

# Ruby #8 and Bennett Field Allotments Grazing Permit Renewal



## ENVIRONMENTAL ASSESSMENT

Wells Field Office  
4130 (NVE0300)



# **September 2011**

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It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

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**Cover Photo taken by Terrell Dobis, Rangeland Management Specialist, Elko NV**

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## **Attachments**

Attachment 1: Ruby #8 and Bennett Field Allotment and Proposed Projects Map

Attachment 2: Special status species with a potential to exist within the sagebrush and salt desert scrub habitats in the Ruby 8 and Bennett Field Allotments.

Attachment 3: Special status species with a potential to exist within the wetland habitats in the Ruby 8 and Bennett Field Allotments.

Attachment 4: Birds associated primarily with sagebrush and salt desert scrub habitats

Attachment 5: Additional birds associated primarily with riparian habitats

## **Appendices**

Appendix A: Ruby #8 Northeastern Great Basin Standards and Guidelines Assessment

Appendix B: Bennett Field Northeastern Great Basin Standards and Guidelines Assessment.

Appendix C: Addendum to the Ruby #8 and Bennett Field Allotments Northeastern Great Basin Standards and Guidelines Assessment.

## 1 – INTRODUCTION

The Bureau of Land Management, Elko District, Wells Field Office (BLM) proposes to issue a grazing permit renewal to provide area-specific direction and management actions for the Ruby #8 and Bennett Field Allotments. In 2006 the BLM completed Standards and Guidelines Rangeland Health Assessments that analyzed monitoring data collected between 1990 and 2005 for Ruby #8 Allotment, and monitoring data collected between 1987 and 2005 for Bennett Field Allotment, and concluded that the allotments are attaining multiple use objectives and achieving standards established by the *Northeastern Great Basin Standards and Guidelines for Grazing Administration* (RAC, 1997). In 2008 the BLM then issued a Final Decision to issue livestock grazing permits to the permittees in the Ruby #8 and Bennett Field Allotments with no changes to the terms and conditions.

Even though the Ruby #8 Allotment is meeting the established standards and guidelines, there has been a need identified by the permittees for an additional water source on the eastern side of the allotment to further improve livestock distribution. The proposed well location was determined in coordination between the BLM and permittees. Also, two of the three permittees regularly request a change in season of use from the authorized season of use.

One of the permittees on the Ruby #8 Allotment also has a permit to graze livestock in the Bennett Field Allotment under the same authorization number. No changes are being proposed for the Bennett Field portion of the permit at this time; the Bennett Field Allotment is included under this Environmental Assessment to keep the two allotments under the same authorization number for this permittee and to prevent an increase in administrative workload.

This environmental assessment (EA) has been prepared for compliance with the National Environmental Policy Act of 1969 (NEPA). This EA tiers to the Environmental Impact Statement (EIS) for the 1985 Wells Resource Management Plan (RMP) as amended ([http://www.blm.gov/nv/st/en/fo/elko\\_field\\_office/blm\\_programs/planning.html](http://www.blm.gov/nv/st/en/fo/elko_field_office/blm_programs/planning.html)), and incorporates by reference relevant portions of the 2006 Standards and Guidelines Rangeland Health Assessments (see appendices A and B). In addition the BLM has prepared an addendum to the 2006 Standards and guidelines assessments which addresses Standard 2, Riparian Wetlands (Appendix C). These documents are also available upon request at the Elko District Office.

### 1.1 Purpose and Need

The purpose of the action is to modify the terms and conditions on livestock grazing permits for the Ruby #8 Allotment by changing the season of use and to add a range improvement by installing and equipping a new well. The need for the action is to

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improve the distribution and timing of livestock use and to fully process and issue livestock grazing permits in compliance with all applicable laws and regulations.

## 1.2 Relationship to Laws, Policies and Land Use Plans

The Federal Land Policy and Management Act of 1976 (FLPMA) requires an action under consideration be in conformance with the applicable BLM land use plan, and be consistent with other federal, state, local and tribal policies to the maximum extent possible.

### 1.2.1 BLM Land Use Plan Conformance

The proposed action is in conformance with the Proposed Wells Resource Management Plan (RMP) (BLM 1985a), as approved in the Wells Resource Management Plan Record of Decision dated July 19, 1985 and as amended. The proposed action is also consistent with allotment specific objectives from the Wells Rangeland Program Summary dated September 15, 1986.

#### A. Wells Resource Management Plan Record of Decision

1. Livestock Grazing (BLM, 1985b., p. 17)
  - a. Provide for livestock grazing consistent with other resources.
  - b. Livestock grazing will continue in all allotments.
  - c. Monitor and adjust grazing management systems and livestock numbers as required.
2. Terrestrial Wildlife Habitat (BLM, 1985b., p. 19-22)
  - a. Conserve and/or enhance wildlife habitat to the maximum extent possible.
  - b. Eliminate all of the fencing hazards in crucial big game habitat and most of the fencing hazards in non-crucial big game habitat.

#### B. Wells Rangeland Program Summary, Allotment Specific Objectives for Ruby #8 (BLM, 1986, p. 22)

1. Livestock Grazing
  - a. Improve livestock distribution in the eastern portion of the allotment.
  - b. Improve ecological status of the northern third of the allotment.
  - c. Enhance production of spring forage within the south eastern portion of the allotment.
2. Terrestrial Wildlife Habitat
  - a. Manage rangeland habitat to provide forage for wildlife: Antelope 22 AUMs.
  - b. Facilitate big game movements by fence modification.

#### C. Wells Rangeland Program Summary, Allotment Specific Objectives for Bennett Field (BLM, 1986, p. 26)

1. Livestock Grazing
  - a. Provide forage to sustain 180 AUMs for livestock grazing.
  - b. Manage livestock to maintain present ecological status and trend.

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## 2. Terrestrial Wildlife Habitat

- a. Manage rangeland habitat to provide forage for wildlife: Antelope 5 AUMs.
- b. Facilitate big game movements by fence modification.

### 1.2.2 Consistency with Non-BLM Authorities

The proposed action is further consistent with other Federal, State and local land use policies and plans to the maximum extent possible. This includes the *Nevada Statewide Policy Plan of Public Lands* (Nevada Division of State Lands, 1986) and the *Elko County Public Land Use and Natural Resource Management Plan* (Elko County, 2010).

The following table identifies elements of the human environment that are regulated by a statutory or regulatory authority that would be affected and are analyzed in chapter 3 of this EA, as well as those that BLM determined would not be affected.

**Table 1.2.2: Supplemental authorities and rationale for detailed analysis for the Proposed Action**

ELEMENT/RESOURCE	Not Present	Present Not Affected	Present Potentially Affected	Rationale/Reference Section
Air Quality and Climate Change		X		Actions would not affect the resource
Area of Critical Environmental Concern	X			Statutory authority is not present and not further addressed in this EA
Cultural Resources			X	See Section 3.2.7
Environmental Justice	X			Statutory authority is not present and not further addressed in this EA
Farm Land - Prime/Unique	X			Statutory authority is not present and not further addressed in this EA
Floodplains		X		Actions would not affect the resource
Migratory Birds			X	See Section 3.2.5
Native American Religious Concerns			X	See Section 3.2.8
Non-Native Invasive and Noxious Species			X	See Section 3.2.4
Threatened/Endangered Species		X		See Section 3.2.5
Water Quality (Surface/Ground)			X	See Section 3.2.2
Wastes, Hazardous/Solid	X			Statutory authority is not present and not further addressed in this EA
Wetlands, Riparian Zones			X	See Section 3.2.3
Wild & Scenic Rivers	X			Statutory authority is not present and not further addressed in this EA
Wilderness	X			Statutory authority is not present and not further addressed in this EA

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## 2 – PROPOSED ACTION AND ALTERNATIVES

This chapter describes the Proposed Action and No Action alternatives. It also describes alternatives that BLM considered but eliminated from further analysis in this EA.

### 2.1 Components Common to All Alternatives

This section describes components that are common to all alternatives. The components discussed below are in effect on current grazing permits and are not going to be modified at this time. These components would be carried forward “as is” on the new grazing permits.

#### Standard Elko District Terms and Conditions

1. Actual use data on all pastures must be submitted to this office within 15 days from the last day of use.
2. Supplemental feeding is limited to salt, mineral and/or protein supplements in block, granular or liquid form. Such supplements must be placed at least ¼ mile from live waters (springs, streams), troughs, wet or dry meadows and aspen stands.
3. All riparian exclosures, including spring development exclosures, are closed to livestock use unless specifically authorized in writing by the authorized officer.
4. Pursuant to 43 CFR 10.4 (G), the holder of this authorization must notify the authorized officer by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects or objects of cultural patrimony. 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.
5. The terms and conditions of your permit may be modified if additional information indicates that revision is necessary to conform to 43 CFR 4180. See discussion for cultural resources at 2.2.4 below for possible exceptions to term and condition #2.

### 2.2 Proposed Action

The proposed action is to fully process and issue two grazing permits for the Ruby #8 Allotment with modifications to the terms and conditions, install and equip a new well, and fully process and issue one grazing permit for the Ruby #8 and Bennett Field Allotments. Modifications to terms and conditions are only proposed for the Ruby #8 Allotment portion of the permit.

#### 2.2.1 Issue New Grazing Permits

The BLM is proposing to issue two grazing permits for the Ruby #8 Allotment (permits 2701028, and 2701078) and modifying terms and conditions of the permits by changing the season of use and some of the stipulated terms. The current season of use is 4/20 to 9/30. These permittees have regularly requested a change in season of use from

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spring/summer to fall/winter; the requests have been approved by management as being within the intent of the permit. The proposed season of use would be 6/10-9/30 **or** 10/10-1/15; this would allow each of the three permittees to choose between spring/summer or fall/winter grazing of the allotment on an annual basis.

The BLM is also proposing to issue one grazing permit for the Ruby #8 and Bennett Field Allotments (permit 2701071). Terms and conditions of the Ruby #8 portion of the permit would be modified. The current season of use is 4/20 to 9/30. The proposed season of use would be 6/10-9/30 **or** 10/10-1/15; this would allow the permittee to choose between spring/summer, or fall/winter grazing of the allotment on an annual basis. Terms and conditions of the Bennett Field portion of the permit would not change.

Once approved, the fully processed and issued permits would become effective in 2012 on the earliest turnout date authorized on each permit.

## 2.2.1.1 Issue New Grazing Permit to Authorization #2701028

The following are the proposed terms and conditions on the grazing permit that would be issued to Authorization #2701028 under the proposed action. The total permitted use under this authorization would remain the same and be summarized on the permit under the Allotment Summary.

### Proposed Mandatory Terms and Conditions

Allotment	Pasture	Livestock Number	Livestock Kind	Grazing Period Begin	Grazing Period End	Percent Public Land	Type of Use	AUMs*
Ruby #8	Native	108	Cattle	6/10	1/15	100	Active	781
	Seeding	29	Cattle	6/10	1/15	100	Active	210
	FFR	6	Cattle	6/1	6/30	100	Active	6

\*The active AUMs in this table differ from the Allotment Summary due to calculations and rounding.

### Proposed Other Terms and Conditions

1. The term of the grazing permit will be for the period of the base property lease with renewal approved concurrently with the base property lease up to 10 years.
2. Lines 1 and 2 represent use that will be taken between 6/10 - 9/30 or 10/10 - 1/15, but not both. Grazing use must be applied for in advance annually. Annual total grazing use of the allotment shall not exceed the permittee's active preference AUMs.
3. Line 3 represents AUMs which occur on public land fenced in with private land (originally part of Vaughan and Connelly Ranches) controlled by the permittee.

### Authorization #2701028 Allotment Summary (AUMs)

Allotment	Active AUMs	Suspended AUMs	Total Grazing Preference
Ruby #8	1,003	1,864	2867

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## 2.2.1.2 Issue New Grazing Permit to Authorization #2701078

The following are the proposed terms and conditions on the grazing permit that would be issued to Authorization #2701078 under the proposed action. The total permitted use under this authorization would remain the same and be summarized on the permit under the Allotment Summary.

### Proposed Mandatory Terms and Conditions

Allotment	Pasture	Livestock Number	Livestock Kind	Grazing Period Begin	Grazing Period End	Percent Public Land	Type of Use	AUMs
Ruby #8	Native	96	Cattle	6/10	1/15	100	Active	694
	Seeding	12	Cattle	6/10	1/15	100	Active	87

### Proposed Other Terms and Conditions

Lines 1 and 2 represent use that Use will be taken between 6/10 - 9/30 or 10/10 - 1/15, but not both. Grazing use must be applied for in advance annually. Annual total grazing use of the allotment shall not exceed the permittee's active preference AUMs.

### Authorization #2701078 Allotment Summary (AUMs)

Allotment	Active AUMs	Suspended AUMs	Total Grazing Preference
Ruby #8	781	1,518	2,299

## 2.2.1.3 Issue New Grazing Permit to Authorization #2701071

The following are the proposed terms and conditions on the grazing permit that would be issued to Authorization #2701071 under the proposed action. Under Authorization #2701071, grazing is permitted in two allotments: Ruby #8 and Bennett Field.

### Proposed Mandatory Terms and Conditions

Allotment	Pasture	Livestock Number	Livestock Kind	Grazing Period Begin	Grazing Period End	Percent Public Land	Type of Use	AUMs
Ruby #8	Native	16	Cattle	6/10	1/15	97	Active	112
	Seeding	8	Cattle	6/10	1/15	97	Active	56
	FFR	8	Cattle	6/20	7/20	100	Active	8
Bennett Field		150	Cattle	5/11	8/25	34	Active	179

### Proposed Other Terms and Conditions

- Lines 1 and 2 represent use that will be taken between 6/10 - 9/30 or 10/10 - 1/15, but not both. Grazing use must be applied for in advance annually. Annual total grazing use of the allotment shall not exceed the permittee's active preference AUMs.
- Line 3 represents AUMs which occur on public land fenced in with private land controlled by the permittee.

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## Authorization #2701071 Allotment Summary (AUMs)

Allotment	Active AUMs	Suspended AUMs	Total Grazing Preference
Ruby #8	179	791	970
Bennett Field	180	160	340

### 2.2.2 Water Well Installation

The permittees are proposing to install and equip a livestock watering well with a point of diversion and place of use in T. 29 N., R. 59 E., sec. 26, NW1/4 SW1/4 M.D.M. The development would consist of a ground water well, pump, solar panels, storage tank, a single 1200 gallon or smaller stock trough and associated apparatus.

The water well portion of the project is proposed by the permittees in an effort to provide water for cattle in the portion of the allotment which would be served in and nearby the aforementioned place of use. The permittees and BLM have identified this as an area with insufficient water.

The permittees are proposing to develop water at the source by drilling a groundwater well 50 to 200 feet deep and installing all livestock watering appurtenances within a radius of 100 feet. The permittees would also build a small enclosure for apparatus such as the storage tank and solar panels. Total direct disturbance for the proposed well development would be less than one acre.

Access to the proposed well site would be provided by an existing road. Well drilling and other project related disturbance would occur within 100 feet of this road. The permittees would not be authorized to make any road improvements or cause any new disturbance through access other than that which would occur near the proposed well site.

Permittees would enter into a cooperative rangeland improvement agreement with the BLM and would be responsible for construction and maintenance of the facility. The facility would be operated by the permittees and would provide water for livestock at their discretion and in accordance with the terms and conditions of their grazing permit. In the event that the project is abandoned, any existing improvements would be removed and the well plugged in accordance with State of Nevada requirements. All Water rights would be filed and held in accordance with Nevada state law.

### 2.2.3 Environmental Design/Resource Protection

#### General

- The permittee would follow guidance provided in BLM manual 1741-2 regarding livestock water developments and would provide BLM with specific plans which would need to be approved prior to beginning work on the Section 26 Well.
- Permittees would be responsible for hazardous materials cleanup at the well site for activities within their control. No more than 25 gallons of petroleum products may be stored at the site. In the event of a hazardous material spill during drilling

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the permittees would be financially responsible for documentation and cleanup. The permittees would not be responsible for hazardous material dumping at the site beyond their control.

- The permittee would paint the storage tank BLM Standard Environmental Color Shadow Grey to more adequately blend with the surrounding environment.
- Access roads would not be constructed to the well site. No blading or scraping of the ground would be permitted.

## Wildlife

- If well site construction were to occur between 1 March and 31 August, it would be required that a wildlife biologist survey the immediate drilling site for migratory bird and raptor nests. If a nest is found, construction would be postponed until after completion of the nest.
- Wildlife would be able to access the trough and a bird ladder shall be installed in the trough by the permittee.

## Cultural

- As a measure to control potential impacts to cultural resources, permittees would not add to or alter their current salting locations within the Ruby #8 allotment due to the installation of the new well, except that salt could be placed within 200 feet of the Ruby 8, Section 26 Well.
- An exception to the Standard Elko District Terms and Conditions above at 2.1.1 regarding the requirement to place supplements at least ¼ mile from troughs may be enacted to mitigate impacts to cultural resources by drawing livestock away from historic properties if necessary (a.k.a. cultural resources eligible for listing on the National Register of Historic Places). BLM would insure placement exceptions would not impact wildlife, meadow or other resources and would coordinate with the permittees regarding supplement placement.

### **2.2.4 Monitoring**

After a period of at least two years the BLM would monitor the vicinity of the proposed Ruby 8, Section 26 Well to determine whether livestock activity has exposed cultural resources not seen previously on the surface (i.e. exposure of subsurface cultural deposits via trampling, erosion, or similar processes). Should subsurface cultural resources be subsequently identified in the vicinity of the well the permittees would immediately shut off the water supply to the stock trough. BLM would work with the grazing permittees and Nevada State Historic Preservation Office to eliminate or reduce effects to the point where they would not be adverse either in the short or long term. Among but not limited to measures that would be considered are: changes in when, how often and/or if the Section 26 Well would be pumped, installation of fencing and use of mineral blocks to alter use patterns, and data recovery at the affected site(s). Upon emplacement of appropriate mitigation measures, the authorized officer would provide the permittees with written notice that use of the well could resume.

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Permittees are responsible for complying with measures to protect cultural resources. Should damages to these resources occur due to failure to comply with these terms, the permittees would be responsible for funding data recovery or restoration costs at the affected cultural resource site(s).

## 2.3 No Action Alternative

Under this alternative, three new grazing permits for the Ruby #8 Allotment would be issued with no modifications to the grazing permit terms and conditions. The season of use would remain 4/20 to 9/30 and no new well would be installed. A new grazing permit for the Bennett Field Allotment would be issued with no modifications to the grazing permit terms and conditions.

### 2.3.1 Current Terms and Conditions for Authorization #2701028

The following are the current terms and conditions on the grazing permit for Authorization #2701028. These are the terms and conditions that would be on a new permit if no changes in current grazing management are made.

#### Current Mandatory Terms and Conditions

Allotment	Livestock Number	Livestock Kind	Grazing Period Begin	Grazing Period End	Percent Public Land	Type of Use	AUMs
Ruby #8	80	Cattle	4/20	7/10	100	Active	216
	79	Cattle	7/11	9/30	100	Active	213
	6	Cattle	6/01	6/30	100	Active	6
	105	Cattle	4/20	9/30	100	Active	566

#### Current Other Terms and Conditions

1. The term of the grazing permit will be for a period of the lease (initially 5 years) with renewal approved concurrent with the lease up to 10 years.
2. Line 1 represents the Seeding Pasture.
3. Line 2 and 4 represents use in the Native Pasture.
4. Line 3 is fenced AUMs occurring in the Vaughn and Connelly Ranch Pastures.

### 2.3.2 Current Terms and Conditions for Authorization #2701078

The following are the current terms and conditions on the grazing permit for Authorization #2701078. These are the terms and conditions that would be on a new permit if no changes in current management are made.

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## Current Mandatory Terms and Conditions

Allotment	Pasture	Livestock Number	Livestock Kind	Grazing Period Begin	Grazing Period End	Percent Public Land	Type of Use	AUMs
Ruby #8	Seeding	55	Cattle	5/01	6/15	100	Active	83
	Native	272	Cattle	6/16	9/01	100	Active	698

### 2.3.3 Current Terms and Conditions for Authorization #2701071

The following are the current terms and conditions on the grazing permit for Authorization #2701071. These are the terms and conditions that would be on a new permit if no changes in current management are made. Under Authorization #2701071, grazing is permitted in two allotments: Ruby #8 and Bennett Field.

## Current Mandatory Terms and Conditions

Allotment	Pasture	Livestock Number	Livestock Kind	Grazing Period Begin	Grazing Period End	Percent Public Land	Type of Use	AUMs
Ruby #8		24	Cattle	4/25	7/10	97	Active	59
		47	Cattle	6/20	9/01	97	Active	111
	FFR	8	Cattle	6/20	7/20	100	Active	8
Bennett Field		150	Cattle	5/11	8/25	34	Active	179

## Current Other Terms and Conditions

Line 3 describes AUMs (8) which occur on public land which is fenced in with private land owned by the permittee.

## 2.4 Alternatives Eliminated from Further Analysis

Well installation only (no changes in permit terms) was considered in the initial stages of scoping but was eliminated from further analysis because it did not address desired changes in season of use.

BLM and Grazing permittees initially considered removal of the seeding fence in the Southern portion of the Ruby #8 allotment. The grazing permittees requested that the fence remain and fence removal was dropped from the Proposed Action.

Discontinuing grazing within the Ruby #8 and Bennett Field Allotments is not considered in detail in this Environmental Assessment. If grazing permits are not renewed they would eventually expire. This would result in the discontinuation of livestock grazing in the Ruby #8 and Bennett Field Allotments. This alternative is not in compliance with the objectives identified in the Wells RMP Record of Decision and the Wells Rangeland Program Summary, nor is it in compliance with the multiple use mandate of FLPMA. The Allotments are currently meeting the *Northeastern Great Basin Standards and Guidelines for Grazing Administration* as determined in 2006 and 2009 (Attachments A,

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B, and C) with the current grazing management, so there is no compelling reason to consider allowing the grazing permit to expire and to eliminate grazing.

## 3 – AFFECTED ENVIRONMENT / ENVIRONMENTAL EFFECTS

### 3.1 Scope of Analysis

#### Setting

The Ruby #8 Allotment and the Bennett Field Allotment are located in southern Ruby Valley, approximately 52 miles southwest of Wells, Nevada. The Ruby #8 Allotment contains 29,205 acres 99% of which (29,031 acres) is BLM administered land. The Bennett Field Allotment contains 2,717 acres 41% of which (1,125 acres) is BLM administered land (See Attachment 1).

The Ruby #8 Allotment is grazed in common by three permittees who hold a combined total of 1,963 AUMs in active grazing preference on the allotment. One of the Ruby #8 permittees also utilizes the Bennett Field Allotment and holds 180 AUMs in active grazing preference on Bennett Field. The permittees meet all of the qualifications to graze livestock on public lands administered by the BLM as outlined in Title 43 Code of Federal Regulations Part 4100 –*Grazing Administration-Exclusive of Alaska*.

The Ruby #8 Allotment is divided into two pastures: the Native Pasture is located in the Northern portion of the allotment and comprises 83% of the land area. The Seeding Pasture is the southern-most 17% of the allotment (see Attachment 1). The vegetation in the Seeding Pasture is a mixture of sagebrush community and crested wheatgrass; a portion of the pasture was seeded with crested wheatgrass in 1967 and has since seen some re-growth of sagebrush within the seeded area. The Native Pasture is mainly an alkali flood plain bordered on the southwest by Franklin Lake and was flooded periodically by the lake in the 1980's. Vegetation in the Native Pasture consists primarily of plants typical to a salt desert scrub community (greasewood, Inland saltgrass, and Western wheatgrass) along with some sagebrush. The flooding led to a change in vegetation, reducing the amount of brush and increasing the amount of grass.

The Seeding Pasture has two existing water wells that are centrally located in the pasture: one is located in the crested wheatgrass seeding and the other just outside of the seeding to the east (see Attachment 1). There are six developed water sources in the Native Pasture: three water gaps are located along the pasture boundary in the northwestern corner (only one shown on Attachment 1), one well is near the western boundary, one well is in the mid-northern portion of the pasture, and another well is in the southwestern corner of the pasture. There is no developed water sources located in the mid-eastern to northeastern portions of the Native Pasture.

The Bennett Field Allotment is adjacent to a portion of the Ruby #8 Allotment's northern boundary. The Bennett Field Allotment is mainly comprised of an alkali flood plain with vegetation consisting of Western wheatgrass and inland saltgrass with interspersed sagebrush islands. The western side of the allotment is a sandy upland site with Thurber's needlegrass, needle and thread and Indian ricegrass as the dominant grass species.

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There are two developed water sources in the Bennett Field Allotment: one is on private land in the south end of the allotment and the other is on public land centrally located in the middle of the allotment.

## **3.1.1 Potentially Affected Resources and Uses**

Issues analyzed for direct, indirect and cumulative impacts are summarized below.

## **3.1.2 Related Past, Present and Reasonably Foreseeable Actions**

The Council on Environmental Quality (CEQ) regulations define cumulative impacts as: “[T]he impact on the environment which results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions regardless of what agency (Federal or Non-Federal) or person undertakes such actions.” Past present and reasonably foreseeable future actions (PPRFFA’s) related to the analysis of cumulative impacts on resources or uses affected by the proposed action primarily include livestock grazing, agriculture/hay farming, dispersed recreation, oil and gas exploration, and transportation.

### Livestock Grazing

Grazing of domestic cattle, sheep and horses has occurred on public and private lands in the area since at least the 1860s. Livestock grazing on public lands remained unregulated until the passage of the 1934 Taylor Grazing Act established the U.S. Grazing Service. Public lands were then adjudicated and forage allocated for livestock. Following the approval of the 1985 Wells RMP, forage has since been managed for multiple uses. It is anticipated that levels of livestock grazing would remain consistent at or near present levels on public lands within the study area. Numbers on private lands not within a BLM administered allotment could increase or decrease at the landowners discretion.

Livestock grazing has resulted in several activities within and near the Ruby #8 and Bennett Field Allotments. These include on and offroad travel, installation of range improvements such as fences and watering wells, and creation of rangeland vegetation treatments such as the Ruby #8 seeding.

Recreation: Past and present recreation uses primarily include dispersed recreation activities such as hunting, fishing, camping, nature-viewing and on and off-highway vehicle (OHV) travel.

Oil and Gas Exploration: Some leasing and exploration activity has occurred in the past and is expected to continue at current levels. Recent exploration occurred in the Ruby #7 Allotment, located to the north of Ruby #8 Allotment and east of the Bennett Field Allotment, with the drilling of the Ruby Valley Federal #1-11 well.

Agriculture: Agricultural activities, primarily the cultivation of hay crops for livestock occurs on private lands within the immediate watershed. It is anticipated that agricultural activities would remain at present levels.

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## Climate Change

Although climate change is not an action, it can result in incremental impacts when added to past, present, and reasonable foreseeable actions. Predictions<sup>1</sup> associated with climate change, identified during a literature review for impacts that could occur within the BLM-Elko District include:

- Temperature increase predicted of 1 to 2 <sup>degree F</sup> (Karl et al. 2009) between now and 2020, leading to:
  - earlier snow melt and onset of spring (Stewart et al. 2005),
  - longer growing season for forage production,
  - an increase in evapotranspiration (Hegerl et al. 2007),
  - threat of an increase for diseases, insects, and non-native and noxious species (Chambers et al. 2009).
  - reduction in soil moisture for plants (Izaurrealde et al. 2011)
  - increase in drought frequency and severity,
  - likely increase to stream temperature in non-shaded riparian areas, and
  - an increase in wildfires resulting from a combination of the above factors (Ehrenfeld 2003, Norton 2003).
  
- Precipitation could vary from **no change** to as much as **15% less** than present (Timmerman et al. 1999; Karl et al. 2009) suggesting the:
  - potential for species shifting geographically to adapt to changing conditions (Crozier 2003, 2004; Inouye et al. 2000; Reid and Lisle 2008),
  - mortality of species unable to adapt to changing conditions (Beever et al. 2003; Galbreath et al. 2009),
  - increase of storm intensity,
  - higher potential for floods and subsequent erosion on soils with high clay content (Janetos et al. 2008), and
  - higher demand for water in urban, rural, and agricultural areas, as well as from increasing demands for diverted flow to areas like Las Vegas, Nevada (Deacon et al. 2007).

### **3.1.3 Geographic Scope**

The geographic extent of resources and uses cumulatively affected by the proposed action varies by the type of resource and impact, as noted below.

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<sup>1</sup> Predictions: In addition to compliance with Secretarial Order No. 3226 to consider impacts of climate change, CEQ advises agencies to recognize the *scientific limits of their ability to accurately predict climate change effects*, especially of a short-term nature, and not devote effort to analyzing wholly speculative effects. BLM (2008) further states that disseminated information based on non-agency reports/studies (i.e. third party scientific reports in credible publications) should be up-to-date, have integrity (based on accurate science and technology), useful to management for planning, and objective (BLM 2008, OMB 2002, DOI 2002).

# Ruby #8 and Bennett Field Allotment Permit Renewal

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## 3.2 Effects of the Alternatives

The following affected resources are brought forth for analysis

### 3.2.1 Soil Resources

#### **Affected Environment**

The Ruby #8 Allotment has soils that are formed on lacustrine features such as lake plains and beaches. These soils are very deep, typically have a fine surface texture and have very low slopes. As a result of their fine surface texture many of these soils have a moderate hazard of erosion by wind. Hazard of erosion by water is slight due to low slopes. Depth to available water is less than five feet for about half of the allotment and so soils exhibit hydric or partially hydric characteristics.

Biological soil crusts are present in the eastern portions of the allotment in the inter spaces between sagebrush, rabbitbrush and/or greasewood. This includes the area of the proposed section 26 well. Biological soil crusts are not present in areas subject to frequent and infrequent flooding and wave action which comprises roughly 30% of the allotment. Areas of livestock concentration near watering wells also do not contain biological soil crusts.

The BLM's 2006 Standards and Guidelines assessment determined that Soils on the Ruby #8 and Bennett Field Allotments were meeting objectives for infiltration and permeability rates (BLM, 2006a, BLM 2006b). From this determination it can be inferred that existing soil quality in the allotment is generally good. There are some localized occurrences of trampling and trailing due to concentration of livestock near watering wells and troughs. This concentration usually results in an area about two acres in size that exhibits poor soil cohesiveness and lack of vegetation that increases the hazard of erosion by wind. These areas of concentration comprise less than 0.04% of the Bennett Field and Ruby #8 allotments. Soil quality is not affected at the Soil Mapping Unit, Watershed, or Allotment wide scale.

#### **Effects of Alternatives**

Grazing and related activities can potentially impact soil resources within the Ruby #8 and Bennett Field Allotments by altering its physical properties, and through removal of vegetation. Direct impacts include compaction, hoof shear and other physical impacts which reduce aggregate stability increasing the likelihood of erosion by wind and water (USDA 2001). Similar impacts occur indirectly as a result of vegetation removal. Through a decrease in vegetative cover, grazing can increase exposure of soils to erosion from rainfall impact. A decrease in vegetative vigor due to grazing stress and increased susceptibility to weed establishment can increase the hazard of erosion.

Direct impacts also occur to biological soil crusts where present. The effects of these impacts are similar to those described above with the addition that affected biological soil crusts would take longer to recover.

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## Proposed Action

The proposed action would likely result in some positive and some negative impacts to soil quality. Installation of the watering well would decrease impacts to some soils but increase impacts to others. Impacts would be similar to those observed at other livestock watering wells within the allotments. Heavy impacts would occur to about two acres in the immediate vicinity of the well site. Additional impacts would also occur to the portion of the allotment served by the watering well but this would not lead to any recognizable departure from the current condition. Biological soil crusts would disappear in the two acres surrounding the proposed Section 26 Well and would decrease in nearby areas with increased livestock use. Soil crusts would likely improve in areas with less livestock use. Recovery of biological soil crusts can take between 5 and 250 years based on soil characteristics and climate variables (Musha, 2006).

Overall Impacts to soils within the Ruby #8 and Bennett Field Allotments would likely be positive as a result of the proposed action. The water well development is expected to improve cattle distribution and decrease the likelihood of overutilization of existing forage sources, thus improving soils on the allotment. Proposed winter use may benefit soils since physical impacts are typically less severe when soils are frozen. In addition, proposed winter use would provide for decreased grazing use during the vegetative growing period and increased deferment or rest which would provide for improved plant vigor which would increase plant cover and provide for decreased erosion potential.

## No Action

Under the No Action Alternative existing impacts to soil resources would continue to occur. Soil quality would likely continue to be good as described above for the affected environment.

## **Cumulative Impacts**

The cumulative effects study area (CESA) is the Ruby #8 and Bennett Field Allotments. This area was chosen because cumulative impacts would occur to soils where there are multiple land uses within the Ruby #8 and Bennett Field Allotments. Past, Present, and reasonably foreseeable actions (PPRFFAs) along with natural conditions have not resulted in poor soil quality. There are no planned future actions which would impact soil quality; however, the effects of climate change may result in some impacts to soils in the long term. The No Action Alternative in conjunction with the PPRFFA's would not result in substantive cumulative impacts to soils. While there are some short term negative impacts associated with the Proposed Action, they would not lead to a decrease in soil quality on the allotment scale and may result in some improvement of soil quality in the long term. The Proposed Action alternative in conjunction with the PPRFFAs would not result in substantive cumulative impacts to soils.

## **3.2.2 Water Resources**

### **Affected Environment**

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Water resources in the project area include intermittent streams, groundwater, ponds, and an occasionally filled lake bed. There are several water wells within and near the allotment with a depth to water less than 100 ft. below ground elevation. Water draining from the allotments terminates in a nearby playa. Under extremely wet, high precipitation periods the playa fills with water. Aerial photographs indicate that ponding of water is more frequent in the western extremities of the Ruby #8 Allotment and within portions of Bennett Field Allotment. Flooding appears to be frequent enough to support some riparian values.

Water resources within the Ruby #8 and Bennett Field Allotments are subject to narrative water quality standards outlined in Nevada Administrative Code Chapter 445A.121. These criteria state that a source is in compliance with water quality standards if it is free from waste substances that interfere with any beneficial use of the water. The Nevada Division of Environmental Protection (NDEP) has not listed any of the water bodies within the allotments on the State of Nevada List of Impaired Water Bodies. In addition, BLM has no record of any water quality conditions within the allotments that have affected beneficial use of the water.

## **Effects of Alternatives**

Grazing and related activities can potentially impact water quality for water resources within the Ruby #8 and Bennett Field Allotments through erosion and direct contact with animal waste. Impacts to water quality may occur when soils lose cohesiveness and are eroded by moving water during rainfall events and overland flow. These impacts to soils are described in the soils section of Environmental Effects in this document. Cattle and wildlife may also impact water quality by introducing fecal material to surface water. Cattle could defecate directly into ponded surface water, or this material may be transported to ponded water through overland flow during rainfall and snowmelt events. High levels of fecal material in water can result in elevated levels of coliform bacteria and nutrients.

## Proposed Action

Surface water resources are too far away to be affected by proposed disturbance and subsequent erosion as a result of proposed well installation. In addition, any impacts would be offset by improved livestock grazing distribution and decreased livestock use in frequently flooded areas. The potential for any increased sediment discharge is very small due to the low gradient and limited amount of surface disturbance that would occur as a result of well installation. Installation of a new water source away from frequently flooded areas of the allotment would decrease cattle use near surface water and decrease the likelihood of impacts to water quality.

Groundwater pumping from the proposed well would not result in any detectable impacts to the affected aquifer. In general, pumping results in withdrawal of water from the aquifer which may result in lowering of the groundwater table. The amount of water withdrawal required to operate the proposed well would be a very minor portion of the basin groundwater budget and would not result in any detectable change.

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## No Action

Under the No Action Alternative existing impacts to water quality would continue to occur; however, under existing management there are no identified issues with water quality as described above for the affected environment.

## **Cumulative Impacts**

The cumulative effects study area (CESA) is the Lower Franklin River HUC level 5 watershed. Cumulative impacts to water quality can occur as a result of several past, present, and reasonably foreseeable actions (PPRFFAs) as well as external environmental factors which affect watershed processes in this area. PPRFFAs include agriculture, grazing, recreation, and other disturbances. Environmental factors include flooding, fire and drought. Climate change may result in gradual changes in quantity of water and timing of environmental factors as discussed in section 3.1.2. Water resources are generally negatively affected by these activities and external factors because they can result in departure from typical natural water quality conditions. The Proposed Action and the No Action Alternative in conjunction with the PPRFFA's would not result in a substantive impact to water quality in the Franklin River Watershed.

## **3.2.3 Wetlands and Riparian Zones**

### **Affected Environment**

Lentic riparian areas exist in the western portion of the Ruby #8 Allotment near Franklin Lake, and throughout the Bennett Field Allotment. Standing water in these areas is created by seasonal flooding which varies in extent and duration from year to year. Irregularity of water supply and high salinity in soil and water result in limited riparian development. Much of the area covered by seasonal water is devoid of vegetation, most likely due to a combination of being under water during the growing season and having higher salinity than soils of slightly higher elevation. These higher elevation soils support saltgrass and other salt tolerant species, but do not support any obligate riparian vegetation. A site visit in April 2010 indicated that cattle do utilize saltgrass in these seasonally flooded areas.

Riparian condition assessments were conducted in 2010 to evaluate condition of riparian condition within the allotments. Riparian condition assessments are qualitative assessment of riparian areas based on quantitative science. The methodology evaluates the functionality of riparian areas based on hydrological, vegetation, and soils/erosional factors, within the context of the geologic setting and the potential of the area. Prichard et al. (1994) suggests the following definitions for spring and lentic areas:

“Lentic riparian-wetland areas are functioning properly when adequate vegetation, landform, or debris is present to:

- 1) dissipate energies associated with wind action, wave action, and overland flow from adjacent sites, thereby reducing erosion and improving water quality;
- 2) filter sediment and aid floodplain development;
- 3) improve flood-water retention and ground-water recharge;

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- 4) develop root masses that stabilize islands and shoreline features against cutting action;
- 5) restrict water percolation;
- 6) develop diverse ponding characteristics to provide the habitat and water depth, duration, and temperature necessary for fish production, waterbird breeding, and other uses; and,
- 7) support greater biodiversity”.

Proper functioning condition assessment conducted in 2010 indicates that these areas are in proper functioning condition (Appendix C).

The 2006 Northeastern Great Basin Standards and Guidelines Assessments (S&G) did not include an assessment of riparian/wetland sites because none were thought to exist within the allotment. Further reconnaissance indicated that although surface water within the allotments is not perennial, the ponding of water as described above is sufficiently frequent to result in the presence of waterfowl which is a riparian/wetland value. An addendum to the 2006 S&G which addresses Standard 2, Riparian Wetland Sites is included as an appendix to this document (appendix C).

## **Effects of Alternatives**

### Proposed Action

Lentic areas and riparian zones could be affected by changing livestock distribution and season of use as a result of the proposed action. The proposed water well could result in less impact to riparian/wetland areas within the Ruby #8 Allotment as livestock utilize troughs for water rather than undeveloped surface water. Decreased pressure on riparian areas may also occur as a result of less demand for water during proposed cold seasons of livestock grazing use. Impacts on the Bennett Field Allotment would be unchanged.

### No Action

Under the No Action Alternative existing impacts to riparian/wetland areas would continue to occur; however, under existing management there are no identified issues with riparian/wetland areas as described above for the affected environment.

## **Cumulative Impacts**

The cumulative effects study area (CESA) is the Lower Franklin River HUC level 5 watershed. Cumulative impacts to wetlands and riparian areas can occur as a result of past, present, and reasonably foreseeable actions (PPRFAs) as well as external environmental factors which affect water resources in this area. PPRFFAs include agriculture and grazing. Environmental factors include flooding, fire and drought. Climate change may result in gradual changes in quantity of water and timing of environmental factors as discussed in section 3.1.2. Riparian resources are negatively affected by these activities and events. The No Action Alternative in conjunction with the PPRFFA's would not result in substantive impacts to riparian/wetland resources. Because the Proposed Action would likely lead to some improvement of riparian/wetland resources there are no cumulative impacts of concern.

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## 3.2.4 Invasive, Nonnative Species

### **Affected Environment**

No noxious weeds are known to exist within the Ruby #8 or Bennett Field Allotments; however hoary cress (*Cardaria draba*), Canada thistle (*Cirsium arvense*), Scotch thistle (*Onopordum acanthium*) are known to exist within adjacent allotments. Invasive species within the two allotments include cheatgrass (*Bromus tectorum*) Bur buttercup (*Ranunculus testiculatus*) and halogeton (*Halogeton glomeratus*) which have established in disturbed areas.

### **Effects of Alternatives**

#### Proposed Action

The proposed action would have only small scale impacts on current invasive species and would not result in establishment of new populations of noxious weeds. The proposed changes in season of use differ only slightly from what has been occurring in recent years and the current system does not appear to be resulting in any issues with invasive, nonnative species. The development of a well and associated troughs could have immediate impacts on vegetation and soil resources that could lead to the spread of invasive or noxious weed populations. There may be an increase in bur buttercup or other nonnative species at the proposed Section 26 well, however this would only impact the two acre area surrounding the well-site, and would not result in any spread of noxious weeds or nonnative plants away from the well site.

The availability of additional water is likely to better distribute grazing throughout the pasture. This improved distribution in grazing use would equate to more consistent and adequate herbaceous cover across the allotment. More evenly grazed landscapes often result in improved plant health and vigor, and decrease grazing related impacts that could lead to the spread or establishment of invasive or noxious weed species. The small amount of new disturbance included in the Proposed Action would help to minimize introduction of new or spread of existing invasive or noxious species populations in the project areas. The BLM will continue to monitor for noxious weeds within the allotments and treat any noxious weed infestations

#### No Action

The no action alternative would have minimal effects on current invasive species populations or establishments of new populations noxious weeds as long as current grazing management practices are continued.

### **Cumulative Impacts**

The cumulative effects study area for invasive and noxious weeds includes the Ruby #8 and Bennett Field Allotments (approximately 32,000 acres). Cumulative effects analyzed include ranching activities and associated livestock grazing, range improvements and vegetation management projects, dispersed recreation, and transportation. Other external factors such as wind, birds, wildlife, climate change, and human use may bring new

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noxious or invasive weeds to areas currently not occupied by weeds. However, the BLM has and will continue to treat noxious weeds throughout the area with a management technique of early detection and rapid response. This will ensure that any new infestations are documented and treated early while the sizes of the patches are small and manageable.

Wildfire, which is not an action planned or carried out by the Bureau, would continue to represent the single biggest disturbance threat to the allotments. The Bureau has and would be expected to continue to aggressively suppress wildfire in the lands in and around these allotments and conduct subsequent post-fire rehabilitation actions to reduce the likelihood of increases in noxious and invasive species occurrence. Actions such as conducting inventories for noxious weeds the first year after the fire and aggressively treating any weeds within the burned area would significantly decrease the risk of future invasions, but it may not be a realistic objective to eradicate all weeds within the allotments.

The proposed action coupled with the actions in the past, present and foreseeable future would not greatly affect the presence or movement of the pre-existing invasive species or the potential establishment of noxious species on the allotments. Implementation of the proposed action alternative including use of the proposed project procedures is expected to result in negligible impacts in the spread or increase of invasive non-native species or establishment of noxious weeds.

### **3.2.5 Special Status Species, Migratory Birds, and Other Wildlife**

#### **Affected Environment**

These allotments provide habitat for a diversity of wildlife species, including mule deer (*Odocoileus hemionus*), American pronghorn (*Antilocapra americana*), and numerous species of upland game birds, meso-carnivores, small mammals, passerine birds, waterfowl, raptors, amphibians, reptiles, and invertebrates. The recent Standards and Guidelines Assessments documented that the Habitat Standard is being met for both allotments. For this reason, no changes in livestock grazing would be required. Wildlife habitat condition is emphasized in the 1985 Wells Record of Decision. Adjustment in livestock seasons of use are authorized to improve or maintain essential and crucial wildlife habitats (1985 Wells Record of Decision, page 20). As a standard procedure, activities associated with construction may also be limited to protect active nests of sensitive raptor species and other wildlife. These and other species are discussed below.

#### *Big Game Species*

The area has no special designation as “crucial” habitat for mule deer, although both allotments are designated intermediate range. Some dispersed mule deer movements could occur on a yearlong basis, primarily during the summer period. These movements occur from pockets of Utah juniper (*Juniperus utahensis*) to the east to marshes and agricultural fields on private lands to the west, as well as to the Ruby Mountains further to the west. Mule deer depend upon healthy, diverse, and productive plant communities,

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adequate horizontal screening cover, and readily available browse. In 2006, sagebrush age and form class condition was rated as satisfactory in both the Ruby 8 and Bennett Field Allotments.

Less than 1% of the Ruby 8 Allotment is designated as crucial winter habitat for pronghorn. This is in the eastern portion of the allotment. Approximately the eastern 1/3 of Ruby 8 Allotment has been identified as pronghorn yearlong range. While pronghorn are less dependent upon horizontal cover than mule deer, it is important while raising young. Pronghorn depend upon a healthy, diverse, and productive herbaceous component to the plant community for forage. Two pronghorn habitat key areas have been established in the Ruby 8 Allotment. In 1988, habitat was rated as good condition for pronghorn at these key areas. While complete key area monitoring has not been completed since 1988, visits to the vicinities of the key areas as recently as 2006, 2008, and 2011 have described similar conditions.

### *Special Status Species*

Special status species include species that are listed or proposed for listing as threatened or endangered (T&E) under the Endangered Species Act (ESA), species that are candidates for listing under the ESA, species that are listed by the State of Nevada, and/or species that are on Nevada BLM's list of Sensitive Species as of July 29, 2003. No federally listed, or proposed, species are known to exist on the Ruby 8 or Bennett Field Allotments, and no critical habitat for any aquatic or terrestrial species has been designated or proposed for designation under the ESA in the Elko District. The greater sage-grouse (*Centrocercus urophasianus*), a candidate species, has suitable habitat on the allotments and is discussed under Gallinaceous Birds below.

The Columbia spotted frog (*Rana luteiventris*), a Candidate species, has been documented approximately 4.5 miles to the west of the Ruby 8 Allotment boundary. Munger et al. (1998) found adult Columbia spotted frogs in southwestern Idaho to be positively associated with still water in seasonally flooded areas containing a shrubscrub component (willow) that was particularly valuable as hiding habitat. They were less likely to be found in seasonally flooded areas with only an emergent (e.g., reeds, grasses) vegetative component. Portions of the Ruby 8 Allotment are seasonally flooded and may provide breeding, foraging, and overwintering habitat. However, there is no shrubscrub component (as described by Munger et al. 1998) within these seasonally flooded areas, making them less than ideal spotted frog habitat.

Special status species with a potential to exist within the sagebrush and salt desert scrub habitats in the Ruby 8 and Bennett Field Allotments are found in Appendix 2. Those associated with wetland habitats with a potential to exist within the Ruby 8 and Bennett Field Allotments are listed in Appendix 3. For this analysis, sensitive species were grouped based upon common habitat components in order to avoid unnecessary repetition. Birds associated primarily with sagebrush and salt desert scrub habitats are found in Appendix 4. Additional birds associated primarily with riparian habitats are found in Appendix 5.

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**Eagles:** On July 9, 2007, the bald eagle (*Haliaeetus leucocephalus*) was removed (“de-listed”) from the list of threatened and endangered species. Bald and golden eagles continue to receive protection under the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act, and both species are classified as Sensitive by Nevada BLM. Both of these laws prohibit killing, selling or otherwise harming eagles, their nests, or their eggs. The Service has also prepared a draft post-delisting bald eagle monitoring plan. These documents and more information about the bald and golden (*Aquila chrysaetos*) eagle are available on the Service’s website at (<http://www.fws.gov/midwest/eagle/protect/DraftBAEAPDM.pdf>; <http://www.fws.gov/migratorybirds/baldeagle.htm>). Golden eagles have been documented as year-round residents in the Ruby 8 Allotment and adjacent allotments. Bald eagles have not been documented within the Ruby 8 or Bennett Field Allotments and would likely only occur occasionally during winter while foraging.

**Other Raptors:** The Ruby 8 and Bennett Field Allotments provide potential foraging habitat for raptors such as the northern goshawk (*Accipiter gentilis*), ferruginous hawk (*Buteo regalis*), and prairie falcon (*Falco mexicanus*). Northern goshawks and prairie falcons have not been documented within these allotments, but are common as near as three or four miles to the west in the Ruby Mountains. Though typically not associated with greasewood flats or salt desert scrub vegetation, ferruginous hawks have been documented within the Ruby 8 Allotment as well as in nearby sagebrush and pinyon-juniper habitats and may use the project area on a limited basis for foraging. Small mammals and jackrabbits (*Lepus* spp.) serve as prey for raptors in these habitats.

Additional raptors that may be associated with nearby riparian habitats include Swainson’s hawk (*Buteo swainsoni*) and peregrine falcon (*Falco peregrinus*). Both have been documented within three miles of the Ruby 8 and Bennett Field Allotments. It is possible that Swainson’s hawks and peregrine falcons use these allotments during spring and summer.

**Gallinaceous Birds:** The Ruby 8 and Bennett Field Allotments are in a part of the Elko District where greater sage-grouse numbers are thought to be relatively low. Suitable habitat does, however, exist within both allotments. The southeastern quarter of the Ruby 8 Allotment is considered greater sage-grouse winter habitat, the western portion is nesting and early brood-rearing habitat, and the western and southern portions are late summer habitat. All of the Bennett Field Allotment lies within nesting, early brood-rearing, and late summer range.

Mountain quail can inhabit sagebrush habitat, however, mountain quail (*Oreortyx pictus*) have not been documented nearer than ~51 miles to these allotments. Columbian sharp-tailed grouse (*Tympanuchus phasianellus*) could potentially occupy this type of habitat, but again, have not been documented nearby.

**Owls** – Burrowing owls (*Athene cunicularia*) could occur in the area. Abandoned mammal burrows, such as those created by badgers (*Taxidea taxus*), provide nesting habitat. This species tends to use disturbed or open sites with minimal vegetation for

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nesting and loafing, such as recent burned areas or areas near troughs, corrals, or livestock mineral licks where open terrain exists. This may be due to the lack of vegetation at these sites that allows increased visibility from the burrow entrance. The proposed Section 26 well site was visited by a BLM wildlife biologist on 18 March 2009, 12 July 2011, and 19 August 2011. No burrowing owls were observed during a cursory search around the perimeter of, and within, the proposed site, but recent badger diggings approximately 200 yards north of the proposed well site may provide burrowing owl nesting habitat. Burrowing owls have been documented within approximately six miles of these allotments. Other owls that may utilize potential habitat in the vicinity of these allotments include long-eared (*Asio otus*) and short-eared (*Asio flammeus*) owls, primarily in association with riparian habitats. Neither species has been documented within 10 miles of these allotments.

Shorebirds or Other Riparian Associates – Riparian habitats on these allotments provide habitat for species such as sandhill crane (*Grus canadensis*), western snowy plover (*Charadrius alexandrinus nivosus*), long-billed curlew (*Numenius americanus*), black tern (*Chlidonias niger*), white-faced ibis (*Plegadis chihi*), snowy egret (*Egretta thula*), Wilson's phalarope (*Phalaropus tricolor*), and various ducks. All except snowy plover have been documented within 10 miles of these allotments.

Snowy plovers nest on the ground on broad open beaches, salt or dry mud flats, and barren shorelines of alkaline playa lakes where vegetation is sparse or absent (Wildlife Action Plan Team 2006, GBBO 2010). Such habitat occurs within the Ruby 8 Allotment along the periphery of Franklin Lake and in scattered areas on the northern end. Although snowy plover occurrence has not been documented within the project area, this habitat could host nesting snowy plovers.

Woodpeckers – Lewis's woodpeckers (*Melanerpes lewis*) and red-naped sapsuckers (*Sphyrapicus nuchalis*) are associated with riparian areas and, thus, have the potential to utilize habitat near these allotments. Neither has been documented within 10 miles of these allotments.

Songbirds – Breeding and nesting habitat for loggerhead shrikes (*Lanius ludovicianus*) is provided by sagebrush and salt desert scrub habitats. On 19 August 2011, a family group of loggerhead shrikes consisting of two adults and one juvenile was observed approximately 400 meters southwest of the proposed Section 26 well, indicating likely breeding in the area. Sagebrush communities also provide summer habitat for vesper sparrows (*Pooecetes gramineus*) and winter habitat for black rosy-finches (*Leucosticte astrata*). Nearby riparian areas may provide breeding habitat for yellow-breasted chats (*Icteria virens*) and bobolinks (*Dolichonyx orizyvorus*), however only yellow-breasted chats have been documented within 10 miles of the proposed action area.

Bats – The juniper woodlands and mountainous terrain east of the Ruby 8 and Bennett Field Allotments provide bat roost sites. Bats could use these allotments for foraging, although this would most likely be associated with riparian areas to the west.

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Pygmy Rabbits – Pygmy rabbits (*Brachylagus idahoensis*) were petitioned for listing under the Endangered Species Act. On 30 September 2010, the US Fish and Wildlife Service (USFWS) issued a 12-month finding that listing of the pygmy rabbit was not warranted, however, there is still a need to conserve, enhance, and/or protect pygmy rabbit habitat.

Pygmy rabbits are found in a variety of vegetation types, including sagebrush, greasewood, and salt desert scrub habitats, provided that the soils are appropriate for constructing burrows. The proposed well site was visited by a BLM wildlife biologist on 18 March 2009, 12 July 2011, and 19 August 2011. No pygmy rabbits were observed during a cursory search within and around the perimeter of the proposed site. As with burrowing owls, any newly documented burrows need to be avoided during construction of the well to eliminate the possibility of negatively affecting pygmy rabbits.

Preble's Shrews – Likely habitat associations for Preble's shrews (*Sorex preblei*) collected in northeastern Nevada were described as “ephemeral and perennial streams dominated by shrubs, primarily below 2,500 m in elevation” (Ports and George 1990). At Sheep Creek, ~55km north of Elko, Ports and George (1990) collected 12 specimens “in a seasonally wet, sagebrush-dominated community.” Little else is known about the ecology and distribution of Preble's shrew in Nevada, or its specific habitat needs. Given this brief description of habitat associations of Preble's shrews in northeastern Nevada, it is reasonable to expect that the species may occur within the proposed action area.

River Otters – While river otters (*Lontra canadensis*) have been documented using salt desert scrub habitat, they are tied to lotic riparian areas within this habitat type. There are no suitable lotic riparian areas within the Ruby 8 or Bennett Field Allotments, therefore river otters would not be affected by the proposed action.

Northern Leopard Frogs – Northern leopard frogs (*Rana pipiens*) have been documented within six miles of the Ruby 8 Allotment. The riparian habitat associated with periodic expansion of Franklin Lake may provide short-term habitat along the western edge of the allotment, otherwise they are not expected to occur in the proposed action area.

### *Other Migratory Birds*

In addition to those protections offered to certain migratory birds that are considered Nevada BLM Sensitive Species, all migratory birds are offered certain protections under the Migratory Bird Treaty Act and Presidential Executive Order. On January 11, 2001, President Clinton signed the Migratory Bird Executive Order. This Executive Order outlines the responsibilities of Federal agencies to protect migratory birds and directs executive departments and agencies to take certain actions to further implement the Migratory Bird Treaty Act. A list of the migratory birds affected by the President's executive order is contained in 50 CFR 10.13.

Under the provisions of the Migratory Bird Treaty Act, the unauthorized take (death or injury) of migratory birds is a strict liability criminal offense that does not require knowledge or specific intent on the part of the offender. The U.S. Fish and Wildlife

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Service is responsible for issuing a permit to allow take of a migratory bird. Any construction associated with the proposed action would be expected to conform to the Act, avoiding migratory bird nesting seasons where possible.

## Effects of Alternatives

### Proposed Action

This alternative would allow for later growing season or dormant season cattle grazing. Currently, all grazing occurs during the growing season or early fall (through 30 September). While all three permittees could conceivably graze during the growing season under this alternative, past interest to graze during the dormant season suggests that this alternative would result in less growing season use than what is permitted under the current system. It is expected that this shift in season of use would benefit habitat quality for pronghorn and mule deer. It is expected that herbaceous forage quantity and diversity would improve over the long term because less forage utilization by cattle would occur during the growing season. Further improvement in habitat quality is expected to result from the better grazing distribution associated with the addition of the water well. Greater sage-grouse habitat would likely improve under this alternative. Specifically, canopy cover of grasses and forbs is expected to increase due to the improved timing and distribution of cattle grazing, resulting in improved early and late summer habitat conditions. These same changes would benefit raptors and other predators through maintenance of, or increases in prey populations of small mammals and invertebrates.

A recently recognized threat to Greater sage-grouse populations is the emergence of the infectious disease West Nile Virus (WNV; Naugle et al. 2004, 2005, Walker et al. 2004, 2007, Aldridge 2005, Walker 2008). Outbreaks of WNV have been shown to negatively affect local sage-grouse populations, leading to near-extirpation of one local population (Walker et al. 2004) and additive mortality in other affected populations (Clark 2006). Artificial increases in surface area of water in arid sagebrush landscapes inhabited by sage-grouse have been identified as a significant threat to sage-grouse populations because they provide additional mosquito breeding habitat (Walker and Naugle 2011). The mosquito *Culex tarsalis* is the dominant vector of WNV in sagebrush habitats (Walker and Naugle 2011). Artificial increases in surface water are associated with energy development such as coal bed methane, and other anthropogenic sources such as overflowing stock tanks, earthen stockpounds, and irrigated fields, (Zou et al. 2006 and Doherty 2007 in Walker and Naugle 2011).

The proposed Section 26 water well would introduce up to 1,200 gallons of water into a trough in an otherwise arid landscape. This trough would be a source of breeding habitat for mosquitos and could serve as a source of WNV within the project area. However, the well would be located in an extensive stand of ubiquitous greasewood (*Sarcobatus vermiculatus*). This is not sage-grouse habitat and grouse would not be expected to use the well site as a watering location. Most importantly, the well site would be providing only a miniscule amount of additional surface water when compared to Franklin Lake, Ruby Marsh, and other seasonal or permanent sources of standing water within the

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project area and larger Cumulative Effects Study Area (see below). This additional 1,200 gallons is not expected to pose a significant threat to Greater sage-grouse populations through increased risk of WNV exposure.

On 12 April 2010 the BLM signed a Memorandum of Understanding (MOU) with the US Fish and Wildlife Service to promote the conservation of migratory birds. An example of a conservation measure in the MOU is to manage livestock to avoid impacts on nesting birds and to improve migratory bird habitat. Changing the season of use from early spring/summer to mid-late summer or late summer/early fall will lessen direct disturbance to nesting migratory birds of many species. Many migratory bird species depend upon healthy, diverse, and productive herbaceous plant communities. As plant cover and vigor increase as a result of the improved timing and distribution of cattle grazing, such species are expected to benefit. Other species, such as raptors, may indirectly benefit from an increase in prey populations. The improved water distribution resulting from the water well and troughs will benefit wildlife species that depend upon availability of accessible water. Habitat for species associated with riparian areas (e.g., shorebirds, Columbia spotted frog and northern leopard frog) will improve because the new well is expected to draw cattle away from seasonal wetland habitat on the western side of the Ruby 8 Allotment.

Given the paucity of ecological information related to Preble's shrew, little can be surmised regarding potential effects of the proposed action on the species. However, the proposed action is not expected to alter the shrub community, while the herbaceous understory is generally expected to improve. Increases in native herbaceous understory would generally benefit small mammals (Reynolds and Trost 1980), likely including Preble's shrew.

Short-term disturbance during construction of the proposed water well and trough would occur. Outside of the nesting season, most affected species are mobile enough to temporarily avoid the disturbance. Impacts to migratory bird populations are not anticipated. In an effort to better ensure that no take of migratory birds occurs, construction activities will not occur during the migratory bird nesting season (1 April to 15 August). If this is unavoidable and construction is projected to occur during the nesting season, it will be required that a BLM-approved wildlife biologist survey the area at and around the construction site for migratory bird nests or signs of breeding activity. Similarly, if construction occurs during 1 March to 31 August, it will be required that a BLM-approved wildlife biologist survey the area for burrowing owl and other raptor nests. If any migratory bird or raptor nest is found, construction will be postponed until after completion of the nest. The long-term benefits from improvements in grazing timing and distribution, as well as increased water availability will outweigh the temporary effects of any disturbance.

The proposed Section 26 well would introduce more livestock grazing pressure into an area of the Ruby #8 Allotment that has historically received light use. This has the potential to affect species such as loggerhead shrike that may breed in the area through decreases in herbaceous cover (which serve as shrike prey habitat) and congregation of

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cattle around large shrubs that may serve as nesting sites for shrikes (Wiggins 2005). Although there may be negative impacts to individual shrikes near the proposed well, the redistribution of grazing pressure encouraged by the proposed well would likely benefit other areas of the Allotment by lessening potential impacts of cattle to shrike breeding habitat there. Individual breeding pairs may be disturbed or displaced in the vicinity of the proposed well, but impacts to the loggerhead shrike population are not anticipated. The same rationale applies to other species that may occur in the vicinity of the proposed Section 26 well.

### No Action

This alternative would allow cattle grazing to continue under the terms and conditions of the current permit. Current grazing management has resulted in conditions that meet the standards and guidelines for upland habitat. It is expected that under this alternative perennial grass and forb composition and cover would remain constant or increase. Grasses would have a chance to set seed as well as transport nutrients back to the roots during most years, but would likely be grazed most years during the growing season. Mule deer and pronghorn habitat quality would likely remain stable.

Under this alternative, greater sage-grouse habitat is expected to remain stable or improve. Under the current grazing system, herbaceous canopy cover has maintained a level suitable for greater sage-grouse where it occurs.

Sensitive and non-sensitive migratory birds that rely upon upland habitats generally require a diversity of vegetation structure and distribution. These species would likely experience stable or improving trends in habitat quality under this alternative.

### **Cumulative Impacts**

The cumulative effects study area (CESA) for wildlife is the Long - Ruby Valley HUC level 4 watershed. The only negative impact identified for either alternative was the temporary disturbance caused by the construction of the water well and troughs and the resulting impacts on breeding success of migratory birds mentioned above if these activities occur concurrently. Recent oil and gas exploration may cause similar short-term disturbances. The nearest (and only) recent exploratory well is to the northeast of the Ruby 8 and Bennett Field Allotments. No other oil and gas exploration in the CESA is expected in the foreseeable future. Construction activities associated with the proposed action are designed to minimize impacts to migratory birds through timing adjustments (outside of the nesting season) or by pre-construction surveys to identify active nests. Recent surveys for pygmy rabbits and burrowing owls have ensured that impacts would not be expected to these less mobile species. Other mammal species and most bird, reptile, and amphibian species would be mobile enough to avoid well construction activities. It is thus determined that potential impacts of well and trough construction do not represent a significant cumulative effect.

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## 3.2.6 Livestock Grazing

### **Affected Environment**

Grazing of domestic cattle, sheep and horses has occurred on public and private lands in the area since at least the 1860s. Livestock grazing on public lands remained unregulated until the passage of the 1934 Taylor Grazing Act established the U.S. Grazing Service. Public lands were then adjudicated and forage allocated for livestock. Since FLPMA and as further outlined in the Wells RMP in 1985, forage has since been managed for multiple uses. It is anticipated that levels of livestock grazing would remain consistent at or near present levels on public lands. Numbers on private lands outside allotment boundaries could increase or decrease at the landowner's discretion.

### **Effects of Alternatives**

Livestock grazing is one of the most important economic activities in Elko County. A 2003 study identified 142 economic sectors within the Elko County economy. Cattle ranching recorded \$53.8 million in output value, which ranked this industry 8th out of the 142 sectors; the sector employed 482 people, representing 2.53% of the total workforce, which ranked this sector 9th out of the 142 sectors; the industry realized \$43.5 million in export sales, representing 5.77% of Elko County's total exports, which ranked this sector 4th out of the 142 sectors. Total economic impact of the industry to Elko County amounted to \$96.6 million dollars, with a total direct and indirect payroll of 905 jobs representing \$14.4 million in income (Alevy, Jonathan, et al., 2007; Fadali, Elizabeth, et al., 2009; Fadali, Elizabeth, and Thomas R. Harris., 2006; Harris, Thomas R., et al., 2007).

Elko County has a land base of just less than eleven million acres, of which 71.5% is in Federal ownership. Private farm and rangelands occupy another 26% of the county's land base, with the remaining 2.5% of the land base occupied by other uses. Hay is the principle crop raised on the private farmlands. The 1997 Census of Agriculture counted 402 farms and ranches in the county, with an aggregate cow herd ranking Elko County fourth in the nation in terms of animal numbers. Approximately 68% of all Elko County beef cow operations held federal grazing permits. The average Elko county ranch derives 49% of its annual forage requirements from public lands. Each Animal Unit Month (AUM) utilized on public lands in Elko County is estimated to have a total production value of \$38 and a total economic impact of \$68. In 2006 an estimated 152,000 cows grazed within the county.

The current grazing permits for the Ruby #8 Allotment allow cattle to graze from 4/20 to 9/30 annually, with a total permitted use of 1,963 AUMs. Based on the 2003 study, this represents a potential total economic impact of \$133,280 to the Elko County economy every year.

The current grazing permit for the Bennett Field Allotment allows cattle grazing from 5/11 to 8/25 annually, with a permitted use of 179 AUMs. Based on the 2003 study, this

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represents a potential total economic impact of \$12,172 to the Elko County economy every year.

## Proposed Action

Three grazing permits would be renewed with modifications to the terms and conditions and a well would be installed. The number of permitted AUMs would remain the same. Changes to the terms and conditions of the permits is expected to further improve on the meeting of the established standards and guidelines, specifically Standard #3(Habitat), other multiple use resource objectives and maintain or improve the current ecological condition. The proposed terms and conditions would change the season of use to 6/10-9/30 or 10/10-1/15 annually on the Ruby #8 Allotment and would provide flexibility to the permittees when making decisions regarding turn out on public lands and in their grazing operations. Installation of the well would improve the distribution of livestock by providing an additional water source and would allow for managing livestock movement by controlling water availability in the Ruby #8 Allotment. The overall economic impact to Elko County would be unchanged from the scenario explained in the affected environment above.

## No Action

All three grazing permits would be renewed with the current terms and conditions. Grazing would be authorized as it was in the past, with the season of use and the number of permitted AUMs staying the same. The Ruby #8 and Bennett Field Allotments would continue to meet the established standards and guidelines for rangeland health. A new well would not be installed to further improve livestock distribution. The overall economic impact to Elko County would be unchanged from the scenario explained in the affected environment above.

## **Cumulative Impacts**

The cumulative effects study area (CESA) for Livestock Grazing analysis is the Ruby #8 and Bennett Field Allotments. Livestock grazing has occurred in and around the CESA since at least the 1860s. It is anticipated that livestock grazing on public lands would remain consistent at or near current levels. Numbers on private lands outside of allotment boundaries could increase or decrease at the landowners' discretion. There is no cumulative impact of concern to livestock grazing.

## **3.2.7 Cultural Resources**

### **Affected Environment**

Eleven cultural resource inventories have been completed within the Ruby #8 Allotment over the past 30 years, resulting in the recording of fifteen archaeological sites and four isolated artifacts. Most of the inventories were related to oil and gas seismic exploration or to livestock management projects, and covered only a small fraction of the allotment. No block inventories have been done. While the inventory sample is low, it is spread across the allotment and seems to be adequate to suggest that as a whole, cultural resource sensitivity of the allotment is average. Most cultural resources in the allotment

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are known or expected to be archaeological sites related to historic livestock management or prehistoric Native American use.

Prehistoric sites of the area commonly include artifacts such as projectile points, scraping and cutting tools, potsherds, grinding stones, cooking stones, hammerstones, and flaking debris from tool manufacture. Food debris (bone, burned seeds, mussel shell) and features such as cooking hearths, house floors, and storage pits may also be present, but usually are not visible on the surface. Historic sites usually have tin cans, glass, ceramic, metal and wooden objects.

The relationship of the artifacts and features to one another, their location on the landscape and their location within the soil matrix are critical to the archaeological record. Depletion of the archaeological record began immediately as the inhabitants gathered tools, vessels and other usable items to move on to the next camp. Upon abandonment the forces of nature took their course on the things left behind. Decay usually destroyed organic materials leaving only the most durable items such as stone, pottery, metal and glass and sometimes bone fragments, charcoal and shell. Erosion, bioturbation (disturbances of the soil by plants and animals), fire, frost heaving, etc. have affected sites to varying degree, but many eventually reached a stage of relative stability.

In the Great Basin the pace of damage and destruction picked up considerably with the coming of the Euro-American settlers and their advanced technology, herds of livestock and substantially greater population density. Impacts to cultural resources brought on by the newcomers to the region included mechanical disturbance, looting, vandalism and fire. Experimental research has demonstrated that livestock trampling can damage or break and dislocate artifacts (U.S Army 1990; Roney 1977). Past impacts within the allotment are likely to have ranged from minor movement of surface artifacts to large scale damage of sites.

Conditions of known cultural resources in the Ruby #8 Allotment range from poor to good. In the mid-1980s, increased precipitation filled Franklin Lake higher than it had been in many decades. According to BLM records, some archaeological sites along the ephemeral lake were exposed via wave action and exhibit some wave damage associated with this and earlier high water events. Other sites elsewhere in the allotment lie within silty sediments that are highly erodible, and have been impacted by wind and precipitation erosion. Additionally most cultural resources in the allotment have probably been affected by livestock grazing to one degree or another since Ruby Valley has been grazed since 1858 (Patterson et al. 1969:208). Usually records documenting livestock use at cultural resource sites over time are not available. However, in this case specific livestock use information was recorded in 1982 for archaeological sites CRNV-11-2530 and 2531 within the allotment. When first recorded these sites were said to have “very minimal” and “minor” cattle impacts (e.g. limited trampling, trails, manure, etc.) respectively. In 2008, these sites were revisited. Livestock use at both had increased, but the most intensive use is evidenced at CRNV-11-2531. The entire surface of this site is covered with cattle hoof prints. Cow manure is common and four cow beds were observed within the site. Livestock use at CRNV-11-2530 was less than at CRNV-11-

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2531 but still at least of moderate intensity. Hoof prints are common and cow manure is found every few meters. Only one possible cow bed was observed. Other than for the small areas involving bedding, damage at both sites is limited to the upper 2-4cm of the archaeological deposits. These sites were again revisited in 2011 with very little evidence of livestock activity being found at CrNV-11-2530 and no new livestock activity noted at CrNV-11-2531 (in fact, the cow manure looked several years old).

While livestock damage is evident at the two sites (or at least the parts of them not impacted by wave action), they are estimated to be in fair to good condition. As discussed below livestock can impact cultural resources in a variety of ways. Artifacts within CRNV-11-2530 and 2531 and other sites in the allotment undoubtedly have been displaced and maybe broken due to trampling. The cattle bedding has unearthed artifacts and potentially mixed cultural deposits at the latter site. Nonetheless, their potential to address important research questions still exists.

Local evidence of severe damage to cultural resources resulting from concentrated and long term livestock use was noted at Mud Well in the Ruby #8 Allotment in 1982. Age of the well is unknown, but it probably was built during the 1950s or 1960s like other wells in the allotment. These wells were installed in the era before the National Historic Preservation Act was enacted and/or applied to public land projects so no attempt was made to identify or protect important cultural resources. Mud Well, located roughly three miles north of the proposed Section 26 Well, was installed within what is now known as archaeological site CRNV-11-2532. Livestock trampling and bedding has penetrated into the substrate and had denuded most of an area approximately 150 meters in diameter around the well. Manure is spread across the site. General trampling and substantial trailing evidence were still observed 400 meters from the well, but was not nearly as intense as at the well. Although not documented in 1982, trailing and trampling intensity are assumed to have decreased even more as one moved further from the well. These actions were thought to have severely damaged the archaeological site. Given the long history of trampling, trailing, and other erosive factors it is unlikely that any research value remains at site CrNV-11-2532. Furthermore, because there is no baseline for comparison (i.e. the site was recorded well after the installation of the well) it is difficult to say just how much damage has occurred at the site.

Proposed Stock Water Well Inventory - A Class III cultural resource inventory was conducted at the initial proposed well site and a reconnaissance inventory was done for the surrounding area in October of 2008. Three cultural resource sites and an isolated artifact were recorded while assessing a proposed location for the well and looking for alternative locations away from cultural resources. The proposed Section 26 Well would be placed in a location that is different from the location originally proposed by the permittees. The proposed location is over ½ mile from significant cultural resources.

### **Effects of Alternatives**

Livestock can severely impact cultural resources by damaging or destroying their archaeological research potential (Ataman 1996, Broadhead 1999, U.S Army 1990). Damage typically is due to trampling, wallowing, bedding and bodily waste elimination

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which can negatively impact archaeological stratigraphy, site patterning and features, cause/exacerbate erosion, break and displace/mix artifacts, and contaminate sediments and archaeological organic residues with fecal material and urine. While livestock use over the last 150 years has impacted most cultural resources in the Elko District to one degree or another, the effects vary considerably. Generally sites further from livestock congregation areas such as water and supplemental feed sites, bedding grounds and shelter are assumed to be in better condition than those in proximity to these areas.

### Proposed Action

Construction of the proposed well would redistribute livestock use in the Ruby #8 allotment, allowing increased use of areas that are currently considered to be underutilized and where cultural resources are likely to have seen less livestock use in the past. Substantial damage would be anticipated for any cultural resources within 400 meters of the well and at any new feed supplement locations associated with the well. Cattle tend to “camp” on water sources during hot weather, so increased area and intensity of use around the well would be anticipated in the summer. Impacts would lessen as distance from the well increased.

The probability of impacts to cultural resources in areas near the proposed well would be reduced through adherence to resource protection measures and BLM monitoring. Based on the results of 1982 and 2008 archaeological inventories the proposed project was moved to the current proposed location, well away from known cultural resources. Any feed supplements would be located within 200 feet of the well to keep intensive use close by, further limiting the potential for damage to nearby cultural resources. While it is difficult to anticipate livestock behavior, these measures are expected to eliminate or substantially reduce impacts. BLM would periodically monitor archaeological site conditions and would take measures to eliminate any adverse effects resulting from livestock use of the proposed well

Additional known sites would be monitored and information gathered to learn when and where cattle congregate. The new information would be used to work with the permittees to manage livestock use in such a manner as to draw the animals away from historic properties. Wells are the only water sources within the allotment so sequence and length of pumping can be used to move livestock around as needed. Placement of feed supplements would be used in a similar manner.

### No Action

As discussed above, livestock activity has affected cultural resources in the allotment. Observations at two archaeological sites indicate a change in cattle activity sometime in the last 26 years has led to some deterioration, but this increase in livestock use may have been an anomaly as recent visits to the site show a marked decrease in livestock presence.

### **Cumulative Impacts**

The cumulative effects study area (CESA) is the Lower Franklin River HUC level 5 watershed. Cumulative impacts to cultural resources can occur as a result of past,

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present, and reasonably foreseeable actions (PPRFFAs) as well as external environmental factors described above in the Affected Environment for Cultural Resources.

Unlike renewable resources, the condition of cultural resources cannot be improved. Their condition may be stabilized for a time or the rate of deterioration lessened, but by their nature most will continue a downward spiral. The condition of cultural resources within the allotment and the area as a whole will likely continue to deteriorate due to both PPRFFAs and external factors. While livestock grazing is likely to contribute to the overall decline of the conditions of cultural resources, implementation of the No Action or Proposed Action Alternative would render the overall impacts comparatively minor. There are no cumulative impacts of concern related to the No Action and Proposed Action alternatives.

## **3.2.8 Native American Concerns**

### **Affected Environment**

Ruby Valley, due its abundance in natural resources, had a higher pre-contact Native American population density than most of the Great Basin (Steward 1938). The valley and surrounding mountains still hold cultural and spiritual significance to the Newe (Shoshone) whose families have occupied the valley (Bengston 2009:66). A recent ethnographic study of the Valley (Bengston 2009) affirms that while the valley as a whole is significant, certain locations such as former village sites, places where ceremonies or festivals are held, etc. stand out as having special value. A review of the confidential map accompanying the Bengston report indicates that none of the identified special areas lie within the Ruby #8 or Bennett Field Allotments or in close proximity to the proposed well.

### **Effects of Alternatives**

#### Proposed Action

Given that none of the areas identified in Ruby Valley as having special significance to the Western Shoshone people occur near the proposed project, no adverse effects are anticipated

#### No Action

Effects of the no action would be the same as those of the proposed alternative.

### **Cumulative Impacts**

No cumulative impacts are anticipated.

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## 3.3 Mitigation and Monitoring

No additional mitigation or monitoring measures other than those specifically outlined in the Proposed Action for Cultural Resources, Section 2.2.5 have been identified for this action.

## 4 – CONSULTATION AND COORDINATION

### 4.1 Persons, Groups or Agencies Consulted

In January 2009 the BLM mailed a scoping letter for the proposed Ruby #8 Section 26 water well to interested public for the Ruby #8 Allotment. The BLM received one response from the Sustainable Grazing Coalition supporting management projects that improve livestock distribution.

In July 2009 the BLM mailed a letter to Ruby #8 Allotment Permittees informing them that BLM was expanding the proposed action to include changes in season of use and removal of the seeding fence as a result of previous requests made by the permittees. Permittees later requested that the seeding fence remain in place and removal of the seeding fence was subsequently taken out of the proposed action.

In July 2010 the BLM mailed a revised project scoping letter to interested parties for the Ruby #8 and Bennett Field Allotments. The letter introduced the Proposed Action outlined in this EA. The BLM received a response from Nevada Division of Water Resources regarding proper permitting procedures for the proposed well; and a response from Nevada Department of Wildlife (NDOW) regarding potential issues with proposed changes in season of use. Issues identified by NDOW are addressed in section 3.2.5 of the EA.

### 4.2 Preparers

Mark Dean	Project Lead, Soil, Water, Air, Riparian
Tim Murphy	Cultural Resources, Native American Concerns
Jill Jensen	Cultural Resources
Tyson Gripp	Non-Native Invasive Species
Terri Dobis	Livestock Grazing
Derrick Holdstock	Special Status Species, Migratory Birds, and Other Wildlife
Cameron Collins	Special Status Species, Migratory Birds, and Other Wildlife

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Kirk Laird                      Planning and Environmental Coordinator  
Victoria Anne                 Planning and Environmental Coordinator

## 4.3 Distribution

Prior to issuance of any decision to implement the proposed action, this EA will be available for comment on the BLM public web site at:

[http://www.blm.gov/nv/st/en/fo/elko\\_field\\_office/blm\\_information/nepa.html](http://www.blm.gov/nv/st/en/fo/elko_field_office/blm_information/nepa.html)

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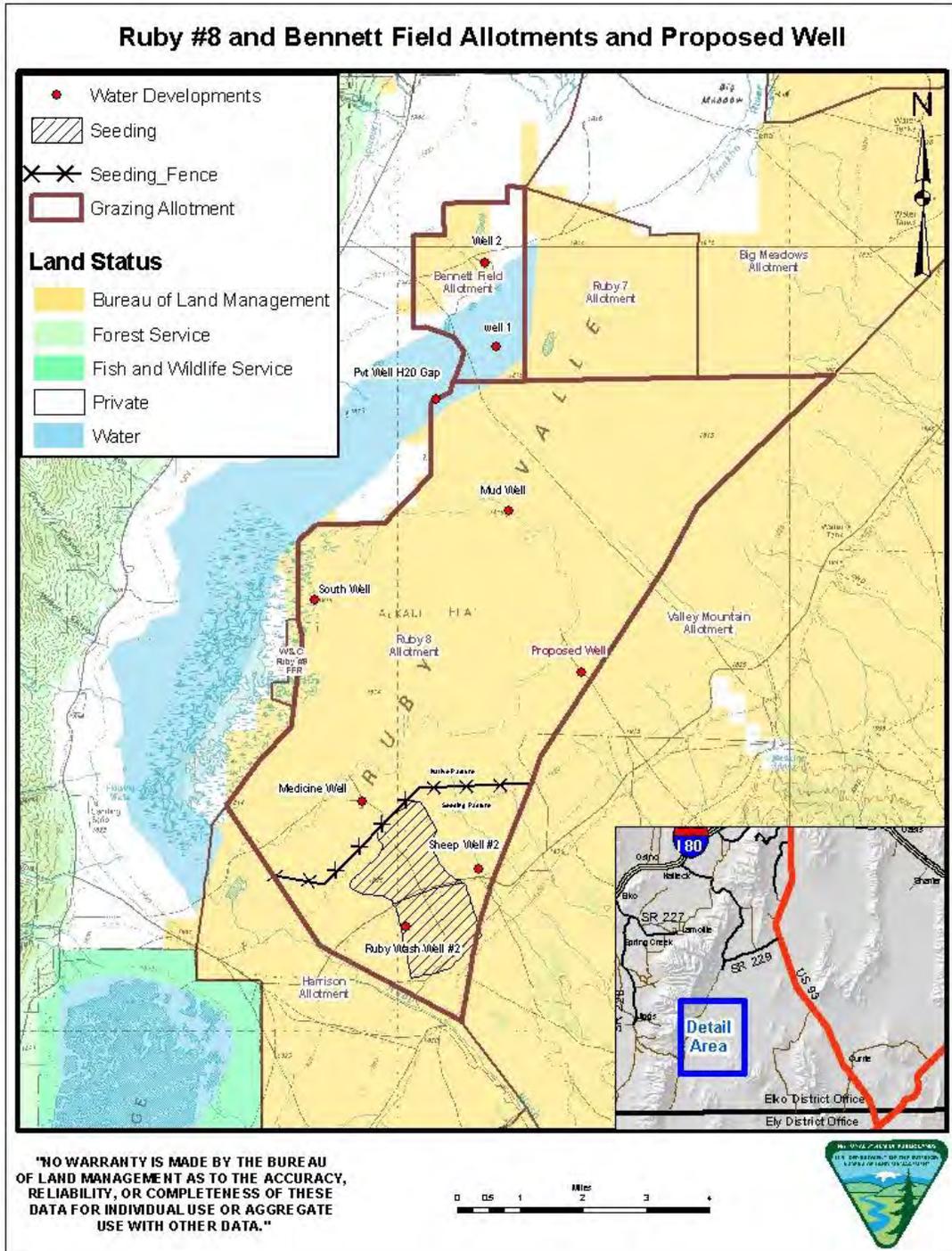
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# Ruby #8 and Bennett Field Allotment Permit Renewal

## ATTACHMENTS

### ATTACHMENT 1



## Ruby #8 and Bennett Field Allotment Permit Renewal

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### Attachment 2: Special status species with a potential to exist within the sagebrush and salt desert scrub habitats in the Ruby #8 and Bennett Field Allotments.

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Common Name	Scientific Name
<i>Birds</i>	
Northern Goshawk	<i>Accipiter gentilis</i>
Ferruginous Hawk	<i>Buteo regalis</i>
Golden Eagle	<i>Aquila chrysaetos</i>
Prairie Falcon	<i>Falco mexicanus</i>
Columbian Sharp-tailed Grouse	<i>Tympanuchus phasianellus</i>
Greater Sage Grouse	<i>Centrocercus urophasianus</i>
Mountain Quail	<i>Oreortyx pictus</i>
Burrowing Owl	<i>Athene cunicularia</i>
Loggerhead Shrike	<i>Lanius ludovicianus</i>
Vesper Sparrow	<i>Pooecetes gramineus</i>
Black Rosy Finch	<i>Leucosticte atrata</i>
<i>Mammals</i>	
Pallid Bat	<i>Antrozous pallidus</i>
Townsend's big-eared Bat	<i>Corynorhinus townsendii</i>
Big Brown Bat	<i>Eptesicus fuscus</i>
Spotted Bat	<i>Euderma maculatum</i>
Silver-haired Bat	<i>Lasionycteris noctivagans</i>
Western Red Bat	<i>Lasiurus blossevillii</i>
Hoary Bat	<i>Lasiurus cinereus</i>
California Myotis	<i>Myotis californicus</i>
Western Small-footed Myotis	<i>Myotis ciliolabrum</i>
Long-eared Myotis	<i>Myotis evotis</i>
Little Brown Bat	<i>Myotis lucifugus</i>
Fringed Myotis	<i>Myotis thysanodes</i>
Long-legged Myotis	<i>Myotis volans</i>
Yuma Myotis	<i>Myotis yumanensis</i>
Western Pipistrelle	<i>Pipistrellus hesperus</i>
Brazilian Free-tailed Bat	<i>Tadarida brasiliensis</i>
Pygmy Rabbit	<i>Brachylagus idahoensis</i>

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## Ruby #8 and Bennett Field Allotment Permit Renewal

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### Attachment 3. Special status species with a potential to exist within the wetland habitats in the Ruby 8 and Bennett Field Allotments.

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Common Name	Scientific Name
<i>Birds</i>	
Least Bittern	<i>Ixobrychus exilis</i>
Swainson's Hawk	<i>Buteo swainsoni</i>
Bald Eagle	<i>Haliaeetus leucocephalus</i>
Peregrine Falcon	<i>Falco peregrinus</i>
Sandhill Crane	<i>Grus canadensis</i>
Snowy Plover	<i>Charadrius alexandrinus</i>
Long-billed Curlew	<i>Numenius americanus</i>
Black Tern	<i>Chlidonias niger</i>
Long-eared Owl	<i>Asio otus</i>
Short-eared Owl	<i>Asio flammeus</i>
Lewis's Woodpecker	<i>Melanerpes lewis</i>
Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>
Yellow-breasted Chat	<i>Icteria virens</i>
Bobolink	<i>Dolichonyx oryzivorus</i>
<i>Mammals</i>	
Preble's Shrew	<i>Sorex preblei</i>
<i>Amphibians</i>	
Northern Leopard Frog	<i>Rana pipiens</i>
Columbia Spotted Frog	<i>Rana luteiventri</i>

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# Ruby #8 and Bennett Field Allotment Permit Renewal

## Attachment 4: Birds associated primarily with sagebrush and salt desert scrub habitats

Common Name	Scientific Name	Sagebrush	Salt Desert Scrub	Lowland Riparian	Wetlands and Lakes
Turkey Vulture	<i>Cathartes aura</i>	F	F	F	F
Northern Harrier	<i>Circus cyaneus</i>	M	M	B	B
Cooper's Hawk	<i>Accipiter cooperii</i>	F		B	
Northern Goshawk	<i>Accipiter gentilis</i>	F			
Ferruginous Hawk	<i>Buteo regalis</i>	B		W	W
Rough-legged Hawk	<i>Buteo lagopus</i>	F		W	W
Golden Eagle	<i>Aquila chrysaetos</i>	F	F		F
American Kestrel	<i>Falco sparverius</i>	F	F	B	F
Prairie Falcon	<i>Falco mexicanus</i>	F	F	F	F
Gray Partridge	<i>Perdix perdix</i>	B		B	
Chucker	<i>Alectoris chukar</i>	B	B		
Columbian Sharp-tailed Grouse	<i>Tympanuchus phasianellus</i>	B			
Greater Sage-grouse	<i>Centrocercus urophasianus</i>	B			
Mountain Quail	<i>Oreortyx pictus</i>	B			
California Quail	<i>Callipepla californica</i>	B	B	B	B
Greater Roadrunner	<i>Geococcyx californianus</i>		I	B	
Burrowing Owl	<i>Athene cunicularia</i>	B	B	B	
Common Nighthawk	<i>Chordeiles minor</i>	B	B	B	B
Common Poor-will	<i>Phalaenoptilus nuttallii</i>	B	B	B	
Rufous Hummingbird	<i>Selasphorus rufus</i>	M	M	M	
Gray Flycatcher	<i>Empidonax wrightii</i>	B			
Loggerhead Shrike	<i>Lanius ludovicianus</i>	B	B		
Horned Lark	<i>Eremophila alpestris</i>	B	B		
Bushtit	<i>Psaltriparus minimus</i>	B	B	B?	
Mountain Bluebird	<i>Sialia currucoides</i>	F			
Sage Thrasher	<i>Oreoscoptes montanus</i>	B	B		
American Pipit	<i>Anthus rubescens</i>		W		W
Black-throated Sparrow	<i>Amphispiza bilineata</i>	B	B		
Sage Sparrow	<i>Amphispiza belli</i>	B	B		
Brewer's Sparrow	<i>Spizella breweri</i>	B			
Vesper Sparrow	<i>Pooecetes gramineus</i>	B			
Lark Sparrow	<i>Chondestes grammacus</i>	B	B	B	
Lapland Longspur	<i>Calcarius lapponicus</i>		I	I	
Snow Bunting	<i>Plectrophenax nivalis</i>	I	I	I	I
Western Meadowlark	<i>Sturnella neglecta</i>	B	B	B	
Brown-headed Cowbird	<i>Molothrus ater</i>	B		B	B
Black Rosy Finch	<i>Leucosticte atrata</i>	W			
American Goldfinch	<i>Carduelis tristis</i>	M	M	W	M

B = breeding, F = foraging, I – incidental, M = migratory, W = wintering

# Ruby #8 and Bennett Field Allotment Permit Renewal

## Attachment 5: Additional birds associated primarily with riparian habitats

Common Name	Scientific Name	Lowland Riparian	Wetlands and Lakes
Common Loon	<i>Gavia immer</i>		M
Horned Grebe	<i>Podiceps auritus</i>		I
Eared Grebe	<i>Podiceps nigricollis</i>		B
Pied-billed Grebe	<i>Podilymbus podiceps</i>		B
Western Grebe	<i>Aechmophorus occidentalis</i>		B
Clark's Grebe	<i>Aechmophorus clarkii</i>		B
American White Pelican	<i>Pelecanus erythrorhynchos</i>		B
Double-crested Cormorant	<i>Phalacrocorax auritus</i>		B
American Bittern	<i>Botaurus lentiginosus</i>	B	
Least Bittern	<i>Ixobrychus exilis</i>		B
Great Blue Heron	<i>Ardea herodias</i>	B	B
Great Egret	<i>Ardea alba</i>	B	B
Snowy Egret	<i>Egretta thula</i>	B	B
Cattle Egret	<i>Bubulcus ibis</i>		B
Green Heron	<i>Butorides virescens</i>		B
Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	B	B
White-faced ibis	<i>Plegadis chihi</i>	B	B
Tundra Swan	<i>Cygnus columbianus</i>		W
Trumpeter Swan	<i>Cygnus buccinator</i>		I
Greater White-fronted Goose	<i>Anser albifrons</i>		M
Ross' Goose	<i>Chen rossii</i>		M
Snow Goose	<i>Chen caerulescens</i>		M
Canada Goose	<i>Branta canadensis</i>	B	B
Wood Duck	<i>Aix sponsa</i>	B	M
Mallard	<i>Anas platyrhynchos</i>	B	B
Northern Pintail	<i>Anas acuta</i>	B	B
Gadwall	<i>Anas strepera</i>	B	B
American Wigeon	<i>Anas americana</i>	M	W
Eurasian Wigeon	<i>Anas penelope</i>		I
Northern Shoveler	<i>Anas clypeata</i>	B	B
Blue-winged Teal	<i>Anas discors</i>	I	I
Cinnamon Teal	<i>Anas cyanoptera</i>	B	B
Green-winged Teal	<i>Anas crecca</i>	M	W
Lesser Scaup	<i>Aythya affinis</i>	M	W
Ring-necked Duck	<i>Aythya collaris</i>	M	W
Greater Scaup	<i>Aythya marila</i>		I
Canvasback	<i>Aythya valisineria</i>		W
Redhead	<i>Aythya americana</i>	B	B
Long-tailed Duck	<i>Clangula hyemalis</i>		I
Surf Scoter	<i>Melanitta perspicillata</i>		I
White-winged Scoter	<i>Melanitta fusca</i>		I
Common Goldeneye	<i>Bucephala clangula</i>	M	W
Barrow's Goldeneye	<i>Bucephala islandica</i>	I	I
Bufflehead	<i>Bucephala albeola</i>	M	W
Common Merganser	<i>Mergus merganser</i>	B	B
Red-breasted Merganser	<i>Mergus serrator</i>	M	M

## Ruby #8 and Bennett Field Allotment Permit Renewal

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Ruddy Duck	<i>Oxyura jamaicensis</i>	B	B
Hooded Merganser	<i>Lophodytes cucullatus</i>	M	W
Sharp-shinned Hawk	<i>Accipiter striatus</i>	M	

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B = breeding, F = foraging, I – incidental, M = migratory, W = wintering

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Common Name	Scientific Name	Lowland Riparian	Wetlands and Lakes
Red-shouldered Hawk	<i>Buteo lineatus</i>	I	
Broad-winged Hawk	<i>Buteo platypterus</i>	I	
Red-tailed Hawk	<i>Buteo jamaicensis</i>	B	W
Swainson's Hawk	<i>Buteo swainsoni</i>	B	
Osprey	<i>Pandion haliaetus</i>	B	
Bald Eagle	<i>Haliaeetus leucocephalus</i>	B	B
Merlin	<i>Falco columbarius</i>	W	W
Peregrine Falcon	<i>Falco peregrinus</i>	F	M
Ring-necked Pheasant	<i>Phasianus colchicus</i>	B	B
Dusky Grouse	<i>Dendragapus obscurus</i>	B	
Wild Turkey	<i>Meleagris gallopavo</i>	B	
Virginia Rail	<i>Rallus limicola</i>	B	B
Sora	<i>Porzana carolina</i>	B	B
Common Moorhen	<i>Gallinula chloropus</i>		B
American Coot	<i>Fulica americana</i>		B
Sandhill Crane	<i>Grus canadensis</i>	B	B
Black-bellied Plover	<i>Pluvialis squatarola</i>		M
Semipalmated Plover	<i>Charadrius semipalmatus</i>		M
Snowy Plover	<i>Charadrius alexandrinus</i>		B
Killdeer	<i>Charadrius vociferus</i>	B	B
Mountain Plover	<i>Charadrius montanus</i>		I
Black-necked Stilt	<i>Himantopus mexicanus</i>	F	B
American Avocet	<i>Recurvirostra americana</i>	F	B
Greater Yellowlegs	<i>Tringa melanoleuca</i>	M	M
Lesser Yellowlegs	<i>Tringa flavipes</i>	M	M
Solitary Sandpiper	<i>Tringa solitaria</i>	I	I
Spotted Sandpiper	<i>Actitis macularia</i>	B	B
Long-billed Curlew	<i>Numenius americanus</i>	B	B
Marbled Godwit	<i>Limosa fedoa</i>	M	M
Willet	<i>Catoptrophorus semipalmatus</i>	B	B
Baird's Sandpiper	<i>Calidris bairdii</i>		M
Western Sandpiper	<i>Calidris mauri</i>	M	M
Least Sandpiper	<i>Calidris minutilla</i>	M	M
Long-billed Dowitcher	<i>Limnodromus scolopaceus</i>		M
Wilson's Snipe	<i>Gallinago delicata</i>	B	B
Wilson's Phalarope	<i>Phalaropus tricolor</i>	B	B
Red-necked Phalarope	<i>Phalaropus lobatus</i>		M
Bonaparte's Gull	<i>Larus philadelphia</i>	M	M
Franklin's Gull	<i>Larus pipixcan</i>	M	B
Ring-billed Gull	<i>Larus delawarensis</i>	F	B
California Gull	<i>Larus californicus</i>	F	B
Herring Gull	<i>Larus argentatus</i>		W
Black Tern	<i>Chlidonias niger</i>	M	B

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B = breeding, F = foraging, I – incidental, M = migratory, W = wintering

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# Ruby #8 and Bennett Field Allotment Permit Renewal

Common Name	Scientific Name	Lowland Riparian	Wetlands and Lakes
Caspian Tern	<i>Sterna caspia</i>	F	B
Forster's Tern	<i>Sterna forsteri</i>		B
Rock Dove	<i>Columba livia</i>	F	
White-winged Dove	<i>Zenaida asiatica</i>	B	
Mourning Dove	<i>Zenaida macroura</i>	B	
Barn Owl	<i>Tyto alba</i>	B	B
Long-eared Owl	<i>Asio otus</i>	B	
Short-eared Owl	<i>Asio flammeus</i>	M	B
Western Screech Owl	<i>Otus kennicottii</i>	B	
Great Horned Owl	<i>Bubo virginianus</i>	B	
Northern Pygmy Owl	<i>Glaucidium gnoma</i>	B	
Belted Kingfisher	<i>Ceryle alcyon</i>	B	B
Black Swift	<i>Cypseloides niger</i>	I	
Black-chinned Hummingbird	<i>Archilochus alexandri</i>	B	
Northern Flicker	<i>Colaptes auratus</i>	B	W
Lewis's Woodpecker	<i>Melanerpes lewis</i>	M	
Downy Woodpecker	<i>Picoides pubescens</i>	B	
Hairy Woodpecker	<i>Picoides villosus</i>	M	
Williamson's Sapsucker	<i>Sphyrapicus thyroideus</i>	B	
Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	B	
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	I	
Western Wood-pewee	<i>Contopus sordidulus</i>	B	
Willow Flycatcher	<i>Empidonax traillii</i>	B	
Cordilleran Flycatcher	<i>Empidonax occidentalis</i>	M	
Black Phoebe	<i>Sayornis nigricans</i>	B	
Ash-throated Flycatcher	<i>Myiarchus cinerascens</i>	B	
Western Kingbird	<i>Tyrannus verticalis</i>	B	
Eastern Kingbird	<i>Tyrannus tyrannus</i>	I	I
Northern Shrike	<i>Lanius excubitor</i>	I	
Warbling Vireo	<i>Vireo gilvus</i>	B	
Red-eyed Vireo	<i>Vireo olivaceus</i>	I	
Black-billed Magpie	<i>Pica hudsonia</i>	B	
American Crow	<i>Corvus brachyrhynchos</i>	B	M
Common Raven	<i>Corvus corax</i>	B	
Tree Swallow	<i>Tachycineta bicolor</i>	B	M
Violet-green Swallow	<i>Tachycineta thalassina</i>	M	M
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	B	B
Bank Swallow	<i>Riparia riparia</i>	B	B
Barn Swallow	<i>Hirundo rustica</i>	M	M
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	M	M
Mountain Chickadee	<i>Poecile gambeli</i>	W	
Marsh Wren	<i>Cistothorus palustris</i>		B
Bewick's Wren	<i>Thryomanes bewickii</i>	B	
House Wren	<i>Troglodytes aedon</i>	B	
Pacific Wren	<i>Troglodytes pacificus</i>	I	
American Dipper	<i>Cinclus mexicanus</i>	B	
Blue-gray Gnatcatcher	<i>Polioptila caerulea</i>	B	

# Ruby #8 and Bennett Field Allotment Permit Renewal

B = breeding, F = foraging, I – incidental, M = migratory, W = wintering

Common Name	Scientific Name	Lowland Riparian	Wetlands and Lakes
Western Bluebird	<i>Sialia mexicana</i>	B	
Varied Thrush	<i>Ixoreus naevius</i>	I	
American Robin	<i>Turdus migratorius</i>	B	
Veery	<i>Catharus fuscescens</i>	I	
Northern Mockingbird	<i>Mimus polyglottos</i>	B	
Gray Catbird	<i>Dumetella carolinensis</i>	I	
Bohemian Waxwing	<i>Bombycilla garrulus</i>	W	
Cedar Waxwing	<i>Bombycilla cedrorum</i>	B	
European Starling	<i>Sturnus vulgaris</i>	B	
Orange-crowned Warbler	<i>Vermivora celata</i>	M	
Yellow Warbler	<i>Dendroica petechia</i>	B	
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	I	
Townsend's Warbler	<i>Dendroica townsendi</i>	M	
Blackpoll Warbler	<i>Dendroica striata</i>	I	
Northern Waterthrush	<i>Seiurus noveboracensis</i>	I	
Common Yellowthroat	<i>Geothlypis trichas</i>	B	B
Yellow-breasted Chat	<i>Icteria virens</i>	B	
Summer Tanager	<i>Piranga rubra</i>	B	
Lazuli Bunting	<i>Passerina amoena</i>	B	
Indigo Bunting	<i>Passerina cyanea</i>	B?	
Blue Grosbeak	<i>Passerina caerulea</i>	B	
Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	B	
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	I	
Spotted Towhee	<i>Pipilo maculatus</i>	B	
American Tree Sparrow	<i>Spizella arborea</i>	W	
Savannah Sparrow	<i>Passerculus sandwichensis</i>		B
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	B	
Song Sparrow	<i>Melospiza melodia</i>	B	B
Lincoln's Sparrow	<i>Melospiza lincolnii</i>	M	
Dark-eyed Junco	<i>Junco hyemalis</i>	W	
Harris' Sparrow	<i>Zonotrichia querula</i>	I	
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>	W	
Golden-crowned Sparrow	<i>Zonotrichia atricapilla</i>	I	
White-throated Sparrow	<i>Zonotrichia albicollis</i>	I	
Northern Oriole	<i>Icterus bullockii</i>	B	
Bobolink	<i>Dolichonyx oryzivorus</i>	B	
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	B	B
Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>		B
Brewer's Blackbird	<i>Euphagus cyanocephalus</i>	B	B
Great-tailed Grackle	<i>Quiscalus mexicanus</i>	B	B
Common Grackle	<i>Quiscalus quiscula</i>	I	
House Finch	<i>Carpodacus mexicanus</i>	B	
Purple Finch	<i>Carpodacus purpureus</i>	I	
Lesser Goldfinch	<i>Carduelis psaltria</i>	M	
Common Redpoll	<i>Carduelis flammea</i>	I	
House Sparrow	<i>Passer domesticus</i>	B	

B = breeding, F = foraging, I – incidental, M = migratory, W = wintering