan (MFP) and Record of Decision (ROD) approved July, 1983. The MFP and ROD are broad, long term land use planning documents that implemented decisions regarding rangeland management in the Ely District. The Willard Creek Allotment has been designated as management category “improve” (I).

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. 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 Ely BLM 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 Willard Creek Allotment.

The term grazing permit under consideration authorizes grazing use within the Willard Creek Allotment (10127). Cattle are the authorized kind of livestock. The permit would be for a period of ten years. The base property for the permit would be approximately 1,000 acres of privately owned ranch property in White Pine County, Nevada. The grazing permit area occurs entirely within White Pine County. The permit area is situated in the east portion of the Ely District BLM, approximately 40 miles east of Ely, Nevada. The permit area occurs within the South Spring Valley Watershed (#120A). The current term permit for Wahoo Ranch on the Willard Creek Allotment has been issued for the period 02/01/2006 to 01/31/2016. Southern Nevada Water Authority has recently purchased the Wahoo Ranch, and would become a new permit holder for the Willard Creek Allotment. This grazing permit transfer is expected to become completed and signed by the authorized officer by September 30, 2007.

A Grazing Final Multiple Use Decision (FMUD) was issued for the Willard Creek Allotment on December 8, 1993. A grazing decision is essentially a document that determines whether changes in livestock management practices are necessary for a defined administrative area. A summary of this decision is provided in the Affected Environment portion of this EA.

An evaluation and determination of the rangeland health is being conducted during the current permit

issuance (renewal) process. Standards for Rangeland Health were assessed by a BLM interdisciplinary team on February 28, 2007 on the Willard Creek Allotment. The interdisciplinary team (consisting of Rangeland Management Specialists, Wildlife Biologist, Natural Resource Specialist, Archaeologist, Weeds Specialist, Soils Specialist, Watershed Specialist, and others) utilized several scientifically based documents and official publications to complete the assessment. These documents include the White Pine County Soil Survey, East Part (USDA-SCS 2005), 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), Riparian Area Management (USDI-BLM et al. 1998), 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, professional observations, and photographs to assess achievement of the Standards and conformance with the Guidelines. Monitoring data has been gathered periodically for this allotment since 1982.

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

### ***Standards Achievement***

Rangeland monitoring data for the Willard Creek Allotment 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 evaluation and assessment of monitoring data, it has been determined that rangeland health and the quality of the plant communities is adequate to authorize the grazing permit renewal. Two of three Standards are achieved and current livestock management practices are in conformance with Guidelines for Rangeland Health on the Willard Creek Allotment.

A summary of the achievement or non-achievement of the Standards and conformance to the Guidelines for Rangeland Health follows:

- |  |   |
|--|---|
| 1. Upland Sites Standard               | (Achieved)  |
| 2. Riparian and Wetland Sites Standard | (Achieved)  |
| 3. Habitat Standard                    | (Not Achieved, but making significant progress towards) |

### ***Causal Factors – Habitat Standard***

- Livestock are a contributing factor to not achieving the Standard
- Livestock are not a contributing factor to not achieving the Standard**
- Failure to achieve the Standard is related to other issues or conditions**

### ***Guidelines Conformance***

As a result of the evaluation of monitoring data, it has been determined that current livestock grazing management practices conform with the following guidelines:

Current livestock management practices conform with Guidelines 1.1 and 1.3. Guideline 1.2 is not

applicable to the assessment area at this time. Current practices conform with Guidelines 2.1, 2.3, and 2.4. Guideline 2.2 is not applicable to the assessment area at this time. Current practices conform with Guidelines 3.2, 3.3, and 3.6. Guidelines 3.1, 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 26.

### **Need for the Proposal**

The need for the proposal is to fully process the renewal of the term grazing permit for Wahoo Ranch in accordance with all applicable laws, regulations, and policies with terms and conditions of grazing use that conform to the Standards and Guidelines of Grazing Administration and the other pertinent land use objectives for livestock use. The grazing permit would be renewed for a period of 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.” Wahoo Ranch meets all of the qualifications to graze livestock on public lands administered by the BLM according to Chapter 1 of BLM Handbook H-4110, “Qualifications, Permitted Use, and Allotment Transfers.”

### **Relationship to Planning**

The proposed action is consistent with the Federal, State, and local plans to the maximum extent possible. The proposed action would be in accordance with the Schell Management Framework Plan (MFP) and the Schell Grazing Environmental Impact Statement (EIS) dated June, 1983 and the subsequent Record of Decision (ROD) dated July 1983. The proposed action would implement the management decisions from these approved Land Use Planning documents regarding range (p.7) and watershed condition (p.6). The proposed action would also be consistent with the President’s Healthy Forests Initiative for Wildfire Prevention and stronger communities (August 2002), as well as the White Pine County Elk Management Plan approved March 1999 and the Greater Sage Grouse Conservation Plan for Nevada and Eastern California (June 30, 2004). The project is also consistent with the White Pine County Land Use Plan of May, 1998 which states the following:

- “The federal government should continue to make the public rangelands economically and realistically available for livestock grazing, along with the other multiple use objectives.” (page 7)

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 (1/11/01).
- 1973 Endangered Species Act.
- 1964 Wilderness Act.
- White Pine County Elk Management Plan approved March 1999.
- Conservation Agreement and Conservation Strategy for Bonneville Cutthroat Trout in the State of Nevada (2006).

## 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 IMs Washington Office (WO) 2003-071 and WO 2004-126. It also complies with the requirements outlined in the following policies, handbooks, and manuals:

- 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 February 28, 2007 at the Ely BLM Field Office. At that time, no 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 throughout the review of this document. Thus far, no issues have been identified as a result of public scoping.

After internal scoping, a new issue was identified for scoping in this EA. Southern Nevada Water Authority (SNWA) has proposed a groundwater development project that would potentially occur in the proximity of the proposed action. This issue is discussed in the cumulative impacts section of this EA.

## II. DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

### Proposed Action

In order to meet the need for the proposal, the BLM would fully process and issue a new term grazing permit for Wahoo Ranch (operator # 2702894) and authorize livestock grazing on the Willard Creek Grazing Allotment. The Willard Creek Allotment includes approximately 10,300 public land acres (Figure 1). The current term permit and allotment information follows:

Allotment Number	Allotment Name	Livestock Number/Kind	Grazing Period		% Public* Land (Billing)	Type Use	AUMs**
			Begin	End			
10127	Willard Creek	41 Cattle	04/15	11/30	100	Active	310

\* The allotment is billed at 100% public land through the Rangeland Administrative Billing System (RAS).

\*\* The active preference for the allotment is 311 AUMs. The 310 AUMs presented is a rounded figure based on the 41 cattle grazing from April 15 through November 30.

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

<u>Allotment</u>	<u>Active</u>	<u>Voluntary Non - Use</u>	<u>Total</u>
10127 Willard Creek	311	492	803

The proposed action is to renew the grazing permit without any changes to the terms and conditions of the permit (status quo). The cattle numbers and season of use would remain the same. Appendix II lists the specific terms and conditions that will be included as part of the grazing permit. Appendix II lists the deferred rotational grazing system. Allowable use levels for key forage species will be included in the new permit. Allowable use levels are a quantification of Land Use Plan vegetative objectives. The issuance of the term grazing permit would be for a period of ten years from 03/01/07 to 02/28/17.

### **Proposed Action – Monitoring**

Rangeland monitoring data would continue to be collected for the Willard Creek Allotment over the long term to determine if the livestock management practices as authorized by the permit renewal are in conformance with the Standards for Rangeland Health and other vegetative and multiple use objectives for the allotment. Monitoring and data collection would continue in the form of proper functioning condition riparian studies (PFC), establishing key areas, measuring utilization levels(KFPM), frequency trend, ecological condition, vegetation cover, observed apparent trend, actual use reports, climate studies, compliance checks, professional observations, and photographs. Monitoring may also continue according to broad watershed assessment of the South Spring Valley Watershed.

The term permit renewal area would also be monitored on a regular basis by both BLM and the grazing permittees for noxious weeds or non-native invasive species. Further mitigation measures for weeds are identified in the Noxious Weed Risk Assessment in Appendix III.

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

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.

## ***No Grazing Alternative***

The No Grazing alternative was addressed in the Schell Draft Grazing EIS. The EIS analyzed the impacts of grazing through a proposed action and four 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 Schell MFP and grazing EIS, the effects of not renewing the term grazing permit are not analyzed in this document. The decision in the MFP was that the lands within the Willard Creek Allotment would be available for grazing, in which case 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. Three other alternatives were analyzed in the Schell Grazing EIS, which are as follows:

1. The Resource Protection Alternative, which would have reduced AUMs by 16% from the three year 1977 – 1980 average licensed use, to provide more forage for wildlife.
2. The Graze at Preference Alternative, which would have increased AUMs to active preference and emphasized livestock production in relation to wildlife and wild horses.
3. The no action alternative, which would have maintained AUMs at the current average licensed use level of 1977 – 1980. Wildlife and wild horse use would remain as at present.

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**

### **Introduction**

In addition to the description of the affected environment presented below, the affected environment is also described in the Schell Management Framework Plan (MFP).

### **General Area Description**

The Willard Creek Allotment (10127) encompasses approximately 10,300 public land acres. The allotment is situated in South Spring Valley, on the western side of the Snake Mountain Range. The allotment is fenced on all four sides. The eastern boundary of the allotment was formerly the Humboldt National Forest. The allotment is located entirely within White Pine County, Nevada, in the eastern portion of the Ely BLM District approximately 45 miles east of Ely, Nevada. Elevations range from about 5,750 feet in the valley portion of the allotment to 7,000 feet near the National Forest Boundary. Average annual precipitation is 8 – 12 inches. Salt desert shrub and sagebrush/perennial grass plant communities occur in the lower portions of the allotment while sagebrush/perennial grass communities that contain scattered pinyon/juniper trees or a limited extent of pinyon-juniper woodlands occur on the benches and higher elevation sites. A few ponderosa pine trees occur in the allotment near Shingle Creek. Two lotic (stream) systems occur on public land in the allotment; Shingle Creek and Pine/Ridge Creek. The creeks are ephemeral in that they do not always flow year long. In addition, the Spring Creek Meadow, a lentic riparian system of about 2 acres, occurs in the southwest portion of the allotment.

The Willard Creek Allotment occurs within the South Spring Valley Watershed. The allotment also occurs within the Great Salt Lake Area (028A) Major Land Resource Area (MLRA).

**A. Critical Elements of the Human Environment:**

The critical elements of the human environment, as identified in BLM Manual 1790-1 and WO IM 99-178 are listed in Table 1. Other mandatory items for consideration, as identified in the 2001 Ely BLM NEPA Handbook, are also listed. Elements or mandatory items that may be affected by the proposed action are further described in this Environmental Assessment (EA).

Those critical elements or mandatory items that are not present or would not be adversely affected are also listed in Table 1. These resource values may or may not be considered further in this document.

**Table 1. Critical Elements of the Human Environment, Mandatory Items, and Rationale for Detailed Analysis for the Proposed Action or Elimination from Further Consideration**

Critical Elements and 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 <sub>x</sub> . 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 allotment did not reveal any sites of particular concern for impacts from livestock grazing. Typical impacts to Cultural Resources were disclosed in the Schell Grazing EIS
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. However, the potential for the proposed livestock grazing to negatively affect migratory birds is discounted because of low density of livestock and dispersed grazing within the allotment.
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"
Prime or Unique Farmlands			X	Resource not present
Riparian Areas		X		Livestock use could impact Riparian areas

Special Status Species	X			There are no Threatened/Endangered or candidate plant or animal species known to occur on the allotments. Although State or Nevada BLM listed sensitive species may be present within the allotment, it is highly unlikely that individuals would be impacted by the livestock grazing as proposed in this EA due to the relative low density of livestock within the allotment. In addition, the current livestock management practices may result in the improvement of habitat for these species. The species' populations would not be expected to be negatively impacted by the proposed livestock grazing.
Wastes (Hazardous or Solid)			X	No known wastes present
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 Mngmt. Area
Wild & Scenic Rivers			X	Resource not present
Wilderness			X	Resource not present

In addition to the Critical Elements of the Human Environment and 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 non-critical element further is provided. The non-critical 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	Would certainly be affected
Vegetation		X	Would certainly be affected
Soils		X	Would certainly be affected
Wildlife		X	The proposed project, should continue to provide the current level of habitat for the species presently occurring there.

Recreation		X	May be affected. Wildlife related recreation could be enhanced
Visual Resources		X	May be affected
Social & Economic Values		X	Renewing the permit would have economic impacts to the permittee and the county
USFS Land Transfer to BLM		X	Needs to be considered
Water Quantity		X	Would certainly be affected

***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 a site specific discussion:***

***Critical Elements of the Human Environment & Mandatory Items - Cultural Resources, Migratory birds, Noxious Weeds and Invasive Non-Native Species, Riparian Areas, and Special Status Species.***

***Other Resource Values - Range/Livestock/Standards and Guidelines, Vegetation, Soils, Wildlife, Recreation, Social and Economic Values, Visual Resources, USFS Land Transfer to BLM, and Water Quantity.***

**A discussion of both classes of values follows:**

***Critical Elements of the Human Environment & 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 Willard Creek 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 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.

***Migratory Birds***

Federal agencies are required to protect migratory birds and their habitat. This is according to the Migratory Bird Treaty Act of 1918 and subsequent amendments (16 U.S.C. 703-711) and Executive Order 13186 issued January 11, 2001. A number of migratory bird species are known to have a distribution that overlaps with the proposed action area. Migratory bird nesting and foraging habitat may be located throughout the Willard Creek Allotment. Based on known habitat associations, species composition may be somewhat anticipated. Sagebrush obligates are most likely to use the area. Outside the breeding season, any number of species have the potential to use the area during the winter or migration.

### ***Noxious Weeds and Invasive, Non-Native Species***

The Ely weeds inventory (Weedpoints\_012607) indicates that there are no noxious weeds present on public lands in the Willard Creek Allotment. One small population of Canada thistle (*Cirsium arvense*) has been inventoried on the county right of way near the aqueduct from Shingle Creek. There are also several infestations of bull thistle (*Cirsium vulgare*) found along Willard Creek and the aqueduct from Shingle Creek. Several salt cedar trees (*Tamarix spp.*) are present in the Scotty Meadows Allotment, south of the boundary with Willard Creek Allotment about .75 miles. There are also infestations of hoary cress (*Lepidium draba*) in the Scotty Meadows Allotment in the Doyles Well area. The invasive annual grass cheatgrass (*Bromus tectorum*) is present in the allotment. Small patches of the invasive species halogeton (*Halogeton glomeratus*) also occur in the allotment, as does mustard. 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.

### ***Riparian Areas***

Three riparian systems are discussed in this EA. The first is Shingle Creek, a lotic (stream) riparian system. The second riparian system is Pine/Ridge Creek, also a stream system that occurs in a man made channel. The third system is Spring Creek Meadow, a 2 acre spring/seep area in the southwest portion of the allotment. All three systems are accessible to use by livestock and wildlife. Access by livestock is controlled through a rotation grazing system. Shingle Creek is considered a recreational fishery. During dry years, Shingle Creek may stop flowing in late summer and fall. Pine/Ridge Creek has shown fairly constant flows during spring and summer. All three systems were rated in proper functioning condition in June, 2006.

### ***Special Status Species (Federally listed, proposed or candidate Threatened or Endangered Species, and Nevada BLM sensitive species)***

The bald eagle may use the Willard Creek Allotment in winter. The bald eagle was officially delisted throughout its range as Threatened when a notice was published on August 8, 2007 in the Federal Register. The peregrine falcon, a BLM listed State Sensitive Species, may use the allotment also. No sightings have been reported to BLM. BLM State Sensitive Species that are expected to use the permit renewal area include the golden eagle, burrowing owl, prairie falcon, and loggerhead shrike. The Bonneville cutthroat trout, a Nevada BLM State Sensitive Species, occurs in Pine/Ridge Creek.

Although State or BLM listed sensitive species may be present within the allotment, it is highly unlikely that individuals would be impacted by the livestock grazing as proposed in this EA due to the relative low density of livestock within the allotment. In addition, the current livestock management practices may result in the improvement of habitat for these species. The species' populations would not be expected to be negatively impacted by the proposed livestock grazing. Presently, the only identified Nevada BLM State Sensitive Species present within the permit renewal action area is the Bonneville Cutthroat Trout (*Oncorhynchus clarki utah*). Current habitat conditions on the creek are considered stable and in good condition. The limiting factor for Bonneville Cutthroat Trout in Pine/Ridge Creek has been identified as the lack of quality pools; a factor not affected by the proposed action as described. There is no known pygmy rabbit habitat on the allotments. There are no ferruginous hawk nest sites.

### *Special Status Plants*

There are no Threatened, Endangered, Candidate, or Nevada BLM Sensitive Plants known to occur in the term permit renewal area.

### *Sage Grouse*

The sage grouse is a BLM State sensitive species. There are no known sage grouse leks (strutting grounds) on the allotment. Sage grouse may have nesting or brooding habitat on the allotment.

### *Other Resource Values:*

### *Range/Livestock/Standards and Guidelines*

The Willard Creek 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 5.

A grazing multiple use decision was issued for the Willard Creek Allotment in December, 1993. The decision reduced the active permitted livestock use on the allotment for both grazing permits by 694 AUMs, from 1,132 to 438 active AUMs. The 694 AUMs reduction was placed in non-use for conservation and protection purposes. The reduction was phased in over a five year period. The decision also established a deferred rotational grazing system (3 pastures) with a season of use from 4/15 to 11/30. The decision established allowable use levels for key forage species, established ecological condition objectives for key upland areas, established wildlife and riparian objectives, and established stream habitat objectives. Other terms and conditions of grazing use were implemented according to the decision.

### *Licensed Use – Willard Creek Allotment- Wahoo Ranch*

Current active permitted use on the Willard Creek Allotment for Wahoo Ranch is 311 AUMs. From 2000 through 2006 (seven years), licensed livestock use by Wahoo Ranch or the predecessor, the Harbecke permit, averaged 208 AUMs the six years the allotment was grazed. Complete voluntary non – use was taken on the allotment during the 2003 grazing year, due to drought conditions. Licensed use ranged from a high of 284 AUMs in 2006 to a low of 133 AUMs in 2000.

### *Licensed Use – Willard Creek Allotment- John Baal Permit*

Current active permitted use on the Willard Creek Allotment for John Baal is 127 AUMs. From 2000 through 2006 (seven years), licensed livestock use by John Baal averaged 116 AUMs the seven years the allotment was grazed. During the 2003 grazing year, due to drought conditions, 41 AUMs were licensed on the allotment. Licensed use was for the full 127 AUMs each of the other six years.

The Habitat Standard is not being achieved on the Willard Creek 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).

### ***Vegetation***

The Willard Creek Allotment occurs within Major Land Resource Area (MLRA) 028A – Great Salt Lake Area. The ecological sites (range sites) within the allotment have been described, classified, and studied by the Natural Resource Conservation Service (NRCS). The four vegetation types within the allotment are salt desert shrub (greasewood), black sagebrush, northern desert shrub (big sagebrush types), and pinyon-juniper woodlands. Scattered pinyon-juniper trees occur in the upper elevations of the allotment. The dominant vegetation consists of greasewood, shadscale, black sagebrush or Wyoming big sagebrush, Indian ricegrass, needleandthread grass, galleta grass, and other native perennial grasses and forbs. There are two seeded areas in the allotment. A Russian wild rye seeding of about 370 acres occurs west of the county road. A crested wheatgrass seeding of about 700 acres occurs east of the county road. 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 Willard Creek Allotment are primarily loamy soils, derived from material eroded from the Snake Range Mountain Block. The soils are primarily alluvial, occurring on the alluvial fans on the west side of the Snake Mountain Range. The major Soil Mapping Unit (SMU) in the allotment is a 3343, a Huilepass Association. This SMU represents about 45% of the land area of the allotment. SMUs 1305 (Jericho – Armespan Association), and 5020 (Atlanta – Kunzler Association) are also major soil mapping units and together represent another 40% 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. Soils in the Willard Creek Allotment vary in percolation rates, and water holding capacity.

### ***Wildlife***

The Willard Creek Allotment is within Nevada Division of Wildlife Big Game Management Area 11, Unit 115. The allotment provides habitat for mule deer (*Odocoileus hemionus*), pronghorn antelope (*Antilocapra Americana*), and elk (*Cervus Canadensis*). In addition, deer frequently cross the allotment from higher elevation habitat to reach private alfalfa fields or native meadow on private land within or near the allotment. The allotment receives year-long antelope use and use by deer most of the year. Elk currently use the allotment on an occasional basis.

A map from the allotment evaluation of 1993 shows about 3,200 acres of “deer spring range” in the eastern portion of the allotment. This is confirmed by Geographic Information System (G.I.S.) data from the Ely District BLM. Nevada Division of Wildlife (NDOW) commented to the evaluation that all of the public land area east of the county road (about 6,000 acres) should be considered “key deer spring range” based on helicopter census data from several years showing high numbers of deer in the allotment during spring. Ely District data also identifies deer year long use areas in the Willard Creek Allotment.

The 1993 evaluation identified needleandthread grass, snowberry, and mountain mahogany as key species for mule deer in the allotment. Big game browse-class trees and shrubs such as mahogany, bitterbrush, serviceberry, and chokecherry are limited in the allotment. The allotment also provides habitat for coyotes (*Canus latrans*), rabbits (*Lepus spp. and Sylvilagus spp.*), sagebrush obligate birds, and other small mammals and reptiles.

The Ely District Geographic Information System (G.I.S.) data show no raptor nesting areas and no bighorn sheep habitat anywhere near the allotment.

### ***Recreation***

Recreation in this area includes large and small game hunting, wildlife observation and photography, hiking, horse back riding, primitive camping, fossil collection, and off road vehicle (OHV) exploration. The area is very isolated and undeveloped, however a few water sources are present. There are no developed recreational facilities on the allotment.

### ***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.

### ***Visual Resources***

The Visual Resource Management (VRM) System provides a way to identify and evaluate scenic values to determine the appropriate levels of management. It also provides a way to analyze potential visual impacts and apply visual design techniques to ensure that surface disturbing activities are in harmony with their surroundings. The allotment occurs in a scenic area typical of the intermountain great basin landforms. It could be stated that Mt. Wheeler (the highest peak in Nevada) is a unique visual resource near the allotment. The allotment primarily occurs within a Visual Resource Management (VRM) Class 4 Zone.

### ***USFS Land Transfer to BLM***

In January 2007, land administered by the U.S. Forest Service immediately east of the fenced Willard Creek Allotment was transferred to BLM. This was in accordance with legislation for the White Pine County Public Lands Bill (PL 109 -432). This portion of land is not within a wilderness area. This area is called the Shingle Creek Grazing Allotment and is permitted for sheep grazing. Sheep grazing use in the Shingle Creek allotment will now be administered by BLM.

### ***Water Quantity***

Water quantity for livestock grazing varies annually according to climatic conditions. Livestock watering generally occurs on native waters, a water pipeline development, and on private ground. In some years temporary water hauling has been authorized to distribute livestock use across the pastures.

#### **IV. ENVIRONMENTAL CONSEQUENCES**

The environmental consequences of grazing were analyzed in the Schell Management Framework Plan and Environmental Impact Statement (MFP/EIS), dated June 1983. The proposed action is within the array of options identified for the alternatives and proposed action as analyzed in the EIS. There have been no major changes made associated with the proposed term permit renewal from the rangeland management actions presented in the EIS. The following site specific analysis discusses the environmental consequences (impacts) associated with the proposed action.

Since the proposed action is to renew the grazing permit without any changes, 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 “critical elements of the human environment” or “mandatory items” have been identified by resource specialists as potentially affected by the proposed action:***

##### ***Anticipated Impacts of the Proposed Action - Critical Elements of the Human Environment & Mandatory Items***

###### **1. Noxious Weeds and Invasive, Non-Native Species**

The grazing permit renewal and the maintenance of existing 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 low 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. Grazing use may or may not cause an increase in invasive plants such as cheatgrass or halogeton, depending on climate, stocking level, timing of grazing, presence or absence of fire, and other factors. Cheatgrass and halogeton can spread with or without grazing use. The permit renewal area would be monitored on a regular basis for noxious or invasive weeds or nonnative species. Control treatments would be initiated on noxious weed populations that become established in the project area.

###### **2. Riparian Areas**

The three riparian systems in the Willard Creek Allotment that have been monitored as in proper functioning condition (PFC) would be maintained in PFC, since a pasture rotation grazing system is in place for the allotment. Cattle are not expected to concentrate at native riparian areas. A majority of the livestock watering activity in the allotment occurs at a trough in the crested wheatgrass seeding on the east pasture of the allotment. Combined grazing by cattle and wildlife should be within the allowable use levels established for key riparian grasses and shrubs (see terms and conditions of the grazing permit, Appendix II). Stream bank stability would be expected to remain good with a continuous cover of diverse native vegetation capable of withstanding high stream flow events. The riparian areas would continue to be monitored and the grazing permittee would be required to prevent cattle from concentrating on the riparian systems. Water hauling may be required to distribute cattle should heavy use be identified at any riparian system.

### 3. Special Status Species (Federally listed, proposed or candidate Threatened or Endangered Species, and Nevada BLM sensitive species)

The proposed permit renewal is expected to have no affect on habitat values for the bald eagle, which is considered a transitory migrant in the permit renewal area. The proposed permit renewal is also expected to have no affect on habitat values for the ferruginous hawk, peregrine falcon, golden eagle, burrowing owl, prairie falcon, loggerhead shrike, or Bonneville cutthroat trout. The proposed action would not contribute to the need to list any sensitive species as threatened or endangered. A fish population and habitat survey of Pine/Ridge Creek accomplished by NDOW on June 3, 2004 showed a population estimate of healthy Bonneville trout 21% higher than the previous high estimate survey of 1999.

With limited spring use and good livestock distribution, light grazing pressure in the Willard Creek Allotment would benefit any 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 be in accordance with the Nevada Governor's Plan for the Greater Sage Grouse which lists vegetation cover objectives for grouse.

No special status plants are located in the term permit renewal area, thus special status plants would not be affected by the proposal.

#### ***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

According to the proposed action, grazing would continue as it has in the past. Livestock management practices would remain the same or similar to what they have been. A deferred rotational pasture grazing system would continue. Cattle distribution would continue to be influenced by the location of native waters, the trough in the wheatgrass seeding, by temporary water hauling, or by waters provided on private ground. Utilization of key forage plants is expected to be moderate or less. 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. This possibility would be monitored and actions taken to correct the problem. 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 make continue to make progress towards achieving Standards and Guidelines for Rangeland Health and the other multiple use resource objectives for the allotment.

##### 2. Vegetation

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 woody native perennial grasses, 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 1/2 acre could develop around temporary water haul locations. 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 would be held to manageable levels.

General impacts to vegetation have also been addressed in the Schell Grazing EIS.

### 3. Soils

Soils would maintain structure, water holding characteristics, and percolation characteristics according to the livestock management practices implemented by the proposed action. Soils would remain stable, with biotic crusts in place, and would be resistant to wind or water erosion. Adequate vegetative cover would help protect soils and would result in adequate litter to protect soils. Disturbed, compacted areas of soil of approximately 1/4 acre or less could develop near waters in the allotment or other areas where cattle concentrate over time.

General impacts to soils have also been addressed in the Schell Grazing EIS.

### 4. Wildlife

The project, as proposed, should continue to provide the current level of habitat for the species presently occurring there. 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 water developments maintained by the permit and at any temporary water haul sites that would be authorized. Because water would not be provided year-round at temporary water haul sites, 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.

General impacts to wildlife were also addressed in the Schell Grazing EIS.

### 5. Recreation

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.

### 6. Visual Resource Management (VRM)

The proposed term permit renewal is consistent with the Visual Resource Management (VRM) Class 4

Zone objectives for this area.

## 7. Social and Economic Values

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.

## 8. USFS Land Transfer to BLM

In January 2007, the NFS transferred land to the BLM that is immediately east of the fenced Willard Creek Allotment boundary (see Figure 3). The boundary between the Willard Creek and Shingle Creek Allotments is a fenced boundary. It is not expected that cattle use would occur on the Shingle Creek Allotment nor sheep use occur on the Willard Creek Allotment.

## 9. Water Quantity

Implementing the term permit renewal action would maintain water availability for livestock and wildlife, or any other resource value in the allotment. The location and number of water haul sites, if needed, would be determined annually in the Willard Creek Allotment. Hauling water distributes livestock use and also provides additional sources for wildlife. Generally grazing occurs in association with natural waters, a pipeline development, and on private ground and does not have to be hauled to tanks and troughs.

### ***Cumulative Impacts***

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 or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively important actions taking place over a period of time.

According to the 1994 BLM publication “Guidelines for Assessing and Documenting Cumulative Impacts,” the analysis can be focused on those issues and resource values identified during scoping that are of major importance. No 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 issue of major importance. This issue is 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. Limited historical mineral mining has occurred in the area of the Willard Creek Allotment, on the west side of the Snake Mountain

Range. 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 Willard Creek Allotment. Woodcutting and pinyon nut gathering have been minimal. Hunting occurs on the allotment. Camping, trapping, wildlife viewing, antler collection, and other recreational activities including OHV use have been minimal, in part due to the isolated geographic position of the allotment. Small two track roads associated with these activities are not extensive and have not altered the landscape. Wildfires have not been frequent or catastrophic. Wildlife use has not been intensive in the area and has not fundamentally altered the plant communities. Livestock grazing has been intensive historically and has been associated with the mining booms and two world wars. Livestock grazing together with drought, absence of fire, road establishment, and water ditches may be a contributing factor to the presence of invasive plant species. Allotment boundary fences have been constructed to improve livestock management and provide for improved administration of rangelands. Rangeland monitoring has been a common activity in the area.

### Present Actions

Current activities or projects occurring in the project area are very limited. There is no current mineral mining, oil and gas exploration, or wind energy testing. Woodcutting, trapping, and pinyon nut gathering are minimal. Recreational activities including OHV use are currently minimal. There is only occasional use of the small two track roads in the area. There have been no recent wildfires. Current livestock grazing and wildlife use are not intensive in the area. Robert or Fern Harbecke have grazed at less than active permitted use in the area for the past few grazing years, and have completely rested the allotment during 2003. 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.

In January 2007, the U.S. Forest Service transferred land to the BLM that is immediately east of the fenced Willard Creek Allotment boundary (see Figure 3). This was in accordance with legislation for the White Pine County Public Lands Bill (PL 109 -432). This portion of land is not within a wilderness area. This area is called the Shingle Creek Grazing Allotment and is permitted for sheep grazing. Sheep grazing use in the Shingle Creek allotment will now be administered by BLM.

Southern Nevada Water Authority has recently purchased the Wahoo Ranch, and would become a new permit holder for the Willard Creek Allotment. This grazing permit transfer is expected to become completed and signed by the authorized officer by September 30, 2007.

### Reasonably Foreseeable Future Actions

It is reasonable to expect that the grazing permit as proposed by this EA would become approved and cattle would be permitted to graze the Willard Creek Allotment. 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 ecological sites to determine if Rangeland Health Standards and other vegetative objectives are being achieved. Dozens of grazing term permit renewals are expected to be completed each year through 2009 and during subsequent years.

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. The Willard Creek Allotment is positioned within South Spring Valley, in the Spring Valley Basin portion of the proposed project, which could be affected by the SNWA project. The allotment is only a couple of miles away from identified well exploration areas. 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. This would have a direct impact on livestock grazing, soils, vegetation, and wildlife in the allotment. The potential also exists that SNWA well water could become available for livestock in the permit renewal area through agreement between SNWA, BLM, and the livestock permittee. This would improve livestock management and distribute livestock use, resulting in increased ecological health of the native plant communities.

If water wells, pipelines, and associated infrastructure are established and operated in the area of this term permit renewal, then recreational activities would be expected to increase somewhat in the Willard Creek Allotment. These activities might include primitive camping, trailer camping, OHV use, wood cutting, pinyon nut gathering, hunting, hiking, wilderness exploration, antler collection, and similar activities. There is the likelihood that invasive species spread could occur with the groundwater development project. A noxious weed risk assessment would be prepared for the SNWA project.

The SNWA has purchased the Harbecke Ranch, which occurs within the boundaries of the Willard Creek Allotment. It is unknown at this time how the former Harbecke Ranch will be managed.

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, woodcutting, pinyon nut gathering, OHV use, recreational camping or hiking, horse back riding, hunting, or trapping in the area in the reasonably foreseeable future.

A new resource management plan and environmental impact statement (RMP/EIS) is currently being developed for the Ely Field Office BLM area. According to the new RMP/EIS, resource management would occur on a watershed basis. The area of the proposed action occurs within the Hamblin Valley Watershed. Broad watershed assessment of this watershed is expected to be accomplished by BLM within the next ten years. The assessment will determine if further changes in grazing management practices are needed to meet Standards for Rangeland Health. The assessment may also recommend sagebrush restoration treatments or other vegetative treatments.

### ***Cumulative Impacts Summary***

The proposed permit renewal would maintain rangeland health and watershed conditions. The proposed action would maintain sound grazing management practices. There would be little cumulative visual impairment to the area as a result of the term permit renewal. The proposed action in combination with the SNWA water development proposal could lead to impacts of concern on the Willard Creek Allotment. The vegetation and riparian systems of the allotment would continue to be monitored in light of this possibility.

## **V. PROPOSED MITIGATING MEASURES**

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 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. Brandon Humphries (Wahoo Ranch) has a strong interest in this grazing permit renewal. John Baal and Southern Nevada Water Authority also have an interest in this permit renewal.

On July 20, 2006 the John Baal Term 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.

Scoping letters were mailed to interested publics and the grazing permittee regarding the permit renewal action in September of 2006, requesting comments by October 11. No comments have been received to date concerning these letters. A project summary of this term permit renewal was posted on the BLM external website in November, 2006. No comments have been received to date regarding the posting. Another coordination letter was mailed to Brandon Humphries of Wahoo Ranch dated February 14, 2007, requesting participation in the range monitoring and the permit reinstatement process.

This preliminary EA will be posted for a thirty day public review and comment period on the Ely BLM external website. A hard copy of the preliminary 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 Willard Creek Allotment. Changes in the EA based upon public input will be made as appropriate.

Interested publics will again be notified by mail when the final EA is completed and the Decision Record/Finding of No Significant Impact (DR/FONSI) is signed. A FONSI documents why implementation of the selected action will not result in environmental impacts that significantly affect the quality of the human environment. These documents will also be mailed to interested publics. 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 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, 2006 or January 2007, have requested additional information regarding rangeland related actions or programs within the Willard Creek Grazing Allotment:

Curtis A. Baughman, Nevada Division of Wildlife  
Steven Carter  
Peter Ford  
Mr. Steve Foree, Nevada Division of Wildlife  
Lincoln County Commissioners  
Curt Leet  
Betsy Macfarlan, ENLC  
Cindy Macfarlan  
John McLain, Resource Concepts, Inc.  
Nevada State Clearinghouse  
Western Watersheds Project, Katie Fite  
Southern Nevada Water Authority

#### Record of Personal Consultation and Coordination

Brandon Humphries - Wahoo Ranch  
John Baal - Las Vegas

#### B. Internal District Review

Steve Leslie	Wilderness
Mark Lowrie	Rangeland Resources/ Environmental Coordination/ Noxious Weeds/Wildlife
Bonnie Waggoner	Noxious Weeds
Elvis Wall	Native American Religious Concerns
Susan Howle/Sheri Wysong	Environmental Coordination
Brad Pendley/Steve Abele/ Alicia Styles/Deb Koziol	Wildlife/T&E Species/Riparian/Migratory Birds
Lisa Gilbert/Joshua Hopper	Cultural Resources
David Jeppesen	Recreation/Visual Resources
Kari Harrison	Soil/Water/Air
Gary Medlyn	Watershed Analysis
Chris Mayer	Rangeland Resources/Environmental Coordination
Kyle Hansen	Environmental Coordination

APPENDIX I  
**STANDARDS DETERMINATION DOCUMENT**  
**Wahoo Ranch & John Baal Term Permit Renewals**  
**EAs NV-040-06-044 and NV-040-06-045**

**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 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. 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 Willard Creek Allotment (10127), in the Ely District BLM. This document does not evaluate or assess achievement of the Wild Horse and Burro or Off Highway Vehicle Standards or conformance to the respective Guidelines. The Willard Creek Allotment encompasses approximately 10,250 public land acres and is the permitted grazing allotment for both the John Baal and Wahoo Ranch Term Permit Renewals (John Baal – Operator # 2704412 / Wahoo Ranch – Operator # 2702894).

Standards for Rangeland Health were assessed by a BLM interdisciplinary team on February 28, 2007 on the Willard Creek Allotment. The interdisciplinary team (consisting of Rangeland Management Specialists, Wildlife Biologist, Natural Resource Specialist, Archaeologist, Weeds Specialist, Soils Specialist, Watershed Specialist, and others) utilized several scientifically based documents and official publications to complete the assessment. These documents include the White Pine County Soil Survey (USDA-SCS), Range Site Descriptions (USDA-SCS 1994), Interpreting Indicators of Rangeland Health (USDI-BLM et al. 2000), Sampling Vegetation Attributes (USDI-BLM et al. 1996), the Nevada Rangeland Monitoring Handbook (USDA-SCS et al. 1984), Riparian Area Management (USDI-BLM et al. 1998), and the National Range and Pasture Handbook (USDA NRCS 2003). A complete list of references is included as Appendix IV to the EA.

The interdisciplinary team also used rangeland monitoring data, professional observations, and photographs to assess achievement of the Standards and conformance to the Guidelines.

Rangeland monitoring is conducted at key areas and representative study sites in the term permit renewal area. The key areas have been selected based on accessibility, soil mapping units (SMU), representative ecological (range) sites, livestock use patterns, and permittee input. “Standard Riparian Functioning Condition Checklists” (USDI-BLM 2000) have been completed for the riparian systems of the term permit renewal area. The term permit renewal area has been monitored for vegetation condition periodically since 1982.

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

The following Rangeland Health Standards information has been incorporated into Environmental Assessment NV-040-06-045.

**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.

Soil 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. 26 )**

- Not in conformance with the Guidelines

**Conclusion:**

**Standard achieved.** Vegetation cover studies, ecological condition studies, utilization studies, photographs, and professional observations indicate the majority of the allotment is achieving the Upland Sites Standard. Canopy and ground cover, including litter, live vegetation, and rock, are appropriate to ecological site potential. Biological crusts are generally present and there is no indication of excess compaction or trampling of soils. This indicates stable soils where percolation and infiltration are appropriate to range site potential. Key forage utilization accomplished in both native sagebrush range (028AY012NV) and the crested wheatgrass seeding has been generally moderate or less during the assessment period, and has often been slight or less. This promotes litter to stabilize upland sites. Utilization has generally been in conformance with the Guidelines for Rangeland Health and is within the range that scientific literature and experience indicates should allow for recovery. Key Areas are on flat landform slopes or slopes of less than 5%. Mild slopes are contributing to stable soil conditions

It is estimated approximately 9,750 of 10,250 public land acres in the term permit renewal area are achieving the Standard. Approximately 200 acres of the wild rye seeding west of the county road and 300 acres of the crested wheatgrass seeding east of the county road are not achieving the Standard and should continue to be monitored. These areas at times have been heavily used by cattle. Grazing management practices and/or vegetation treatments should be considered to maintain soils, vegetation resiliency, resistance, and ecological/watershed health of this area. The understory herbaceous seeded species component needs to be maintained or improved, which would prevent the spread of cheatgrass or other invasive species into these areas. In addition, heavy use has been recoded in the Spring Creek Riparian Meadow.

Current or existing grazing management and levels of grazing use within the Willard Creek Allotment are causal factors in failing to achieve the Upland Sites Standard in the 500 acres of seeded areas mentioned above. Utilization studies show heavy and severe use in these areas, which are favored by cattle.

**Standard #2. Riparian and Wetland Sites**

Riparian and wetland areas exhibit a properly functioning condition and achieve State water quality criteria  
Riparian and Wetland Sites Indicators:

- ❖ Stream side riparian areas are functioning properly when adequate vegetation, large woody debris, or rock is present to dissipate stream energy associated with high water flows. Elements indicating proper functioning condition such as avoiding accelerated erosion, capturing sediment, and providing for groundwater recharge and release are determined by the following measurements as appropriate to the site characteristics: Width/Depth ratio; Channel roughness; Sinuosity of stream channel; Bank stability; Vegetative cover (amount, spacing, life form); and Other cover (large woody debris, rock).
- ❖ Natural springs, seeps, and marsh areas are functioning properly when adequate vegetation is present to facilitate water retention, filtering, and release as indicated by plant species and cover appropriate to the site characteristics.
- ❖ Chemical, physical, and biological water constituents are not exceeding the State water quality standards.

**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. 26)**

- Not in conformance with the Guidelines

**Conclusion:**

**This Standard is achieved.** All three riparian systems are in proper functioning condition (PFC). The PFC forms rate very positive for the vegetative, hydrologic, and erosion/deposition indicators. A diversity of native riparian grasses, forbs, shrubs, and trees is present at all three riparian areas that show good cover, vigor and production and are capable of withstanding high water flows. Cover is appropriate to site characteristics. Utilization of key riparian species has generally been within allowable use levels. The NDOW stream habitat survey on Pine/Ridge Creek of June 2004 found bank stability to be favorable with ratings of 75% or higher at all stations surveyed.

**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
- X Not achieving the Standard, but making significant progress towards**
- Not achieving the Standard, not making significant progress towards

**Causal Factors:**

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

**X In conformance with the Guidelines**

- Not in conformance with the Guidelines

**Conclusion:**

**Standard not achieved.** Vegetation cover studies, utilization studies, precipitation studies, photographs, and professional observations indicate portions of the allotment are achieving the Habitat Standard and portions of the allotment are not achieving the Habitat Standard. The ecological condition study done at Key Area WC-04 in 2006 indicates a shrub composition above ecological site potential. This key area represents approximately 1,000 acres of native sagebrush habitat. The native grass and forb component are below site potential. This area could be losing resiliency as the herbaceous component declines and the site transitions to woody species dominance. The area could lose resistance to invasive species spread. Rangeland monitoring studies accomplished at WC-04 have produced mixed results. The vegetation cover study done at this key area in 2006 resulted in a measured composition of 83.6% shrubs, 13.3% grass, and 3.1% shrubs.

Vegetation productivity and structure are generally appropriate to the ecological site potential. Vegetation distribution is

good to excellent in this allotment. Key forage utilization accomplished in native sagebrush range has been generally moderate or less during the assessment period. The ecological processes of the hydrologic cycle, nutrient cycle, and energy flow are being maintained. Most of the allotment remains in a stable, resilient, resistant, and ecologically healthy state, and has not transitioned to range dominated by shrubs or by invasive annual grasses or other introduced species. Native species are diverse. Vegetation nutritional value has not been monitored for.

The presence of cheatgrass is a concern in portions of this allotment. The fine fuels of cheatgrass could lead to a wildfire disturbance in native sagebrush range that would result in elimination of native plants from the ecological sites. Cheatgrass control measures (e.g. herbicide) may be appropriate for this allotment in the future.

Current or existing livestock management practices on native range within the Willard Creek Allotment are not significant causal factors in failing to achieve the Habitat Standard. Utilization data shows generally slight and light grazing use in native sagebrush range. Progress is being made towards achieving the Standard. In sagebrush range, the current grazing management system conforms to the Guidelines. The failure to achieve the Habitat Standard on native range is more attributable to historic grazing pressure, drought, the absence of fire, fire suppression, climate, or other factors.

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

### Standard # 1. Soils.

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

### Standard # 2. Riparian and Wetland Sites

No. Riparian systems in the Willard Creek Allotment are in proper functioning condition.

### Standard # 3. Habitat

No. The failure to achieve the Habitat Standard on native range is more attributable to historic grazing pressure prior to 1980, drought, absence of fire, fire suppression, climate, or other factors. The transition to a range dominated by sagebrush shrubs at Key Area WC-04 or other study sites has occurred over the long term with historic heavy grazing use, lack of wildfire to maintain grasses, and drought being key factors in the transition.

## **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 or existing livestock management practices conform with Guidelines 1.1 and 1.3. Guideline 1.2 is not applicable to the assessment area at this time.*

### GUIDELINES:

- 2.1 Management practices will maintain or promote sufficient vegetation cover, large woody debris, or rock to achieve proper functioning condition in riparian and wetland areas. Supporting the processes of energy dissipation, sediment capture, groundwater recharge, and stream bank stability will thus promote stream channel morphology (e.g. width/depth ratio, channel roughness, and sinuosity) appropriate to climate, landform, gradient, and erosional history.
- 2.2 Where grazing management practices are not likely to restore riparian and wetland sites, land management treatments should be designed and implemented where appropriate to the site.

- 2.3 Management practices are adequate when significant progress is being made toward this Standard.
- 2.4 Grazing management practices will maintain, restore or enhance water quality and ensure the attainment of water quality that meets or exceeds State standards.

***Current or existing livestock management practices conform with Guidelines 2.1, 2.3, and 2.4. Guideline 2.2 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 or existing livestock management practices conform with Guidelines 3.1, 3.2, 3.3, and 3.6. Guidelines 3.4 and 3.5 are not applicable to the assessment area at this time.***

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

Wahoo Ranch Grazing Permit

1. Maintain the permit at 41 cattle from 04/15 – 11/30 for 311 AUMs active preference. Maintain 492 AUMs in mandatory non-use for the conservation and protection of public lands.
2. Grazing use will be in accordance with the final multiple use decision dated December 8, 1993. Maintain the deferred rotational grazing system for three pastures as outlined in the FMUD with a season of use from 4/15 to 11/30.
3. Maintain allowable use levels for key forage species as outlined in the FMUD.
4. Salt blocks and nutritional supplements will be located at least ¼ mile away from riparian areas or watering troughs. Supplement locations should be moved every year.
5. 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.

Prepared by:

Mark Lowrie, Rangeland Management Specialist

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Date

Reviewed by:

Chris Mayer, Lead Rangeland Management Specialist

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Date

I concur:

\_\_\_\_\_  
William E. Dunn  
Assistant District Manager  
Renewable resources

\_\_\_\_\_

Date

**Standards Determination Document**  
**Appendix I**  
**Monitoring Data for the Willard Creek Allotment**

**Findings:** *Monitoring data results describing current resource conditions for Key Areas and study sites in the Willard Creek Allotment as they relate to the Upland Sites Standard and soils indicators are as follows:*

**Willard Creek Allotment Soils correlated to Key Areas**

The Willard Creek Allotment occurs within Major Land Resource Area (MLRA) 028A, the Great Salt Lake Area. The major Soil Mapping Unit (SMU) in the allotment is a 3343, a Huilepass Association. This SMU represents about 45% of the land area of the allotment. SMUs 1305 (Jericho – Armespan Association), and 5020 (Atlanta – Kunzler Association) are also major soil mapping units and together represent another 40% of the land area of the allotment. Key Area WC-01 occurs in SMU 5020. Key Area WC-02 and WC-03 occur in SMU 3343. Key Area WC-04 occurs in SMU 1305.

***Rangeland Monitoring Data***

Vegetation cover data, key forage plant method utilization transect (KFPM) data, ecological condition data, and production data for the Willard Creek Allotment was gathered and reviewed for native key areas and study sites on June 22, 2006 and August 25, 2005. KFPM data is also presented below for 2005, 2003, and 2001. Photographs have been taken and professional observations noted for all these studies.

One key grazing area on native range within the allotment, and three key areas in seeded areas were monitored during the summer of 2006. Key Area WC-01 was originally established in a Russian wild rye seeding in the 1970s (WRS2) and reestablished in April, 2006. Key Areas WC-02 (WRS1) and WC-03 occur in a crested wheatgrass seeding and were also reestablished in April, 2006. Key Area WC-04 occurs in native Wyoming sagebrush range, where it was monitored in 2005 and 2006. The key areas have been selected based on accessibility, soil mapping units (SMU), representative ecological (range) sites, livestock use patterns, and permittee input. The key areas, study sites, and other areas of the allotment have been monitored for many years.

***Line Intercept Vegetation Cover Data***

Vegetation cover data has been gathered at Key Areas WC-01 and WC-04 in June, 2006 and at three study sites in native sagebrush range in August of 2005. Vegetation cover 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. Vegetation cover data for the Willard Creek Allotment is summarized as follows:

**Table 1. Line Intercept Vegetation Cover Data – Willard Creek Allotment**

Key Area	Vegetative Canopy Cover/Litter	Biological Surfaces	Soil Compaction/ Infiltration
WC-01 6/22/06	27.82 feet/ *	Not present	Not recorded
WC-04 6/22/06	24.05 feet/ 6.05 feet	Present	No compaction
WCSS1 8/25/05	19.40 feet/ 6.28 feet	Common	No compaction
WCSS2 8/25/05	24.20 feet/ 5.16 feet	Present	No compaction

WCSS3 8/25/05	23.69 feet/ 7.82 feet	Present	No compaction
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\* Litter was not measured at Key Area WC-01

The canopy and ground cover at Key Area WC-04 and the study sites WCSS1, 2, and 3 (all four areas in native sagebrush range) were found to be similar to the potential of the ecological site. Key Area WC-04 and study sites WCSS1 and WCSS3 are located within a Shallow loam 8-10" P.Z. Ecological Site (028AY017NV). Wyoming big sagebrush, Indian ricegrass, and needleandthread dominate the plant community. Approximate ground cover (basal and crown) is 10 to 20 percent. This compares to 24 percent at WC-04, 19 percent at WCSS1, and 24 percent at WCSS3. Study site WCSS2 is located within a Shallow Calcareous Loam 8-10" P.Z. Ecological Site (028AY013NV). Black sagebrush, Indian ricegrass, and needleandthread dominate the plant community. Approximate ground cover (basal and crown) is 15 to 25 percent. This compares to 24 percent at WCSS2.

**Table 2. Line Intercept Vegetation Cover by Composition – Willard Creek Allotment**

Study Site	Date	Pasture	Linear Cover In Feet	Percent Shrubs	Percent Grass	Percent Forbs
WC - 01	6/22/06	Wild Rye Sdng.	27.82 feet	4.0%	96.0%	0.0%
WC - 04	6/22/06	Native sage	24.05 feet	83.6%	13.3%	3.1%
WCSS1	8/25/05	Native sage	19.40 feet	90.3%	3.0%	6.7%
WCSS2	8/25/05	Native sage	24.20 feet	83.7%	0.4%	5.3%
WCSS3	8/25/05	Native sage	23.69 feet	89.2%	6.5%	3.7%

Range observations that were noted on the vegetation cover forms are as follows:

Overall in the allotment, soils were observed to be stable. Soil surfaces were stabilized by litter, organic matter, and biotic crusts. Biotic crusts such as lichens and mosses were generally present in the interspaces between shrubs. Soils were not compacted, 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 small quantities at one of the five areas monitored above, WCSS3. The frequency or size of rocks was not recorded, however the observation was noted that generally rocks are stabilizing soils in this allotment.

**Forage Utilization – Willard Creek Allotment**

In the summer of 2006 (6/22/06), two key forage plant method transects (KFPM) were conducted in the Willard Creek Allotment. At Key Area WC-01 in the wild rye seeding, current year's utilization up to 6/22/06 was 60% (moderate) of wild rye. At Key Area WC-04 in Wyoming sagebrush range, utilization of Indian ricegrass was 10% and utilization of bottlebrush squirreltail was 5% (slight).

On April 24, 2006 seven KFPM utilization transects were conducted in the Willard Creek Allotment. Use was found to be heavy at two areas and slight at one area in the wild rye seeding. Use was found to be slight in native range and in the crested wheatgrass seeding.

On August 25, 2005 utilization of Indian ricegrass at WCSS1 was 6% and utilization of needlegrass was 2% (slight). At study site WCSS2, utilization of Indian ricegrass was 43% (moderate). At study site WCSS3, Indian ricegrass and needlegrass were not utilized.

In November of 2003, nine KFPM transects were conducted in the Willard Creek Allotment. Overall, use of crested wheatgrass in the seeded area was found to be moderate. Use in the Spring Creek Riparian Meadow complex was found to be heavy on combined riparian species. Use in native sagebrush range varied from 0% to 62%, and was generally light or less.

### ***Historic Forage Utilization – Willard Creek Allotment***

The Willard Creek Allotment Evaluation of 1993 indicated that most of the cattle grazing use during the years preceeding the evaluation occurred in the seeded pastures with very little use on the native range.

Use Pattern Maps (UPM) from the Willard Creek Allotment Evaluation of 1993 for the years 1984, 1985, 1987, 1988, and 1989 show a pattern of slight and light use in the area of the wild rye seeding west of the county road. A pattern of moderate and heavy use is indicated in and around the crested wheatgrass seeding east of the county road. A pattern of slight and light use is indicated in the native sagebrush range in the eastern portions of the allotment.

### ***Range Inspection & Memorandum***

On August 23, 2001 a range inspection was made of the Willard Creek Allotment and four KFPM transects were conducted in the crested wheatgrass seeding. A rangeland memorandum was written describing use levels and the allotment conditions. Use in the seeding varied from moderate to severe. A lack of wheatgrass production was noted, with many plants “crowned out” from historic drought and overgrazing. Cheatgrass was present but noted as not a problem in the seeding. An excerpt from the memorandum follows:

“The native Wyoming sage range to the east of the riparian meadow was in good condition with a good component of needle grass, ricegrass, and other grasses including galleta grass and three awn grass. Scattered young pinyon and juniper trees were present. Small rabbit brush was a minor component in this area. Gravelly rocky soils were stable. We would not have to reseed this area if it burned. Cow tracks were light in the area and utilization was slight or less thus far in the grazing year. Cheatgrass was common and small in the area, no real problem yet. Little deer winter use and no sage grouse sign noted. At a half mile northerly from this area, in similar Wyoming sage range more cheatgrass was present. A healthy native component of perennial grass was still present, used low moderate thus far in the grazing year. Sand dropseed grass and cactus were also present. Some of the grass was still green. Galleta grass was a fair component but not that productive. No other browse species were present, just Wyoming sagebrush. No small rabbit brush present. This area should be seeded lightly if burned.”

### ***Licensed Use – Willard Creek Allotment- John Baal Permit***

Current active permitted use on the Willard Creek Allotment for John Baal is 127 AUMs. From 2000 through 2006 (seven years), licensed livestock use by John Baal averaged 116 AUMs the seven years the allotment was grazed. During the 2003 grazing year, due to drought conditions, 41 AUMs were licensed on the allotment. Licensed use was for the full 127 AUMs each of the other six years.

### ***Licensed Use – Willard Creek Allotment- Wahoo Ranch***

Current active permitted use on the Willard Creek Allotment for Wahoo Ranch is 311 AUMs. From 2000 through 2006 (seven years), licensed livestock use by Wahoo Ranch or the predecessor, the Harbecke permit, averaged 208 AUMs the six years the allotment was grazed. Complete voluntary non – use was taken on the allotment during the 2003 grazing year, due to drought conditions. Licensed use ranged from a high of 284 AUMs in 2006 to a low of 133 AUMs in 2000.

***Findings: Monitoring data results describing current resource conditions for riparian systems in the Willard Creek Allotment as they relate to the Riparian and Wetland Sites Standard and indicators are as follows:***

### ***Riparian System Data***

Riparian systems were monitored on June 22 and 23, 2006 for the Willard Creek Allotment. “Standard Riparian Functioning Condition Checklists” (USDI-BLM 2000) were completed for Shingle Creek, Pine/Ridge Creek, and Spring Creek Meadow. Shingle Creek and Pine/Ridge Creek within the Willard Creek Allotment were evaluated as lotic (stream systems). The location of these streams is as follows:

Shingle Creek - T. 13N., R. 68E., Section 7 SW1/4.

T. 13N., R. 67E., Section 12 SE1/4 and Section 13 N1/2.

Pine/Ridge Creek - T. 13N., R. 68E., Section 19 NE1/4. N: 4318000 E: 726500

Both streams flow into the Willard Creek Allotment from the Shingle Creek Allotment (formerly Humboldt National Forest, now BLM) which is located to the east of the allotment on the west benches of the Snake Mountain Range. Approximately 2 miles of Shingle Creek were evaluated. Approximately 500 yards of Pine/Ridge Creek were evaluated. Pine/Ridge Creek flows in a man made channel and flows as far as 2 miles on the Willard Creek Allotment in a good year.

Both streams were found to be in proper functioning condition (PFC) on June 22 and 23, 2006. Adequate vegetation, debris, and rock were present to dissipate stream energy during high water flows. Bank stability was good. Plant species and vegetative cover were appropriate for the riparian channel and site characteristics. Riparian-wetland plants exhibited high vigor. Several photographs taken of the small stream channels show riparian systems in good condition, with clear water quality, sufficient to support riparian-wetland plants, and little use by herbivores evident. This information is summarized below:

Stream	PFC Rating
Shingle Creek June 22, 2006	Proper Functioning Condition
Pine/Ridge Creek June 23, 2006	Proper Functioning Condition

***Historic data – Shingle Creek - BLM***

Shingle Creek received a good stream habitat rating in the allotment evaluation of 1993. Bank cover was rated 72% of optimum (good) as was bank stability 72% of optimum (good).

***Historic data – Pine/Ridge Creek - BLM***

A Stream Habitat Survey Summary and Analysis was completed for Pine/Ridge Creek in July, 1988. Bank cover was rated 66% of optimum and bank stability was rated 72% of optimum.

***Spring Creek Meadow***

Proper functioning condition studies accomplished on Spring Creek Meadow on June 23, 2006 indicated this 2 acre spring/seep system to be in proper functioning condition (lower end of PFC). The location of Spring Creek Meadow within the allotment is as follows:

T. 13N., R. 67E., Section 25 SW1/4.

Adequate vegetation, debris, and rock was present to dissipate energy during high water flows. Riparian-wetland plants exhibited high vigor. Plant species and vegetative cover were appropriate for the meadow site characteristics. Several photographs taken of the meadow show a riparian system in good condition, with good water quality, sufficient to support riparian-wetland plants, and some use by herbivores evident. Some flow patterns were altered by hoof action and hummocking. This information is summarized below:

Stream	PFC Rating
Spring Creek Meadow June 23, 2006	Proper Functioning Condition

***Findings: Monitoring data results describing current resource conditions for Key Areas and study sites in the Willard Creek Allotment as they relate to the Habitat Standard and habitat indicators are as follows:***

Line intercept cover data, utilization data, memorandum observations, production data, and the native plant species table (p.34) indicate that generally a healthy composition and diversity of native shrubs, grasses, and forbs is present at key areas and study sites within the allotment. The production data from the ecological condition table together with utilization data and professional observation indicate that plant community production is appropriate to site characteristics. Normal year plant production varies from 250 to 500 lbs. per acre for ecological sites within the Soil Mapping Unit (SMU) 1305 (Jericho-Armespan Association). Production at Key Area WC-04 was 417 lbs. per acre and production at WCSS1 was 568 lbs. per acre.

Vegetation composition at Key Area WC-04 is inappropriate to ecological site potential according to the study done in 2006. The study indicates the Wyoming sagebrush composition (95.4%) to be far above the appropriate composition of about 50% shrubs. The native grass component of 4.6% and forb component of a trace are also far below the potential composition of about 45% grasses and 5% forbs. The study done at WCSS1 in 2005, which was accomplished within about 25 yards of the study at WC-04, presents a much healthier vegetation composition.

The canopy and ground cover at several upland grazing areas in the Willard Creek Allotment were found to be similar to the potential of the ecological site. This indicates a healthy vegetation structure. Variation in the height and age class of native plants was noted. Professional observation indicates vegetation distribution (patchiness, corridors) to be appropriate in this area. The vegetation composition changes along the elevation gradient and plant communities are separated by rolling topography broken by washes. A mosaic of plant communities is present. There is a combination of both sagebrush range and pinyon/juniper woodland on the west benches of the Snake Range. There are travel corridors present for grazing animals in the washes between the rolling topography.

Little information is available on nutritional value of the available forage in the area, however it is assumed that the native plant diversity is adequate to sustain animal needs, even in the winter period.

***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.

Although cheatgrass is present in the allotment, and although some data indicates a shrub composition above what should be healthy for the ecological sites (composition by cover table – p. 29) the ecological sites within this allotment are not generally transitioning to plant communities overly dominated by shrubs or by invasive, non-native plant species. A healthy herbaceous component is present, with a soil that has biological crusts in place. The plant communities remain in a stable state, resilient, and somewhat resistant to invasive species spread.

***Ecological Condition***

Ecological condition data for the Willard Creek Allotment was gathered and reviewed for key areas in native range on June 22, 2006 and August 25, 2005. Ecological condition measures the relative abundance and weight of plant community species and compares the current situation with the ecological site potential. The data is summarized as follows:

**Table 2.**  
**Willard Creek Allotment– Ecological Condition Summary**

Study Site	Ecological Site	Location	Dominant Vegetation	Percent Shrubs	Percent Native Grass	Percent Forbs	Trend	Similarity Index	Production Lbs./acre
WC-04 6/22/06	028AY017NV Shallow loam 8-10”	N:4318776 E: 723840	Wyoming sage Indian ricegrass Needleandthread	95.4%	4.6%	Trace	Not Apparent	33%*	417**
WCSS1 8/25/05	028AY017NV Shallow loam 8-10”	N:4318755 E: 723839	Wyoming sage Indian ricegrass Needleandthread	76.2%	18.5%	5.3%	Improving	54%	568
WC-01 6/22/06	Russian Wild rye Seeding	N:4317843 E: 718699	Elymus junceus	65.0%	34.9% Elju	Trace	Not recorded	N/A	272

\* The similarity index is a numerical value given to the resemblance between current vegetative composition & production and the ecological site potential composition & production. The closer the numerical value is towards 100, the more the current vegetative condition resembles site potential and ecological health.

\*\* 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 Shallow loam 8-10” site is 400 lbs. per acre. Unfavorable year production is 200 lbs. per acre.

At WCSS1 on 8/25/05 cheatgrass made up a trace of plant community production.

At WC-04 on 6/22/06 cheatgrass also made up a trace of plant community production.

Potential vegetative composition for the Shallow loam 8-10” site is about 45% grasses, 5% forbs, and 50% shrubs.

A combination of all of the range monitoring studies accomplished in the allotment since 1982 indicate a diversity of native upland vegetation is present in the allotment. The following table lists the native upland plant species that have been observed in the allotment:

**Table 3. Native Plant Species - Willard Creek Allotment – Grasses, Forbs, and Shrubs**

Common Name	Symbol	Common Name	Symbol
Indian ricegrass	Orhy	Indian paintbrush	Casti2
Needleandthread	Heco26	Prince’s plume	Stan1
Galleta grass	Hija	Aster	Aster
Squirreltail grass	Sihy	Groundsmoke	Gara2
Bluegrass	Poa	Miner’s candle	Crypt
Sand dropseed	Spcr		
Threeawn grass	Arist		
Sandberg’s blue	Pose	Little leaf mahogany	Cein7
Bluebunch wheat	Pssp6	Mormon Tea	Epne
Muttongrass	Pofe	Douglas rabbitbrush	Chvi8
Sedge	Carex	Fourwing saltbush	Atca2
Rush	Juncus	Broom Snakeweed	Gusa2
Saltgrass	Dist	Horsebrush	Tetra3
Mat muhly	Muri	Spiny hosage	Grsp
Alkali bluegrass	Poju	Black sagebrush	Arno4
Nevada bluegrass	Pone	Shadscale	Atco
Kent. bluegrass	Popr	Winterfat	Eula5
		Bud sagebrush	Arsp5
Loco (milkvetch)	Astra	Wyoming sagebrush	Artrwy
Globemallow	Sphae	Basin big sagebrush	Artr
Penstemon	Penst	Black greasewood	Save4
Eriogonum	Eriog	Downy rabbitbrush	Chvip4
Cinquefoil	Poten	Stansbury cliffrose	Pust
Phlox	Phlox	Wild rose	Rosa
		Willow	Salix

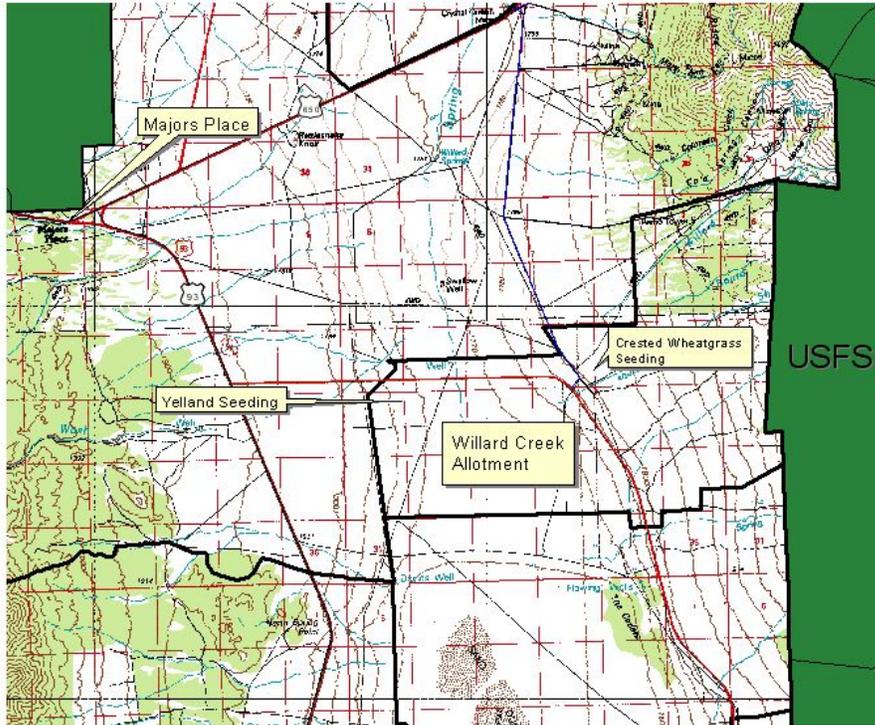
The following precipitation data by year is presented for the Ely Weather Station (Yelland Field) as summarized by the National Oceanic and Atmospheric Administration. The precipitation totals are for **crop year precipitation**, or that moisture (including snow) measured from September through June. 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. Eight of the ten 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

Figure 1



# John Baal Term Permit Renewal Willard Creek Allotment



- Rangeimp\_area.shp
- Allotments.shp
- BATTLE MTN.
- CALIENTE
- CALIENTE/ELY
- CLOSED
- ELKO
- ELY
- ELY/CALIENTE
- LAS VEGAS
- TONOPAH
- USFS
- UTAH

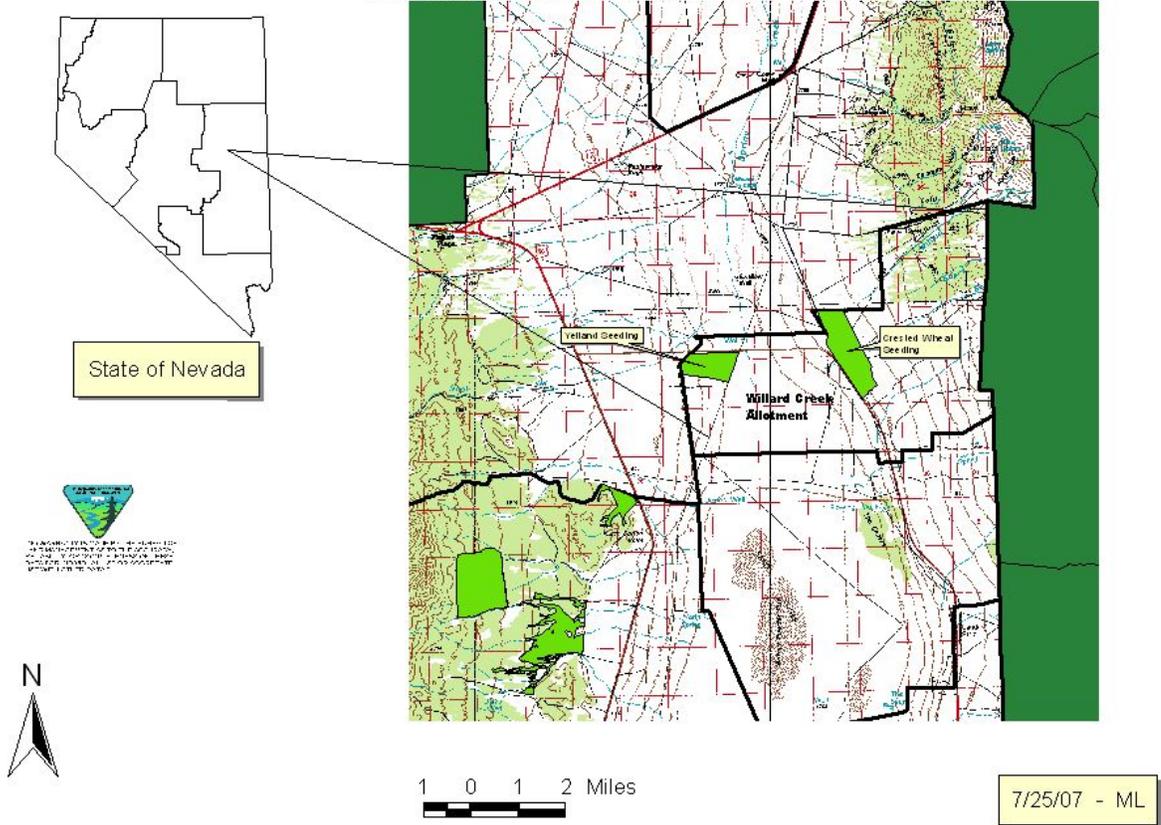


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Ely Field Office BLM  
12/05/06

**Figure 2**  
**General Location Map**  
**Willard Creek Allotment**



**Appendix II  
Grazing Permit Terms and Conditions**

**Terms and Conditions of Authorized Use - Wahoo Ranch Permit**

The active permitted use (grazing preference) associated with this term permit renewal authorizes 311 AUMs of cattle grazing in the Willard Creek Allotment with a season of use from 04/15 through 11/30. This permit is summarized as follows:

Allotment Number/Name	Livestock		Grazing Period		% Public Land	Type Use	AUMs
	Number	Kind	Begin	End			
10127 Willard Creek	41	Cattle	04/15	11/30	100%	Active	311

The allotment summary is as follows:

Allotment	Preference		Total
	Active	Suspended	
Willard Creek	311	492*	803

\* 492 AUMs are held in non-use for conservation/resource protection purposes in accordance with the Multiple Use Decision for the Willard Creek Allotment dated December 8, 1993.

**Terms and Conditions:**

In accordance with 43 CFR 4130.3-2, the following terms and conditions will be included in the grazing permit for Wahoo Ranch on the Willard Creek 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.

**Additional Terms and Conditions:**

1. All grazing use will be in accordance with the final multiple use decision (FMUD) dated December 8, 1993.
2. 492 AUMs shown in suspension will be put in mandatory non-use for the conservation and protection of public lands.
3. Grazing will be in accordance with the deferred rotational grazing system as outlined for cattle with a season of use from 4/15 to 11/30. This grazing system is as follows:

Year	Pasture	Season of Use
1	East	4/15 - 9/09
	Native	9/10 - 10/18
	West	10/19 - 11/30
2	Native	4/15 - 5/24
	West	5/25 - 7/07
	East	7/08 - 11/30
3	West	4/15 - 5/29
	East	5/30 - 10/23
	Native	10/24 - 11/30
4	Repeat grazing system cycle	

4. Allowable use levels are outlined in the 1993 FMUD and are as follows:
  - AGCR - 50% season long (4/15 – 11/30)
  - ELJU - 55% season long (4/15 – 11/30)

ORHY - 55% year long  
ARTR - 45% year long  
RIPARIAN GRASSES & GRASS-LIKES - 50% year long  
WILLOW - 45% year long

5. Certified actual use reports by use area and pasture are due 15 days after the end of the authorized grazed period.
6. To improve livestock distribution the placement of mineral block and/or salt block will be a minimum distance of ½ mile from water, or as approved by the authorized officer.
7. BLM and Wahoo Ranch will work together on an annual basis to identify livestock management practices to be implemented for each year in the Willard Creek Allotment. Annual grazing may be modified from the terms and conditions listed above in consideration of climatic conditions such as drought, forage availability, wildfire locations, and/or other factors, as long as vegetative objectives are met. Grazing use will be in accordance with Standards and Guidelines for Rangeland Health.
8. The permittee is required to perform normal maintenance on the range improvements that have been or will be issued through approved cooperative agreements or section 4 permits.
9. Water hauling to temporary water haul sites may be required on an annual basis to distribute cattle use. Water hauling locations will be coordinated with the grazing permit holder and will be determined by the authorized officer.
10. During the ten year period of this term permit renewal, the BLM and Wahoo Ranch will monitor the Willard Creek Allotment for resource conditions in order to determine the effectiveness of the term permit renewal in achieving or making progress towards achieving the Standards for Rangeland Health. Wahoo Ranch will be encouraged to participate in the monitoring. Rangeland monitoring may be conducted both prior to and following annual use. Monitoring conducted prior to annual use will determine areas of forage availability and cattle stocking levels. Monitoring conducted following grazing use will determine utilization levels and use patterns. Specific rangeland monitoring studies could include Proper functioning condition riparian studies (PFC), vegetation cover studies, ecological condition studies, key forage plant method utilization transects (KFPM), use pattern mapping, frequency trend, observed apparent trend, professional observation, and photographs.

**Appendix III**  
**Noxious Weed Risk Assessment**  
**Wahoo Ranch Term Permit Renewal**

On June 30, 2006 a Noxious Weed Risk Assessment was completed for a proposed grazing term permit renewal, located on public lands in White Pine County, Nevada within the Ely Field District Bureau of Land Management. The proposed term permit renewal occurs in south Spring Valley within the Willard Creek Grazing Allotment. The permit renewal covers approximately 10,250 acres of public land. The legal location of the term permit renewal area is as follows:

T. 13N., R. 67E., many sections

T. 13N., R. 68E., portions of sections 6,7,18,19,30 (all in White Pine County)

The four main vegetation types within the Willard Creek Allotment are salt desert shrub, black sagebrush, and Wyoming sagebrush ecological sites and pinyon-juniper woodlands. The dominant vegetation consists of greasewood, black sagebrush, Wyoming sagebrush, Indian ricegrass, needleandthread grass, and assorted other native perennial grasses and forbs.

A tour and field inspection for noxious weeds and invasive species was conducted on June 30, 2006. Photographs of the term permit renewal area were taken during the field inspection.

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

For this project, the factor rates as low (3) at the present time. A few noxious weed species are located on public lands within the project area, as verified by field inspection and the Ely Field Office Weeds Inventory. The Ely Weeds Inventory (Weedpoints\_012607) indicates that there is one occurrence of Canada thistle (*Cirsium arvense*) on the county right of way near the aqueduct in the middle portion of the allotment. Bull thistle (*Cirsium vulgare*) is present along Willard Creek and the aqueduct from Shingle Creek. Salt cedar (*Tamarix spp.*) occurs about 0.75 miles south of the south allotment boundary, in the Scotty Meadows Allotment. Hoary cress (*Lepidium draba*) also occurs in the Scotty Meadows Allotment. The invasive non-native annual grass cheatgrass (*Bromus tectorum*) is present in portions of the allotment. The invasive species halogeton (*Halogeton glomeratus*), Russian thistle (*Salsola kali*), and mustard are also present in the allotment and along access roads.

The term permit renewal is not likely to result in the establishment of noxious weeds in the term permit renewal area. However, the proposed term permit renewal could result in the spread and establishment of halogeton, cheatgrass, mustard, or halogeton.

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

For this term permit renewal, the factor rates as low (3) at the present time. This means that there are no expected cumulative effects to native plant communities. There is minor possibility of noxious weeds being carried in to the area by normal size pickup trucks or by equipment used for water hauling. Minor adverse effects of noxious weeds becoming established are possible.

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

For this term permit renewal, the Risk Rating is low (9) at the present time. Preventive management measures for noxious weeds should be developed to prevent spread of noxious species into the term permit renewal area. These measures (mitigation) are as follows:

1. Trucks and other heavy equipment used in water hauling activity will be washed prior to entering the project area.
2. Wahoo Ranch and BLM will watch for and report or eradicate any small noxious weed patches in the project area.
3. The range specialist for the Willard Creek Allotment will include weed detection into normal rangeland monitoring activities.
4. The term permit renewal area will be monitored for noxious weeds for at least three consecutive years following renewal of the permit.

The term permit renewal can proceed as planned. Control treatments would be initiated on noxious weed populations that establish in the area.

Reviewed by: \_\_\_\_\_ Date:

## Appendix IV - List of References

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