UNITED STATES DEPARTMENT OF THE INTERIOR
BLM, BOISE DISTRICT

Sunnyside Watershed Grazing Permit Renewals
EA No. ID-111-2006-1772

Applicant (if any): **BLM Action**	Proposed Action: **Sunnyside Watershed Grazing Permit Renewals**			EA No. **ID-111-2006-1772**
State: **Idaho**	County: **Ada, Canyon, Elmore**	District: **Boise**	Field Office: **Four Rivers**	Authority: **NEPA, FLPMA, & Taylor Grazing Act**
Prepared By: **FRFO ID Team**	Title: **Various**			Report Date: **9/28/07**

LANDS INVOLVED

Allotment	Township	Range	Total Acres	BLM Acres
White Butte	1 S.	2 W.	601	479
Sunnyside Spring/Fall	1 N., 1 – 3 S.	1 W., 1 – 5 E.	275,031	152,728
Sunnyside Winter	1 – 4 S.	1 W., 1 – 4 E.	140,320	130,810
Rattlesnake Seeding	3 – 5 S.	4 – 6 E.	16,035	14,598
Crater Rings	3 S.	5 E.	3,236	3,130
Rattlesnake Creek	5 S.	5 – 6 E.	6,212	4,733
Rabbit Springs	4 S.	3 E.	590	590
Melba Seeding	1 N., 1 – 2 S.	1 W.	3,200	2,958
Reverse	5 – 6 S.	7 – 8 E.	11,236	10,538
Chattin Hill	4 – 5 S.	3 – 4 E.	11,952	8,844
Squaw Creek	2 – 4 S.	4 – 6 E.	18,909	15,192
Simco	3 S.	4 E.	2,473	2,467
Airbase	4 – 5 S.	4 – 6 E.	27,564	26,140
Medbury Hill	5 S.	8 E.	1,593	1,561
Total Acres			**518,951**	**374,769**

Consideration of Critical Elements	NA or Not Present	Applicable or Present, No Impact	Discussed in EA
Air Quality	X		
Areas of Critical Environmental Concern		X	
Cultural Resources			X
Environmental Justice (E.O. 12898)	X		
Farm Lands (prime or unique)	X		
Floodplains	X		
Migratory Birds			X
Native American Religious Concerns	X		
Invasive, Non-Native Species			X
Wastes, Hazardous or Solid	X		
Threatened or Endangered Species			X
Social and Economic			X
Water Quality (Drinking/Ground)	X		
Wetlands/Riparian Zones			X
Wild and Scenic Rivers (Eligible)	X		
Wilderness Study Areas	X		

Environmental Assessment #ID-111-2006-1772
Grazing Permit Renewals for the Sunnyside Watershed

Table of Contents

1.0 Introduction 2
1.1 Purpose and Need for the Proposed Action 2
1.2 Summary of Proposed Action 3
1.3 Conformance with the Land Use Plan 4
1.4 Relationship to Statutes, Regulations, and Other Requirements 5
2.0 Description of the Alternatives 7
2.1 Alternatives Development Process 8
2.2 Alternatives Considered, But Not Analyzed in Detail 9
2.3 Description of the Proposed Action and Alternatives 10
2.3.1 Alternative A - No Change Alternative 10
2.3.2 Alternative B - Dormant Use of Perennial Allotments and Pastures 12
2.3.3 Alternative C - Broader Use of Annual Pastures and Rotational Grazing of Perennial Pastures 13
2.3.4 Alternative D - Alternative D-1 to D-9: Proposals submitted by individual permittees 15
2.4 Comparison of Alternatives 20
3.0 Affected Environment 27
3.1 Upland Vegetation 27
3.2 Special Status Plants 33
3.3 Soils and Watershed 35
3.4 Invasive, Non-native Species 37
3.5 Special Status Animals 39
3.6 Cultural Resources 42
3.7 Wetlands/Riparian Areas/Aquatic Resources/Floodplains 43
3.8 Social and Economic 46
3.9 Visual Resource Management 46
3.10 Recreation/Wild and Scenic Rivers 46
4.0 Environmental Consequences 47
4.1 Upland Vegetation and Soils 47
4.1.1 Alternative A 47
4.1.2 Alternative B 48
4.1.3 Alternative C 49
4.2 Special Status Plants 50
4.2.1 Alternative A 50
4.2.2 Alternative B 51
4.2.3 Alternative C 51
4.3 Invasive, Non-native Species 51
4.3.1 Alternative A 51
4.3.2 Alternative B 51
4.3.3 Alternative C 52

4.4 Fish and Wildlife/Special Status Animals 52
4.4.1 Alternative A 52
4.4.2 Alternative B 52
4.4.3 Alternative C 52
4.5 Cultural Resources 53
4.5.1 Alternative A 53
4.5.2 Alternative B 53
4.5.3 Alternative C 53
4.6 Wetlands/Riparian Areas 53
4.6.1 Alternative A 53
4.6.2 Alternative B 55
4.6.3 Alternative C 55
4.7 Social and Economic 55
4.7.1 Alternative A 55
4.7.2 Alternative B 55
4.7.3 Alternative C 56
4.8 Visual Resource Management (VRM) 56
4.8.1 Alternative A 56
4.8.2 Alternative B 56
4.8.3 Alternative C 56
4.9 Recreation 57
4.9.1 Alternative A 57
4.9.3 Alternative C 57
4.10 Cumulative Impacts 58
4.11 Mitigation 58
5.0 Consultation and Coordination 59
5.1 Public Participation 59
5.2 List of Agencies, Organizations, and Individuals Consulted 60
5.3 List of Preparers 61
6.0 Literature Cited 62
7.0 Appendices 65
7.1 Appendix A: Environmental Consequences for Permittee-submitted Proposals (Alternatives D-1 through D-9) 66
7.1.1 Alternative D-1: John Anchustegui Jr.; Permit #1101636, Sunnyside Spring/Fall (825) and Simco (887) Allotments 66
7.1.2 Alternative D-2: L.G. Davison & Sons, L.L.C.; Permit #1100519, Sunnyside Spring/Fall Allotment (825) 67
7.1.3 Alternative D-3: Soulen Livestock Company; Permit #1101687, Sunnyside Winter (826) and Airbase (896) Allotments 68
7.1.4 Alternative D-4: Davis Cattle Company; Permit #1101601, Rattlesnake Seeding Allotment (827) 70
7.1.5 Alternative D-5: Jean M. Smith, Permit #1101659, Crater Rings (828) and Squaw Creek (886) Allotments 71
7.1.6 Alternative D-6: Daniel Whitted, Permit #1101674, Rabbit Springs Allotment (837) 73

7.1.7 Alternative D-7: Double D Bar Ranch, Permit #1101621, Melba Seeding Allotment (868) ... 73
7.1.8 Alternative D-8: Danskin, LLC, Permit #1101690, Reverse Allotment (873) .. 74
7.1.9 Alternative D-9: Mr. George Withers, Permit #1101675, Medbury Hill Allotment (899) ... 75
7.2 Appendix B: Grazing-related Conservation Measures from the March 30, 2006 Conservation Agreement (CA) for Grazing Allotments Containing Slickspot Peppergrass Habitat. ... 76
7.3 Appendix C: Conservation Measures for Jackson Lake Springsnail Populations and Habitat ... 83
7.4 Appendix D: Common Terms and Conditions for all grazing permits in the Sunnyside Watershed ... 85
7.5 Appendix E: Maps ... 87

Environmental Assessment #ID-111-2006-1772
Grazing Permit Renewals for the Sunnyside Watershed

1.0 Introduction

The 14 public land grazing allotments and 21 grazing permits covered in this document (Table 3.1) were grouped and assessed as a "watershed" to determine their conformance to the Idaho Standards for Rangeland Health and Guidelines for Grazing Management. The affected area is referred to as the Sunnyside Watershed. With the exception of a portion of the Sunnyside Spring/Fall Allotment, the 14 allotments are located wholly within the Snake River Birds of Prey National Conservation Area (NCA). The allotments are located on the Snake River Plain north of the Snake River and south of Interstate 84. The affected area lies in portions of Ada, Canyon, and Elmore counties, is approximately 20 miles wide, and extends along about 80 miles of the Snake River from near Melba southeast to Hammett, Idaho.

1.1 Purpose and Need for the Proposed Action

The purpose of the Proposed Action is to authorize livestock grazing and related management facilities on 14 grazing allotments in accordance with applicable laws and regulations. The purpose of this environmental assessment (EA) is to analyze the impacts of proposed livestock grazing management practices and projects. The EA will aid the BLM authorized officer in making informed decisions regarding future livestock grazing management that are in conformance to existing land use plan objectives, in compliance with the Idaho Standards for Rangeland Health, consistent with the Guidelines for Livestock Grazing Management, and compatible with the 1993 NCA-enabling legislation.

The Sunnyside Watershed has been impacted over the past three decades from a combination of landscape-scale wildfire, grazing, military training, and recreation. Repeated wildfires during this period have caused the loss of over 300,000 acres of native shrubs, and have exacerbated the influx of noxious weeds, as well as exotic invasive weeds and grasses, such as cheatgrass. The initial allotment review process identified few specific issues other than the general ecological deterioration of the area. The following table shows the determinations for each standard in the various allotments. Determinations revealed that most applicable rangeland health standards and livestock management guidelines were being met. However, in seven allotments (about 362,400 acres), Standard 4 (native plant communities) was not being met due to the landscape-scale loss of native shrubs and perennial bunchgrasses, and the resulting dominance by cheatgrass and other invasive species, including bur buttercup. In four of these seven allotments, the issue was determined to be livestock-related. Standard 5 (seedings) was not being met in eight allotments (about 357,700 acres) due to past failures of a number of vegetation treatments. In only three of these allotments was livestock management determined to be a significant factor in the seeding failures. Standard 6 (exotic plant communities) was not being met in five of the allotments, but in none of these allotments was livestock grazing considered a significant factor. With the exception of the Rabbit Springs Allotment, the entire watershed failed to meet Standard 8 (threatened, endangered, and sensitive species) because of landscape-scale wildfire-related ecological changes that have impacted habitat for slickspot

peppergrass and other sensitive plants and animals. The Airbase, Squaw Creek, and Reverse Allotments had some pastures where livestock grazing was considered a significant factor in not meeting Standard 8, and other pastures where livestock grazing was not considered a significant factor.

Allotment Name	Rangeland Health Standards							
	1	2	3	4	5	6	7	8
White Butte #386	M	NM	M	*	*	M	*	NM
Medbury Hill #899	M	M	M	*	NM	M	*	NM
Airbase #896	M	M	M	M	NM	M	*	NM/NMC
Simco #887	M	*	*	*	*	NM	*	NM
Squaw Creek #886	M	*	*	NMC	NMC	M	*	NMC
Chattin Hill #875	M	M	M	NM	*	NM	*	NM
Reverse #873	M	*	*	M	NMC	NM	*	NMC
Melba Seeding #868	M	M	M	NM	NM	*	*	NMC
Rabbit Springs #837	M	NM	M	NM	*	*	M	M
Rattlesnake Creek #834	M	M	M	*	*	M	M	NMC
Crater Rings #828	NMC	*	*	*	NMC	M	*	NM
Rattlesnake Seeding #827	M	*	*	NM	NMC	M	*	NM
Sunnyside Spring/Fall #825	M	*	*	NMC	NM	NM	*	NMC
Sunnyside Winter #826	M	M	M	NMC	NM	NM	*	NMC

M = Meeting the Standard.
NM = Not meeting, but livestock grazing is not a significant factor.
NMC = Not meeting, and livestock grazing is considered a significant factor.
* Standard does not apply to this allotment.

Where livestock grazing management is considered a significant part of the problem, this analysis will determine appropriate actions to improve grazing management, and will adjust and/or renew 21 grazing permits in a way that promotes the attainment of rangeland health standards. At a minimum, affected permits will be authorized in a manner that reduces direct and indirect livestock-related impacts on slickspot peppergrass and the Idaho (now Jackson Lake) springsnail. Permits for allotment located within the general slickspot peppergrass zone of consideration will include generic slickspot peppergrass livestock-related conservation measures. Permits in allotments affected by slickspot peppergrass management areas identified in the 2006 slickspot peppergrass Conservation Agreement will incorporate additional livestock-related conservation measures specific to those management areas. Potential impacts to the Idaho (now Jackson Lake) springsnail will be mitigated through appropriate conservation measures identified in the 2005 bald eagle and Idaho springsnail Biological Assessment.

1.2 Summary of Proposed Action

BLM proposes to renew 21 grazing permits in 14 allotments in the Sunnyside Watershed in a manner that: 1) safeguards the watershed, 2) protects special resource values, including special status plant and animal species, and 3) is compatible with the purposes for which the NCA was established.

If appropriate, grazing permits would be issued for a 10-year term, and would conform to current policy and direction. Existing permits would be modified, as needed, including but not limited to, amended Terms and Conditions, new authorized range improvements, or minor modifications to allotment boundaries. Management requirements would also be imposed to insure rangeland health standards and livestock management guidelines are met.

1.3 Conformance with the Land Use Plan

The Kuna Management Framework Plan (MFP) is the land use plan that has guided public land management in the Sunnyside Watershed since 1983. In 1993, however, Public Law 103-64 (the NCA-enabling Act), amended the Kuna MFP by providing that existing uses of the NCA be authorized only to the extent they are compatible with the purposes for which the NCA was established – the conservation, protection, and enhancement of raptor populations and habitats. As such, public lands in the NCA are now managed under the concept of dominant use, not multiple use. Grazing alternatives contained herein are in conformance with the MFP, as required by 43 CFR 1610.5-3(a). The alternatives comply with the Idaho Standards for Rangeland Health, and are consistent with the Guidelines for Livestock Grazing Management. The alternatives also conform to the NCA-enabling Act, since the purpose of the alternatives is to improve livestock grazing management in a way that facilitates conservation, protection, and enhancement of raptor populations and habitats.

It should be noted that the Four Rivers Field Office will be releasing a Final Resource Management Plan (RMP) for the NCA sometime in late calendar year 2007. Proposed decisions in the soon-to-be-released Final NCA RMP that affect livestock grazing management will not differ substantially from those contained in the Kuna MFP. The Final NCA RMP will not include forage allocations, but will identify allotments or portions thereof that are not available for livestock grazing. The soon-to-be-released Final NCA RMP recognizes the current degraded state of the NCA's ecosystem, which has resulted largely from repeated wildfires and drought over the past three decades. The NCA RMP will impose a requirement that grazing permittees leave a minimum of 250 lb/acre of standing litter to reduce soil erosion and enhance watershed protection in pastures dominated by exotic annual species (i.e., cheatgrass). To ensure that proposed grazing decisions are consistent with the NCA RMP when it becomes effective, we will impose this 250 lb/acre residual litter requirement on all grazing permits.

The new NCA RMP will also establish objectives for habitat restoration and fuels management, which will affect up to 230,000 acres of the NCA over the life of the plan. We recognize that rangeland dominated by annual exotics cannot effectively be improved through livestock management alone. As such, the NCA RMP recognizes the need to conduct vegetation treatments in annual-dominated areas for one or both of these objectives. Following successful treatment, continued livestock grazing will be evaluated in the context of whether and to what extent it can be used to conserve and sustain the ecological and monetary investments that have been made in the treated areas. As such, livestock numbers, seasons-of-use, grazing systems, and AUMs will be reviewed and revised as necessary to ensure rangeland health standards are met.

1.4 Relationship to Statutes, Regulations, and Other Requirements

Federal regulations authorize BLM to issue grazing permits to qualified applicants. Permittees may graze livestock on public lands that are designated in the 1983 Kuna MFP as available for livestock grazing. Should the new NCA RMP change the designation of specific allotments, grazing decisions will be issued at that time to implement those decisions. In addition, the following laws, regulations, manuals, and policies provide the foundation for livestock use and management of public land:

- The Taylor Grazing Act, 1934
- The Federal Land Policy and Management Act, 1976 (FLPMA), Title IV, Section 402
- The Public Rangelands Improvement Act, 1978
- The National Environmental Policy Act, 1969, as amended (NEPA)
- Title 40 - Code of Federal Regulation (40 CFR), Subparts 1500 to 1508 – Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act
- BLM Planning Handbook, H-1601-1
- BLM Special Status Species Management Manual, 6840
- Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management, 1997
- Title 43 - Code of Federal Regulations (43 CFR), Subpart 4100 – Grazing Administration, exclusive of Alaska

1. Standards and Guidelines (43 CFR 4180)

On August 12, 1997, the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management were approved by the Secretary of the Interior. Livestock management practices must now conform to the approved standards and guidelines. The BLM has completed Standards and Guidelines Assessments and Determinations for the 14 allotments in the Sunnyside Watershed. The Authorized Officer has determined that, in most cases, grazing management practices and/or levels of grazing are not significant factors in BLM's failure to meet standards for rangeland health and to conform to guidelines for grazing management. Standards needing the most attention in the Sunnyside Watershed include Standards 4, 5, and 8, as discussed in Section 1.1 above.

2. Snake River Birds of Prey National Conservation Area (NCA)

The 483,700 acre NCA was established by Public Law 103-64 on August 4, 1993 to "…provide for the conservation, protection, and enhancement of raptor populations and habitats, and the natural and environmental resources and values associated therewith..." The NCA-enabling Act provides that uses of public lands in the NCA existing on the date of enactment, including livestock grazing, shall be allowed to continue as long as they are consistent and compatible with the purposes for which the NCA was established.

3. Bald Eagle and Idaho (now Jackson Lake) Springsnail Biological Assessment (BA)

In 2005, BLM prepared a BA to determine potential impacts of livestock grazing on the threatened bald eagle and the endangered Idaho springsnail. Although these species have since been de-listed, BLM will continue to manage them as sensitive species. In addition, the Idaho

springsnail, was renamed the Jackson Lake springsnail. The BA identified the following nine allotments in the Sunnyside Watershed that contain habitat for one or both of these species.

Airbase	Chattin Hill	Medbury Hill
Melba Seeding	Rabbit Springs	Rattlesnake Creek
Reverse	Sunnyside Winter	White Butte

In August 2005, the U.S. Fish and Wildlife Service (FWS) published a Biological Opinion (BO), finding that livestock grazing in the above allotments would not likely adversely affect the bald eagle. The BO also concluded that livestock grazing in the following allotments would likely adversely affect the Idaho (now Jackson Lake) springsnail.

Medbury Hill	Melba Seeding	Rattlesnake Creek
Reverse	Sunnyside Winter	White Butte

Conservation measures were developed for the affected grazing allotments to reduce the potential for livestock-related impacts to the Idaho (now Jackson Lake) springsnail (Appendix C). These conservation measures will be incorporated into the grazing decisions for the affected allotments.

4. Slickspot peppergrass (*Lepidium papilliferum*) Conservation Agreement (CA)

Slickspot peppergrass is a small endemic annual and biennial plant that occurs on sparsely vegetated microsites known as "slickspots" in sagebrush-steppe habitats of southwestern Idaho (Quinney 2000), across a landscape of intermingled ownerships, management responsibilities, and land use activities. In July 2002, the FWS proposed the species for listing as endangered under the Endangered Species Act. On January 22, 2004, however, FWS withdrew its proposal to list slickspot peppergrass. On August 19, 2005, the U.S. District Court for the District of Idaho directed FWS to reconsider whether to list the species as threatened or endangered. In January 2007, FWS issued a decision not to list the species. Thus, slickspot peppergrass is now being managed as a BLM sensitive species.

Until further notice, slickspot peppergrass will be managed under the requirements of a March 30, 2006 CA, which was developed to protect slickspot peppergrass from the potential impacts of various land use activities. The CA is an amended and refined version of a 2003 Candidate Conservation Agreement (CCA), which represented a coordinated effort among the State of Idaho, BLM, Idaho Army National Guard, and several grazing permittees. The CCA established 12 slickspot peppergrass management areas (MAs) to provide an organizational structure to facilitate management, based on issues and site-specific habitat characteristics. All or portions of six MAs (Boise, Kuna, Gowen Field/Orchard Training Area, Orchard, Orchard add-on, and Mountain Home) are located within the Sunnyside Watershed, and will be referenced in this EA.

The effect of slickspot peppergrass conservation measures on livestock grazing was analyzed in 2004 (EA-ID095-2004-078). Conservation measures that affect livestock management in specific Sunnyside Watershed allotments are found in Appendix B. Proposed decisions must comply with these CA conservation measures. With the exception of the Reverse Allotment,

these conservation measures were incorporated into affected grazing permits by a September 10, 2004 grazing decision.

2.0 Description of the Alternatives

Extensive areas of the Sunnyside Watershed where shrubs have been removed by wildfire are currently dominated by cheatgrass and other exotic invasive annual plants. This landscape-scale vegetation change reflects an ecological transition, and the largely annual-dominated Sunnyside Watershed is considered to have crossed the ecological threshold, and has been converted to annual exotic range.

> "In assessing the standards for rangeland health it is important to understand the concept of thresholds. A threshold is a transition boundary that an ecosystem crosses, resulting in a new stable state that is not easily reversed without significant inputs of resources. Once an ecosystem crosses a threshold, it may be very difficult to restore the original plant community and ecological processes by changes in management alone. Expensive restoration measures (e.g., weed control, seeding, soil modifications or additions) may be necessary to restore these degraded ecosystems." (USDI 2000 page 9)

Based on the above definition, lands that have been converted to annual exotic range may be managed differently than perennial rangeland. Because much of the Sunnyside Watershed has crossed the ecological threshold from perennial to annual exotic range, livestock grazing management will not produce the same results as would be expected and desired in a perennial rangeland system. Through grazing management, ecological conditions would be expected to improve only if: 1) pastures support a significant component of perennial plants that will respond to grazing management, and 2) adequate growing conditions provide the opportunity for the perennial plant community to respond to improved grazing management.

In the Sunnyside Watershed, annual and seasonal variations in precipitation cause significant annual fluctuations in livestock forage production, especially in pastures supporting predominantly exotic annual species. Some permittees have taken voluntary non-use or substantial AUM reductions during years of extremely low forage production in annual pastures. In other cases, grazing in years with much reduced forage production has resulted in inadequate residual ground cover following livestock removal. Inadequate ground cover reduces the amount of moisture being captured and retained, thus, reducing spring soil moisture content. Likewise, inadequate ground cover results in below normal surface soil temperatures that retard initiation of spring plant growth. These are important management considerations in an area where soil moisture is often available to plants only in the spring.

The Sunnyside Watershed S&G Assessment acknowledged that allotments have been significantly impacted by wildland fire, drought, invasive exotic plants, and unsuccessful emergency fire rehabilitation projects. In a few instances, timing and intensity of livestock grazing were determined to have contributed to either not meeting a standard or placing the area at risk of not meeting a standard.

Excessive utilization of herbaceous perennials and shrubs has been observed in some allotments, especially in drought years. In addition, some allotments are grazed during both spring and fall, with no specific pasture rotation system. As a result, grazing occurs almost every year during the critical growth period of desired perennial plants, resulting in reduced plant vigor and reproduction, as well as the dominance of plant interspaces by invasive annual grasses and weeds.

2.1 Alternatives Development Process

To simplify the analysis of different grazing management alternatives for the Sunnyside Watershed, we assumed that areas supporting plant communities composed predominately of cheatgrass and other exotic annual grasses and forbs would not be expected to improve in ecological condition with livestock grazing management alone. Further, we recognize that vegetation production in annual plant communities varies greatly from year to year, and as such, these communities provide no reliable basis for making or revising forage allocations. Vegetation treatments (i.e., habitat restoration, fuels management, and fire rehabilitation projects) provide the only feasible option for improving the ecological condition in these areas. **Therefore, although livestock numbers and/or AUMs would be reduced on an annual basis to reflect decreased annual forage production, significant changes in AUM preference would not be made in annual allotments or pastures.** In essence, annual pastures would be managed on a custodial basis until they are treated as part of a rangeland restoration or fuels management project. These pastures and allotments, however, would be subject to Management Requirements imposed for watershed protection purposes, and for special status species management.

Proposed management actions would focus on improving livestock management in those allotments or pastures that support residual perennial plant communities sufficiently large enough to respond to improved grazing management. Allotments and pastures identified in Table 2.1 have crossed an ecological threshold, are composed predominately of annual exotic species, and require vegetation treatment to improve ecological condition and function.

Table 2.1 Allotments or pastures to be managed as annual exotic rangeland

Allotment No.	Allotment Names	Pasture Names
386	White Butte	*Entire allotment*
825	Sunnyside Spring/Fall	All land outside the Kuna slickspot peppergrass Management Area.
826	Sunnyside Winter	*Entire allotment*
827	Rattlesnake Seeding	New Field, Rock Dam, Small Arms #2, Airbase, Hog Farm, West Lamberton, and Pastures 1, 2 and 3
834	Rattlesnake Creek	*Entire allotment*
837	Rabbit Springs	*Entire allotment*
868	Melba Seeding	*Entire allotment*
873	Reverse	Pastures 1 – 6
875	Chattin Hill	*Entire allotment*

Table 2.1 Allotments or pastures to be managed as annual exotic rangeland

Allotment No.	Allotment Names	Pasture Names
886	Squaw Creek	Farm to Market, Crater II Seeding, East Rockhouse, West Rock House, and Small Arms II
887	Simco	*Entire allotment*
896	Airbase	*Entire allotment*
899	Medbury Hill	Pastures 1 and 4 (south of Highway 30)

No significant changes in grazing management would be proposed for the exotic annual allotments and pastures listed in Table 2.1 due to their inability to improve ecologically through grazing management. However, new management requirements would be imposed on the grazing permits for these allotments, requiring a minimum amount of residual standing litter following livestock removal to reduce wind erosion and enhance watershed values, and incorporating conservation measures for the protection and conservation of slickspot peppergrass and Idaho (now Jackson Lake) springsnail populations and habitats.

Table 2.2 lists those allotments and/or pastures supporting a sufficient residual component of perennial species that would allow them to respond to changes in grazing management.

Table 2.2 Allotments or pastures to be managed as perennial rangeland

Allotment No.	Allotment Names	Pasture Names
825	Sunnyside Spring/Fall	Pastures within the Kuna slickspot peppergrass Management Area: **Dormant Use Only from 10/15 to 02/15**
827	Rattlesnake Seeding	Pastures 4, 5, and East Lamberton
828	Crater Rings	*Entire allotment*
873	Reverse	Pastures 7, 8, and 9
886	Squaw Creek	Sheep Butte
899	Medbury Hill	Pastures 2 and 3 (north of Highway 30)

A number of strategies could be employed to improve livestock management in perennial pastures (see Table 2.2). Grazing management systems could be initiated that incorporate modifications in livestock and/or AUM numbers, seasons and/or length of use, and utilization levels. Management objectives would address livestock movement, distribution, and turn-out dates. Range improvements could be proposed to improve livestock distribution, accommodate and support rangeland restoration efforts, protect special status plant or animal species, and facilitate implementation of grazing systems. On-the-ground cultural, wildlife, and botanical surveys and an environmental assessment would be conducted prior to authorization of any new surface disturbing activities.

2.2 Alternatives Considered, But Not Analyzed in Detail

2.2.1 No Grazing Alternative

A No Grazing proposal was analyzed in Alternative C of the Draft NCA RMP Environmental Impact Statement, which was released on June 2, 2006 for a 90-day public

comment period. Since the Final NCA RMP will soon be released, and will become the Land Use Plan for the Sunnyside Watershed, a No Grazing alternative need not be analyzed in this EA.

2.2.2 Reduced Grazing Preference in Annual Allotments/Pastures

As stated in Section 2.1, we recognize that vegetation production in annual plant communities seldom equals that of perennial communities. Further, the vegetative production in annual plant communities may vary greatly from year to year. As such, annual exotic rangelands are highly variable forage producers, and provide no reliable basis for long-term forage allocations. Therefore, although authorized AUMs would be reduced as needed on an annual basis to reflect decreased forage production, significant changes in forage allocation (preference) would be inappropriate or ineffective in annual allotments or pastures. In essence, annual pastures would be managed on a custodial basis until they are treated as part of a rangeland restoration or fuels management project, after which they would be re-evaluated to determine how and to what extent livestock grazing could be re-initiated in a way that meets Rangeland Health Standards and conserves and protects the ecological and monetary investment in the vegetation treatment. Grazing permits for annual allotments and pastures would, however, be subject to new management requirements imposed for watershed protection purposes, and for special status species management.

2.3 Description of the Proposed Action and Alternatives

This EA discusses and analyzes four (4) alternatives, three of which pertain to all the allotments. The fourth alternative (Alternative D) consists of nine allotment-specific proposals submitted by individual grazing permittees. They are described as Alternatives D-1 through D-9. Since each of the Alternative D proposals affects a specific allotment(s), they are each analyzed separately. Alternative D will be considered the Proposed Action for the affected permits. Alternative C will be considered the Proposed Action for those allotments or permits for which a specific permittee proposal was not proffered.

2.3.1 Alternative A - No Change Alternative

Under this alternative BLM would continue to authorize the current kinds and numbers of livestock and the current seasons of use and AUMs (Table 2.3), except where those seasons of use or AUMs conflict with new requirements being imposed pursuant to the 2006 slickspot peppergrass CA or the 2005 bald eagle and Idaho springsnail BA.

Table 2.3.1. Current Authorized Livestock Grazing in the Sunnyside Watershed

Allotment			Terms of Permit				
			Livestock		Period of Use	% Public Land	Allotted AUMs[1]
No.	Name	Permittee	No.*	Kind			
00386	White Butte	Tom Kasper	44	Cattle	04/01-05/01	100	45
00825	Sunnyside Spring/Fall	John Anchustegui	2,393	Sheep	04/01-05/31	100	960
			670	Sheep	11/01-01/31	100	405
		Donald L. Pape	72	Cattle	04/01-06/15	100	180
			61	Cattle	10/16-12/15	100	122
		L.G. Davison & Sons	73	Cattle	04/01-05/15	100	108

Table 2.3.1. Current Authorized Livestock Grazing in the Sunnyside Watershed

Allotment			Terms of Permit				
			Livestock				
		T.F.I.	1,889	Cattle	04/01-05/31	100	3,989
			1,151	Cattle	10/16-12/15	100	2,308
		Tom Nicholson	1,173	Cattle	04/01-06/30	97	3,404
			1,316	Cattle	11/01-12/15	97	1,889
	Leone FFR		4	Cattle	04/01-06/30	100	12
			5	Cattle	11/01-12/15	100	7
	Prison FFR		4	Cattle	04/01-06/30	100	12
			5	Cattle	11/01-12/15	100	7
00826	Sunnyside Winter	Arlen DeMeyer	243	Cattle	12/16-02/28	100	599
		Soulen Livestock Co.	9,865	Sheep	12/16-02/28	100	4,865
			179	Cattle	12/16-02/28	100	441
		T.F.I.	766	Cattle	12/16-02/28	100	1,889
		Tom Nicholson	1,472	Cattle	12/16-02/28	100	3,484
00827	Rattlesnake Seeding	Davis Cattle Co.	271	Cattle	03/01-06/30	93	1,011
			416	Cattle	11/01-02/28	93	1,640
00828	Crater Rings	Jean M. Smith	400	Cattle	04/05-05/31	100	750
00834	Rattlesnake Creek	Verlin Gingerich	55	Cattle	04/01-06/15	100	137
			54	Cattle	10/01-11/16	100	83
00837	Rabbit Springs	Daniel Whitted.	85	Cattle	04/15-04/29	100	42
			85	Cattle	08/15-08/29	100	42
00868	Melba Seeding	Double D Bar Ranch	72	Cattle	04/01-06/30	100	215
			72	Cattle	11/01-12/15	100	107
	FFR		1	Cattle	03/01-04/14	100	1
	FFR		2	Cattle	10/01-02/28	100	10
00873	Reverse	Danskin, LLC	315	Cattle	03/01-05/31	95	905
			315	Cattle	11/10-02/28	95	1,092
00875	Chattin Hill	Grandview Farms	285	Cattle	12/01-02/28	100	833
00886	Squaw Creek	Jean M. Smith	735	Cattle	04/01-06/30	91	2,001
			390	Cattle	11/01-01/15	91	970
00887	Simco	John Anchustegui	84	Cattle	04/01-06/30	100	251
00896	Airbase	Soulen Livestock Co.	879	Cattle	11/05-02/28	100	3,352
00899	Medbury Hill	George Withers	100	Cattle	04/01-05/31	100	201
			100	Cattle	11/16-12/14	100	95

* Livestock numbers may vary providing the season of use and AUMs are not exceeded.
[1] All AUMs are active; there are no suspended AUMs in any allotments within the watershed.

Terms and conditions that would apply to all permits in the Sunnyside Watershed are shown in Appendix D.

Rangeland Management Projects:
Rangeland management projects in the Sunnyside Watershed are limited to fences, cattleguards, and loading corrals. There are no permanent water facilities on public land. Livestock water is either hauled in to portable troughs or into historic "dugouts."

2.3.2 Alternative B - Dormant Use of Perennial Allotments and Pastures

Table 2.3.2 describes the grazing management under Alternative B.

Annual allotments and pastures: Spring grazing in annual allotments and pastures would be managed as described in Alternative A. Dormant season grazing in annual allotments and pastures could occur anytime from October 15 through February 28.

Perennial allotments and pastures: Livestock grazing in perennial allotments and pastures, including areas treated in the future for habitat restoration or fuels management, would be authorized only during the dormant season, which is defined as the period extending from October 15 through February 28.

Terms and Conditions:
Terms and Conditions would be the same as described for Alternative A.

Rangeland Management Projects:
No rangeland management projects would be constructed.

Table 2.3.2. Proposed Livestock Grazing in the Sunnyside Watershed – Alternative B.

Allotment			Terms of Permit				
			Livestock		Period of Use	% Public Land	Allotted AUMs[1]
No.	Name	Permittee	No.*	Kind			
00386	White Butte	Tom Kasper	44	Cattle	04/01-05/01	100	45
00825	Sunnyside Spring/Fall	John Anchustegui	2,393	Sheep	04/01-05/31	100	960
			670	Sheep	10/15 – 2/28	100	405
		Donald L. Pape	72	Cattle	04/01-06/15	100	180
			61	Cattle	10/15 – 2/28	100	122
		L.G. Davison & Sons	73	Cattle	04/01-05/15	100	108
		T.F.I.	1,889	Cattle	04/01-05/31	100	3,989
			1,151	Cattle	10/15 – 2/28	100	2,308
		Tom Nicholson	1,173	Cattle	04/01-06/30	97	3,404
			1,316	Cattle	10/15 – 2/28	97	1,889
	Leone FFR		4	Cattle	04/01-06/30	100	12
			5	Cattle	10/15 – 2/28	100	7
	Prison FFR		4	Cattle	04/01-06/30	100	12
			5	Cattle	10/15 – 2/28	100	7
00826	Sunnyside Winter	Arlen DeMeyer	243	Cattle	10/15 – 2/28	100	599
		Soulen Livestock Co.	9,865	Sheep	10/15 – 2/28	100	4,865
			179	Cattle	10/15 – 2/28	100	441
		T.F.I.	766	Cattle	10/15 – 2/28	100	1,889
		Tom Nicholson	1,472	Cattle	10/15 – 2/28	100	3,484
00827	Rattlesnake Seeding	Davis Cattle Co.	271	Cattle	03/01-06/30	93	1325
			416	Cattle	10/15 – 2/28	93	1326
00828	Crater Rings	Jean M. Smith	400	Cattle	10/15 – 2/28	100	750
00834	Rattlesnake Creek	Verlin Gingerich	55	Cattle	04/01-06/15	100	137
			54	Cattle	10/15 – 2/28	100	83

Table 2.3.2. Proposed Livestock Grazing in the Sunnyside Watershed – Alternative B.

Allotment			Terms of Permit				
			Livestock				
00837	Rabbit Springs	Daniel Whitted.	85	Cattle	04/15-04/29	100	42
			85	Cattle	08/15-08/29	100	42
00868	Melba Seeding	Double D Bar Ranch	72	Cattle	04/01-06/30	100	215
			72	Cattle	10/15 – 2/28	100	107
	FFR		1	Cattle	03/01-04/14	100	1
	FFR		2	Cattle	10/15 – 2/28	100	10
00873	Reverse	Danskin, LLC	315	Cattle	03/01-05/31	95	905
			315	Cattle	10/15 – 2/28	95	1,092
00875	Chattin Hill	Grandview Farms	285	Cattle	10/15 – 2/28	100	833
00886	Squaw Creek	Jean M. Smith	735	Cattle	04/01-06/30	91	2,001
			390	Cattle	10/15 – 2/28	91	970
00887	Simco	John Anchustegui	84	Cattle	04/01-06/30	100	251
00896	Airbase	Soulen Livestock Co.	879	Cattle	10/15 – 2/28	100	3,352
00899	Medbury Hill	George Withers	100	Cattle	04/01-05/31	100	145
			100	Cattle	10/15 – 2/28	100	150

* Livestock numbers may vary providing the season of use and AUMs are not exceeded.
[1] All AUMs are active; there are no suspended AUMs in any allotments within the watershed.

2.3.3 Alternative C - Broader Use of Annual Pastures and Rotational Grazing of Perennial Pastures

Table 2.3.3 describes the grazing management under Alternative C.

Annual allotments and pastures: Livestock kinds and numbers in annual allotments and pastures would remain the same as described for Alternative A; however, spring use would be authorized only during the period from April 1 to June 30, and dormant season use would be authorized only during the period from October 15 to February 28. Unless otherwise provided, annual pastures would be grazed in either spring or dormant season, but not in both seasons in the same calendar year.

Perennial allotments and pastures: In perennial allotments and pastures, including areas treated in the future for habitat restoration or fuels management, livestock grazing would be managed under a rotational grazing system, wherein livestock grazing would alternate between spring and dormant season use. Spring use would be authorized only during the period from April 1 to May 20. Dormant season use would be authorized only during the period from October 15 to February 28. Livestock grazing would not be authorized in the same allotment/pasture during the same season of use in any two consecutive years.

Terms and Conditions:
Terms and Conditions would be the same as described for Alternative A.

Rangeland Management Projects:
No rangeland management projects would be constructed.

Table 2.3.3. Proposed Livestock Grazing in the Sunnyside Watershed – Alternative C.

Allotment			Terms of Permit				
			Livestock		Period of Use	% Public Land	Allotted AUMs[1]
No.	Name	Permittee	No.*	Kind			
00386	White Butte	Tom Kasper	44	Cattle	04/01-06/30	100	45
00825	Sunnyside Spring/Fall	John Anchustegui	2,393	Sheep	04/01-06/30	100	960
			670	Sheep	10/15 – 2/28	100	405
		Donald L. Pape	72	Cattle	04/01-06/30	100	180
			61	Cattle	10/15 – 2/28	100	122
		L.G. Davison & Sons	73	Cattle	04/01-06/30	100	108
		T.F.I.	1,889	Cattle	04/01-05/31	100	3,989
			1,151	Cattle	10/15 – 2/28	100	2,308
		Tom Nicholson	1,173	Cattle	04/01-06/30	97	3,404
			1,316	Cattle	10/15 – 2/28	97	1,889
	Leone FFR		4	Cattle	04/01-06/30	100	12
			5	Cattle	10/15 – 2/28	100	7
	Prison FFR		4	Cattle	04/01-06/30	100	12
			5	Cattle	10/15 – 2/28	100	7
00826	Sunnyside Winter	Arlen DeMeyer	243	Cattle	10/15 – 2/28	100	599
		Soulen Livestock Co.	9,865	Sheep	10/15 – 2/28	100	4,865
			179	Cattle	10/15 – 2/28	100	441
		T.F.I.	766	Cattle	10/15 – 2/28	100	1,889
		Tom Nicholson	1,472	Cattle	10/15 – 2/28	100	3,484
00827	Rattlesnake Seeding	Davis Cattle Co.	271	Cattle	04/01-06/30	93	1,011
			416	Cattle	10/15 – 2/28	93	1,640
00828	Crater Rings	Jean M. Smith	400	Cattle	04/01-05/20	100	750
00834	Rattlesnake Creek	Verlin Gingerich	55	Cattle	04/01-06/30	100	137
			54	Cattle	10/15 – 2/28	100	83
00837	Rabbit Springs	Daniel Whitted.	85	Cattle	04/01-06/30	100	42
			85	Cattle	08/15-08/29	100	42
00868	Melba Seeding	Double D Bar Ranch	72	Cattle	04/01-06/30	100	215
			72	Cattle	10/15 – 2/28	100	107
	FFR		1	Cattle	04/01-06/30	100	1
	FFR		2	Cattle	10/15 – 2/28	100	10
00873	Reverse	Danskin, LLC	315	Cattle	04/01-06/30	95	905
			315	Cattle	10/15 – 2/28	95	1,092
00875	Chattin Hill	Grandview Farms	285	Cattle	10/15 – 2/28	100	833
00886	Squaw Creek	Jean M. Smith	735	Cattle	04/01-06/30	91	2,001
			390	Cattle	10/15 – 2/28	91	970
00887	Simco	John Anchustegui	84	Cattle	04/01-06/30	100	251
00896	Airbase	Soulen Livestock Co.	879	Cattle	10/15 – 2/28	100	3,352
00899	Medbury Hill	George Withers	100	Cattle	04/01-06/30	100	201
			100	Cattle	10/15 – 2/28	100	95

* Livestock numbers may vary providing the season of use and AUMs are not exceeded.
[1] All AUMs are active; there are no suspended AUMs in any allotments within the watershed.

2.3.4 Alternative D - Alternative D-1 to D-9: Proposals submitted by individual permittees

Each of the following alternatives involves a specific grazing proposal submitted by an individual permittee, which affects the allotment(s) in which the permittee is authorized to graze livestock. Only three alternatives will be evaluated for those allotments for which a permittee did not submit a specific proposal.

2.3.4.1 Alternative D-1: John Anchustegui Jr.; Sunnyside Spring/Fall (825) and Simco (887) Allotments

Sunnyside Spring/Fall (825)

The permittee proposes that authorized dormant season use dates for sheep be changed from November 1 - January 31 to November 1 - March 31 and that 350 AUMs of authorized spring sheep use (Table 2.3) be converted to 350 AUMs of dormant season (fall-winter) cattle use, as shown in Table 2.4.

Table 2.4. Proposed permitted use of Sunnyside Spring/Fall (825) allotment for Authorization #1101636 under Alternative D-1.

Livestock		Use Period		%	
Kind	Number*	Begin	End	P.L.	AUM's
Sheep	1,546	04/01	05/31	100	610
Sheep	408	11/01	03/31	100	405
Cattle	88	12/01	03/31	100	350
Cattle[1]	46	12/01	03/31	100	184 EOU

* Maximum livestock numbers may not exceed 2,000, 1,000, 200, and 46 head, respectively. Numbers may vary providing the period of use and AUMs by grazing season are not exceeded.
[1] Exchange of Use Agreement (EOU)

Simco (887)

The permittee proposes that the current season of use (Table 2.3) be modified as shown in Table 2.5.

Table 2.5. Proposed permitted use of Simco (887) allotment for Authorization #1101636 under Alternative D-1.

Livestock		Use Period		%	
Kind	**Number***	**Begin**	**End**	**P.L.**	**AUM's**
Cattle	97	03/15	05/31	100	250

* Maximum livestock numbers shall not exceed 200 head. Numbers may vary providing the period of use and AUMs are not exceeded.

2.3.4.2 Alternative D-2: L. G. Davison & Sons, Inc; Sunnyside Spring/Fall (825) Allotment

The permittee is proposing to increase the size of their historical use area in the Sunnyside Spring/Fall Allotment to include an 880 acre portion of the allotment that has historically not been grazed due to conflicts with traffic on South Cole Road. The permittee would cooperate with BLM to construct and maintain a 1¼ mile fence along the west side of South Cole Road. In

addition the permittee would agree to construct and/or repair and maintain fencing along the north, west, and south boundaries of the parcel. The permittee also proposes that their grazing permit be amended to authorize the use of "unused" spring AUMs during the dormant (fall/winter) use period (Table 2.6).

Table 2.6. Proposed permitted use of Sunnyside Spring/Fall Allotment (825) for Permit #1101519 under Alternative D-2.

Livestock		Use Period		%	
Kind	**Number**	**Begin**	**End**	**P.L.**	**AUM's**
Cattle	73	04/01	05/01	100	108
Fall/Winter use by application*		11/01	12/31	100	*

* Upon application and approval, unused spring AUMs may be used during this period.

The permittee would be authorized to graze two parcels of public land that are immediately adjacent to private lands owned or controlled by the permittee. The South Pasture includes the public land in Sections 2 and 11, T. 1 N., R. 1 E., and the North Pasture includes the public land in Section 24 and that portion of Section 25 located south of Ten Mile Creek, in T. 2 N., R. 1 E. These two pastures are currently part of the Sunnyside Spring/Fall (00825) allotment. The permittee have historically had exclusive use of the South Pasture. The North Pasture, however, has not been grazed for more than 20 years due to lack of fencing.

The permittee would comply with all grazing-related conservation measures required by the slickspot peppergrass CA, which would be included in their grazing permit as Management Requirements.

South Cole Road, a north-south county road, represents the east boundary of the North Pasture. There is currently no fence along the county road right of way. The permittee, in cooperation with BLM, would construct and maintain 1¼ miles of fence along the west boundary of the South Cole Road right of way. The permittee would also construct and/or repair and maintain fences around the perimeter of the South Pasture, as well as fences along the north, west, and south boundaries of the North Pasture.

2.3.4.3 Alternative D-3: Soulen Livestock Company; Sunnyside Winter (826) and Airbase (896) Allotments

The permittee proposes that 441 cattle AUMs in the Sunnyside Winter (00826) Allotment (Table 2.3) be transferred to the Airbase (00896) Allotment (Table 2.7). In addition, the permittee proposes that the boundaries of the Airbase Allotment be amended to include the 2,145 acre Simco Restoration Field, which is currently a part of the Sunnyside Winter Allotment.

Table 2.7. Proposed permitted use of Sunnyside Winter (826) and Airbase (896) allotments for Permit #1101687 under Alternative D-3.

Allotment	Livestock		Use Period		%	
Number	**Kind**	**Number***	**Begin**	**End**	**P.L.**	**AUM's**
00826 SS Winter	Sheep	9,865	12/15	02/28	100	4,866
00896 Airbase	Cattle	995	11/05	02/28	100	3,793

* Maximum livestock numbers of livestock on 00826 and 00896 shall not exceed 10,000 and 1,000 head, respectively. Numbers may vary providing the period of use and AUMs by grazing season are not exceeded.

Livestock would not be permitted access to the Snake River in either the Sunnyside Winter or Airbase allotment, as described in the 2005 bald eagle and Idaho springsnail Biological Assessment. In addition, the permittee would manage both allotments under a rotational grazing system to ensure that individual pastures are not grazed during identical periods in consecutive years.

2.3.4.4 Alternative D-4: Davis Cattle Company; Rattlesnake Seeding (827) Allotment

The spring use period would be shortened and the maximum number of cattle on the allotment at any one time would be 700 head (Table 2.8).

Table 2.8. Proposed permitted use of Rattlesnake Seeding (827) allotment for Authorization #1101601 under Alternative D-4.

Livestock		Use Period		%	
Kind	Number*	Begin	End	P.L.	AUM's
Cattle	700	03/01	06/01	100	1,326
Cattle	700	11/01	02/28	100	1,325

* Maximum livestock numbers shall not exceed 700 head. Numbers may vary providing the period of use and AUMs by grazing season are not exceeded.

Annual Pastures (New Field, Rock Dam, Small Arms #2, Airbase, Hog Farm, West Lamberton, and Rattlesnake Seeding #1, #2, and #3) would be grazed from 3/1 to 6/1 and from 11/1 to 2/28, depending on residual forage availability. The three Perennial Pastures (Rattlesnake Seeding #4, Rattlesnake Seeding #5, and East Lamberton) would be managed under a modified deferred rotation system wherein pastures would be grazed alternately in the spring one year and the dormant season the next. During the spring grazing season the permittee has traditionally used the East Lamberton pasture as a holding pasture for livestock that are being worked/shipped. The permittee would continue this traditional use and would construct an approximate one mile long fence to divide this pasture near the section line common to Sections 28 and 29, T. 4 S., R. 6 E., which would create a fourth perennial pasture. Consequently, all four perennial pastures would be of relatively equal size, and have similar carrying capacities.

2.3.4.5 Alternative D-5: Jean M. Smith, Crater Rings (828) and Squaw Creek (886) Allotments

<u>Crater Rings (828)</u>

Livestock grazing management would be as described in Alternative A (Table 2.3). The current livestock grazing system, authorized kind and number of livestock, and period and amount of use remain unchanged (Table 2.3). Additionally, the grazing authorization would be amended to allow livestock grazing in the NW¼ of section 8, T. 3 S., R. 5 E., with no additional allocation of AUMs.

The permittee proposes that two existing wire gates in the Crater Rings allotment be replaced with cattleguards. The first would replace the gate located approximately 280 feet east of the NW section corner of Section 3, T. 3 S., R. 5 E., along the northern boundary of the allotment.

The second would replace the gate located approximately one-quarter mile east of the west quarter corner of Section 5, T. 3 S., R. 5 E.

Squaw Creek (886)

The kind of livestock and amount of use would be as described in Alternative A (Table 2.3). The maximum number of livestock and periods of use would be amended as shown in Table 2.9.

Table 2.9. Proposed permitted use of Squaw Creek (886) allotment for Authorization #1101659 under Alternative D-5.

Livestock		Use Period		%	
Kind	Number*	Begin	End	P.L.	AUM's
Cattle	735	04/01	06/30	91	2001
Cattle	261	10/15	02/15	91	970

* Maximum livestock numbers during the 04/01 to 06/30 and 10/15 to 02/15 use periods shall not exceed 1,300 and 500 head, respectively. Numbers may vary providing the period of use and AUMs by grazing season are not exceeded.

The Sheep Butte pasture would be divided into two pastures of approximately equal acreage (East and West) with a 1.75 mile fence, and livestock grazing in those pastures would be managed under a deferred rotation system wherein annual grazing in each pasture would rotate between spring and dormant season use in alternate years. Spring use (4/1 through 6/30) would be authorized in all Annual pastures (Farm to Market, Crater Ring 2 Seeding, Crater Ring 2A, Rockhouse East, Rockhouse West, and Small Arms 2). Given adequate re-growth, dormant season use would be allowed in all pastures in the allotment except the Sheep Butte pastures.

The allotment would be grazed under a four-herd system (heifers, first calf heifers, second calf heifers, and mature cows), wherein each herd would be maintained as an individual unit (approximately 200 animal units per herd) and held within separate pastures at all times.

The permittee further proposes that BLM replace two wire gates with cattleguards.

2.3.4.6 Alternative D-6: Daniel Whitted, Rabbit Springs (837) Allotment

The kind and number of livestock would be as described in Alternative A (Table 2.3), but the authorized season of use would be amended as shown in Table 2.10. Livestock would graze both pastures during the same period each year.

Table 2.10. Proposed permitted use of Rabbit Springs (837) allotment for Authorization #1101674 under Alternative D-6.

	Livestock		Use Period		%	
Pasture	Kind	Number*	Begin	End	P.L.	AUM's
Upper (North)	Cattle	70	06/01	06/30	100	69
Lower (South)	Cattle	15	06/01	06/30	100	15

* Maximum livestock numbers shall not exceed 70 and 15 head, respectively. Numbers may vary providing the period of use and AUMs by grazing season are not exceeded.

2.3.4.7 Alternative D-7: Double D Bar Ranch, Melba Seeding (868) Allotment

The Melba Seeding Pasture would be grazed as described in Alternative A (Table 2.3). The Snake River and FFR pastures would be grazed every spring (Table 2.11).

Table 2.11. Proposed permitted use of Melba Seeding (868) allotment for Authorization #1101621 under Alternative D-7.

Pasture	Livestock		Use Period		%	
	Kind	Number*	Begin	End	P.L.	AUM's
Snake River	Cattle	72	04/01	06/30	100	215
FFR	Cattle	4	04/01	06/30	100	11
Melba Seeding	Cattle	72	11/01	12/15	100	107

* Maximum livestock numbers shall not exceed 72 head in the Snake River and Melba Seeding pastures or 7 head in the FFR pasture. Numbers may vary providing the period of use and AUMs by grazing season are not exceeded.

2.3.4.8 Alternative D-8: Danskin, LLC, Reverse (873) Allotment

Spring use would remain as described in Alternative A (Table 2.3). Ten days of use would be added in early November to the Fall use period (Table 2.12), setting the maximum number of cattle that may be present on the allotment at any one time at 315 head. All pastures would be grazed under a deferred rotation schedule, with one or more of the nine pastures being rested during any one calendar year. No perennial pasture (pastures 7 - 9) would be grazed during any two consecutive spring grazing seasons (March through May), and no annual pasture (pastures 1 - 6) would be grazed during the same thirty day period in any two consecutive spring grazing seasons (March through May).

Grazing in pastures 7 and 9 would be in compliance with the slickspot peppergrass CA to protect the two documented slickspot peppergrass populations (EO #10 and #61). If grazing management is found to not adequately protect the integrity of occupied slickspot peppergrass habitat in pastures 7 and 9, fences may be proposed to exclude livestock from the identified areas. The extent of this fencing would depend upon the specific area requiring mitigation.

Table 2.12. Proposed permitted use of Reverse (873) allotment for Authorization #1101690 under Alternative D-8.

Livestock		Use Period		%	
Kind	Number*	Begin	End	P.L.	AUM's
Cattle	315	03/01	05/31	95	905
Cattle	292	11/01	02/28	95	1095

* Maximum livestock numbers shall not exceed 315 head. Numbers may vary providing the period of use and AUMs by grazing season are not exceeded.

2.3.4.9 Alternative D-9: George Withers, Medbury Hill (899) Allotment

The fall-winter season of use would be extended as shown in Table 2.13.

Table 2.13. Proposed permitted use of Medbury Hill (887) allotment for Authorization #1101675 under Alternative D-9.

Livestock		Use Period		%	
Kind	**Number***	**Begin**	**End**	**P.L.**	**AUM's**
Cattle	100	04/01	05/31	100	201
Cattle	48	11/01	12/31	100	96

* Maximum livestock numbers shall not exceed 100 head. Numbers may vary providing the period of use and AUMs are not exceeded.

Spring use would be allowed at any time between April 1 and May 31 in Pastures #1 and #4 (annual pastures), and grazing would be rotated between early spring (4/1-4/30) and late spring (5/1-5/20) in Pastures #2 and #3 (perennial pastures) in alternate years (Table 2.14).

Table 2.14. Annual spring use schedule for annual/perennial pastures within the Medbury Hill (899) allotment.

Year	Pasture Number			
	#1	**#2**	**#3**	**#4**
Odd	04/01-05/31	05/01-05/20	04/01-04/30	04/01-05/31
Even	04/01-05/31	04/01-04/30	05/01-05/20	04/01-05/31

Approximately 116 acres of public land located on the plateau atop Medbury Hill would be reseeded. The area was previously seeded in the fall of 2000 with a perennial seed mixture as a part of an NCA habitat improvement project, but the seeding failed to establish.

2.4 Comparison of Alternatives

The four alternatives are compared against each other for each grazing permit on specific allotments. Table 2.15 identifies the alternatives that apply to each permit or allotment and addresses those areas of proposed grazing use that differ. The table describes the alternatives separately for the perennial and annual pastures identified in Tables 2.1 and 2.2 of this document.

Table 2.15 Grazing Alternatives Comparison

White Butte Allotment #386			**Management for Annuals only**	
	Alternative A	**Alternative B**	**Alternative C**	**Alternative D**
AUMs by season	45 spring cattle	NA	45 spring cattle	No proposal
Season of Use	4/1 to 5/1	NA	4/1 to 6/30	NA
Management Objectives	Jackson Lake springsnail	NA	Utilization and Residue; Jackson Lake springsnail	NA
Sunnyside Spring/Fall #825 (John Anchustegui)			**Management for Annuals and Perennials**	
	Alternative A	**Alternative B**	**Alternative C**	**Alternative D**
No. / Kind of Livestock by season	2393 sheep/ spring 670 sheep/dormant (numbers vary)	2400 sheep maximum /spring 2400 sheep maximum /dormant	Same as B	1546 sheep /spring; 408 sheep /dormant; 88 cattle /dormant
AUMs by season	960 spring sheep 405 dormant sheep	Same as A	Same as A	610 spring sheep 405 dormant sheep 350 dormant cattle

Perennial Pastures (Table 2.2)	11/01 to 01/31	10/15 to 2/15	Same as B	Same as A
Annual Pastures (Table 2.1)	4/1 to 5/31 11/1 to 1/31	4/1 to 5/31 10/15 to 2/28	4/1 to 6/30 Same as B	sheep 4/1 to 5/31 sheep 11/01 to 3/31 cattle 12/01 to 3/31
Management Objectives	LEPA CA	Utilization and Residue; LEPA CA	Same as B	Same as B
Sunnyside Spring/Fall #825 (Tom Nicholson)		**Management for Annuals and Perennials**		
	Alternative A	**Alternative B**	**Alternative C**	**Alternative D**
AUMs by season	3428 spring cattle 1903 dormant cattle	3428 spring cattle 1903 dormant cattle	3428 spring cattle 1903 dormant cattle	No proposal
Perennial Pastures (Table 2.2)	11/01 to 12/15	10/15 to 2/15	Same as B	NA
Annual Pastures (Table 2.1)	4/1 to 6/30 11/01 to 12/15	4/1 to 6/30 10/15 to 2/28	4/1 to 06/30 Same as B	NA
Management Objectives	LEPA CCA	Utilization and Residue; LEPA CCA	Same as B	NA
Sunnyside Spring/Fall #825 (T.F.I.)		**Management for Annuals and Perennials**		
	Alternative A	**Alternative B**	**Alternative C**	**Alternative D**
AUMs by season	3989 spring cattle 2308 dormant cattle	3989 spring cattle 2308 dormant cattle	3989 spring cattle 2308 dormant cattle	No proposal
Perennial Pastures (Table 2.2)	10/16 to 12/15	10/15 to 2/15	Same as B	NA
Annual Pastures (Table 2.1)	4/1 to 5/31 10/16 to 12/15	Spring - Same as A 10/15 to 2/28	4/1 to 6/30 Fall - Same as B	NA
Management Objectives	LEPA CCA	Utilization and Residue: LEPA CCA	Same as B	NA
Sunnyside Spring/Fall #825 (D. L. Pape)		**Management for Annuals and Perennials**		
	Alternative A	**Alternative B**	**Alternative C**	**Alternative D**
AUMs by season	180 spring cattle 122 dormant cattle	180 spring cattle 122 dormant cattle	180 spring cattle 122 dormant cattle	No proposal
Perennial Pastures (Table 2.2)	10/16 to 12/15	10/15 to 02/15	Same as B	NA
Annual Pastures (Table 2.1)	4/1 to 6/15 10/16 to 12/15	Spring - Same as A 10/15 to 2/28	4/1 to 6/30 Fall - Same as B	NA
Management Objectives	LEPA CCA	Utilization and Residue; LEPA CCA	Same as B	NA
Sunnyside Spring/Fall #825 (L. G. Davison & Sons, Inc.)		**Management for Annuals and Perennials**		
	Alternative A	**Alternative B**	**Alternative C**	**Alternative D**
AUMs by season	108 spring cattle	108 spring cattle	108 spring cattle	54 spring cattle 54 Dormant cattle
Perennial Pastures (Table 2.2)	NA	NA	NA	NA
Annual Pastures (Table 2.1)	4/1 to 5/15 No Fall	Same as A	4/1 to 6/30 No Fall	4/1 to 5/1 and 11/1 to 12/31

Management Objectives	LEPA CCA	Utilization and Residue; LEPA CCA	Same as B	Same as B
Sunnyside Winter #826 (Soulen Livestock Co.)		**Management for Annuals only**		
	Alternative A	**Alternative B**	**Alternative C**	**Alternative D**
No. / Kind of Livestock by season.	179 cattle-dormant 9,865 sheep-dormant numbers vary	NA	225 cattle-dormant 10,000 sheep-dormant maximum	Same as A, but Transfer cattle use to Airbase Allotment. Same as C-sheep
AUMs by season	4865 winter sheep 441 winter cattle	4865 winter sheep 441 winter cattle	4865 winter sheep 441 winter cattle	4865 winter sheep
Perennial Pastures (Table 2.2)	NA	NA	NA	NA
Annual Pastures (Table 2.1)	12/16 to 2/28 CCA	NA	10/15 to 2/28 CCA	Same as C
Management Objectives	LEPA CCA; Jackson Lake springsnail	NA	Utilization and Residue: LEPA CCA; Jackson Lake springsnail	Same as B
Sunnyside Winter #826 (Tom Nicholson)		**Management for Annuals only**		
	Alternative A	**Alternative B**	**Alternative C**	**Alternative D**
AUMs by season	3484 winter cattle	NA	3484 winter cattle	No proposal
Perennial Pastures (Table 2.2)	NA	NA	NA	NA
Annual Pastures (Table 2.1)	12/16 to 2/28 CCA	NA	10/15 to 2/28 CCA	NA
Management Objectives	LEPA CCA	NA	Utilization and Residue; LEPA CCA	NA
Sunnyside Winter #826 (T.F.I.)		**Management for Annuals only**		
	Alternative A	**Alternative B**	**Alternative C**	**Alternative D**
AUMs by season	1889 winter cattle	NA	1889 winter cattle	No proposal
Perennial Pastures (Table 2.2)	NA	NA	NA	NA
Annual Pastures (Table 2.1)	12/16 to 2/28 CCA	NA	10/15 to 2/28 CCA	NA
Management Objectives	LEPA CCA; Jackson Lake springsnail	NA	Utilization and Residue; LEPA CCA; Jackson Lake springsnail	NA
Sunnyside Winter #826 (Arlen DeMeyer)		**Management for Annuals only**		
	Alternative A	**Alternative B**	**Alternative C**	**Alternative D**
AUMs by season	599 winter cattle	NA	599 winter cattle	No proposal
Perennial Pastures (Table 2.2)	NA	NA	NA	NA
Annual Pastures (Table 2.1)	12/16 to 2/28 CCA,	NA	10/15 to 2/28 CCA,	NA
Management Objectives	LEPA CCA; Jackson Lake springsnail	NA	Utilization and Residue; LEPA CCA; Jackson Lake	NA

			springsnail	
Rattlesnake Seeding #827		**Management for Perennials and Annuals**		
	Alternative A	**Alternative B**	**Alternative C**	**Alternative D**
AUMs by season	1011 spring cattle 1640 dormant cattle	1011 spring cattle 1640 dormant cattle	1011 spring cattle 1640 dormant cattle	1325 spring cattle 1326 dormant cattle
Perennial Pastures (Table 2.2)	3/1 to 6/30 11/1 to 2/28 11/1 to 6/30	10/15 to 2/28	4/1 to 5/20 Fall - Same as B	3/1 to 6/1 11/1 to 2/28
Annual Pastures (Table 2.1)	3/1 to 6/30 11/1 to 2/28 11/1 to 6/30	3/1 to 6/30 10/15 to 2/28	4/1 to 6/30 Same as B	3/1 to 6/1 11/1 to 2/28
Management System	Deferred Grazing rotation	Same as A annuals Dormant only on perennials	Same as A	Same as A Ship cattle from same pasture in spring.
Management Objectives	None	Utilization and Residue	Same as B	Same as B
Crater Rings #828		**Management for Perennial only**		
	Alternative A	**Alternative B**	**Alternative C**	**Alternative D**
AUMs by season	750 spring cattle	750 spring cattle	750 spring cattle.	750 spring cattle
Perennial Pastures (Table 2.2)	4/5 to 5/31	10/15 to 2/28	4/1 to 5/20 Same as B	Same as A
Management System	Spring	Dormant	Deferred Grazing Rotation	Same as A
Management Objectives	None	Utilization and Residue	Same as B	Same as A
Rattlesnake Creek #834		**Management for Annuals only**		
	Alternative A	**Alternative B**	**Alternative C**	**Alternative D**
AUMs by season	137 spring cattle 83 dormant cattle	NA	137 spring cattle 83 dormant cattle	No proposal
Perennial Pastures (Table 2.2)	NA	NA	NA	NA
Annual Pastures (Table 2.1)	4/1 to 6/15 10/1 to 11/16	NA	4/1 to 6/30 10/15 to 2/28	NA
Management System	None	NA	Deferred Grazing Rotation	NA
Management Objectives	Jackson Lake springsnail	NA	Utilization and Residue; Jackson Lake springsnail	NA
Rabbit Springs #837		**Management for Annuals only**		
	Alternative A	**Alternative B**	**Alternative C**	**Alternative D**
AUMs by season	42 spring cattle 42 summer cattle	NA	42 spring cattle 42 summer cattle	84 late spring cattle maximum
Perennial Pastures (Table 2.2)	NA	NA	NA	NA
Annual Pastures (Table 2.1)	4/15 to 4/29 8/15 to 8/29	NA	4/1 to 06/30 10/15 to 2/28	06/01 to 06/30
AUMs by Season	42-spring 42-summer	NA	Same as A	85-late spring
Management	Two pasture	NA	Same as A	AUM restriction by

System	Deferred			pasture, not timing
Management Objectives	Jackson Lake springsnail	NA	Utilization and Residue; Jackson Lake springsnail	Same as C
Melba Seeding #868		**Management for Annuals only**		
	Alternative A	**Alternative B**	**Alternative C**	**Alternative D**
AUMs by season	216 alternating spring/dormant cattle 117 dormant cattle	NA	216 alternating spring/dormant cattle 117 dormant cattle	216 spring cattle 117 dormant cattle
Perennial Pastures (Table 2.2)	NA	NA	NA	NA
Annual Pastures (Table 2.1)	4/1 to 6/30 11/1 to 12/15 CCA **FFR** 3/1 to 4/14 10/1 to 2/28	NA	4/1 to 6/30 10/15 to 2/28 CCA **FFR** 4/1 to 6/30 10/15 to 2/28-same as River	4/1 to 6/30 11/1 to 12/15 CCA **FFR** 4/1 to 6/30-same as River
Management System	River Pasture-spring/dormant; Seeding Pasture-dormant; FFR-spring/dormant	NA	River Pasture-deferred rotation Seeding Pasture-dormant only FFR-Same as River	Same as A FFR-Same as River
Management Objectives	LEPA CCA; Jackson Lake springsnail	NA	Utilization and Residue; LEPA CCA; Jackson Lake springsnail	Same as C
Reverse #873		**Management for Annuals and Perennials**		
	Alternative A	**Alternative B**	**Alternative C**	**Alternative D**
AUMs by season	905 spring cattle 1092 dormant cattle	905 spring cattle 1092 dormant cattle	905 spring cattle 1092 dormant cattle	905 spring cattle 1092 dormant cattle
Perennial Pastures (Table 2.2)	3/1 to 5/31 11/10 to 2/28	10/15 to 2/28	4/1 to 5/20 10/15 to 2/28	3/1 to 5/20 11/1 to 2/28
Annual Pastures (Table 2.1)	3/1 to 5/31 11/10 to 2/28	Same as A 10/15 to 2/28	4/1 to 6/30 Same as B	Same as A 11/1 to 2/28
Management System	Deferred rotation all pastures, no sequential spring use in same pasture	Deferred rotation on annual pastures Dormant only on perennial pastures	Same as A for annual rangelands Deferred rotation-spring/dormant for perennial rangelands	Same as A Dormant use in same pastures authorized every year Spring AUMs could be shifted to dormant annually
Management Objectives	LEPA CCA; Jackson Lake springsnail	Utilization and Residue; LEPA CCA; Jackson Lake springsnail	Same as B	Same as B
Chattin Hill #875		**Management for Annuals only**		
	Alternative A	**Alternative B**	**Alternative C**	**Alternative D**
AUMs by season	833 dormant cattle	NA	833 dormant cattle	No proposal
Perennial	NA	NA	NA	NA

Pastures (Table 2.2)				
Annual Pastures (Table 2.1)	12/1 to 2/28	NA	10/15 to 2/28 – (#5 & #15) 10/15 to 3/31 - FFR	NA
Management System	Dormant Use	NA	Same as A - (#5 & #15) Dormant/early spring- FFR	NA
Management Objectives	None	NA	Utilization and Residue	NA
Squaw Creek #886		**Management for Annuals and Perennials**		
	Alternative A	**Alternative B**	**Alternative C**	**Alternative D**
No. / Kind of Livestock by season.	735 cattle-spring 390 cattle-dormant numbers vary	**Combined with Crater Rings #828** 1300 cattle-spring 650 cattle-dormant maximum	**Same as B**	**Individual Allotment** Same as B
AUMs by Season	2000 spring cattle 970 dormant cattle	2,000 spring cattle 1,720 dormant cattle	2,750 spring/dormant (shift) cattle 970 dormant cattle	Same as A
% Public Land	91	**93**	**Same as B**	Same as A
Perennial Pastures (Table 2.2)	4/1 to 6/30 10/15 to 1/05	10/15 to 2/28	4/1 to 5/20 Same as B	Same as A 10/15 to 2/15
Annual Pastures (Table 2.1)	4/1 to 6/30 10/15 to 1/05	Same as A 10/15 to 2/28	Same as B	Same as A 10/15 to 2/15
Management System	Distribute cattle in each pasture	Distribute cattle on annual pastures Dormant use only in perennial pastures	Same as A – annual pastures Deferred rotation spring/dormant-perennial pastures	Same as A- annual pastures Spring deferred rotation for perennial pasture (Sheep Butte) Dormant use (East Rockhouse)
Project Implementation	None	Cross fence East Rockhouse- CCA management	Same as B	Cattleguards; Cross Fence Sheep Butte-spring rotation
Management Objectives	LEPA CCA	Utilization and Residue: LEPA CCA	Same as B	Same as B
Simco #887		**Management for Annuals only**		
	Alternative A	**Alternative B**	**Alternative C**	**Alternative D**
AUMs by season	251 spring cattle	NA	Same as A	Same as A
Perennial Pastures (Table 2.2)	NA	NA	NA	NA
Annual Pastures (Table 2.1)	4/1 to 6/30	NA	4/1 to 6/30 10/15 to 2/28 Use may shift	3/15 to 5/31
Management Objectives	LEPA	NA	Utilization and Residue, LEPA	LEPA

Airbase #896			Management for Annuals only	
	Alternative A	**Alternative B**	**Alternative C**	**Alternative D**
AUMs by season	3,352 dormant cattle		Same as A	3,793 (441 AUMs transferred from Allotment #826)
Perennial Pastures (Table 2.2)	NA	NA	NA	NA
Annual Pastures (Table 2.1)	11/5 to 2/28	NA	10/15 to 2/28	11/1 to 2/28
Management System	None	NA	Rotate through pastures East to West and West to East in alternating years- moves based on residue	Same as C
Management Objectives	Jackson Lake springsnail	NA	Utilization and Residue: Jackson Lake springsnail	Same as B
Medbury Hill #899			**Management for Annuals and Perennials**	
	Alternative A	**Alternative B**	**Alternative C**	**Alternative D**
AUMs by season	201 spring cattle 95 dormant cattle	Same as A	Same as A	Same as A
Perennial Pastures (Table 2.2)	4/1 to 5/31 11/15 to 12/14	10/15 to 2/28	4/1 to 5/20 Same as B	Same as C 11/1 to 12/31
Annual Pastures (Table 2.1)	4/1 to 5/31 11/15 to 12/14	Same as A 10/15 to 2/28	4/1 to 6/30 Same as B	Same as A 11/1 to 12/31
Management System	Spring rotation, four pastures	NA	Spring/dormant rotation – perennial pastures Distribution- annual pastures	Spring rotational deferment in perennial pastures Annual pastures Same as C
Management Objectives	Jackson Lake springsnail	Utilization and Residue; Jackson Lake springsnail	Same as B	Same as B

3.0 Affected Environment

The 14 allotments in the Sunnyside Watershed encompass approximately 519,000 acres, of which about 375,000 acres are public land (Table 3.1).

Table 3.1 Acres in Sunnyside Watershed Grazing Allotments

Allotment	Total Acres	BLM Acres
White Butte #386	601	479
Sunnyside Spring/Fall #825	275,031	152,728
Sunnyside Winter #826	140,320	130,810
Rattlesnake Seeding #827	16,035	14,598
Crater Rings #828	3,236	3,130
Rattlesnake Creek #834	6,212	4,733
Rabbit Springs #837	590	590
Melba Seeding #868	3,200	2,958
Reverse #873	11,236	10,538
Chattin Hill #875	11,952	8,844
Squaw Creek #886	18,909	15,192
Simco #887	2,473	2,467
Airbase #896	27,564	26,140
Medbury Hill #899	1,593	1,561
Total Acres	**518,951**	**374,769**

The above lands have been impacted by repeated wildfires. In the early 1980s, because of high fuel loads produced during several years of above-average precipitation, large wildfires burned across much of the area, and the fire return interval of the Snake River Plain ecosystem in the affected area was forever altered. Records indicate that from 1980 to 2003, approximately 235,595 acres were burned in the portion of the Sunnyside Watershed within the NCA. Over 200,000 acres were burned more than once, and some areas were burned four or more times during that period (see Map 5 – Fire History). Repeated wildfires, and the combined impacts of extended drought, livestock grazing, and soil disturbing recreational and military training activities have removed native shrub communities, resulting in extensive areas of degraded habitat supporting little more than a cheatgrass monoculture. Exotic annual communities vary greatly with soil type, former vegetation community composition, and history of disturbance. Other annual exotic species, including halogeton, bur-buttercup, Russian thistle, clasping pepperweed, and tumble mustard have also invaded disturbed areas. These trends continue, but have worsened with the additional impact of noxious weeds, of which nine species have been recorded in the watershed.

3.1 Upland Vegetation

Upland plant communities in the Sunnyside Watershed are typical of the Lower Snake River Plain, but have been altered significantly since European man first entered the area (Yensen, 1982). Vegetation Map 1 (Appendix 8), developed from aerial photographs, shows broadly

grouped vegetation communities that existed in the NCA in 1979. Vegetation Map 2 (Appendix 8), developed from satellite imagery, shows how the same broadly grouped vegetation communities had changed as of 2001. Plant communities are dominated by near monocultures of cheatgrass in areas that have burned in the last 30 years, or as shrublands with a cheatgrass understory. Vegetation Map 4 (Appendix 8) shows the NCA's wildfire history from 1980 to 2003.

Cheatgrass and the frequent fires that it favors have opened many areas of the NCA to invasion by other non-native plants. Bur buttercup has become the dominant species in some areas. Some shrublands have a bur buttercup understory or lack an understory component altogether (Doremus, per obs). Medusahead wildrye is replacing cheatgrass in some habitats (Quinney 1999). Some disturbed sites, with clay soils, are dominated by clasping pepperweed, an exotic annual forb. In a few areas, seeded exotic grasses, forbs, or shrubs are the dominant vegetation. At the north end of the Idaho Army National Guard's Orchard Training Area (OTA), some Wyoming big sagebrush sites have a strong native grass understory (Quinney 1999 page 95). A few areas are dominated by Sandberg bluegrass, a native early spring bunchgrass, or shrublands with a Sandberg bluegrass understory. Russian thistle grows in abundance in areas lacking a shrub overstory, and is joined by halogeton and weedy kochia in disturbed areas that lack other vegetation. Bur buttercup is also common in disturbed areas, and dominates some areas.

The three most dominant plant communities in the watershed are (in order of prominence) exotic annuals, cheatgrass, and big sagebrush. The exotic annual plant community includes a mixture of annual grasses (cheatgrass, medusahead wildrye, and six weeks fescue) and annual weedy forbs, such as bur buttercup, weedy kochia, and Russian thistle. The cheatgrass community is a virtual monoculture of cheatgrass. The big sagebrush community supports a moderate to dense canopy cover of Wyoming big sagebrush, but supports an understory ranging from cheatgrass and other exotic annual plants to perennial bunchgrasses.

Table 3.2 shows the results of past clipping studies in various range sites in the Sunnyside Spring/Fall Allotment, reflecting that perennial grasses and winterfat produce only a very minor component of the forage production on most range sites. We believe these production numbers are a valid reflection of current allotment conditions throughout the Sunnyside watershed. The first number is the dry weight of all vegetation, and the second number is the dry weight of only perennial grasses and winterfat. These figures underscore the fact that, with few exceptions, the Sunnyside Watershed has undergone a landscape-scale change from perennial to annual communities.

Table 3.2 Sunnyside Allotment Site Write-Up Area Comparisons (1979-80 & 1997)

Site Write-Up No.	Eco-site ID No.[1]	Seral Rating 1979-80	Dry Wt. (Lb/Ac) 1979-80	Seral Rating 1997	Dry Wt. (Lb/Ac) 1997
ET-17	11-1	early	350 / 14*	early	373 / 33*
GS-9	11-1	early	650 / 136*	early	372 / 3*
GS-8	11-1	early	500 / 209*	early	238 / 137*

Table 3.2 Sunnyside Allotment Site Write-Up Area Comparisons (1979-80 & 1997)

Site Write-Up No.	Eco-site ID No.[1]	Seral Rating 1979-80	Dry Wt. (Lb/Ac) 1979-80	Seral Rating 1997	Dry Wt. (Lb/Ac) 1997
GP-9	11-3	early	538 / 65*	mid	364 / 97*
GP-8	11-3	early	525 / 19*	early	200 / 13*
GP-13	11-3	early	668 / 104*	early	196 / 37*
GS-5	11-3	early	350 / 3*	mid	809 / 10*
GS-15	11-3	early	595 / 3*	mid	391 / 145*
JP-1	11-3	early	1385 / 26*	early	475 / 0*
BP-15	11-3	early	650 / 0*	mid	338 / 16*
SR-6	11-3	early	708 / 22*	early	450 / 22*
ET-4	11-3	early	800 / 32*	early	450 / 45*
TB-11	11-3	early	460 / 51*	mid	293 / 0*
JE-1	11-4	early	720 / 87*	mid	344 / 72*
GP-3	11-9	early	388 / 310*	early	278 / 2*
ET-5	11-9	early	357 / 337*	early	354 / 0*
TB-12	11-9	early	203 / 196*	mid	521 / 135*
SR- 1	11-9	early	400 / 396*	mid	516 / 514*
ET-8	11-10	early	450 / 9*	early	419 / 16*
ET-1	11-10	early	455 / 2*	mid	797 / 0*
ET-11	11-10	early	300 / 0*	early	50 / 0*
ET-3	11-10	early	168 / 22*	mid	797 / 0*
LH-2	11-10	early	492 / 0*	mid	670 / 2*
GS-16	11-10	early	509 / 115*	early	200 / 14*
DP-10	11-10	early	511 / 69*	early	150 / 0*
GP-5	11-10	early	40 / 0 *	mid	734 / 13*
SR-5	11-10	early	350 / 7*	early	541 / 7*

Table 3.2 Sunnyside Allotment Site Write-Up Area Comparisons (1979-80 & 1997)

Site Write-Up No.	Eco-site ID No.[1]	Seral Rating 1979-80	Dry Wt. (Lb/Ac) 1979-80	Seral Rating 1997	Dry Wt. (Lb/Ac) 1997
SR-10	11-14	early	550 / 110*	early	250 / 2*
GS-11	(seeding)	not rated	400 / 121*	not rated	464 / 49*

[1] 11-1: Loamy 10-12" (ARTRW, AGSP, STTH2)
11-3: Loamy 7-10" (ARTRW, STTH2, POSA3)
11-4: Shallow Loamy 10-12" (ARTRW, AGSP, STTH2, POSE)
11-9: Silty 7-10" (EULA, ORHY)
11-10: Calcareous Loam 7-10" (ATCO, ARSP5, ORHY)
11-14: Sandy Loam 8-12" (ARTRW, ORHY, STTH2)
* Includes only perennial grasses and winterfat.

Plant Phenology: An unpublished phenology study was completed in the late 1960's for portions of the Boise District in which the Sunnyside Watershed is located. Winter grazing areas in the watershed receive less than 8 inches of annual precipitation (see Vegetation Map 3 – Annual Precipitation, Appendix 8), and support potential plant communities consisting of shadscale, winterfat, hopsage, and greasewood. The following allotments are located in the Winter Use Area:

Sunnyside Winter	Chattin Hill	Airbase
Reverse	Rattlesnake Creek	Melba Seeding
White Butte		

The Spring Range is located generally in an 8-10 inch precipitation zone. Vegetation consists of an overstory of big sagebrush and an understory of cheatgrass, Russian thistle, Sandberg bluegrass, and bottlebrush squirreltail. The current season-of-use in this area is spring or fall. Spring turn-out is based on class of livestock. The season for sheep generally extends from April 1 through June 5, and the season for cattle generally extends from April 11 through June 15. The fall use period is September 15 through October 31 for both classes of livestock. These dates are based on the seasonal growth stage of the major forage species for each class of livestock. The following allotments are in the Spring Use Area:

Sunnyside Spring/Fall	Simco	Squaw Creek
Rattlesnake Seeding	Crater Rings	Rabbit Springs
Medbury Hill		

The critical growth period for native perennial species in the Sunnyside Watershed is May 16 through July 15, during which they are most vulnerable to defoliation. Most Spring use occurs from April 1 to June 30, with some deviation based on individual operators' needs.

Standards and Guidelines Assessment:
The 2003 Sunnyside Watershed Standard and Guidelines Assessment provided information on the degree to which the 14 Sunnyside Watershed allotments were complying with Idaho

Standards for Rangeland Health, as shown in Section 1.1. The following table displays the ratings for upland vegetation (Standards 4, 5, and 6).

Table 3.3 Upland Vegetation Standards (4, 5, and 6) Ratings for the Sunnyside Watershed

Allotment	Dominant Veg	Upland Vegetation Standard (4, 5, 6) Met	Upland Vegetation Standard Not Met	Reason(s) for Not Meeting
White Butte #386	Annual Grasses/Forbs	X		
Sunnyside Spring/Fall #825	Mixed Plant Communities		X	Invasive species are abundant. Shrub canopy cover usually good, herbaceous understory either lacking or converted to invasive species. Seedings lack structural and species diversity, being compromised by exotic invasive plants. Areas converted to annuals are not meeting Standard 6 because some areas have insufficient ground cover, and noxious weeds expanding throughout the area. Grazing, fire, military activity, and OHVs, all part of the problem.
Sunnyside Winter #826	Mixed Plant Communities		X	Invasive species increasing throughout all native communities. Functional and structural diversity dissimilar. Depleted understory. Noxious weeds spreading. Reduced organic material in soil surface. Grazing, fire, and military activities are all factors.
Rattlesnake Seeding #827	Mixed Plant Communities	X	X	Pastures 1, 2, 3, and 5 (seedings) are not meeting standard due to invasion of undesirable weedy species. Lack of structural diversity and functional groups. Pasture 4 and East Lamberton Pasture retain native plants and are meeting standard 4. Pastures 4, Small Arms II, Rock Dam, New Field and West Lamberton are dominated by annual exotics, and meet Standard 6. Grazing, fire, and military activities are factors.
Crater Rings #828	Mixed Plant Communities	X	X	The seeded areas are not meeting standard due to poor vigor of seeded species (crested wheatgrass). Poor diversity in forbs, and increase in invasive species (cheatgrass, tumble mustard, Russian thistle, bluegrass and green rabbitbrush). About 40% of allotment is annual grassland, and does meet Standard 6. Grazing, fire, seeding techniques, and OHV activity are factors.
Rattlesnake Creek #834	Annual Grasses/Forbs	X		All pastures have been converted to annual invasive species. What natives

Table 3.3 Upland Vegetation Standards (4, 5, and 6) Ratings for the Sunnyside Watershed

Allotment	Dominant Veg	Upland Vegetation Standard (4, 5, 6) Met	Upland Vegetation Standard Not Met	Reason(s) for Not Meeting
				still reside exhibit good vigor. No noxious weeds reported.
Rabbit Springs #837	Mixed Plant Communities		X	Good shrub cover but understory lacks native bunchgrass and forbs. Cheatgrass common in the understory. Noxious weeds present. Historical grazing is a significant factor, but the current system is not a factor.
Melba Seeding #868	Annual Grasses/Forbs		X	Seeded species are low in density, vigor and health. Trend is down. Fire, grazing, OHV, and drought are factors.
Reverse #873	Mixed Plant Communities		X	Pastures 5, 6, 7, and 8 are seeded. They are not meeting Standard 5 due to the lack of vegetative structure and exotic annual plant invasion. Pastures 1, 3, 4 and the north half of 2 have converted to annual grass. These pastures have noxious weeds expanding into communities so they are not meeting Standard 6. The south half of Pasture 2 has shrub cover. The understory is cheatgrass, and does not meet Standard 4. Pasture 9 is meeting Standard 4. Fire, grazing, OHV, and drought are factors.
Chattin Hill #875	Mixed Plant Communities		X	Pasture 15 does have some shrub communities. The understory consists of exotic annual species. Interspaces lack vegetation or microbiotic crust. The remaining portiona of the allotment are annual grass-dominated. There are large connected patches of bare soil in Pasture 15, leaving soil unprotected. Historic grazing, drought, fire, and OHV are all factors. Current grazing is not a factor.
Squaw Creek #886	Mixed Plant Communities		X	Shrub communities are meeting the standards. Microbiotic crusts are healthy; herbaceous understory is depleted. Bluegrass areas lack structure and species diversity. Continual spring grazing stresses native bunchgrasses. Small Arms and Sheep Butte Pasture seedings display poor vigor and invasion by undesirable species. Areas converted to annual grasses are meeting Standard 6. Areas converted to annual forbs have insufficient ground cover to protect soil surface. Grazing, fire, drought, and OHV use are all factors.

Table 3.3 Upland Vegetation Standards (4, 5, and 6) Ratings for the Sunnyside Watershed

Allotment	Dominant Veg	Upland Vegetation Standard (4, 5, 6) Met	Upland Vegetation Standard Not Met	Reason(s) for Not Meeting
Simco #887	Annual Grasses/Forbs	X		
Airbase #896	Mixed Plant Communities	X		Shrub stands in Canyon Creek Pasture are compromised by livestock concentrations. Airbase Field seeding is a crested wheatgrass monoculture, lacks structure and diversity. The rest of the allotment is converted to exotic annual grass, and meets Standard 6.
Medbury Hill #899	Mixed Plant Communities	X	X	Hammett Seeding is dominated by annual exotic species. North Pasture lacks shrubs, but herbaceous component is diverse. South Pasture is dominated by cheatgrass, annual kochia, Russian thistle, and tumble mustard.

3.2 Special Status Plants

From 1995 through 2002, BLM botanists documented the following sensitive plant species, generally during project-related inventories.

Table 3.4 Sensitive plants in the Sunnyside Watershed

Species	Status	Occurrences
Snake River milkvetch *(Astragalus purshii var. ophiogenes)*	Watch list	8
Desert pincushion *(Chaenactis stevioides)*	BSO (4)	6
Greeley's wavewing *(Cymopterus acaulis var. greeleyorum)*	BSO (3)	1
White eatonella *(Eatonella nivea)*	BSO (4)	2
Shockley's buckwheat *(Eriogonum shockleyi)*	BSO (3)	5
White margined wax-plant *(Glyptopleura marginata)*	BSO (4)	6
Spreading gilia *(Ipomopsis polycladon)*	BSO (3)	4
Davis peppergrass *(Lepidium davisii)*	BSO (3)	35
Slickspot peppergrass *(Lepidium papilliferum)*	BSO (2)	22
American wood-sage *(Teucrium caNAdense var. occidentale)*	BSO (3)	3
Woven-spore lichen *(Texosporium sancti-jacobi)*	BSO (2)	12

* Bureau Sensitive (BSO): 1 = Critically imperiled; 2 = Imperiled; 3 = Rare or uncommon; 4 = Not rare and apparently secure; 5 = Demonstrably widespread

Snake River milkvetch: occurs on barren sites with big sagebrush, Indian ricegrass, needle and thread grass, and four-wing saltbush. It grows in loosely aggregated, frequently moving sand deposits on bluffs, talus, dunes, and volcanic ash beds, from 700-1075 meters in elevation. It occurs along the Snake River corridor and surrounding uplands from Gooding and Twin Falls

counties to Owyhee County in SW Idaho. There are currently eight known occurrences of this species in the following Sunnyside Watershed allotments: Sunnyside Spring/Fall Allotment-Element Occurrence (EO) #42, Sunnyside Winter Allotment EO #43, 44, and 45, Rattlesnake Seeding Allotment (2), Melba Seeding Allotment EO #8, and Chattin Hill Allotment EO #37.

Desert pincushion: occurs in open, usually sandy sites in salt desert shrub, primarily Wyoming sagebrus), horsebrush, four-wing saltbush and Indian ricegrass communities, up to 1200 meters in elevation. This species is known from Ada, Elmore, and Owyhee counties in Idaho and from Wyoming, Colorado, Oregon, southern California, Arizona, and New Mexico. There are currently six known occurrences of this species in three Sunnyside Watershed allotments: Chattin Hill Allotment EO #5, Rattlesnake Seeding Allotment (1), and Sunnyside Winter Allotment EO #1, 8, 16, 18 .

Greeley's wavewing: occurs on brown and white ash in the Wyoming sagebrush, desert shrub and Indian ricegrass zones. It is currently known from Elmore and Owyhee counties in Idaho and Malheur County, Oregon. There is currently one known occurrence of this species in the Reverse Allotment (EO #6).

White eatonella: occurs in dry desert areas in sandy or volcanic soils, often with sagebrush from 763-1900 meters in elevation. This species occurs in Adams, Lemhi, Custer, Elmore and Owyhee counties in Idaho. It is also known from Oregon, Nevada, and Inyo County, California. There are two known occurrences of this species in two allotments: Rattlesnake Seeding Allotment (EO #16) and Sunnyside Winter Allotment (EO #26).

Shockley's buckwheat: occurs on gravelly benches on lake bed sediments in shadscale, mixed desert shrub and sagebrush communities from 760-1300 meters elevation. It is known from Elmore, Gooding, Owyhee, and Twin Falls county in Idaho, and from Nevada, Utah, and Inyo county California. Within the Sunnyside watershed, this species is known from five sites across three allotments; Sunnyside Winter Allotment (EO #2), Ratttlesnake Seeding Allotment (2), and Melba Seeding allotment EO #3, 12.

White margined wax-plant: occurs on dry sandy-gravelly or loose soils in shadscale, greasewood, rabbitbrush, spiny hopsage, winterfat, and sagebrush communities from 800-1200 meters in elevation. This species is known from Elmore, Owyhee, and Twin Falls counties in Idaho, and from Oregon, California, Nevada, and Utah. This species is known from six occurrences across three allotments: Chattin Hill Allotment (EO 36), Rattlesnake Seeding Allotment (1), and Sunnyside Winter Allotment (EOs 31, 38, 47, and 51).

Spreading gilia: occurs in dry open places in foothills and valleys, with sagebrush/desert shrub communites from 2600 -4900 ft in elevation. This species is known from Ada, Elmore, Owyhee, Butte, and Power counties in Idaho, and from Nevada, Utah, Colorado, California, Arizona and New Mexico. This species is known from four occurrences across three allotments: Chattin Hill (EO 10), Rattlesnake Seeding (1), and Sunnyside Winter Allotment (EO 11, 22).

Davis peppergrass*:* occurs on barren hard bottom playas, but sometimes with a few shadscale and silver sage plants surrounded by Wyoming big sagebrush, four-wing-saltbush and Sandberg

bluegrass habitat from 885-1800 meters in elevation. This species is known from Ada, Elmore, Owyhee, and Twin Falls counties in Idaho and Malheur County, Oregon. There are currently 35 known occurrences of this species in five Sunnyside Watershed allotments: Airbase Allotment (EO 25, 33, 42, 45, 47 and 64), Rattlesnake Creek Allotment (EO 28), Rattlesnake Seeding Allotment (EO 34, 36, and 37), Squaw Creek Allotment (EO 57, 153), and Sunnyside Winter Allotment (EO 22, 24, 26, 35, 43, 44, 46, 48 - 56, 58, 60 - 62, 89, 106, and 125).

Slickspot peppergrass: occurs on bare slickspots in Wyoming big sagebrush habitat. This species is known from Ada, Canyon, Elmore, Gem, Owyhee, and Payette counties in Idaho. The 2006 slickspot peppergrass CA identifies 12 slickspot peppergrass management areas, which receive special management emphasis, six of which affect portions of Sunnyside Watershed allotments. With the exception of the Reverse Allotment, grazing permits in the allotments overlapped by slickspot peppergrass management areas were previously amended to incorporate conservation measures from the CA (Appendix B).

There are 22 known occurrences of this species in the Sunnyside Watershed:

- Melba Seeding Allotment - Kuna Management Area (EO 18);
- Reverse Allotment (EO 10 and 16);
- Squaw Creek Allotment (EO 2 and 21);
- Sunnyside Spring/Fall Allotment:
  - Boise Management Area – (EO 22, 32, 48);
  - Kuna Management Area (EO 18, 19, 24, 25, and 57);
  - Gowen Field/Orchard Management Area (EO 7, 28, 35, 41, 53, 59, 67, 71);
  - Orchard Management Area (EO #20, 30) and
- Sunnyside Winter Allotment - Kuna Management Area (EO 19).

American wood-sage: occurs in sagebrush/grass communities in thin stony soils on basalt flats where moisture accumulates in the spring. This species occurs at elevations below 1500 meters and is endemic to the Snake River Plains in Blaine, Camas, Elmore, Lincoln, and Gooding counties in Idaho. Within the Sunnyside watershed, this species is known from three occurrences in three allotments; Melba Seeding Allotment (EO 2), Rattlesnake Seeding Allotment (1), and Sunnyside Winter Allotment (EO 8).

Woven-spore lichen: is a crustose lichen that occurs on well decomposed humus or on old clumps of Sandberg's bluegrass, in Wyoming sagebrush / Thurber needlegrass / bluebunch wheatgrass sites from 880 -1000 meters in elevation. This species is known from Ada and Elmore counties in Idaho, and from California, Oregon, and Washington. Within the Sunnyside Watershed, this species is known only from the Sunnyside Spring/Fall Allotment (EO 1 - 4, 6 - 8, 10, 12, 14, 19 and 21).

3.3 Soils and Watershed

Soils in the NCA are somewhat diverse as a result of variability in parent materials, location on the landscape, climate, and vegetative communities. The soils, which are formed in alluvium

and residuum derived from sedimentary materials and basalt, occur on nearly level to strongly sloping basalt plains and alluvial terraces.

Soil Physical Features

1. Soils range from shallow to very deep, and well drained to excessively drained.
2. Various forms of cementation are common at differing depths in the soil profile.
3. Soil surface textures range from loams and silt loams to various sandy loams.
4. Subsurface textures vary from sandy loam to clay loam.
5. Soils have an aridic or aridic/xeric moisture regime and a mesic temperature regime.
6. Wind and/or water erosion potentials range from low to high, depending on surface texture and slope.

Existing Soil Conditions

Much of the watershed has degraded into a disturbed vegetative condition. This downward trend is continuing and, in combination with wildfire, grazing, and recreational and military activities, native vegetation is being altered and replaced by less desirable species, primarily exotic invasive species. Areas in a degraded ecological condition are vulnerable to erosional processes which impair watershed health. As vegetative cover is depleted and species composition is changed, site productivity is reduced through erosion and lack of biological diversity (Blackburn et al., 1986).

Watershed health has been affected by mechanical disturbance to the soil surface which has resulted in compaction and structural breakdown. However, much of the soil disturbance has been caused by military and recreational off-road vehicle activity. Soil disturbance has been shown to reduce vegetative diversity, vigor, and productivity. Several studies (Warren 1986) on grazing intensity consider heavy trampling by livestock to be more harmful to the watershed than excessive grazing.

Table 3.5: Standard 1 (Watersheds) Ratings for Sunnyside Watershed Allotments

Allotment	Dominant Vegetation	Watershed Standard Met	Watershed Standard Not Met	Reason(s) for Not Meeting
White Butte #386	Annual Grass	X		Heavy rock/boulder cover provides adequate protection.
Sunnyside Spring/Fall #825	Mixed Plant Communities	X		Areas affected by military maneuvers and OHV activity are of concern due to excessive amounts of bare ground
Sunnyside Winter #826	Mixed Plant Communities	X		OTA Impact Area and areas in the south portion of the allotment are of concern due to excessive amounts of bare ground
Rattlesnake Seeding #827	Mixed Plant Communities	X		The allotment is meeting the standard overall, but Pastures 1, 2, 3, and Rock Dam are not meeting standard due to excessive bare ground, pedestalling, and wind scours
Crater Rings #828	Mixed Plant Communities		X	Active pedestalling, large connected bare areas, insufficient stabilizing agents in soil surface

Table 3.5: Standard 1 (Watersheds) Ratings for Sunnyside Watershed Allotments

Allotment	Dominant Vegetation	Watershed Standard Met	Watershed Standard Not Met	Reason(s) for Not Meeting
Rattlesnake Creek #834	Annual Grass	X		
Rabbit Springs #837	Mixed Plant Communties	X		
Melba Seeding #868	Annual Grass	X		
Reverse #873	Mixed Plant Communities	X		Pasture 4 shows evidence of erosion
Chattin Hill #875	Mixed Plant Communities	X		Pastures 5 and 15 show signs of active erosion
Squaw Creek #886	Mixed Plant Communities	X		Concerns in dry years due to lack of cheatgrass cover
Simco #887	Annual Grass	X		
Airbase #896	Mixed Plant Communities	X		The allotment is meeting the standard overall, but Canyon Creek Pasture is of concern due to large continuous patches of bare ground, lack of residual plant material following grazing, chemical and physical soil crusts, and apparent soil compaction.
Medbury Hill #899	Mixed Plant Communities	X		

3.4 Invasive, Non-native Species

Although exotic annual grasses have impacted large portions of the Sunnyside Watershed, noxious weeds pose an even greater threat. Cheatgrass has some forage value for wild and domestic animals and will not readily invade into healthy plant communities. In contrast, however, noxious weeds are extremely competitive, can invade healthy plant communities, have little wildlife value, and therefore, present a serious threat to all plant communities and their associated resource values, including loss of wildlife habitat, reduced biodiversity, decreased rangeland productivity, and increased soil erosion. Economic losses from noxious weeds are considerable and often not fully recognized.

The NCA contains ten different noxious and invasive weed species in a total of about 140 known sites (Table 3.5) A majority of the NCA populations range from <0.1 – 5 acres in size. It is probable that noxious weed populations exist that have not yet been discovered.

The Boise District weed control program is operated under the February 2007 Vegetation Treatment on BLM Lands Environmental Assessment, and is supported by the May 1991 Vegetation Treatment on BLM Lands Final Environmental Impact Statement. These plans will remain in effect until a Record of Decision is signed for the 2007 Vegetation Treatment on BLM Lands Final Environmental Impact Statement.

The District's weed control program includes the use of herbicides, biological agents (including insects, sheep and goats), hand seeding or planting to rehabilitate disturbed areas, and manual pulling or digging of individual plants to achieve effective, safe, economical weed control. Small infestations may effectively be treated by the immediate application of herbicides and/or manual treatments. Biological agents (especially insects) are proposed for long term control over extensive areas.

Detection and mapping of weed infestations: Noxious and invasive weed populations are identified and mapped throughout the NCA as an on-going process and the information is used to calculate number of acres infested, determine rate of spread, and measure the effectiveness of controls.

Eradication of new weed infestations: This process involves total removal of all weeds in a specific area and on a small scale. This effort requires continuous monitoring and evaluation to ensure success.

Control of existing weed infestations: Control of existing weed infestations focuses first on sites with an understory of desirable species and sites that have the highest potential for recovery. Determining the specific weed control technique depends on the specific circumstance for each area. Selection of appropriate control efforts is based on the following criteria:

1) effectiveness of treatment on the target weed based on past monitoring
2) infestation size
3) seed longevity and germination
4) growth characteristics of target weeds (rhizome/taproot, annual/perennial)
5) relationship of the site to other infestations
6) relationship of the site to listed and/or proposed species
7) distance to surface water
8) accessibility for people and/or equipment
9) use of the area by people
10) cost

Containment of existing weed infestations: If eradication or control is not possible, BLM focuses on containing the further spread of established weed populations. This would protect adjacent uninfested lands and would enhance the success of future control efforts. Highest priority is given to new infestations, travel corridors (roads, trails and canals), riparian areas, and sites adjacent to private land. This containment program requires a long-term commitment to herbicide application, as it is designed to only limit the spread of existing populations.

Table 3.6 Noxious and invasive weeds presently known in the NCA.

Noxious Weed Species (common name)	Noxious Weed Species (scientific name)
Russian knapweed	*Acroptilon repens*
Hoary cress (whitetop)	*Cardaria draba*
Diffuse knapweed	*Centaurea diffusa*
Spotted knapweed	*Centaurea maculosa*

Table 3.6 Noxious and invasive weeds presently known in the NCA.

Noxious Weed Species (common name)	Noxious Weed Species (scientific name)
Rush skeletonweed	*Chondrilla juncea*
Canada thistle	*Cirsium arvense*
Perennial pepperweed	*Lepidium latifolium*
Purple loosestrife	*Lythrum salicaria*
Scotch thistle	*Onopordum acanthium*
Tamarisk (salt cedar)	*Tamarix sp.*
Poison hemlock	*Conium maculatum*
Syrian beancaper	*Zygophyllum fabago*

3.5 Special Status Animals

Threatened and Endangered:

There are currently no known threatened or endangered species or their habitat in the Sunnyside Watershed. The bald eagle and Idaho springsnail were previously listed, respectively, as threatened and endangered, but were de-listed on September 5, 2007. Because the Idaho springsnail was determined to be the same species as the Jackson Lake springsnail, it is now called by that name. Neither the bald eagle nor the Jackson Lake springsnail currently warrants special protection under the Endangered Species Act; however, they will continue to be managed as BLM sensitive species to ensure that BLM authorized actions do not cause impacts that would result in the need for their re-listing. In addition, the bald eagle continues to be protected under the Bald Eagle Protection Act of 1940 (16 USC 668-668d; 54 Stat. 250), as amended.

Based on the findings in a May, 2005 Biological Assessment (BA), grazing will not have a significant effect on bald eagles in the Sunnyside Watershed. The BA, however, identified conservation measures for specific allotments to reduce or eliminate potential direct or indirect grazing-related impacts to the Jackson Lake springsnail. These conservation measures will be incorporated into affected grazing permits renewed or issued through this S&G process.

Candidate:

Yellow-billed Cuckoo

The yellow-billed cuckoo is found along riparian corridors and in riparian woodlands. It is rare in the NCA due to lack of suitable woodland nesting habitat.

Sensitive Species:

Pygmy Rabbit

Pygmy rabbits need large stands of mature sagebrush with an adequate understory of grass and forbs. They have not been seen in the NCA for a number of years, and may be extirpated from the area due to habitat degradation.

American White Pelican

American white pelicans are found along the length of the Snake River in the NCA. They are fish eaters that fish while swimming on the surface. There are no pelican breeding sites in the NCA.

Northern Leopard Frog
The northern leopard frogs are found near water in ponds, lakes, streams, irrigation ditches and rivers. The frog population has dropped precipitously in the last 25 years.

White Sturgeon
The white sturgeon above Hells Canyon is threatened by poor water conditions from municipal, commercial, and agricultural diversion and returns, a change of aquatic characteristics behind dams, lack of migration due to dams, and by a reduction in breeding sites due to dam placement.

Red-band Trout
The red-band trout is the native trout to the Snake River throughout the NCA. Water conditions that affect white sturgeons affect these trout. The trout also have to compete with many exotic species that have been introduced into the river system, including the closely related rainbow trout.

Spotted Bat
The spotted bat is found in the NCA. It utilizes the caves, cracks, and crevices in canyon walls for roosting. It feeds as much as 6-10 km from its roost site. Nothing is known about where it hunts in the NCA. It is known to feed on noctuid moths and beetles.

Piute Ground Squirrel
The Piute ground squirrel is found throughout the upland plateau north of the Snake River and is the "keystone" animal species in the NCA. The greatest density of ground squirrels is in sagebrush grasslands. Non-juvenile Piute ground squirrels were four (4) times more abundant in shrub dominated habitat than in grass dominated habitat. The squirrels were heavier in shrub habitat vs. grass habitat (female - 184 g vs. 164 g; male - 179 g vs. 158 g). Ground squirrels in areas with 25% or greater cheatgrass cover weighed less that ground squirrels in areas with 10% or greater Sandberg bluegrass cover (female - 155 g vs. 185 g; male - 155 g vs. 181 g) (Steenhof et al. 2004). Ground squirrels can be abundant following years of above average precipitation in many habitat types, including exotic grasslands. This squirrel is more common in loess soils, and is the most important prey species for migrant, wintering and breeding raptors, ravens, some mammalian predators and some reptiles.

Trumpeter Swan
The trumpeter swan, which can be confused with the tundra swan, is found along the Snake River and in adjoining ponds from mid-autumn to early spring. It feeds on aquatic vegetation. The number of these swans varies yearly.

Peregrine Falcon
The peregrine falcon is an uncommon migrant through NCA.

Prairie Falcon
The prairie falcon is the most common large raptor in the NCA. The concentration of breeding prairie falcons in the NCA is unrivaled in the world. The most common prey for these falcons is the Piute ground squirrel. Studies have shown that production of young falcons depends on the number of ground squirrels that adult falcons can bring to their young (Holthuijzen, 1989). Most

prairie falcons leave the NCA in July after ground squirrels begin estivation. Migrant falcons return to the area in late January and February when the ground squirrels emerge from hibernation.

Northern Goshawk
The northern goshawk is a rare wintering species in the NCA. It specializes in hunting birds and mammals. The spring migrant population benefits from abundant Piute ground squirrels which they readily hunt.

Ferruginous Hawk
The ferruginous hawk is an uncommon nesting hawk in the NCA. It feeds heavily on Piute ground squirrels when they are available. It can take prey as large as jackrabbits, and is amenable to using nest platforms. All of the female ferruginous hawks that were fitted with radio transmitters migrated from the NCA in August and returned in March.

Loggerhead Shrike
The loggerhead shrike is uncommon to common during the summer where suitable shrub habitat is found. The loss of shrubs in the NCA has greatly reduced breeding opportunities for these shrikes and has caused a severe reduction in their breeding population.

Brewer's Sparrow
The Brewer's sparrow is a shrub-obligate and prefers sagebrush to other shrubs for nesting. This sparrow migrates into the NCA in May and most are gone by early fall. The loss of sagebrush in the NCA has reduced breeding opportunities for this sparrow and has caused a severe reduction in there population.

Sage Sparrow
The sage sparrow migrates into the NCA in late February or early March and most are gone by late fall. It is a sagebrush obligate nester. The loss of sagebrush in the NCA has reduced breeding opportunities for sage sparrows and has caused a severe reduction in their population.

Mojave Black-collard Lizard
The Mojave black-collard lizard is the largest lizard in the NCA, and prefers large boulders and rock piles in sparse vegetation. It eats large insects and small lizards. When annual weeds, especially cheatgrass, invade the area where lizards are found, they find it much more difficult to avoid predation and catch prey because the density of the grass impedes their movements.

Longnose Snake
The longnose snake is found in deserts, grasslands and rocky canyons. It has the same problem that the black-collard lizard does when cheatgrass invades its home range. The diversity of small mammals is reduced in cheatgrass stands. Small mammals and lizards are favorite prey items of this snake.

Western Ground Snake
The western ground snake is the smallest snake in the NCA. They feed mainly on insects and other invertebrates. They are most common near scree and areas where the soil cracks are common.

Common Garter Snake
The common garter snake is found near water, including irrigated fields. It feeds on aquatic and terrestrial prey, especially fish, toads and frogs. For unknown reasons the population of common garter snakes has been dropping for the last 20 years.

Western Toad
These toads are found near water but may be in sagebrush deserts as well as riparian areas and irrigated agricultural lands. They breed as early as February in the NCA. Cheatgrass impedes the movement of this toad and makes it more vulnerable to predation.

Woodhouse's Toad
The Woodhouse's toad is found in farmland, sagebrush desert, grasslands and woodlands. They breed from March to July. They are impeded by cheatgrass in the same way that western toads are.

Giant Fairy Shrimp
The giant fairy shrimp (*Branchinecta raptor*) was recently identified in two playas in the Orchard Training Area portion of the Sunnyside Spring/Fall Allotment, and was named as a separate and distinct species. The shrimp has no special status at this time, since nothing is yet known about its population biology or ecological requirements. Until more is known about the species' requirements, we will manage land uses in and around the playas with conservation of the species as the first priority.

3.6 Cultural Resources

Outside of the Guffey Butte – Black Butte Archeological District Area of Critical Environmental Concern (ACEC), which extends along the Snake River Canyon from the old Guffey Bridge upstream to near Grandview, Idaho, systematic and comprehensive cultural resource surveys have not been performed in most of the Sunnyside Watershed allotments. Most cultural surveys have been associated with proposed projects, including fire rehabilitation, recreation, range improvement, and military training-related projects, as well as river, reservoir, and other research studies. The surveys reveal a wide variety of sites and artifacts.

Prehistoric sites have been described as campsites, villages, open sites, rockshelters, caves, and variety of cultural resources, including archaeological sites, isolated features and artifacts. These site types typically have characteristics described as ground depressions, hearths, mussel shell scatters, projectile points, grinding stones, other stone tools and flaked stone debris. Other features include cairns or trail markers, hunting blinds, talus pits, rock alignments, petroglyphs and pictographs. Isolated artifacts and features include projectile points, biface fragments, cairns and flakes. Some of these sites and features could reflect Native American Traditional Cultural Properties and/or sacred sites.

Historic sites were recorded as can and bottle scatters, historic debris scatters, dumps and as other historic sites. Other features included canals, ditches, homesteads, stock raising camps, mining camps and a bombing target. The Oregon Trail, which dates to the 1840s, brought emigrants through one allotment. Spent cartridges, shot-up targets and clay pigeon fragments were interpreted as recent recreation activities, along with modern beverage cans, bottles and other trash and garbage.

Modern developments are also evident on the landscape, such as roads, trails, bridges, transmission lines, pipelines, range improvements, and other developments that have become the background of modern life. Some other examples include: the Mountain Home Air Force Base, the National Guard's Orchard Training Area, electrical substations, radio facilities, sand and gravel quarries, functioning and abandoned railroad tracks, ranches, businesses, and homes.

3.7 Wetlands/Riparian Areas/Aquatic Resources/Floodplains

Riparian areas in the Sunnyside Watershed include segments of the Snake River (39 miles total) in Medbury Hill, Reverse, Rattlesnake Creek, Airbase, Sunnyside Winter, Melba Seeding, and White Butte allotments. In addition, 1.1 miles of Rattlesnake Creek occur in the Rattlesnake Creek Allotment, and 0.3 miles of Corder Creek occur in the Rabbit Springs Allotment.

On Snake River stream segments upstream of C.J. Strike Dam in the Airbase, Rattlesnake Creek, and Medbury Hill allotments, the modified stream flow regime resulting from water impoundment has inundated historic floodplains under reservoir backwaters, and the reservoir slack waters now act as a lentic (standing water) system. Water level fluctuations in C.J. Strike Reservoir are not as radical as in many reservoirs, and the reservoir is generally maintained at or near full capacity. C.J. Strike Reservoir is not used to store water on a seasonal basis; rather, inflows and outflows are close to equal on a daily basis. Reservoir draw-downs for a typical day are 0.3 foot (Idaho Power Company). This consistent level has aided development and maintenance of a vigorous riparian obligate plant community (emergent wetland) along the shoreline. Areas previously occupied by woody vegetation are now dominated by riparian obligate species, including hardstem bulrush (*Scirpus acutus*), cattail (*Typha latifolia*), and sedge communities, together with sporadic occurrences of younger-aged native and non-native shrubs and trees occurring farther inland.

In the free flowing section of the Snake River downstream of the reservoir, flow volume, timing, and duration is controlled by the collective operations of several large upstream hydroelectric, irrigation and flood control reservoirs (C.J. Strike, Milner, Minidoka, American Falls, and Palisades), and a natural annual hydrograph no longer exists. In addition, several large pumping stations upstream of C.J. Strike Reservoir significantly reduce water supply during irrigation season (April thru November).

The typical return interval above bankfull level is 1.6 years in natural stream systems (Rosgen, 1996, Leopold, 1992); however, the benefits from periodic disturbance by the passage of large ice jambs and flooding flows, including sediment recruitment and entrainment, nutrient delivery, and seed dispersal occurs only rarely below the reservoir, most recently in 1996.

Tailwater fluctuations below the reservoir can be pronounced as flows are adjusted hourly to accommodate power demand. Turbine tailwater discharge is increased in response to the peak demand with water levels fluctuating about three feet during this time (Idaho Power Company). A study by CH2MHill (Blair, 1997), on behalf of Idaho Power Company, concluded that 28.3 to 40.7 acres of area was devoid of riparian vegetation as a result of the cumulative effects of peaking flows.

Most of the free-flowing Snake River segments are moderately entrenched, so riparian areas are generally narrow (less than 10 m), with wider areas occurring where alluvial fans, point bars, lateral bars, islands, and low lying terraces exist.

Aerial reconnaissance and review of aerial photographs of the Snake River from C.J. Strike Reservoir to Swan Falls Dam indicate that island and river bank vegetation consists of four basic habitat types: Forested Wetland (20%), Scrub-Shrub Wetland (40%), Shore and Bottomland Wetland (30%), and Emergent Herbaceous Wetland (10%).

Snake River riparian areas are vegetated by a diverse mix of native and exotic plant species. native species include cattails, phragmites, sedge spp., bulrush spp., skunkbush sumac, willow spp., current, rose, poison ivy, dogwood, grasses and forbs. Native and exotic trees are also present, including: cottonwood, western juniper, tree of heaven, green ash, silver maple, boxelder, poplar, locust, netleaf hackberry, and skunkbush sumac. Where the river is entrenched, steep banks may have little or no hydric vegetation, and instead, are occupied by xeric upland species, such as greasewood, sagebrush, and skunkbush that are often uncharacteristically large and vigorous due to their proximity to water. Where banks and flats are exposed during low water in summer, cocklebur, a moderately poisonous annual weed, is present.

Noxious weeds are present along all Snake River frontage, and may represent the most severe and immediate threat to the long term biological health of riparian areas and wetlands in the watershed. Noxious weed species include: perennial pepperweed, purple loosestrife, poison hemlock, whitetop, Russian knapweed, Canada thistle, and Syrian beancaper.

Snake River stream segments had varying degrees of accessibility to grazing livestock, but without exception, current livestock grazing had little negative effect on the functioning condition of riparian resources including vegetation and general stream hydrology. Where palatability and use of willows increase as sugars concentrate in shoots and branches in the fall prior to plant dormancy, the inaccessibility of riparian areas along the river protects most willows and a host of other palatable woody species from fall and winter browsing. Also, because livestock are provided water far away from the river canyon on the high Bonneville Flood terraces, livestock need not rely solely on access to the river to drink, and in fact, livestock rarely access the canyon area in many allotments, including Sunnyside Winter, Medbury Hill, Reverse, and Airbase.

In the Melba Seeding Allotment, livestock access substantial portions of Snake River riparian areas. Here, the river terrace is lower and much flatter than the majority of river segments in the area. Surveys in June, 2004 revealed that about 25-35 percent of riparian areas in this allotment

receive some degree of livestock grazing. Grazed areas were predominantly located in the first 1.2 miles of river frontage upstream from the gate near Celebration Park. The Snake River Pasture is grazed in early spring when upland forage is still green and the degree of riparian associated grazing is reduced substantially as a result of the season of use. Livestock forage utilization levels were consistently low, and did not jeopardize the functioning condition of the vegetative or hydrological components in this Snake River segment. Foraging by Canada geese probably accounts for a large part of spring grass consumption occurring later in the spring (after livestock have left the pasture) in the first 1.2 mile segment (upstream of Celebration Park), as substantial quantities of fresh goose droppings are present along this narrow grass and sedge dominated portion of the river segment. Overall, browsing of woody riparian species and sedge/rush species by livestock in the Melba Seeding Allotment was slight to light, and hoof trampling and bank shearing was negligible along most of the length of the stream segment

The Snake River Pasture of the Melba Seeding Allotment contains the only Snake River segment in the Sunnyside Watershed where cattle actually go beyond the greenline area and into the active channel. In a few localized areas livestock wander into the river to graze on lateral point bar deposits vegetated with reed canary grass, an aggressive rhizomatous exotic grass species which favors the fine sediments on these flat, shallow bars. These bars become periodically exposed due to fluctuations in water levels caused by upstream dam operations and seasonal irrigation downdraws. On these areas, trampling was estimated at about 10 percent, forage utilization was less than 20 percent, and bank shearing was negligible. Those areas where livestock enter the aquatic zone within the active river channel represented less than one percent of the segment length. It is likely that livestock only enter the river very late in the grazing season when irrigation withdrawals reduce stream flow in the river to a point that cattle can access the bars.

Rattlesnake Creek in the Rattlesnake Creek Allotment is a small spring-fed stream which arises from private property and flows about 1.1 miles across public land before sinking into bedrock just east of Highway 51. Rattlesnake Creek very rarely has surface flows discharging into Snake River, and then only in response to a rare high-yield, short-duration, rain event. This stream shows moderate impacts from livestock grazing, but overall is in proper functioning condition. Rattlesnake Creek below (west of) Highway 51 is a stable, bedrock controlled stream and was not rated for functioning condition due to the seasonal flow regime.

The 0.3 mile segment of Corder Creek in the Rabbit Springs Allotment is dominated by willows. Rushes, sedges, and forbs are well represented in the understory and occupy suitable niches; however, whitetop and perennial pepperweed (noxious weeds) are invading the area around the spring source and threatens to displace native sedges and rushes. The stream was rated in functioning at risk with downward trend as a result of the noxious weed invasion. No excessive bare banks or erosion were noted. Flow regime is controlled by return flows from agricultural use, and flow volumes and duration vary according to upstream irrigation schedules. Despite the unnatural hydrograph, which can sometimes destabilized streams, this stream was vertically and horizontally stable, and was rated in proper hydrologic functioning condition

3.8 Social and Economic

The BLM does not have access to financial or business records for the permittees that graze livestock in the Sunnyside Watershed; therefore, it is impossible to provide a detailed discussion of ranch operations, including economic and social conditions of surrounding communities and merchants.

For the purposes of this document, there are two general ways a ranch may be directly impacted by the decisions and policies of federal and state agencies. There may be short- or long-term changes in authorized AUMs, or changes in the authorized season of use.

3.9 Visual Resource Management

All of the Sunnyside Watershed, except for the Guffey Butte – Black Butte Archeological District (GBBBAD) in the Snake River Canyon, is in Visual Resource Management (VRM) Classes 3 and 4, which allow for visually apparent modifications to the landscape. The GBBBAD is in VRM Class 2, which has little tolerance for visual impacts. However, livestock have very little access to this area.

3.10 Recreation/Wild and Scenic Rivers

BLM's Recreation Opportunity Spectrum classifies the area as a combination of Roaded Natural and Semi-Primitive Motorized. Most recreation use is dispersed in nature and does not require major developed facilities.

Because the watershed lies in close proximity to the Treasure Valley, it receives fairly high dispersed recreation pressure. Primary recreation activities vary, depending on the season of the year. Fishing, recreational shooting, waterfowl and upland bird hunting, bird watching, camping, hiking, and trail riding (horse, all-terrain vehicles, mountain bike, and motorcycle) are most common in spring and early summer, slacking off in mid-summer.

Over the past ten years, off-highway vehicle use has tremendously increased. In Southwest Idaho, ATV and motorbike registration increased 70 percent between 2000 and 2004 (IDPR 2005). This trend holds true for the assessment area, with off-highway vehicle use primarily increasing in areas closest to towns and cities. This use is expected to increase throughout the area as interest in off-highway vehicle use grows. Two areas significantly impacted by recreational off-road vehicle activity include: 1) the area lying east and west of Pleasant Valley Road south of the Union Pacific railroad; and 2) the area generally lying along the Canyon Creek drainage, north of the Grandview Highway and west of Simco Road.

As Idaho's rural population increases and as Idaho's urban population travels further from home to recreate, there would be an associated increase in dispersed recreation use of public lands in more remote locations. Additionally, new recreation activities are becoming more popular and are likely to increase throughout the assessment area. Increased activities may include mountain biking, geocaching, and paragliding.

4.0 Environmental Consequences

4.1 Upland Vegetation and Soils

4.1.1 Alternative A

Annual Allotments and Pastures

Historically and currently, most authorized spring grazing has occurred season-long every year, without periodic deferment or rest. Season-long spring grazing defoliates perennial plants during their active growth period, and reduces carbohydrate root reserves. Repeated impacts to their carbohydrate root reserves weakens perennial plants, and eventually removes them from the community. This effect has been exacerbated by repeated wildfires that have swept through the NCA over the past three decades. Annual allotments and pastures have lost so much of their original component of perennial plants that they no longer function normally, nor do they respond positively to improved grazing management.

Due to a combination of repeated wildfires, historic grazing, and off-road recreational and military vehicle activities, annual allotments and pastures in the Sunnyside Watershed have entered a new steady state. Livestock grazing management, including total livestock removal, will not return this ecosystem to the potential plant community, nor will it significantly improve the structure and function of the allotments or pastures. However, because annual rangeland produces significantly less forage during drought years, failure to reduce livestock numbers during low forage production years would result in insufficient standing litter at the end of the grazing season, which would reduce watershed capabilities.

Direct effects of grazing include trampling of individual plants, soil compaction, and reduction of habitat integrity. Indirect effects of grazing include trailing along fences, increased competition from invasive species, and alteration of soil chemistry caused by wind transported soil originating from areas trampled by livestock. Trampling and overgrazing impacts microbiotic crusts that stabilize soils and inhibit weed germination, and also results in insufficient standing litter to capture and retain winter moisture and to insulate the soil, thereby resulting in lower than normal spring soil temperatures, drier than normal soil conditions, increased wind and water erosion, and alteration of plant community structure and function. While grazing deferment or rest of annual rangelands may increase the amount of vegetative cover and standing fuel, these grazing management practices will have little or no benefit to the few perennials remaining in an annual range (Young and Tipton 1990).

Sufficient ground cover commonly exists in most pastures to maintain watershed protection. In average to above-average precipitation years, like 2005 and 2006, annual pastures appear to be adequately vegetated from a watershed perspective. However, in years of below normal precipitation, cheatgrass produces little growth, as in 2001 and 2002, and the soil surface is left unprotected, as was demonstrated in some of the assessments. This may also occur from grazing pastures in both spring and fall. It is important, then, to ensure that livestock grazing is reduced to appropriate levels, especially in dry years, to ensure that sufficient vegetative cover remains for both wildlife habitat and watershed protection following the grazing season.

Perennial Allotments and Pastures
Perennial pastures have historically been grazed every year throughout the growing season, which has impacted perennial species and reduced the habitat quality of the affected allotments and pastures. Continued livestock grazing in the spring and during drought years has degraded perennial pastures by reducing vigor and recruitment of more palatable native and seeded perennial forage species, which has allowed aggressive unpalatable invasive species to increase. Thus, all perennial pastures support a significant amount of cheatgrass. The normal spring grazing season (April 1 through June 30) occurs during the active and critical growth periods of native perennial species. Pastures used in early spring would normally have sufficient time for re-growth following livestock removal if sufficient moisture is received, which is not the case in most years in the Sunnyside Watershed. Sharp (1970) recommends that a pasture grazed during spring not be grazed in the fall in most years because a lack of soil moisture retards re-growth and does not allow grazed plants to restore sufficient root reserves to withstand the subsequent fall grazing.

Grazing on dry and/or frozen soil during the dormant season would have fewer impacts to microbiotic crusts and dormant plants. Winter grazing could, however, lead to overuse of palatable shrubs species in areas of concentrated use. If soils are not frozen, increased precipitation and the lack of a protective snow layer during winter months would increase the impacts associated with hoof shearing compared to dry ground grazing.

Large areas of bare ground (within and outside of the OTA) reflect a significant rise in military and recreational off-road motorized vehicle activity over the past decade, which has disturbed vegetation and displaced soils, effectively reducing the forage producing capacity of the affected land. Not only will this disturbance not improve through grazing management, the loss of forage production may necessitate a reduction in AUMs to account for the lowered carrying capacity in affected allotments. Continuing grazing authorizations at current levels could exacerbate the ongoing degradation of these ORV-impacted sites. This situation may be mitigated by the route designation process that will occur following completion of the NCA RMP.

Grazing during the month of March coincides with the active growing period of early season species, such as Sandberg bluegrass. During March, soils would also be expected to be saturated and at risk of being compacted in areas where livestock concentrate. Annually rotating early season grazing could mitigate this issue.

4.1.2 Alternative B

Annual Allotments and Pastures
Continued spring grazing in annual pastures would have the same impacts as described for Alternative A.

Extending the length of the authorized dormant grazing season in annual pastures would cause few if any additional impacts to vegetation and soils, other than those described for Alternative A. Though there would be limited impacts to vegetative composition, dormant season grazing could: 1) potentially impact remnant perennial grasses that green up in the fall, 2) result in

possible over use of palatable shrubs, and 3) cause potential trampling damage to saturated soils and microbiotic crusts in the wet fall season (Belnap et al 2001, page 68).

Perennial Allotments and Pastures
With only dormant season use, native and seeded perennial forage species would improve in vigor, reproduction, and recruitment. Dormant season only grazing would also benefit slickspot peppergrass and other special status plants, as reflected by the conservation measure developed for the Kuna slickspot peppergrass Management Area that requires dormant season only grazing. Although dormant season use may increase the likelihood of trampling damage to playas that support Davis peppergrass, this potential impact would be mitigated by the fact that this perennial plant is dormant during this season. Required dormant season use of perennial pastures could potentially increase fire danger and associated suppression costs due to unmanaged forage production in late spring and summer in average to above average precipitation years.

4.1.3 Alternative C

Annual Allotments and Pastures
The extended spring season-of-use would have few adverse effects on soil stability or watershed health, since the season would be extended during a normally dry period. Remnant perennial plants in annual pastures would be exposed to a longer period of selective defoliation during their critical growth period each year. The longer spring season, however, would provide operators with greater management flexibility to turn-out later in the spring when and if soils are saturated. In addition, the longer spring season could help reduce the buildup of hazardous fuels.

The direct and indirect effects of dormant season use of annual allotments and pastures would be the same as Alternative B.

Restricting permittees from grazing annual pastures in both the spring and dormant season in a given year would provide for more residual forage cover to enhance watershed protection. Also, this restriction would enhance the vigor and reproduction of residual perennial plants in the annual pastures by providing them periodic rest or deferment. Permittees would lose some management flexibility, and would have to do more long-term planning than at present.

Perennial Allotments and Pastures
A spring use period for perennial species is acceptable, assuming that permittees graze in a system that adequately provides for sustaining and enhancing these plant communities through periodic deferment or rest. This includes measures to ensure that grazing occurs during no more than half the growing season each year, and that pastures are not grazed more than 2 out of 3 years during the critical growth period (USDA Soil Conservation Service, Technical Notes - Range 34; Guinn, Rouse and Dr. Briske 1994).

Perennial forage species would benefit from a spring grazing season ending on May 20, and the implementation of spring and dormant season deferred rotation grazing. Although the spring grazing season would extend through the active growth period and slightly into the critical growth period of most perennial bunchgrasses, the deferred rotation grazing system would allow

plants to set seed and fully replenish their root reserves in alternate years prior to grazing. This would maintain plant vigor and allow the plant community to sustain itself under average to above average precipitation years. However, perennial plants could still be at risk in drought years, when regrowth and recovery of carbohydrate root reserves is less likely.

Deferred rotation grazing systems could potentially increase fire danger by foregoing spring grazing of exotic annual vegetation that could become a hazardous fine fuel in years of normal to above-normal precipitation.

4.2 Special Status Plants

4.2.1 Alternative A

Since the effects of slickspot peppergrass conservation measures on livestock grazing management were analyzed in Environmental Assessment No. ID095-2004-078 (June 25, 2004), they will not be further discussed herein.

The 2006 slickspot peppergrass CA provides generic conservation measures for any grazing allotment located within the slickspot peppergrass zone of consideration. It also identifies slickspot peppergrass management areas and priority element occurrences (EOs) in the Sunnyside Watershed that receive special management emphasis. With the exception of the Reverse Allotment, grazing permits for allotments located within the zone of consideration were previously amended to incorporate all applicable CA conservation measures (Appendix B). Conservation measures range from generic measures that affect the entire area, to more discreet measures focused on specific slickspot peppergrass management areas or priority EOs.

Grazing management that adheres to slickspot peppergrass conservation measures in affected allotments would minimize adverse effects to suitable and occupied slickspot peppergrass habitat, including trampling of slickspots and individual slickspot peppergrass plants. Conservation measures that reduce livestock-related impacts to slickspot peppergrass, including 1) removing livestock from areas of wet soil, 2) reduced trailing and trampling through habitat areas, and 3) proper placement of water and supplements, may also have positive indirect effects on perennial species, and other sensitive plant populations, including Davis peppergrass, desert pincushion, Packard's buckwheat, and white eatonella. Proper placement of water and supplements, and dormant season only grazing (10/16 to 12/15) in the portion of the Sunnyside Spring/Fall Allotment overlapped by the Kuna slickspot peppergrass management area precludes livestock trampling to slickspot peppergrass populations and habitats that would otherwise occur in the wetter Spring months. The indirect effects of dormant season only grazing in the Kuna slickspot peppergrass management area may include a slightly increased wildfire risk from fuels accumulation during the growing season, especially in years with above average precipitation.

Since livestock related conservation measures were not imposed on the grazing permit for the Reverse Allotment, the potential exists for livestock impacts to two known slickspot peppergrass populations in Pastures 7 and 9. Pursuant to the adaptive management protocol in the 2006 CA, if monitoring shows impacts occurring to these populations, actions would be taken to reduce or eliminate the impact(s), including relocation of fences to exclude livestock from the habitat areas.

Monitoring since 1987 in eight of the 23 Davis peppergrass playas in the Common Pasture and Simco Restoration Field of the Sunnyside Winter Allotment shows a downward trend in population size from factors such as livestock trampling, exotic plant invasion, and aggressive seeded species. Although future trampling may be reduced or eliminated by ensuring that livestock water and supplements are located more than ½ mile from occupied playas, ongoing impacts to playas from invasive plants and/or noxious weeds will not be reversed through livestock management. The only other special status plant known from these two pastures is desert pincushion. Populations of this annual species fluctuate with precipitation levels, and grazing management does not appear to affect the species.

Packard's buckwheat is the only special status plant species currently known from the West Trio Pasture of the Sunnyside Winter Allotment. A portion of the population has been adversely affected by the adjacent landowner's irrigation. Current authorized livestock grazing would not be expected to impact the species.

Potential effects to white eatonella EO 16 in the Rock Dam Pasture of the Rattlesnake Allotment would be similar to potential impacts to Davis peppergrass discussed above.

4.2.2 Alternative B

Impacts to special status plants would be the same as discussed for Alternative A.

4.2.3 Alternative C

Spring use in annual pastures would begin one month later for those allotments that currently begin grazing in March. The season of use change could potentially benefit special status plants by reducing the likelihood of trampling damage when soils are likely to be saturated. On the other hand, higher maximum livestock numbers may increase the potential for trampling damage.

The most significant grazing effects to special status plants typically occur during the spring when plants flower and set seed. The impacts of dormant season use would be minimal, since the plants would have flowered, set seed, and gone dormant by that time. Variations in dormant season use typically have minimal effect on the overall health and maintenance of most special status plants. However, higher maximum livestock numbers could increase the probability of trampling damage. Deferred rotation grazing in perennial pastures could positively affect special status plants by ensuring they are not impacted during their growing period every year.

4.3 Invasive, Non-native Species

4.3.1 Alternative A

Invasive, non-native species are so widespread throughout the Sunnyside Watershed that current grazing management is not expected to have a serious impact on these species.

4.3.2 Alternative B

Changes in grazing management would not reduce the spread of invasive, non-native species in the Sunnyside Watershed.

4.3.3 Alternative C

Direct and indirect effects would be the same as Alternative B.

4.4 Fish and Wildlife/Special Status Animals

The 2005 bald eagle and Idaho springsnail BA determined that livestock grazing would have no significant adverse effects on wintering bald eagle populations or their habitat (USDI 2005). However, livestock grazing was determined to have a likely adverse effect on Idaho (now Jackson Lake) springsnail or its habitat. As such, although the two species have since been de-listed, under all alternatives, conservation measures would be imposed in affected allotments to reduce or eliminate potential livestock grazing-related impacts to Jackson Lake springsnail populations and habitat.

4.4.1 Alternative A

Direct Effects: Livestock cause short-term impacts by trampling burrows used by a number of animals, including pygmy rabbits, Piute ground squirrels, and longnose snakes. Livestock also directly compete with Piute ground squirrels and pygmy rabbits for food.

Indirect Effects: Cattle seeking shelter from the weather break down shrub stands that provide habitat, cover, or nest sites for Piute ground squirrels, loggerhead shrikes and sage and Brewer's sparrows. Heavy grazing reduces perennial grasses and opens rangeland to invasion by annual grasses and weeds. The conversion of native shrub/bunchgrass communities to communities dominated by annual grass and weeds reduce food and cover and make escaping from predators and pursuing prey difficult for smaller animals, including Mojave black-collard lizards, longnose snakes, and Woodhouse's and western toads.

Indirect effects of grazing in pastures adjacent to the Snake River include runoff that produces silt that could smother the Jackson Lake springsnail and its eggs, as well as the eggs of the northern leopard frog, Woodhouse's and western toads, and the red-band trout. Silty water also makes finding prey more difficult for bald eagles, American white pelicans and common garter snakes. These impacts would be mitigated by conservation measures that reduce livestock grazing along the Snake River and its tributaries to protect Jackson Lake springsnail populations and habitat.

There are no known direct or indirect effects of livestock grazing on giant fairy shrimp. The shrimp exist in playas that have been used by livestock for decades. However, the shrimp may benefit from fences that were constructed several years ago to reduce military training impacts to the playas. These fences also reduce livestock effects to the playas.

4.4.2 Alternative B

Direct and indirect effects would be the same as Alternative A.

4.4.3 Alternative C

Direct and indirect effects would be the same as Alternative A, except that a change in season of use may reduce competition for perennial grasses between livestock and ground squirrels.

4.5 Cultural Resources

4.5.1 Alternative A

BLM has no records to reflect the extent, duration or cause of livestock grazing-related impacts to cultural resources. As such, no basis exists for determining how and to what extent differences in grazing management alternatives might affect cultural resources. It is assumed, however, that management actions that increase ground cover would, in most instances, decrease ground visibility, and would subsequently reduce human-related impacts to known and unknown historic and cultural sites and artifacts. Thus, direct, indirect, and cumulative effects to cultural resources will not be further analyzed.

Range management projects will be designed to protect cultural, archaeological and paleontological values, as noted in Guideline #6 for Livestock Grazing Management. All potential ground disturbing activities related to project development will be reviewed by a qualified archaeologist prior to project implementation to avoid impacts to historic and cultural resources. Also prior to implementation, BLM will consult on a government to government basis with affected and interested Native American Tribes about proposed projects and their potential effects on cultural resources. Grazing permits would include term and conditions to protect cultural resources, and to require permittees to notify the BLM if cultural resources are inadvertently discovered during project construction, operation, or maintenance. Permits would also include a Management Requirement to leave a minimum amount of residual standing litter following livestock removal, which should increase ground cover.

4.5.2 Alternative B

Impacts would be the same as described for Alternative A.

4.5.3 Alternative C

Impacts would be the same as described for Alternative A.

4.6 Wetlands/Riparian Areas

4.6.1 Alternative A

Riparian areas bordering the Snake River are populated by narrow dense communities of woody vegetation, sedges, rushes, and grasses, and are rarely accessed for grazing. In addition, livestock grazing along the river is being reduced even further by conservation measures being imposed to protect Jackson Lake springsnail populations and habitats. Thus, most riparian areas along the river are in proper functioning condition (lotic checklist). However, noxious weeds are increasing in localized areas.

Airbase Allotment: Livestock rarely access the Snake River in the Airbase Allotment due to topography along the river corridor, season of livestock grazing use, and livestock watering facilities located away from the river. The stream along this allotment is in proper vegetative and hydrologic functioning condition. This would remain unchanged under current grazing management.

Medbury Hill Allotment: The Medbury Hill Allotment has a total of 3.9 miles of Snake River frontage in the South and North Pastures. Livestock use in riparian areas is nearly nonexistent due to steep, heavily vegetated banks. All areas are in proper functioning condition. Continuing current livestock grazing management would have little or no effect on the proper functioning condition of Snake River riparian areas.

Melba Seeding Allotment: Livestock have historically accessed portions of 6.6 miles of Snake River frontage in the Melba Seeding Allotment. This is the only allotment where cattle actually go beyond the greenline area and into the active river channel. However, the Snake River Pasture is grazed in early spring when upland forage is still green, and the degree of riparian-associated grazing is reduced substantially as a result of the season of use. On these grazed areas, trampling was estimated at about 10-15 percent, and forage utilization was less than 15 percent. Browsing of woody riparian species was slight to light, and hoof trampling and bank shearing was negligible along the length of the stream segment. Overall, livestock grazing levels were consistently low, and did not jeopardize the functioning condition of the vegetative or hydrologic components along this river segment. During development of the bald eagle and Idaho springsnail BA, the permittee agreed to delete from the allotment the eastern half of the Snake River Pasture. Thus, the grazing permit will be amended to delete the east portion of the Snake River Pasture from the allotment and to reduce the associated grazing preference. This will remove grazing from about three miles of accessible river frontage, which will reduce overall impacts to riparian areas.

Rabbit Springs Allotment: Corder Creek is presently in functioning at risk condition with downward trend as a result of an infestation of perennial pepperweed, a noxious weed along the stream corridor. Current grazing management would have little effect on this aggressive noxious weed, since it does not require disturbance to proliferate in the plant community. Corder Creek would continue in a downward trend, although livestock grazing would be only a minor factor.

Rattlesnake Creek Allotment: At present, Rattlesnake Creek is in proper functioning condition. In the long-term, dormant season grazing could potentially reduce willow frequency and growth form along a one-half mile stretch of the Snake River. Due to restricted livestock access to the river, current grazing management would have few short or long-term effects on the proper functioning condition of 5.5 miles of Snake River frontage.

Reverse Allotment: Livestock use in riparian areas along the 5.4 miles of Snake River frontage is nearly non-existent in the Reverse Allotment due to steep, heavily vegetated banks. In isolated areas where livestock have access, grazing has had little effect on the proper functioning condition of vegetative and hydrologic components. Continuing current livestock grazing would have little negative effect on the proper functioning condition of Snake River riparian areas through the short and long terms.

White Butte Allotment: Riparian areas that are in functioning at risk condition for Standard 2 (riparian areas and wetlands) due to infestations of noxious and/or invasive weeds would not improve under this alternative.

4.6.2 Alternative B

Because of conservation measures being imposed to protect the Jackson Lake springsnail, proposed changes in grazing management would not increase use of Snake River riparian areas over the short or long term. Likewise, the use and PFC condition of Rattlesnake and Corder Creek are not expected to change significantly.

4.6.3 Alternative C

Same as Alternative B.

4.7 Social and Economic

4.7.1 Alternative A

The area of use, season of use, and livestock numbers vary yearly in annual pastures due to the timing and amount of precipitation. Water is hauled to meet livestock needs and achieve desired use levels. These factors increase the cost of using these areas; however, these costs are offset by benefits that may include: improved nutritional status of livestock in the spring, grazing deferment on adjacent perennial rangelands, and reduced fall feeding costs.

Slickspot peppergrass conservation measures cause adverse economic impacts to some permittees by increasing the intensity of management. Under certain circumstances, the conservation measures limit the season of use, require immediate livestock moves or removal, require herding of livestock away from certain areas, or removing animals to alternate pastures or sites. The alternative, however, could result in the species being listed, which would have a greater adverse effect on permittees.

Conservation measures being imposed to reduce potential impacts to Jackson Lake springsnail will limit the extent of riparian areas available for grazing. This will not only reduce management flexibility, but may necessitate reductions in authorized AUMs in some allotments.

4.7.2 Alternative B

The social and economic impacts of continued spring grazing in annual pastures would be as described in Alternative A.

An extended dormant season of use would provide permittees more management flexibility, as long as vegetation remains dormant and soils are not saturated. The longer dormant season could potentially reduce a permittee's dormant season feeding costs. The specific effects would depend on the individual's operation. Some operations may have an abundance of late season pasture; however, if they have a greater need for spring pasture, they may not benefit as much from this proposal.

A consistent dormant grazing season across the watershed would make BLM oversight and management more efficient and cost-effective. With reduced capability, BLM staff could more easily and efficiently recognize when livestock were grazing outside of authorized seasons.

4.7.3 Alternative C

Alternative C lengthens both the spring and dormant seasons of use, which would provide most permittees with the greatest degree of management flexibility and thus, have the most potential for positive economic effects. It is not expected that this alternative would affect communities or industries.

Crater Rings and Squaw Creek Allotments: This alternative would reduce the permittee's flexibility to graze all pastures during both spring and fall. However, sufficient numbers of pastures exist in these two allotments to provide for adequate grazing in both seasons, given adequate planning.

Medbury Hill Allotment: Broader use periods may improve management flexibility and benefit the economics of the permittee's operation. The grazing rotation would require fewer livestock moves; however, the benefit of rapidly rotating livestock through all pastures would maintain animals at a relatively higher nutritional level, enhancing production.

Melba Seeding Allotment: The slickspot peppergrass conservation measures specify that the Melba Seeding Pasture is authorized for dormant season use only. Therefore, this alternative would incorporate deferred rotation grazing in only the Snake River and FFR Pastures. This alternative would limit spring grazing to every other year, requiring the permittee to extend their feeding program or locate alternate spring pasture in alternate years.

Reverse Allotment: This alternative would have few adverse social or economic affects to the permittee or the area. The grazing system restrictions would remove flexibility needed to respond to highly variable annual forage production. The restriction, however, would only apply to three of nine pastures, and would differ from the current use by only 11 days. There would be more spring time flexibility of use in the remaining six pastures, which may be an economic benefit.

4.8 Visual Resource Management (VRM)

4.8.1 Alternative A

The alternatives contained herein would have no direct or indirect impacts on visual resource quality in the affected areas. The few proposed range improvements would be consistent with other improvements and uses in the area.

4.8.2 Alternative B

Same as Alternative A.

4.8.3 Alternative C

Same as Alternative A.

4.9 Recreation

4.9.1 Alternative A

While recreational activity, especially shooting and off-road vehicle activity, may affect livestock, livestock grazing has little effect on dispersed recreation in the Sunnyside Watershed. The highest concentration of recreation use occurs during the spring in the Snake River Canyon, primarily related to fishing, boating, camping, equestrian use, hiking, and mountain biking. However, conservation measures being imposed to protect the Jackson Lake springsnail have reduced or eliminated most grazing along the river, which should have a positive effect on river and shore-based recreation. The one exception is in the Snake River Pasture of the Melba Seeding Allotment.

Melba Seeding Allotment: The Snake River Pasture extends upstream for over six miles along the Snake River from near Celebration Park. This pasture receives relatively high and increasing recreation use in the spring because of its proximity to Celebration Park, and direct and indirect conflicts between livestock and recreationists have occurred. Direct conflicts have included livestock chasing individuals, and include one case of broken ribs from a cow knocking down and stomping an individual. However, most conflicts have been indirect, and include impaired recreational experiences resulting from reduced aesthetics and visual quality from streambank grazing, and 'cowpies' in areas frequented by fishermen and hikers. These recreational impacts would continue to increase, since even with the imposition of Jackson Lake springsnail conservation measures, livestock would continue to graze during the spring along the most frequented and heavily used (for recreation) stretch of the river in this allotment.

Sunnyside Spring/Fall Allotment: Areas of the Common Pasture located closest to developing areas suffer from heavy spring and summertime use related to recreational shooting (target shooting and ground squirrel "plinking") and off-road vehicle (ORV) activity (motorcycles and ATVs). Areas on both sides of Pleasant Valley Road, south of the Union Pacific Railroad, exhibit significant soil displacement and denuding. Not only does this ORV activity reduce overall forage production and availability, but the ORV activity and shooting physically displaces livestock, essentially reducing the area available for livestock grazing. Further, affected permittees have had numerous livestock killed. These impacts may increase as adjacent private lands are developed for residential and commercial purposes. Development of a Transportation Plan for the NCA, which classifies routes as open, limited, or closed, may reduce ORV impacts, given adequate monitoring and enforcement.

4.9.2 Alternative B

Recreational impacts are the same as Alternative A.

4.9.3 Alternative C

Recreational impacts are the same as Alternative A, with the exception that annually alternating spring and dormant season use in the Snake River Pasture of the Melba Seeding Allotment would limit recreational conflicts to every other year. Limiting grazing to the dormant season in the Snake River Pasture would greatly diminish the conflicts.

4.10 Cumulative Impacts

Scope of Analysis – The resources or values for which the alternatives have direct or indirect impacts include upland vegetation, invasive non-native weeds, wildlife, riparian, recreation, and social/economic. Livestock grazing, recreation, and military training activities are the primary past, present, and future actions and land uses that could cumulatively impact the resources and values in the region. A new activity that will have future profound effects in the Sunnyside Watershed is residential and commercial development. Indirect off-site effects will increase from the use of public lands by individuals living or working on adjacent private lands. Increased human activities could increase direct effects to vegetation and soils and/or could increase recreation-related conflicts with livestock management, both of which could result in reducing or eliminating livestock grazing in some areas.

Decisions incorporating slickspot peppergrass conservation measures were issued in 2004 for grazing permits containing slickspot peppergrass habitat both within and outside of the Sunnyside Watershed. Additional grazing decisions will be issued within the next few years on adjacent allotments in the Mountain Home and the Bennett Mountain Watersheds. Public lands make up the majority of these allotments, but they also include state and private land. Livestock grazing and dispersed recreation are the primary uses of these lands.

Where livestock grazing practices are a significant factor in allotments that are not meeting Idaho Standards for Rangeland Health, grazing practices are being adjusted, and/or Management Requirements are being incorporated in permits, so that progress will be made towards meeting the standards. Adjustments are in conformance with the 1983 Kuna MFP, and are consistent with direction in the soon-to-be-released Final NCA RMP, and could include changes to seasons, levels, and/or duration of livestock use. Changes within the Sunnyside Watershed would have the greatest affect on improving upland resources and associated wildlife habitat. While dispersed recreation will continue to increase over time, changes in adjacent watersheds would have beneficial affects on recreation (dispersed camping, hunting, etc.) commensurate with those of the Sunnyside Watershed.

4.11 Mitigation

This EA assumes that livestock grazing management alone cannot and will not result in allotments and pastures dominated by annual exotic plants reverting to communities comprised of native and/or desirable non-native perennial species. As such, subject to conservation measures and management requirements, annual allotments and pastures will continue to be managed much as they currently are until BLM can initiate habitat restoration or fuels management projects. In accordance with direction in the soon-to-be-released Final NCA RMP, vegetation treatment projects will be rested for whatever time is required for the treatments to successfully establish. Following successful establishment, the treatments will be re-evaluated to determine whether continued livestock grazing is appropriate. If grazing is appropriate, specialists will determine what stocking rates, season(s), levels and length of use are required to protect and support the economic and ecological investments reflected in the projects, and to ensure the treated areas continue to meet or make progress towards meeting long-term Rangeland Health Standards. Permits will then be amended to reflect these new grazing management practices. All affected grazing permits will be amended to include conservation measures to protect slickspot peppergrass and Jackson Lake springsnail habitat. In addition,

pursuant to decisions in the soon-to-be-released Final NCA RMP, all permits will include a requirement to ensure that sufficient ground cover remains at the end of the grazing season for watershed protection.

5.0 Consultation and Coordination

5.1 Public Participation

The Sunnyside Watershed Standards and Guidelines (S&G) process has taken much longer than expected due to schedule interruptions associated with development of: 1) the soon-to-be-released Final NCA RMP, 2) the 2003 slickspot peppergrass CCA, and 3) the 2005 Biological Assessment on the potential effects of livestock grazing on the threatened bald eagle and the endangered Idaho (Jackson Lake) springsnail, both of which have since been de-listed.

The Sunnyside Watershed S&G process and the NCA RMP planning process were initiated at about the same time. During the early stages of the NCA RMP, BLM implemented a process to enable stakeholder participation at the level and to the degree that best met their individual needs and interests. Through this extended scoping and issue development process, livestock grazing was determined to be only a minor issue for the RMP. In addition, BLM staff met separately on numerous occasions with affected permittees, both in the field and in the BLM Boise District Office, to resolve issues specific to their respective grazing allotment(s).

<u>Interested Public</u>
Correspondence was sent to grazing permittees, interested publics, state agencies, local governments, and others, referencing the Sunnyside Watershed S&G process and requesting input. On October 3, 2001 and March 28, 2002, letters were sent out informing interested publics that BLM specialists were collecting field data to be used in allotment assessments, and asking for comments and additional information if available.

On December 31, 2002, Rangeland Health Assessments and Draft Determinations were sent out for review, asking for input that would be used in the subsequent environmental assessment. During this same period, BLM was working with other Federal and State agencies and numerous private individuals to develop conservation measures that would later be incorporated in the 2003 slickspot peppergrass CCA.

On January 6, 2004, interested publics were notified that BLM was developing the Sunnyside Watershed S&G environmental assessment (EA). The letter asked that interested parties submit alternatives for evaluation, and that permittees schedule a meeting with the BLM Four Rivers Field Office Range staff to discuss their specific allotment(s). All references to the Sunnyside Watershed S&G indicated that permit changes may be imposed based on assessments and determinations. The correspondence included an introduction to the S&G process, a list of affected grazing allotments, maps showing the watershed and allotment boundaries, and an invitation to become involved in the process.

In June 2006, BLM released for public review and comment a pre-decisional EA for the Sunnyside Watershed S&G process.

5.2 List of Agencies, Organizations, and Individuals Consulted

The following entities were sent one or more letters and copies of the draft assessments and determinations, and pre-decisional EA, requesting review and comment. Grazing permittees were contacted personally and asked for input on any grazing management concerns. Also, the BLM Boise District met separately with the Shoshone Paiute Tribe in a government to government consultation process to discuss the pre-decisional EA.

Sunnyside Watershed Permittees:
George Withers
John Anchustegui
Drew Blessinger
Danskin L.L.C.
Davis Cattle Company
Margarette DeMeyer
Double D Bar Ranch
Verlin Gingerich
Grandview Farms
Lily Collias
Charles Olsen
Cattle Incorporated
Tom Kasper
Tom Nicholson
T.F.I. c/o Tom & Scott Nicholson
Jean Smith
Soulen Livestock Company
CJ Stewart
John Whitted
Vanderstelt Dairy

Congressional Representatives:
Senator Larry Craig
Senator Mike Crapo
Congressman Bill Sali

Native American Tribes:
Shoshone Paiute Tribal Chairman
Shoshone Bannock Tribal Chairman
Burns Paiute Tribal Chairman

Agencies:
Idaho Department of Agriculture
Idaho Department of Lands

Idaho Department of Fish and Game

Interested Public and Others:
Boise District Grazing Advisory Board
Doug McConnaughey
Western Watersheds Project
Committee for Idaho's High Desert
High Desert Coalition
Idaho Bird Hunters
Idaho Farm Bureau Federation
Idaho Wildlife Federation
Knight Veterinary Clinic
Land & Water Fund
Natural Resources Defense Council
Sierra Club Middle Snake Group
Michael Stanford
Col. William Richey
Keith Helmick
Idaho Cattle Association
American Lands Alliance
Marty Marzinelli
Randall Morris, DDS
Moore, Smith, Buxton, & Turcke
Curt Meis
Southern Idaho Desert Racing Assoc.
Elmore County Commission
Northwest Farm Credit Services

5.3 List of Preparers

Team Member	Contributions
John Doremus	Wildlife / Special Status Animals
Mike Barnum	Grazing Administration
Clint Hughes	Mineral Resources
Larry Ridenhour	Recreation
Pat Kane	Noxious and Invasive Weeds
Matt McCoy	NEPA Coordination
Jeff Mork	GIS
Irene Saphra	Fire and Fuels Management
Dean Shaw	Cultural Resources
Mark Steiger	Botany / Special Status Plants
Allen Tarter	Riparian and Fisheries
Lynn Wessman	Vegetation and Soils

6.0 Literature Cited

Belnap, J., J. H. Hilty-Kaltenecker, R. Rosentreter, J. Williams, S. Leonard, and D. Eldridge. 2001. Biological Soil Crusts: Ecology and Management. Technical Reference 1730-2. USDI Bureau of Land Management, National Science and Technology Center, Denver, Colorado. BLM/ID/ST-01/001+1730. 110 pp.

Blair, C. 1997. C. J. Strike Habitat Evaluation Procedure Study. CH2MHill. *Prepared for* Idaho Power Company. Technical Report Appendix E.3.2-N; C. J. Strike FERC No. 2055. Boise, Idaho. 73 pp.

Blackburn, W. H., T. L. Thurow, and C. A. Taylor, Jr. 1986. Soil erosion on rangeland. pp. 31-39 *in* Proceedings of Symposium on Use of Cover, Soils and Weather Data in Rangeland Monitoring. Society for Range Management, Denver, Colorado.

Friedel, M. H. 1991. Range condition assessment and the concept of threshold – a viewpoint. J. Range Manage. 44:64-67.

Governor's Office of Species Conservation. 2003. Candidate Conservation Agreement between the Bureau of Land Management, the State of Idaho, Idaho National Guard and Nongovernmental Cooperators for *Lepidium papilliferum* (Slickspot Peppergrass). Governor's Office of Species Conservation, Boise, Idaho. 140 pp.

Holthhuijzen, A.M.A. 1989. Behavior and productivity of nesting Prairie Falcons in relation to construction activities at Swan Falls Dam. Final Report. Idaho Power Company, Boise, Idaho. 77 pp.

IDPR (Idaho Department of Parks and Recreation). 2005. Statewide Comprehensive Outdoor Recreation and Tourism Plan. Available at the following website: http://www.idahoparks.org/assets/content/docs/2003-2007-final.pdf

Laycock, W. A. 1991. Stable states and thresholds of range condition on North American rangelands: A viewpoint. J. Range Manage. 44:427-433.

Pellant, M., D. A. Pyke, P. Shaver, and J. E. Herrick. 2000. Interpreting Indicators of Rangeland Health, Version 3. Technical Reference 1734-6. USDI, Bureau of Land Management, National Science and Technology Center, Denver, Colorado.

Piemeisel, R.L. 1951. Causes affecting change and rate of change on a vegetation of annuals in Idaho. Ecology 32:53-72.

Public Law 103 - 64. 1993. An Act to establish the Snake River Birds of Prey National Conservation Area in the State of Idaho, and for other purposes.

Quinney, D. 2000. Then and Now: Changes in Vegetation and Land Use Practices in Southwestern Idaho Sagebrush Lands, with Emphasis on Sagebrush and Former Sagebrush Lands of the Snake River Birds of Prey National Conservation Area North of the Snake River. *In* Entwistle, P.G., A.M. DeBolt, J.H. Kaltenecker, and K. Steenhof, compilers. Proceedings: Sagebrush Steppe Ecosystems Symposium. USDI, Bureau of Land Management Publication No. BLM/ID/PT-001001+1150, Boise Idaho. 145 pp.

Rosgen, D. L. 1996. Applied River Morphology (2nd ed.). Wildland Hydrology Press, Pagosa Springs, Colorado. 350 pp.

Steenhof, K., M. Kochert, E. Yensen, and K. Gage. 2004. Population Status of Piute Ground Squirrels in the Snake River Birds of Prey National Conservation Area, 2003. Final Study Report. USGS, Snake River Field Station, Forest and Rangeland Ecosystem Science Center, Boise, Idaho. 28 pp.

USDA. 1994. Soil Conservation Service. Technical Notes - Range 34. Guinn, Rouse and Dr. Briske.

USDI. 1983. Kuna Management Framework Plan. USDI, Bureau of Land Management, Boise District, Boise, Idaho.

USDI. 2004. Environmental Assessment (EA #ID095-2004-047) for changes to public land grazing management resulting from the Candidate Conservation Agreement (CCA) for slickspot peppergrass. USDI, Bureau of Land Management, Boise, Idaho.

USDI. 2005. Biological Assessment of the Bureau of Land Management, Boise District and the Jarbidge Field Office of the Twin Falls District, Grazing Activities on Four Endangered Snails, One Threatened Snail, and the Threatened Bald Eagle. USDI, Bureau of Land Management, Boise District, Boise, Idaho.

USDI. 2005. Concurrence and Biological Opinion for Ongoing Permitted Grazing Activities in 36 Allotments in Ada, Canyon, Elmore, Owyhee, and Twin Falls Counties, Idaho. USDI, Fish and Wildlife Service, Snake River Fish and Wildlife Office, Boise, Idaho.

Warren, S. D., W. H. Blackburn, and C. A. Taylor, Jr. 1986a. Soil hydrologic response to number of pastures and stocking density under intensive rotation grazing. J. Range Manage. 39:500-504.

Warren, S. D., T. L. Thurow, W. H. Blackburn, and N. E. Garza. 1986b. The influence of livestock trampling under intensive rotation grazing on soil hydrologic characteristics. J. Range Manage. 39:491-495.

Yensen, D. 1982. A Grazing History of Southwestern Idaho with Emphasis on the Birds of Prey Area (Revised from 1980). USDI, Bureau of Land Management, Snake River Birds of Prey Research Project Report, Boise, Idaho. 82 pp.

Young, J. A. and F. Tipton. 1990. Invasion of cheatgrass into arid environments of the Lahontan basin. *In:* McArthur, E. D., Romney, E., Smith, S., and Tueller, P., compilers. Proceedings – symposium on cheatgrass invasion, shrub die-off, and other aspects of shrub biology and management; 1989. Gen. Tech. Rep. INT-276. Ogden, UT; U.S. Department of Agriculture, Forest Service, Intermountain Research Station. pp. 37-40.

7.0 Appendices

Page left blank.

7.1 Appendix A: Environmental Consequences for Permittee-submitted Proposals (Alternatives D-1 through D-9)

Individual permittees submitted the proposals analyzed below. Permits held by permittees who did not submit individual proposals will be analyzed only under Alternatives A, B, and C.

7.1.1 Alternative D-1: John Anchustegui Jr.; Permit #1101636, Sunnyside Spring/Fall (825) and Simco (887) Allotments

Sunnyside Spring/Fall (825)

Upland Vegetation and Soils: The conversion of 350 sheep AUMs from spring and early summer grazing to 350 AUMs of dormant season cattle grazing would benefit the allotment by reducing spring and summer growing season grazing of both annual and perennial vegetation. Since both cattle and sheep browse on shrubs during the dormant season, the change from sheep to cattle would not cause additional impacts to the vegetation. Although fewer animals would be grazing, hoof pressure would be increased, which could balance the impacts somewhat. Extending grazing into the month of March, however, would cause increased potential for trampling damage to soils saturated from winter snowmelt or spring rains. In addition, perennial bunchgrasses are in their active growing period during March, and their root reserves are generally low at this time. Selective grazing during this period in successive years would put additional stress on the perennial plants, and would eventually eliminate remnant perennial species, which would not allow the allotment to make progress towards meeting Standard 4.

Special Status Plants: Moving 350 AUMs of spring use to dormant season use would benefit slickspot peppergrass, as the use would occur when plants are dormant and soils are typically dry and/or frozen. This would aid in making progress towards meeting Standard 8. Cattle trampling of slickspots in late winter (February - March) could occur if soils were thawed out and saturated. However, the 2006 slickspot peppergrass CA contains adaptive management protocols to address modifications in management if adverse effects are identified.

Invasive, Non-native Species: Changes in grazing management would not reduce the spread of invasive, non-native species in the Sunnyside Watershed.

Fish and Wildlife/Special Status Animals: Impacts would be the same as discussed for Alternative C.

Cultural Resources: Impacts would be the same as described for Alternative A.

Wetlands/Riparian Areas: Impacts would be the same as described for Alternative B.

Social and Economic: Since this proposal was submitted by the permittee, it is assumed that it would provide the permittee with the greatest social and economic benefits.

Recreation and VRM: Impacts would be the same as described for Alternative A.

Simco (887)

Upland Vegetation and Soils: Changing the beginning of the grazing period from April 1 to March 15, and increasing livestock numbers during that period would potentially increase trampling impacts to the soil surface if the soils are saturated from spring rains or snow melt. Shortening the grazing season one month would allow for re-growth of remnant perennial grasses given sufficient soil moisture. Selective grazing of remnant perennial species during this period in successive years would put additional stress on these plants, and would eventually eliminate these few plants from the allotment. Further, grazing in March would increase potential for trampling damage to soils saturated from winter snowmelt or spring rains.

Invasive, Non-native Species: Changes in grazing management would not reduce the spread of invasive, non-native species in the Sunnyside Watershed.

Fish and Wildlife/Special Status Animals: Grazing earlier in the growing season would adversely affect remnant perennial vegetation and the species which rely upon it for food and cover.

Cultural Resources: Impacts would be the same as described for Alternative A.

Wetlands/Riparian Areas: Impacts would be the same as described for Alternative B.

Social and Economic: Since this proposal was submitted by the permittee, it is assumed that it would provide the permittee with the greatest social and economic benefits.

Recreation and VRM: Impacts would be the same as described for Alternative A.

7.1.2 Alternative D-2: L.G. Davison & Sons, L.L.C.; Permit #1100519, Sunnyside Spring/Fall Allotment (825)

Upland Vegetation and Soils: No change in permitted livestock numbers or AUMs is proposed, and the area to be grazed would increase from approximately 400 to over 1265 acres. Thus, the effective stocking rate would be reduced from about 3.7 acres/AUM to about 11.7 acres/AUM, which is more reflective of the actual carrying capacity of the allotment, and would benefit the plant community in the South Pasture. The spring season-of-use would remain unchanged (4/1 to 5/15), and a dormant season would be added so that the two areas could be grazed in a deferred rotation system; thus, neither area would be grazed in two consecutive spring seasons, which should benefit desirable perennial species.

Although livestock grazing would occur in a portion of the allotment that has been ungrazed for many years, the amount of use would be light to moderate. Alternate year growing season rest would be a good mitigation for the pasture if use approached 50%.

The provision of water on the private land immediately south of the North Pasture could result in uneven forage utilization in the North Pasture. Uneven utilization and/or trailing would be reduced or eliminated pursuant to the adaptive management protocols in the 2006 slickspot peppergrass CA.

Special Status Plants: The North Pasture lies within the Boise slickspot peppergrass Management Area. Part of the North Pasture was burned in 1996, destroying a large portion of what was once suitable slickspot peppergrass habitat. The burned area has been invaded by cheatgrass and other invasive weeds, which poses a further risk to slickspot peppergrass persistence on this site. The introduction of livestock could serve as another vector for the spread of weeds in the pasture. This alternative would also increase potential for trampling damage to suitable and occupied slickspot peppergrass habitat in alternate spring seasons. Imposition of conservation measures from the 2006 slickspot peppergrass CA would potentially mitigate these impacts. Impacts to slickspot peppergrass could be addressed through protocols in the 2006 CA the adaptive management process.

Invasive, Non-native Species: Changes in grazing management would not reduce the spread of invasive, non-native species in the Sunnyside Watershed.

Fish and Wildlife/Special Status Animals: Impacts would be the same as discussed for Alternative A.

Cultural Resources: Impacts would be the same as described for Alternative A.

Wetlands/Riparian Areas: Impacts would be the same as described for Alternative B.

Social and Economic: Since this proposal was submitted by the permittee, it is assumed that it would provide the permittee with the greatest social and economic benefits. It is recognized, however, that the North Pasture is part of the Sunnyside Spring/Fall Allotment, which is grazed in common by several permittees. Each permittee in the Sunnyside Spring/Fall Allotment is authorized to graze anywhere within the allotment, as long as they do not exceed their authorized AUMs. However, permittees choose to graze in historical use area(s) to reduce grazing-related impacts to the other permittees. Thus, a decision setting aside the North and South Pastures for the exclusive use of L.G. Davison & Sons, L.L.C. requires the concurrence of all Sunnyside Spring/Fall permittees.

Recreation and VRM: Impacts would be the same as described for Alternative A.

7.1.3 Alternative D-3: Soulen Livestock Company; Permit #1101687, Sunnyside Winter (826) and Airbase (896) Allotments

Sunnyside Winter (826)

Upland Vegetation and Soils: Transferring the Simco Restoration Field from the Sunnyside Winter Allotment to the Airbase Allotment would result in the Simco Restoration Field being grazed by cattle, instead of sheep, during the dormant season. Impacts to the Sunnyside Winter Allotment from the permittee's proposal would be small. Four hundred and forty one (441) AUMs of dormant season cattle use would be transferred to the Airbase Allotment. These 441 AUMs represent only about 4% of the permitted AUMs in the Sunnyside Winter Allotment. The proposed transfer of the Simco Restoration Field would reduce the size of the Sunnyside Winter Allotment from 140,791 to 137,778 acres. Authorized AUMs would be reduced from 11,278 to 10,836 AUMs; and the stocking rate would reduce slightly from 12.5 acres to 12.7 acres/AUM.

The season-of-use would not change, so impacts would essentially be the same as in Alternative A.

Special Status Plants: Impacts to special status plants would be the same as described in Alternative A.

Invasive, Non-native Species: Changes in grazing management would not reduce the spread of invasive, non-native species in the Sunnyside Watershed.

Fish and Wildlife/Special Status Animals: Impacts would be the same as discussed for Alternative A.

Cultural Resources: Impacts would be the same as described for Alternative A.

Wetlands/Riparian Areas: Impacts would be the same as described for Alternative B.

Social and Economic: Since this proposal was submitted by the permittee, it is assumed that it would provide the permittee with the greatest social and economic benefits.

Recreation and VRM: Impacts would be the same as described for Alternative A.

Airbase (896)

Upland Vegetation and Soils: The Airbase Allotment assessments were taken during the 2001 - 2002 drought, and revealed insufficient ground cover in some pastures. However, based on a 2006 review of the allotment, two years of "normal" precipitation in 2005 and 2006 resulted in sufficient ground cover to protect the soil surface following grazing. Photographs taken in 2006 show significantly more vegetation and ground cover compared to photographs taken during the original assessment. This underscores that stocking levels must be reduced during drought conditions to ensure that sufficient ground cover remains following grazing to prevent surface soil erosion and ensure watershed protection.

The permittee proposes to: 1) transfer 441 cattle AUMs from the Sunnyside Winter to the Airbase Allotment, and 2) transfer the Simco Restoration Field from the Sunnyside Winter

Allotment to the Airbase Allotment. This proposed transfer of a pasture and AUMs assumes that the Simco Restoration Field can support the 441 AUMs. At 441 AUMs, the 2145-acre Simco Restoration Field would be stocked at approximately 4.9 acres/AUM, which significantly exceeds a reasonable stocking rate for the pasture, even in the best of years. This proposal, then, would result in an overall increase in the Airbase Allotment stocking rate, which would preclude the Airbase Allotment from making progress toward meeting Standard 4.

Impacts to soils would be the same as described in Alternative A.

Special Status Plants: Impacts to special status plants would be the same as described in Alternative A.

Invasive, Non-native Species: Changes in grazing management would not reduce the spread of invasive, non-native species in the Sunnyside Watershed.

Fish and Wildlife/Special Status Animals: Impacts would be the same as discussed for Alternative A.

Cultural Resources: Impacts would be the same as described for Alternative A.

Wetlands/Riparian Areas: Impacts would be the same as described for Alternative B.

Social and Economic: Since this proposal was submitted by the permittee, it is assumed that it would provide the permittee with the greatest social and economic benefits.

Recreation and VRM: Impacts would be the same as described for Alternative A.

7.1.4 Alternative D-4: Davis Cattle Company; Permit #1101601, Rattlesnake Seeding Allotment (827)

Upland Vegetation and Soils: Without periodic deferment or rest, use of upland perennial vegetation in the Snake River Plain during March is not conducive to healthy watersheds. Trampling damage may occur at this time of year because soils are generally fine textured and may be saturated from snow melt or spring precipitation. In addition, perennial bunchgrasses are in their active growing period during March, and carbohydrate root reserves are generally low. Repeated yearly grazing during this period would put additional stress on perennial plants when their roots reserves are lowest. Moderate to heavy defoliation during this period in successive years would eventually eliminate perennial species, which would prevent the allotment from continuing to meet Standard 4.

The East Lamberton Pasture would benefit from construction of a division fence to allow for deferment. The pasture would need to be monitored to ensure use levels during this time period do not exceed 35%. Perennial pastures would be placed on a deferred rotation system in which they would not be grazed during the spring in two successive years. The benefits of this grazing system would be enhanced by keeping use levels within acceptable limits.

Continued grazing of annual pastures in both spring and fall would not ensure that sufficient residual vegetation remains for watershed protection.

Special Status Plants: Under this alternative the permittee proposes to not graze during June and to increase the potential for greater numbers of cattle in any given pasture at one time. This is somewhat offset by the deferred rotational grazing system proposed for the three perennial pastures. Increased livestock numbers in the allotment at any given time would decrease forage selectivity, but could lead to increased trampling of vegetation, soils, and Davis peppergrass playas.

Invasive, Non-Native Species: Changes in grazing management would not reduce the spread of invasive, non-native species in the Sunnyside Watershed.

Fish and Wildlife/Special Status Animals: Grazing earlier in the growing season would adversely effect remnant perennial vegetation and the species which rely upon it for food and cover.

Cultural Resources: Impacts would be the same as described for Alternative A.

Wetlands/Riparian Areas: Impacts would be the same as described for Alternative B.

Social and Economic: Since this proposal was submitted by the permittee, it is assumed that it would provide the permittee with the greatest social and economic benefits. The permittee proposes to modify the existing permit to show maximum authorized livestock numbers, while retaining the existing AUMs. Increasing or decreasing livestock numbers on the allotment is allowed under the current permit, and would be allowed under the proposed permit, provided that authorized seasons of use and AUMs are not exceeded. Thus, nothing is gained by modifying the permit to show maximum livestock numbers.

Recreation and VRM: Impacts would be the same as described for Alternative A.

7.1.5 Alternative D-5: Jean M. Smith, Permit #1101659, Crater Rings (828) and Squaw Creek (886) Allotments

Crater Rings (828)

The permittee is requesting that current use continues in the Crater Rings Allotment, with the exception that an existing fence would be removed to add a 160 acre public land inholding to the allotment without increasing authorized AUMs. This 160 acre parcel was farmed under irrigation before it was acquired by BLM several years ago. The perimeter fence was retained for several years to enhance the establishment of the perennial forage seeding. Overall impacts from this proposal would be essentially the same as Alternative A, but would be negligibly less, given an additional 160 acres of available forage.

Replacing two wire gates with cattleguards would reduce livestock losses and make management for efficient for the permittee, by ensuring that the public does not leave gates open.

Squaw Creek (886)

The permittee proposes to graze the allotment under a four-herd system, wherein each herd would be maintained as an individual unit (approximately 200 animal units per herd) and held within separate pastures at all times. Each pasture would be grazed every spring, but the use would be rotated annually between early and late spring. The permittee also proposes to retain the existing spring season of use, but extend the dormant season from 11/1 to 1/15 to 10/15 to 2/15. The permittee proposes that authorized livestock numbers be allowed to increase to a maximum of 1,300 during spring and 500 during the dormant season, without affecting existing authorized AUMs.

Upland Vegetation and Soils: The perennial Sheep Butte Pasture could benefit if this grazing system provides for some deferment or rest.

Successful post-fire seedings are now dominated by cheatgrass, and in dry years, insufficient ground cover exists in some areas to protect the soil from water and wind erosion. Residual perennial vegetation requires periodic growing season deferment and/or rest to restore depleted carbohydrate root reserves. The proposal to continue to graze each pasture in the spring, and to rotate the use of the pastures between early and late spring each year would not provide adequate rest or deferment for these overstocked and degraded pastures.

Special Status Plants: No special status plants are known from the Sheep Butte Pasture. Spring grazing management in the Rock House East, Rock House West, and Small Arms pastures would remain the same, and impacts would be the same as those described for Alternative A.

Invasive, Non-native Species: Changes in grazing management would not reduce the spread of invasive, non-native species in the Sunnyside Watershed.

Fish and Wildlife/Special Status Animals: Impacts would be the same as described for Alternative A.

Cultural Resources: Impacts would be the same as described for Alternative A.

Wetlands/Riparian Areas: Impacts would be the same as described for Alternative B.

Social and Economic: Since this proposal was submitted by the permittee, it is assumed that it would provide the permittee with the greatest social and economic benefits.

Recreation and VRM: Impacts would be the same as described for Alternative A.

7.1.6 Alternative D-6: Daniel Whitted, Permit #1101674, Rabbit Springs Allotment (837)

Upland Vegetation and Soils: This proposal would ensure that grazing in both pastures is deferred until June each year, which should reduce impacts associated with early spring grazing. Desirable perennial forage species would be able to produce and store carbohydrate root reserves prior to grazing, which would allow them to improve in vigor. Soils would also be drier, resulting in less trampling damage.

Special Status Plants: No Special Status Plants are known from the Rabbit Springs Allotment.

Invasive, Non-native Species: Changes in grazing management would not reduce the spread of invasive, non-native species in the Rabbit Springs Allotment.

Fish and Wildlife/Special Status Animals: Impacts would be the same as described for Alternative A.

Cultural Resources: Impacts would be the same as described for Alternative A.

Wetlands/Riparian Areas: Impacts would be the same as described for Alternative B.

Social and Economic: Since this proposal was submitted by the permittee, it is assumed that it would provide the permittee with the greatest social and economic benefits.

Recreation and VRM: Impacts would be the same as described for Alternative A.

7.1.7 Alternative D-7: Double D Bar Ranch, Permit #1101621, Melba Seeding Allotment (868)

Upland Vegetation and Soils: The only potential changes being evaluated involve increasing the length of the dormant grazing season in the Melba Seeding Pasture, and continuous spring grazing of the Snake River and FFR pastures. The Melba Seeding Pasture is currently managed under conservation measures imposed for the Kuna slickspot peppergrass management area, which prescribes dormant season grazing only from 10/15 to 2/15. Extending the permittee's current dormant grazing season to coincide with permitted dormant grazing in the Kuna slickspot peppergrass management area would have no adverse impacts to resources in the Melba Seeding Pasture.

Spring grazing of remnant native perennial grasses every year in the Snake River and FFR pastures would eventually eliminate these species from the plant community. Selective preferences of cattle for perennial grasses would focus more grazing pressure on these remnant perennials even if overall grazing pressure was light.

The impacts of yearly spring grazing on sandy soils in the Snake River Pasture would be minimal, unless improper levels of grazing use result in insufficient residual cover.

Special Status Plants: Every-year spring grazing may have detrimental effects on special status plants in the Snake River Pasture, including American woodsage, Snake River milkvetch, and Shockley's matted buckwheat. The majority of these impacts would result from increased trampling damage to soils and plants in the Spring when soils are most likely damp.

Invasive, Non-native Species: Changes in grazing management would not reduce the spread of invasive, non-native species in the Sunnyside Watershed.

Fish and Wildlife/Special Status Animals: Grazing earlier in the growing season would adversely affect remnant perennial vegetation and the species which rely upon it for food and cover in the Snake River Pasture.

Cultural Resources: Impacts would be the same as described for Alternative A.

Wetlands/Riparian Areas: Impacts would be the same as described for Alternative B.

Social and Economic: Since this proposal was submitted by the permittee, it is assumed that it would provide the permittee with the greatest social and economic benefits.

Recreation and VRM: Impacts would be the same as described for Alternative A.

7.1.8 Alternative D-8: Danskin, LLC, Permit #1101690, Reverse Allotment (873)

Upland Vegetation and Soils: The month of March is a critical growth period for perennial bunchgrasses. Soils are vulnerable to trampling damage when they are saturated in the early spring, especially if they are finer textured. Biological soil crusts also are more vulnerable during this period, because they are active when the soil surface is wet. That is why the Spring grazing season does not begin before April 1 in Alternatives B and C. The fact that perennial pastures would not be grazed during two consecutive spring seasons could potentially mitigate some of the damage to perennial bunchgrasses; however, there is still potential for trampling damage, and damage to microbiotic crusts from March grazing.

Special Status Plants: Because the Reverse allotment contains two documented slickspot peppergrass populations (EO #10 and #61) in Pastures 7 and 9, the permittee has agreed to comply with applicable grazing conservation measures in the 2006 CA. If grazing management does not adequately protect the integrity of occupied slickspot peppergrass habitat in Pastures 7 and 9, fences may be proposed to exclude livestock from the identified areas. The extent and location of fencing would depend upon the specific area(s) requiring mitigation.

Invasive, Non-native Species: Changes in grazing management would not reduce the spread of invasive, non-native species in the Sunnyside Watershed.

Fish and Wildlife/Special Status Animals: Grazing earlier in the growing season could adversely affect remnant perennial vegetation and the species which rely upon it for food and cover, especially small mammal populations that are important raptor prey.

Cultural Resources: Impacts would be the same as described for Alternative A.

Wetlands/Riparian Areas: Impacts would be the same as described for Alternative B.

Social and Economic: Since this proposal was submitted by the permittee, it is assumed that it would provide the permittee with the greatest social and economic benefits.

Recreation and VRM: Impacts would be the same as described for Alternative A.

7.1.9 Alternative D-9: Mr. George Withers, Permit #1101675, Medbury Hill Allotment (899)

Upland Vegetation and Soils: Deferring grazing in alternate years in the two perennial pastures would ensure that native and seeded perennial bunchgrasses would be able to produce and store carbohydrate root reserves every other year prior to grazing. Although all grazing would occur in the spring, this would allow for some deferment. Early summer and fall grazing would be eliminated, which would allow for rest and possible re-growth when conditions are right.

Special Status Plants: No special status plants are known from the Medbury Hill Allotment.

Invasive, Non-native Species: Changes in grazing management would not reduce the spread of invasive, non-native species in the Sunnyside Watershed.

Fish and Wildlife/Special Status Animals: Impacts would be the same as described for Alternative A.

Cultural Resources: Impacts would be the same as described for Alternative A.

Wetlands/Riparian Areas: Impacts would be the same as described for Alternative B.

Social and Economic: Since this proposal was submitted by the permittee, it is assumed that it would provide the permittee with the greatest social and economic benefits.

Recreation and VRM: Impacts would be the same as described for Alternative A.

7.2 Appendix B: Grazing-related Conservation Measures from the March 30, 2006 Conservation Agreement (CA) for Grazing Allotments Containing Slickspot Peppergrass Habitat.

Note: The conservation measure numbers reflect the numbering system from the CA.

Conservation Measure that applies to all allotments in the LEPA Consideration Zone:

Permittee will supplement federal and state agency surveys and monitoring by surveying their allotments or use areas for slickspots and slickspot peppergrass plants, including existing occurrences, during their normal course of business. Permittees will report survey information to the Conservation Data Center for the purposes of aiding monitoring efforts and contributing to the CA adaptive management strategy.

Sunnyside Spring/Fall Allotment Conservation Measures:

Boise LEPA Management Area No. 5

BLM shall change the terms and conditions of all grazing permits within this management area to reflect and include the conservation measures for this management area and the priority occurrences within it.

5.11 Permittees will supplement federal and state agency surveys and monitoring by surveying their allotments for slickspots and plants, including existing occurrences, during their normal course of business.

5.12 Permittees will report survey information to the Conservation Data Center for the purposes of aiding monitoring efforts and contributing to the CCA adaptive management strategy.

5.13 Permittees shall place salt/supplements to minimize trampling of LEPA and of slickspots, respectively. Supplements will be placed at least 1/2 mile, preferably 3/4 mile from occurrences. Supplement placing shall be considered in the annual LEPA tour with the BLM range specialist, based on the experience in the previous year's grazing season. Supplements that are attractants should be placed so that cattle will not trail through an element occurrence to the supplement or a water source. Attractants should be placed so that cattle are drawn away from the area of the element occurrence. Terms and Conditions within a permit will be adjusted to reflect the distance necessary for supplements from existing element occurrences and slickspots; however, requirements for maximum distance from water may be waived for a compelling reason involving minimizing impact on a slickspot or the plant. If the aforementioned is not possible, then existing sites will be examined by BLM and the permittee to determine the best available location.

5.14 No trailing cattle through element occurrences within the management area when soils are saturated.

5.15 Permittee will herd livestock away from vicinity of element occurrences within the management area when soils are moist and when soils become saturated move cattle to either fenced private land or outside of the management area to Sunnyside Spring/Fall allotment to prevent penetrating trampling.

5.16 Permittees within the management area will use only existing roads and tracks for vehicle travel.

5.17 Sheep grazing permits will be modified to restrict bedding, trailing or watering herds within ½ mile of EO's.

The following conservation measures will be implemented within EO 32. These measures will be included in Instruction Memorandums covering general, fire and rehabilitation standard operating procedures to be issued by December 31, 2003 or through the permittee's annual authorization and/or through modification of grazing permits.

- All supplements and water sources will be placed a mile away from the vicinity of this priority element occurrence.
- Permittee will herd livestock away from vicinity of this priority element occurrence. When soils are moist the permittee will move livestock to either fenced private land or outside of the management area to Sunnyside Spring/Fall allotment to prevent penetrating trampling.

The following conservation measures will be implemented within EO 48. These measures will be included in Instruction Memorandums covering general, fire and rehabilitation standard operating procedures to be issued by December 31, 2003 or through modification of grazing permits.

- All supplements and water sources will be placed a mile away from the vicinity of this priority element occurrence.
- Permittee will herd livestock away from vicinity of this priority element occurrence. When soils are moist the permittee will move livestock to either fenced private land or outside of the management area to Sunnyside Spring/Fall allotment to prevent penetrating trampling.

Sunnyside Spring/Fall, Sunnyside Winter, & Melba Seeding Allotments:

<u>Kuna LEPA Management Area No. 6</u>

BLM shall change the terms and conditions of all grazing permits within this management area to reflect and include the conservation measures for this management area and the priority occurrences within it.

6.11 Permittees will supplement federal and state agency surveys and monitoring by surveying their allotments for slickspots and plants, including existing occurrences, during their normal course of business.

6.12 Permittees will report survey information to the Conservation Data Center for the purposes of aiding monitoring efforts and contributing to the CCA adaptive management strategy.

6.13 Permittees shall place salt/supplements to minimize trampling of LEPA and of slickspots, respectively. Supplements will be placed at least 1/2 mile, preferably 3/4 mile from occurrences. Supplement placing shall be considered in the annual LEPA tour with the BLM range specialist, based on the experience in the previous year's grazing season. Supplements that are attractants should be placed so that cattle will not trail through an element occurrence to the supplement or a water source. Attractants should be placed so that cattle are drawn away from the area of the element occurrence. Terms and Conditions within a permit will be adjusted to reflect the distance necessary for supplements from existing element occurrences and slickspots; however, requirements for maximum distance from water may be waived for a compelling reason involving minimizing impact on a slickspot or the plant. If the aforementioned is not possible, then existing sites will be examined by BLM and the permittee to determine the best available location.

6.14 Permittees will not trail livestock through element occurrences within the management area when soils are saturated.

6.15 Grazing for this management area will be limited to the fall and winter grazing season, beginning approximately on October 1, which ever comes first. Permittee will herd livestock away from priority occurrences if the soils become moist and will relocate livestock if soils become saturated and penetrating trampling is likely to occur to one of three alternative sites, (two of the alternative sites are fenced), away from existing priority element occurrences. If soils are likely to become saturated permittee will also relocate livestock away from the vicinity of existing element occurrences by moving livestock to one of three alternative sites, (two of the alternative sites are fenced).

6.16 Permittees within the management area will use only existing roads and tracks for vehicle travel.

6.17 Sheep grazing permits will be modified to restrict bedding, trailing or watering herds within ½ mile of EO's.

Sunnyside Spring/Fall Allotment:

Gowen Field / Orchard Training Area LEPA Management Area No. 7

BLM shall change the terms and conditions of all grazing permits within this management area to reflect and include the conservation measures for this management area and the priority occurrences within it.

7.12 Permittees will supplement federal and state agency surveys and monitoring by surveying their allotments for slickspots and plants, including existing occurrences, during their normal course of business.

7.13 Permittees will report survey information to the Conservation Data Center for the purposes of aiding monitoring efforts and contributing to the CCA adaptive management strategy.

7.14 Permittees shall place salt/supplements to minimize trampling of LEPA and of slickspots, respectively. Supplements will be placed at least 1/2 mile, preferably 3/4 mile from occurrences. Supplement placing shall be considered in the annual LEPA tour with the BLM range specialist, based on the experience in the previous year's grazing season. Supplements that are attractants should be placed so that cattle will not trail through an element occurrence to the supplement or a water source. Attractants should be placed so that cattle are drawn away from the area of the element occurrence. Terms and Conditions within a permit will be adjusted to reflect the distance necessary for supplements from existing element occurrences and slickspots; however, requirements for maximum distance from water may be waived for a compelling reason involving minimizing impact on a slickspot or the plant. If the aforementioned is not possible, then existing sites will be examined by BLM and the permittee to determine the best available location.

7.15 Permittees will not trail livestock through element occurrences within the management area when soils are saturated. Permittees when directed by the BLM will move livestock to an alternate area either outside of the management are or to private land to avoid penetrating trampling during periods when soils are saturated.

7.16 Permittee will delay turnout, when soils are saturated.

7.17 Confine vehicle use to existing roads and tracks where element occurrences are present.

7.18 Sheep grazing permits will be modified to restrict bedding, trailing or watering herds within ½ mile of EO's.

The following conservation measures will be implemented within EO 27 and EO 71.

- All supplements and water sources will be placed a mile away from the vicinity of these priority occurrences.

- Permittee will graze within these element occurrences when the soils are dry. If precipitation occurs causing the soil to become tracking wet and the ten day forecast predicts more rain the livestock will be removed from the vicinity of the priority element occurrences.

Sunnyside Spring/Fall Allotment:

Orchard LEPA Management Areas No. 8A and 8B

BLM shall change the terms and conditions of all grazing permits within this management area to reflect and include the conservation measures for this management area and the priority occurrences within it.

8.11 Permittees will supplement federal and state agency surveys and monitoring by surveying their allotments for slickspots and plants, including existing occurrences, during their normal course of business.

8.12 Permittees will report survey information to the Conservation Data Center for the purposes of aiding monitoring efforts and contributing to the CCA adaptive maNAgement strategy.

8.13 Permittees shall place salt/supplements to minimize trampling of LEPA and of slickspots, respectively. Supplements will be placed at least 1/2 mile, preferably 3/4 mile from occurrences. Supplement placing shall be considered in the annual LEPA tour with the BLM range specialist, based on the experience in the previous year's grazing season. Supplements that are attractants should be placed so that cattle will not trail through an element occurrence to the supplement or a water source. Attractants should be placed so that cattle are drawn away from the area of the element occurrence. Terms and Conditions within a permit will be adjusted to reflect the distance necessary for supplements from existing element occurrences and slickspots; however, requirements for maximum distance from water may be waived for a compelling reason involving minimizing impact on a slickspot or the plant. If the aforementioned is not possible, then existing sites will be examined by BLM and the permittee to determine the best available location.

8.14 Permittees will not trail livestock through element occurrences within the management area when soils are saturated.

8.15 Confine vehicle use to existing roads and tracks where element occurrences are present.

8.16 Sheep grazing permits will be modified to restrict bedding, trailing or watering herds within ½ mile of element occurrences.

The following conservation measures will be implemented within EO 20.

- All supplements and water sources will be placed a mile away from the vicinity of this priority occurrence.

The following conservation measures will be implemented within EO 30.

- Permittee in cooperation with the BLM will change the remaining period of use for this EO from February through March to November through January.

- Permittee will coordinate turnout for this new period with BLM and delay turnout if soils are saturated and CPT will occur.

Squaw Creek Allotment:

<u>Mountain Home LEPA Management Area No. 9</u>

BLM shall change the terms and conditions of all grazing permits within this management area to reflect and include the conservation measures for this management area and the priority occurrences within it.

9.11 Permittees will supplement federal and state agency surveys and monitoring by surveying their allotments for slickspots and plants, including existing occurrences, during their normal course of business.

9.12 Permittees will report survey information to the Conservation Data Center for the purposes of aiding monitoring efforts and contributing to the CCA adaptive management strategy.

9.13 Permittees shall place salt/supplements to minimize trampling of LEPA and of slickspots, respectively. Supplements will be placed at least 1/2 mile, preferably 3/4 mile from occurrences. Supplement placing shall be considered in the annual LEPA tour with the BLM range specialist, based on the experience in the previous year's grazing season. Supplements that are attractants should be placed so that cattle will not trail through an element occurrence to the supplement or a water source. Attractants should be placed so that cattle are drawn away from the area of the element occurrence. Terms and Conditions within a permit will be adjusted to reflect the distance necessary for supplements from existing element occurrences and slickspots; however, requirements for maximum distance from water may be waived for a compelling reason involving minimizing impact on a slickspot or the plant. If the aforementioned is not possible, then existing sites will be examined by BLM and the permittee to determine the best available location.

9.14 Permittees will not trail livestock through element occurrences within the management area when soils are saturated.

9.15 Confine vehicle use to existing roads and tracks where element occurrences are present.

9.16 No grazing will be conducted in the area containing EO 50.

The following conservation measures will be implemented within EO 21. These measures will be included in Instruction Memorandums covering general, fire and rehabilitation standard operating procedures to be issued by December 31, 2003 or through the permittee's annual authorization and/or through modification of grazing permits.

- Grazing is prohibited on this EO.

- Private land owner will incorporate 160 acres of private land (NW ¼ sec 17 T35 R5E) within a currently fenced area to be maintained by BLM to prevent livestock from grazing within the vicinity of this element occurrence. This land will remain excluded from grazing until such time the owner sells it.

The following conservation measures will be implemented within EO 51. These measures will be included in Instruction Memorandums covering general, fire and rehabilitation standard operating procedures to be issued by December 31, 2003 or through modification of grazing permits.

- Permittee will herd livestock away from slickspots during the 2004 grazing season
- As soon as possible BLM will install a fence and the permittee will maintain the fence, creating a pasture containing this element occurrence, which will not be grazed during periods when the soils are saturated.

Reverse Allotment:

The Reverse Allotment contains EO 10 and 61, which occur outside of currently established LEPA management areas. As such, the only conservation measures that apply to these EOs are the LEPA Consideration Zone Conservation Measures shown at the beginning of Appendix B.

7.3 Appendix C: Conservation Measures for Jackson Lake Springsnail Populations and Habitat

White Butte Allotment

1. The permittee will provide water and salt on the north-central portion of the allotment while livestock are on the allotment.
2. The permittee will conduct daily inspections along the river and herd any livestock away from the river.

Melba Seeding Allotment

1. The permittee will ride the Snake River Pasture daily and move cattle away from the river.
2. The permittee will improve an existing cattleguard at the east end of Halverson Bar to exclude cattle from the east portion of the River Pasture. The permittee will construct a new drift fence between the cattleguard and the rimrock to control cattle.
3. The permittee has voluntarily relinquished grazing privileges on the east (upstream) portion of the River Pasture. This area will be closed to grazing and will be deleted from the Melba Seeding Allotment. The associated AUMs will be deleted from the permittee's grazing permit.

Sunnyside Winter Allotment

1. Permittees will keep their livestock away from the rim of the Snake River Canyon, and keep them on the plateau above the river.
2. If deemed necessary, permittees will repair or replace fences at the locations where livestock may access the Snake River.

Airbase Allotment

1. The permittee will maintain gates across the two access roads into the canyon to keep cattle from the river.

Rattlesnake Creek Allotment

1. The permittee will limit the annual period that cattle are allowed to graze on the riverfront portion of the West and East pastures to 30 days or less, depending on the volume of useable forage available within those portions of the allotment.

Reverse Allotment

1. During periods when livestock are grazing on the allotment, the permittee will ensure that sufficient quantities of water and salt required to meet the daily needs of those cattle present within the pasture are readily available at locations away from the riverfront portion of Pasture #4.

Medbury Hill Allotment

1. During periods when livestock are grazing on the allotment, the permittee will ensure that sufficient quantities of water and salt required to meet the daily needs of those cattle present

within the pasture is readily available at locations away from the riverfront portions of Pastures #1 and #4.

7.4 Appendix D: Common Terms and Conditions for all grazing permits in the Sunnyside Watershed

The following terms and conditions would be included in all grazing permits to provide for proper range management and assist in the orderly administration of the public land:

1. Livestock grazing will be in accordance with the Four Rivers Field Manager's Final Grazing Decision.

2. Livestock numbers may vary annually, providing the period of use, AUMs and livestock numbers are not exceeded, except as otherwise provided by this permit.

3. Turn-out is subject to Boise District range readiness criteria.

4. Your certified actual use report is due within 15 days of completing your authorized annual grazing use. An annual grazing license will not be issued unless an actual use report for the previous grazing season has been filed with BLM.

5. Salt and/or supplement shall not be placed within one quarter (¼) mile of springs, streams, meadows, aspen stands, playas or water developments.

6. Trailing activities must be coordinated with the BLM prior to initiation. A trailing permit, crossing permit or similar authorization may be required prior to crossing public lands.

7. Livestock exclosures located within your grazing allotments are closed to all domestic grazing use.

8. All appropriate documentation regarding base property leases, lands offered for exchange-of-use, and livestock control agreements must be approved prior to turn-out.

9. Pursuant to 43 CFR 10.4(b), you must notify the BLM Field Manager, by telephone with written confirmation, immediately upon the discovery of human remains, funerary objects, sacred objects, or objects of cultural patrimony on federal lands. Pursuant to 43 CFR 10.4(c), you must immediately stop any ongoing activities connected with such discovery and make a reasonable effort to protect the discovered remains or objects.

10. Changes to the scheduled use require prior approval.

11. Range improvements must be maintained in accordance with the cooperative agreements and range improvement permits in which you are a signatory or assignee.

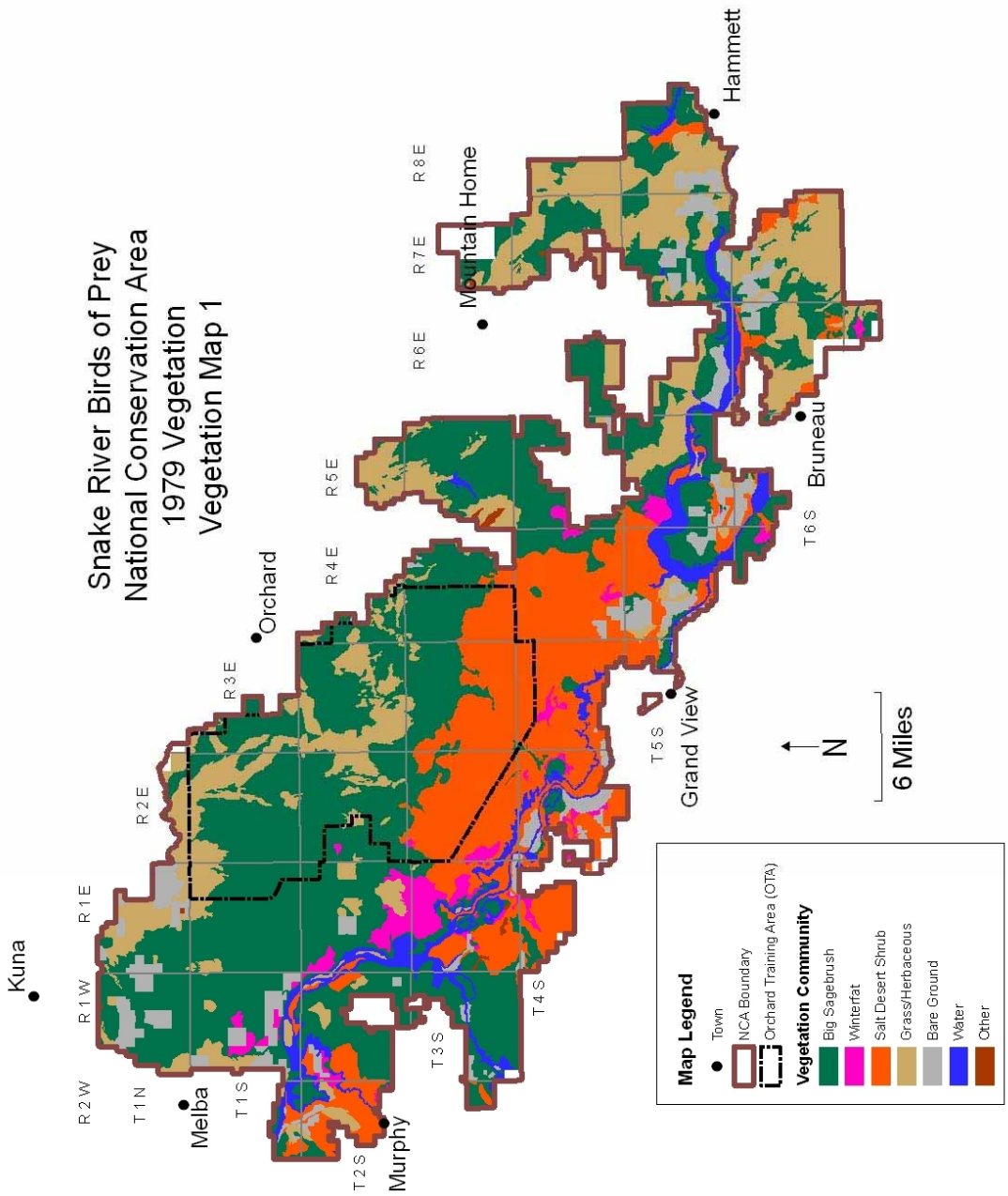
12. Failure to pay grazing bills within 15 days of the due date specified shall result in a late fee assessment of $25.00 or 10 percent of the grazing bill, whichever is greater, not to exceed $250.00. Payment made later than 15 days after the due date shall include the appropriate

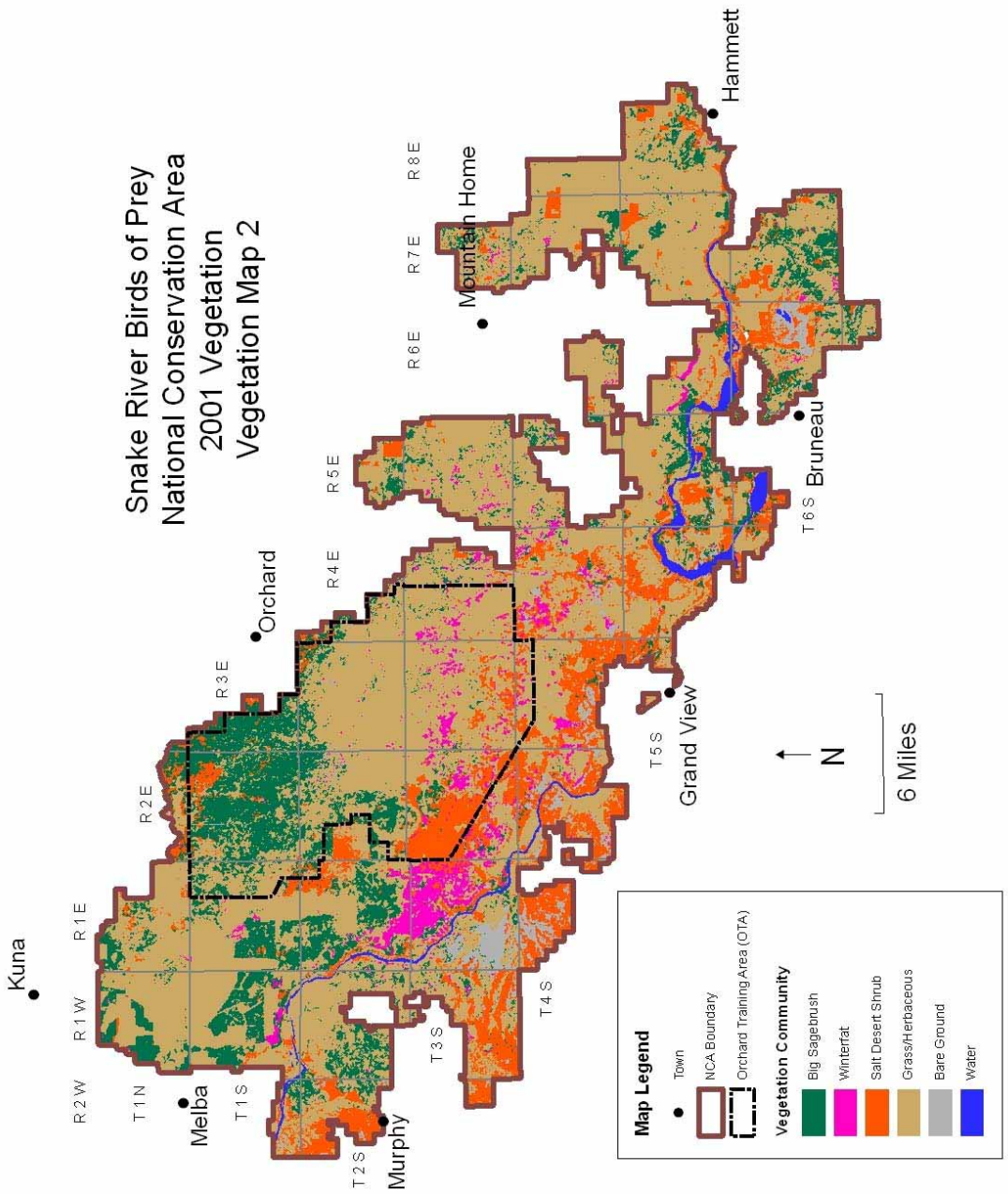
late fee assessment. Failure to make payment within 30 days may be a violation of 43 CFR 4140.1(B)(1) and shall result in action by the authorized officer under 43 CFR 4150.1 and 4160.1.

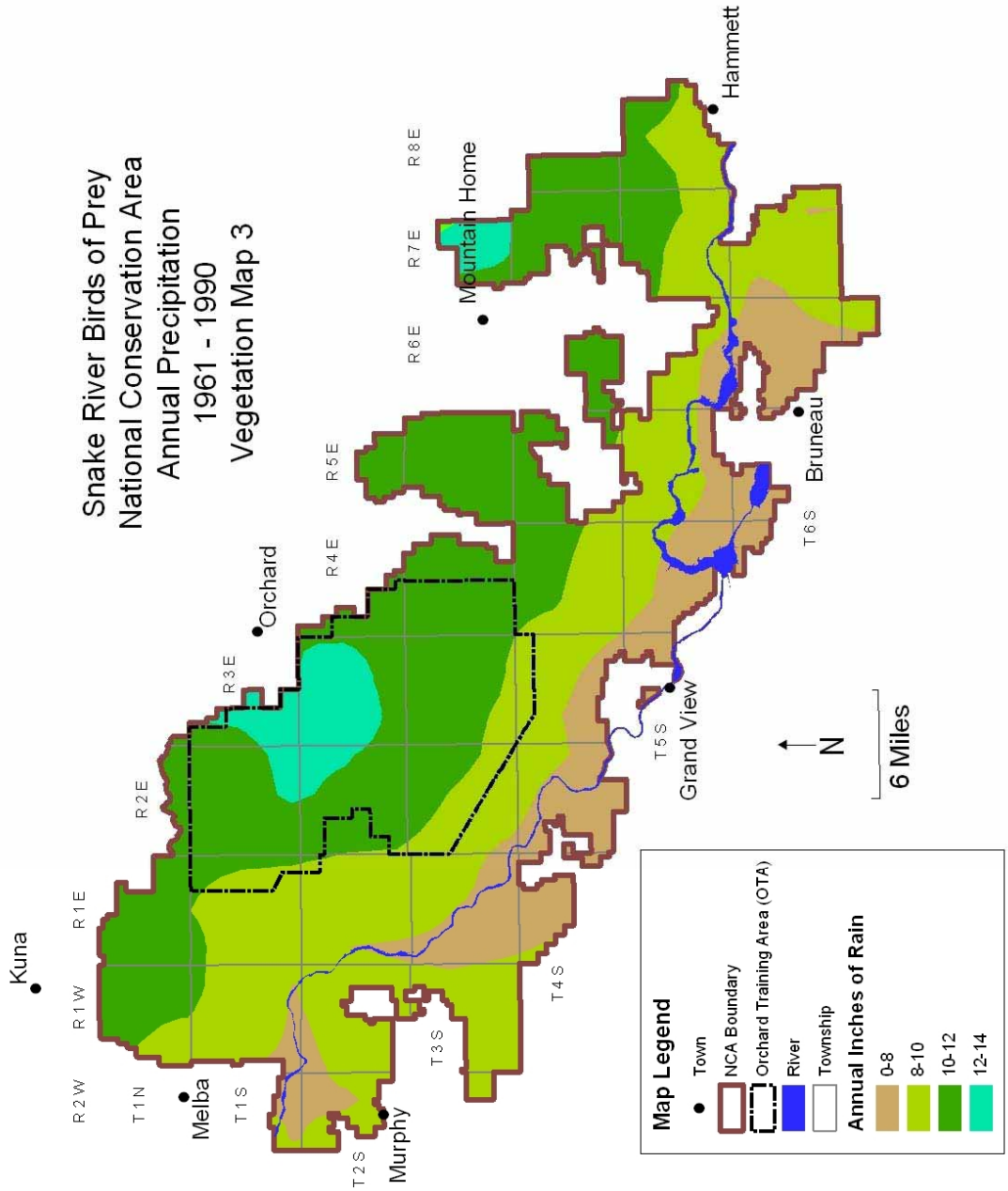
13. Livestock grazing will be in accordance with your allotment grazing schematic(s). Changes in scheduled pasture use dates will require prior authorization.

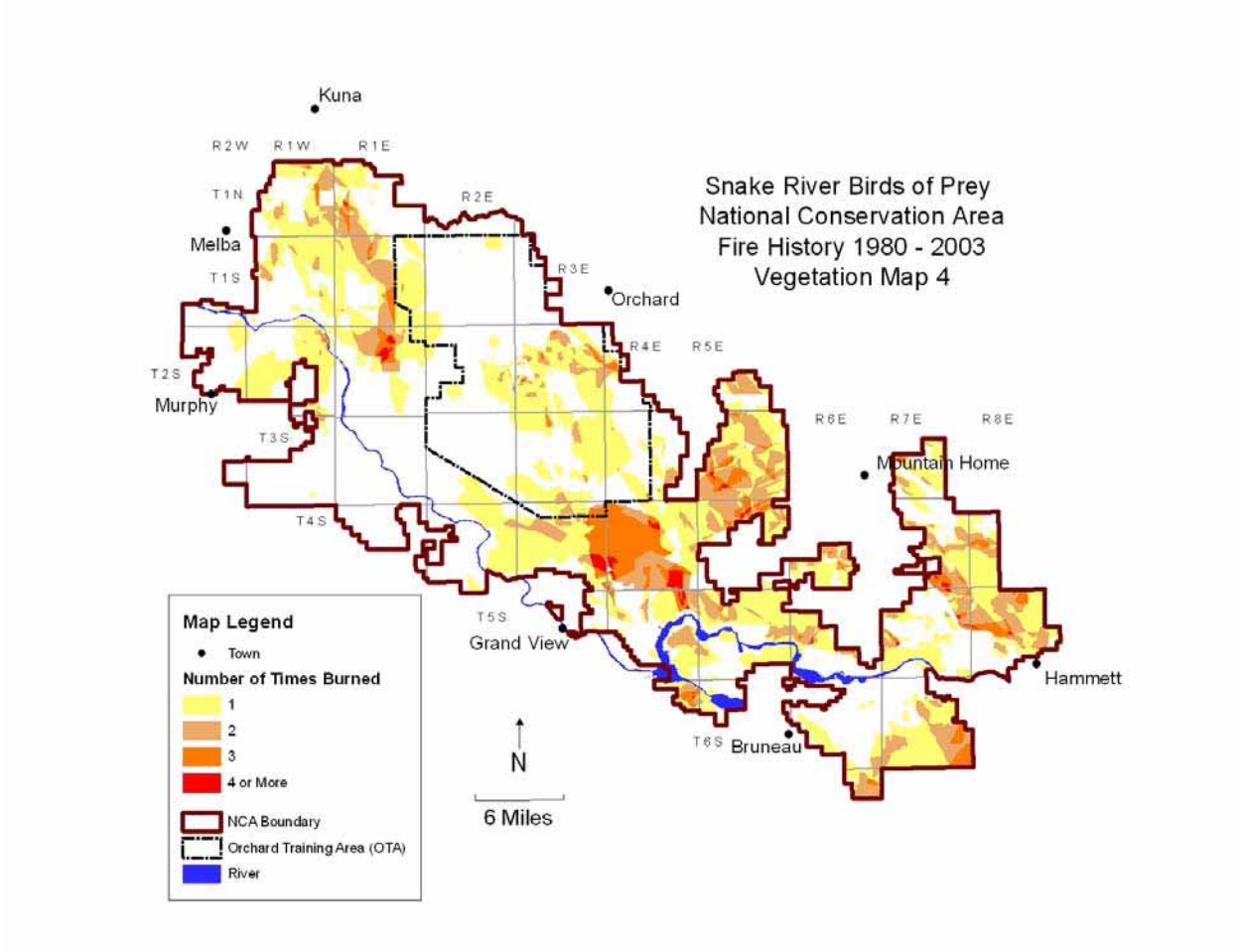
7.5 Appendix E: Maps

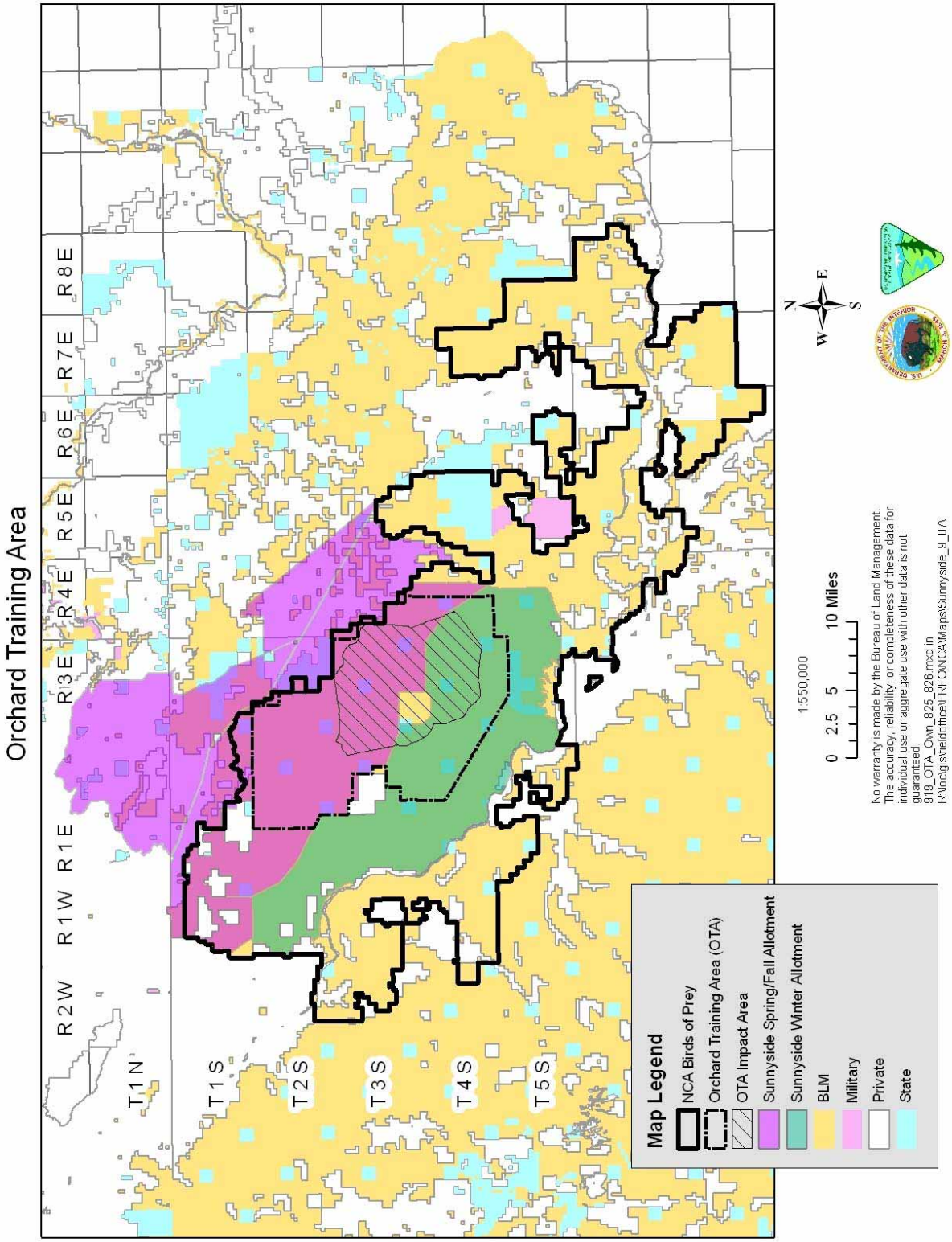
Page left blank.

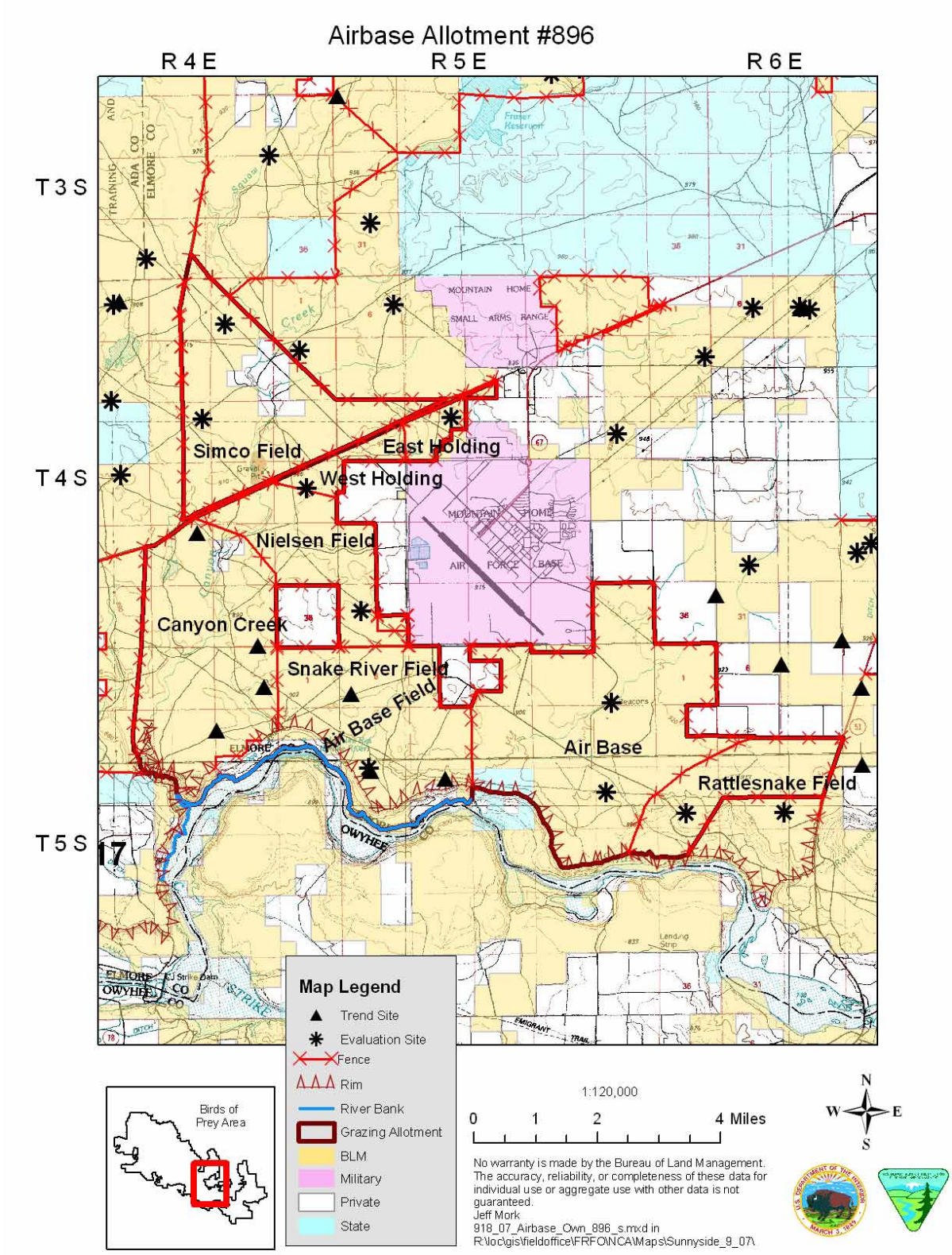

Snake River Birds of Prey
National Conservation Area
1979 Vegetation
Vegetation Map 1
Kuna
Melba
Murphy
Orchard
Mountain Home
Grand View
Bruneau
Hammett
R 2 W
R 1 W
R 1 E
R 2 E
R 3 E
R 4 E
R 5 E
R 6 E
R 7 E
R 8 E
T 1 N
T 1 S
T 2 S
T 3 S
T 4 S
T 5 S
T 6 S
N
6 Miles
Map Legend
Town
NCA Boundary
Orchard Training Area (OTA)
Vegetation Community
Big Sagebrush
Winterfat
Salt Desert Shrub
Grass/Herbaceous
Bare Ground
Water
Other

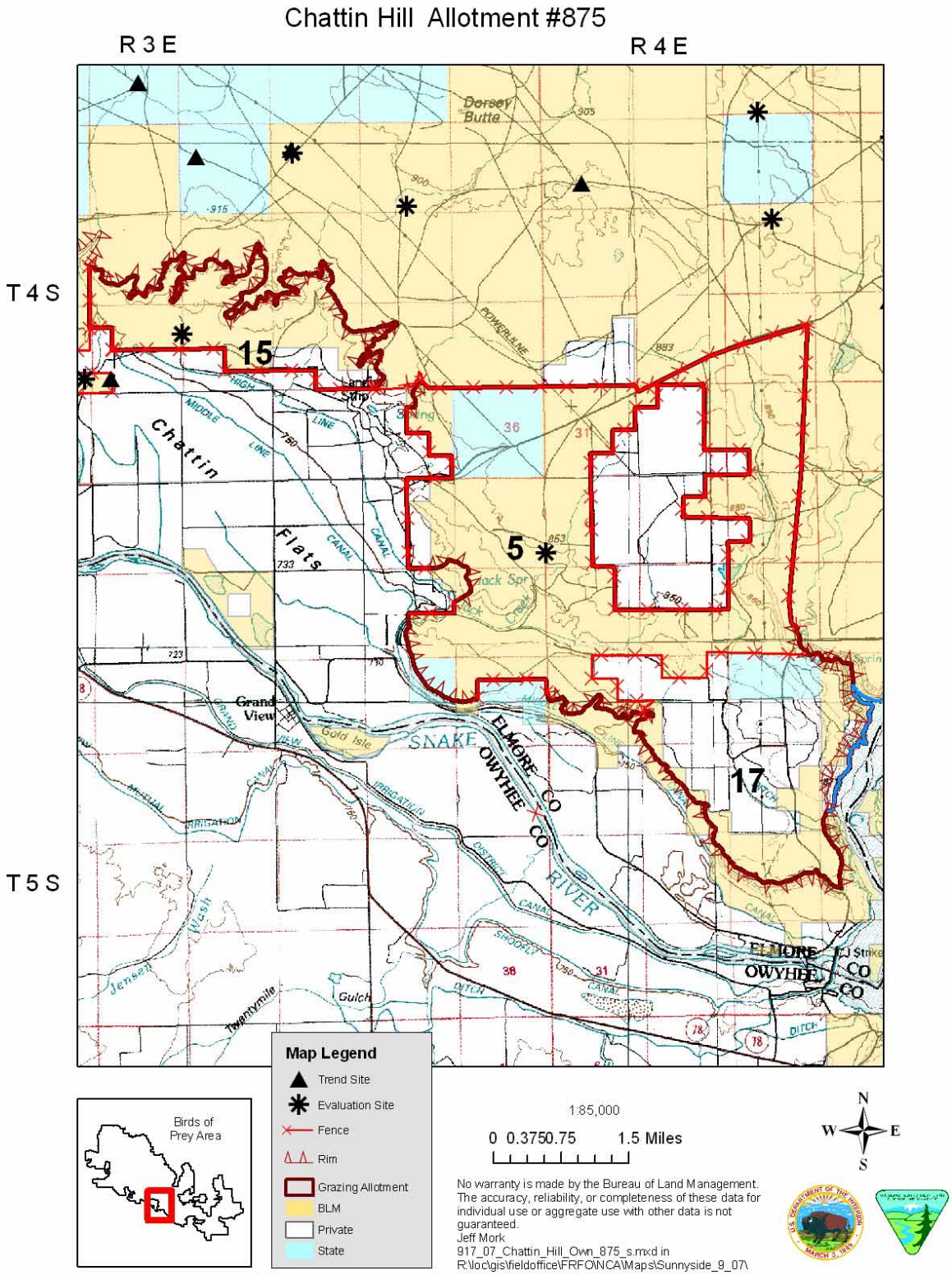

Snake River Birds of Prey
National Conservation Area
2001 Vegetation
Vegetation Map 2
Kuna
Melba
Murphy
Orchard
Mountain Home
Hammett
Bruneau
Grand View
R 2 W
R 1 W
R 1 E
R 2 E
R 3 E
R 4 E
R 5 E
R 6 E
R 7 E
R 8 E
T 1 N
T 1 S
T 2 S
T 3 S
T 4 S
T 5 S
T 6 S
N
6 Miles
Map Legend
Town
NCA Boundary
Orchard Training Area (OTA)
Vegetation Community
Big Sagebrush
Winterfat
Salt Desert Shrub
Grass/Herbaceous
Bare Ground
Water

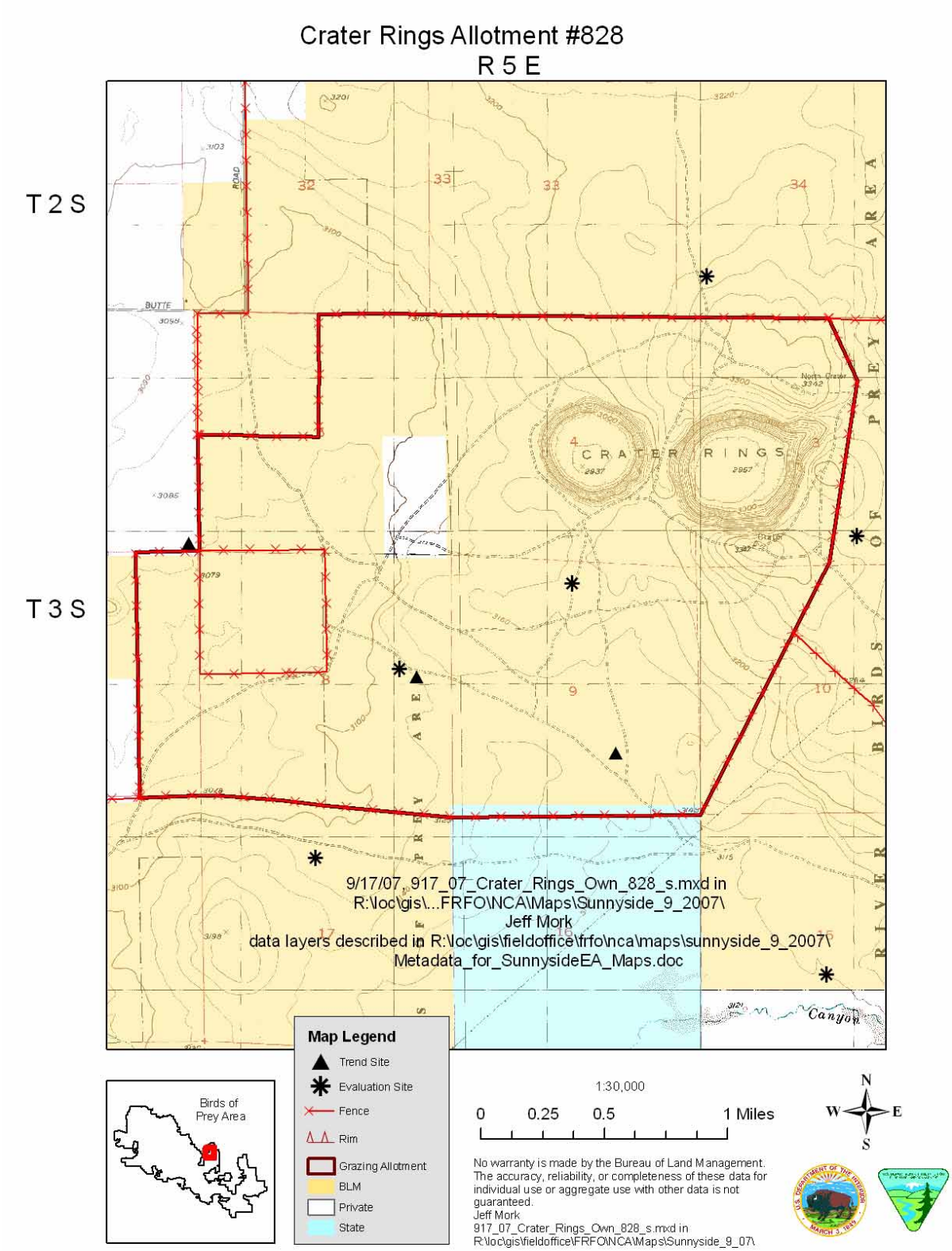

Snake River Birds of Prey
National Conservation Area
Annual Precipitation
1961 - 1990
Vegetation Map 3
Kuna
Melba
Murphy
Orchard
Mountain Home
Grand View
Bruneau
Hammett
R 2 W
R 1 W
R 1 E
R 2 E
R 3 E
R 4 E
R 5 E
R 6 E
R 7 E
R 8 E
T 1 N
T 1 S
T 2 S
T 3 S
T 4 S
T 5 S
T 6 S
N
6 Miles
Map Legend
Town
NCA Boundary
Orchard Training Area (OTA)
River
Township
Annual Inches of Rain
0-8
8-10
10-12
12-14

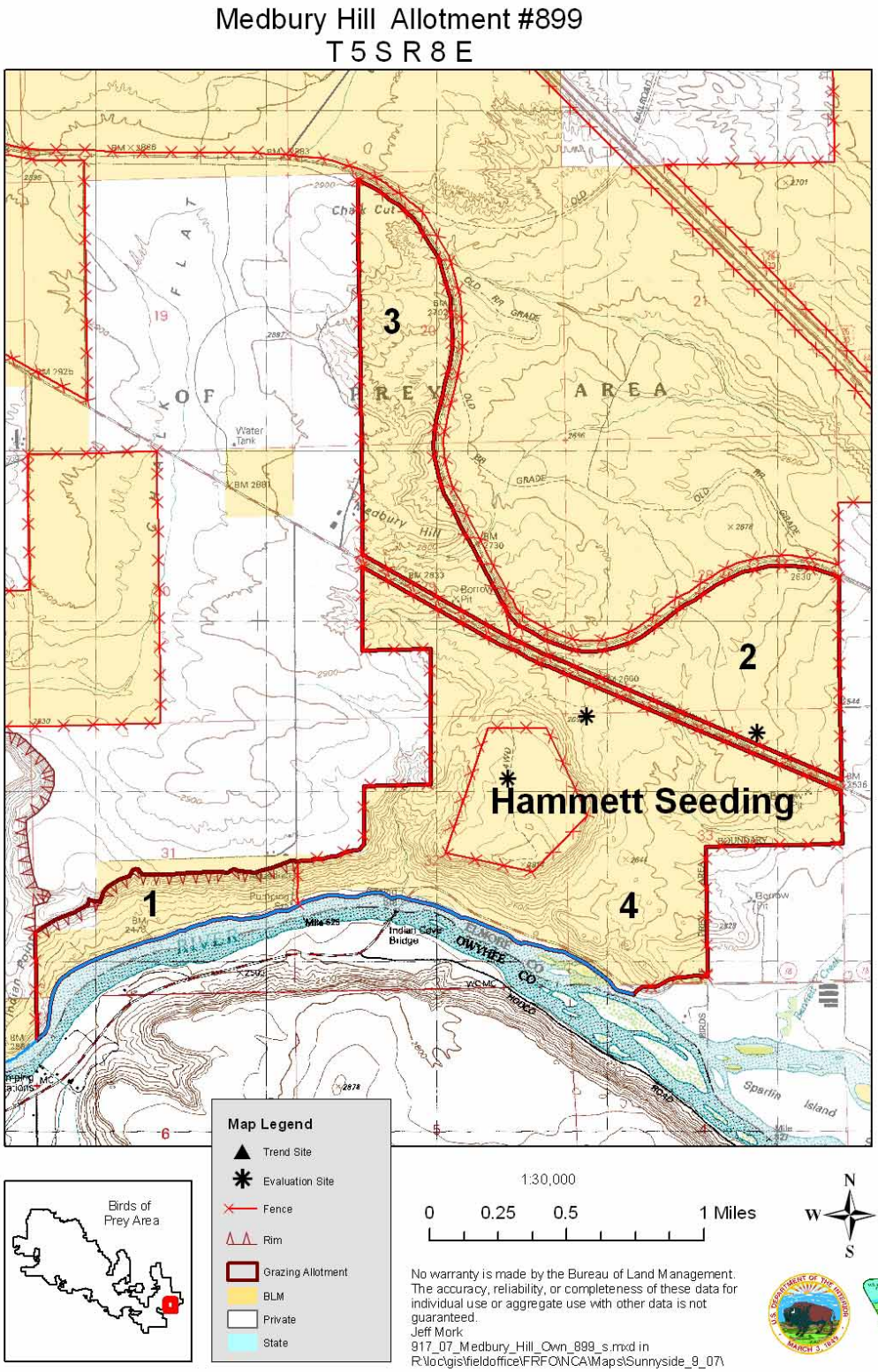

Snake River Birds of Prey
National Conservation Area
Fire History 1980 - 2003
Vegetation Map 4
Kuna
Melba
Orchard
Murphy
Mountain Home
Grand View
Hammett
Bruneau
R2W
R1W
R1E
R2E
R3E
R4E
R5E
R6E
R7E
R8E
T1N
T1S
T2S
T3S
T4S
T5S
T6S
N
6 Miles
Map Legend
Town
Number of Times Burned
1
2
3
4 or More
NCA Boundary
Orchard Training Area (OTA)
River

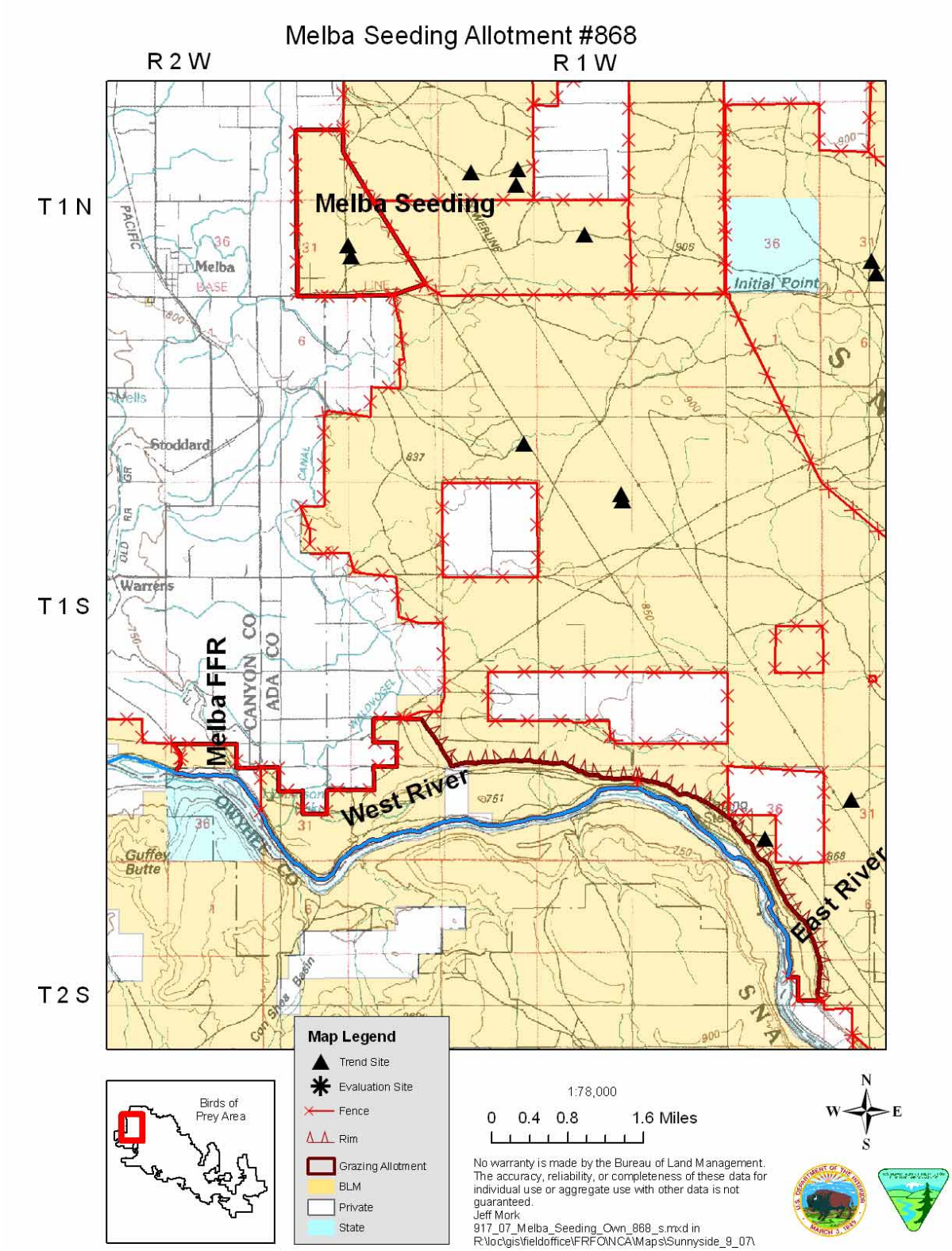

Orchard Training Area
R 2 W
R 1 W
R 1 E
R 3 E
R 4 E
R 5 E
R 6 E
R 7 E
R 8 E
T 1 N
T 1 S
T 2 S
T 3 S
T 4 S
T 5 S
Map Legend
NCA Birds of Prey
Orchard Training Area (OTA)
OTA Impact Area
Sunnyside Spring/Fall Allotment
Sunnyside Winter Allotment
BLM
Military
Private
State
1:550,000
0 2.5 5 10 Miles
N
W
E
S
No warranty is made by the Bureau of Land Management.
The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.
919_OTA_Own_825_828.mxd in
R:\bcgis\fieldoffice\FRFO\NCA\Maps\Sunnyside_9_07\

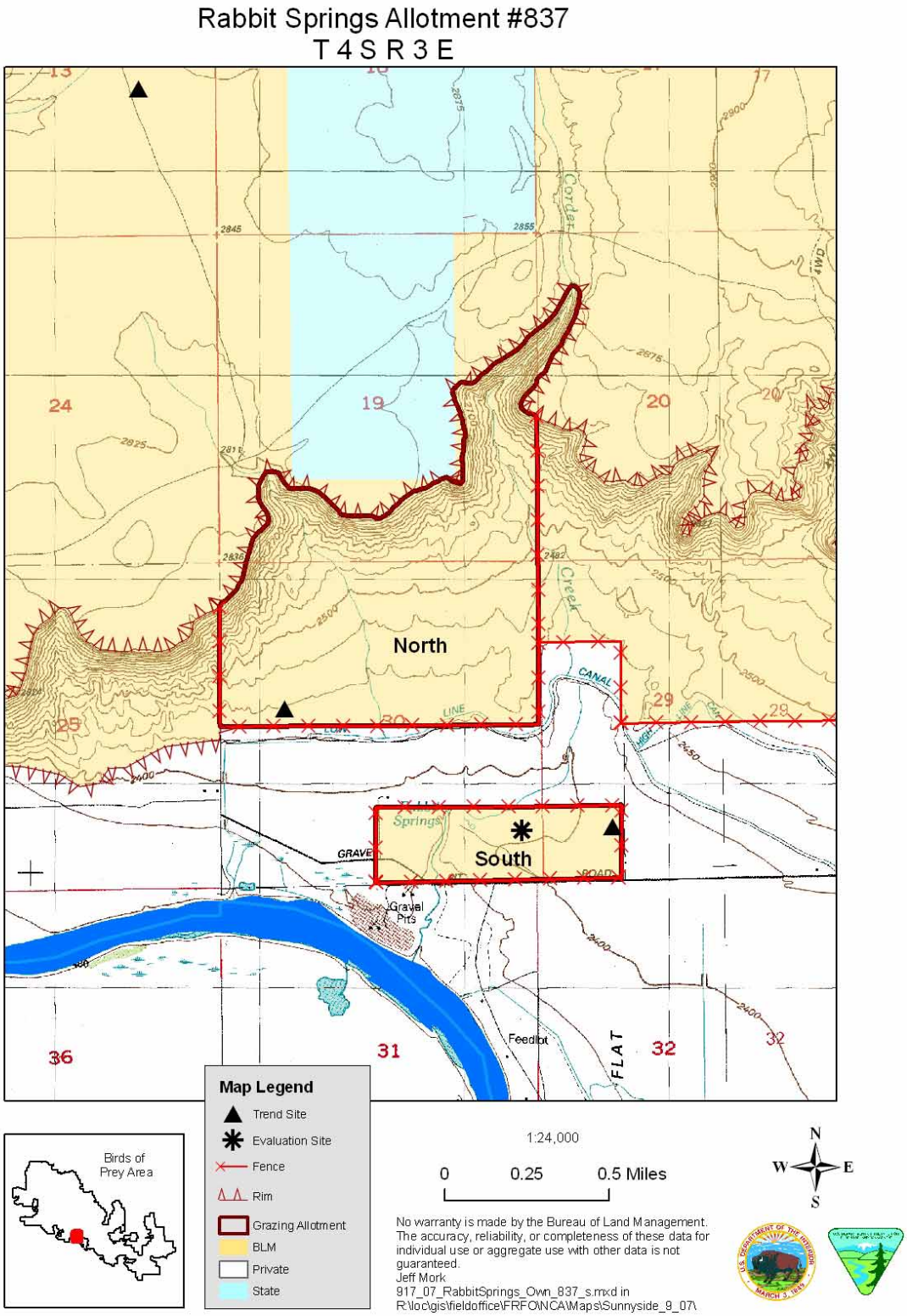

Airbase Allotment #896
R 4 E
R 5 E
R 6 E
T 3 S
T 4 S
T 5 S
17
Simco Field
East Holding
West Holding
Nielsen Field
Canyon Creek
Snake River Field
Air Base Field
Air Base
Rattlesnake Field
MOUNTAIN HOME
SMALL ARMS RANGE
MOUNTAIN HOME
AIR FORCE BASE
Map Legend
Trend Site
Evaluation Site
Fence
Rim
River Bank
Grazing Allotment
BLM
Military
Private
State
Birds of Prey Area
1:120,000
0 1 2 4 Miles
N
W
E
S
No warranty is made by the Bureau of Land Management. The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.
Jeff Mork
918_07_Airbase_Own_896_s.mxd in R:\loc\gis\fieldoffice\FRFO\NCA\Maps\Sunnyside_9_07\

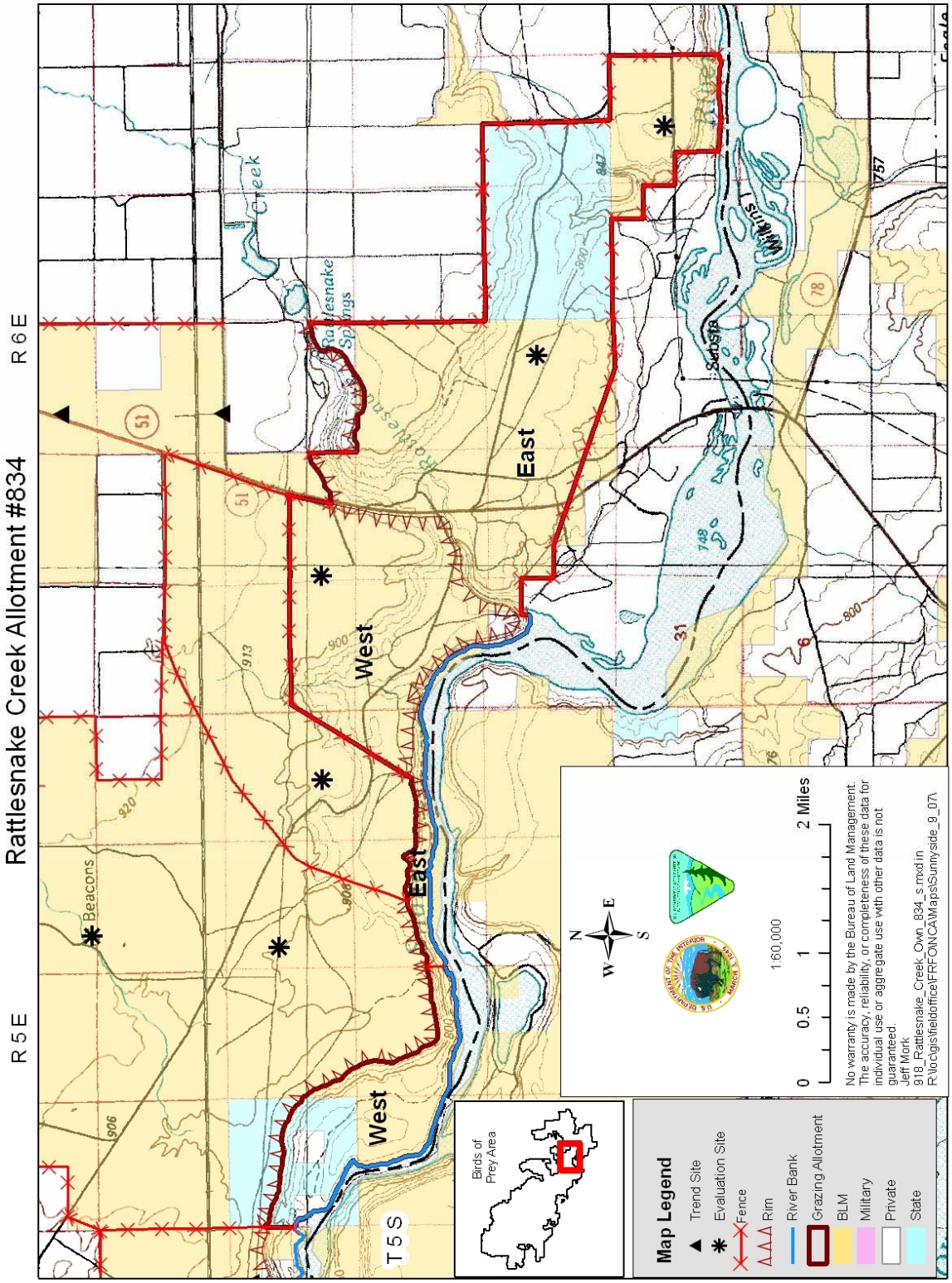

Chattin Hill Allotment #875
R 3 E
R 4 E
T 4 S
T 5 S
15
5
17
Chattin
Flats
Grand View
SNAKE
RIVER
ELMORE CO
OWYHEE CO
Map Legend
Trend Site
Evaluation Site
Fence
Rim
Grazing Allotment
BLM
Private
State
Birds of Prey Area
1:85,000
0 0.3750.75 1.5 Miles
N
W
E
S
No warranty is made by the Bureau of Land Management. The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.
Jeff Mork
917_07_Chattin_Hill_Own_875_s.mxd in R:\loc\gis\fieldoffice\FRFO\NCA\Maps\Sunnyside_9_07\

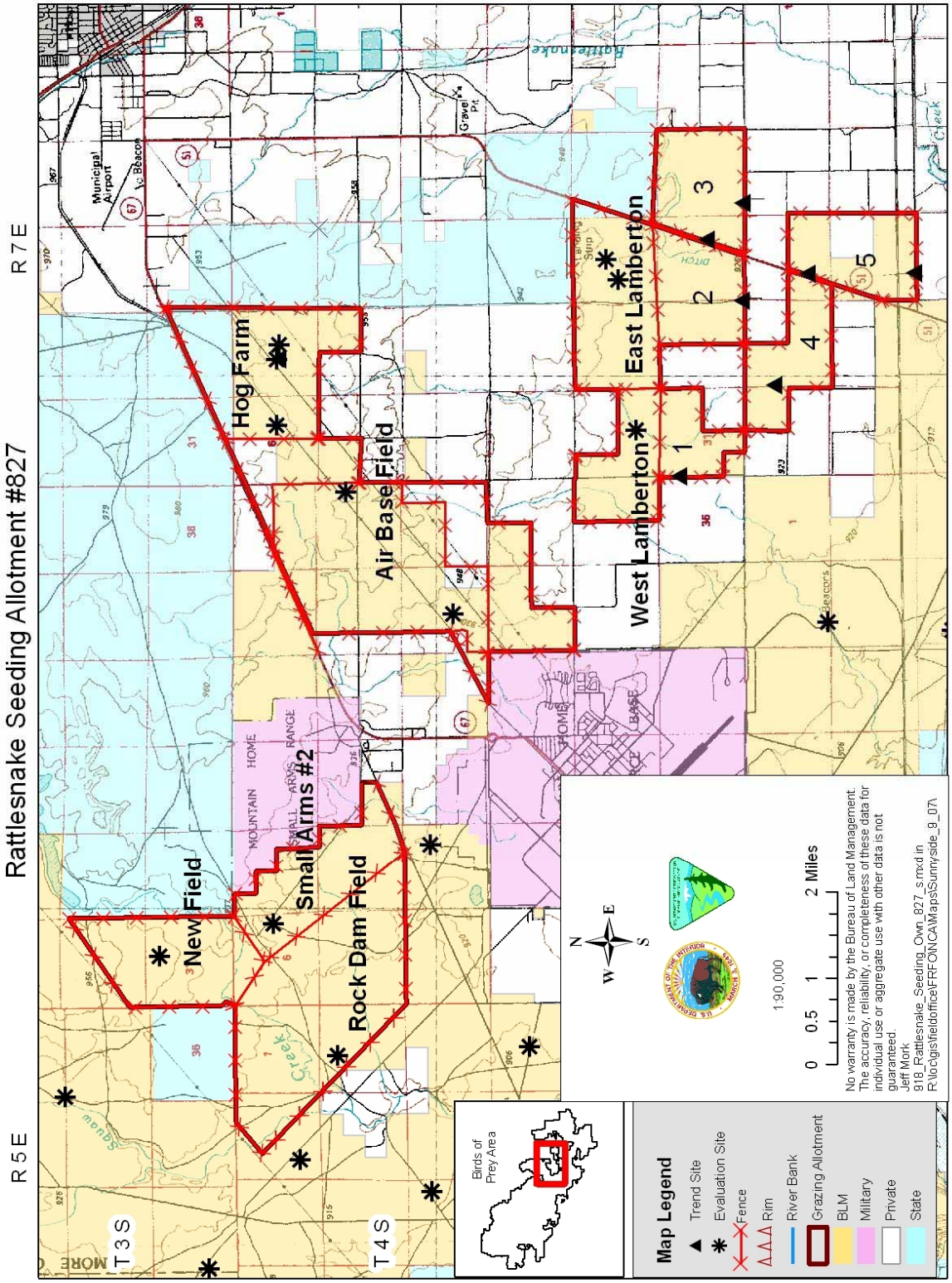

Crater Rings Allotment #828
R 5 E
T 2 S
T 3 S
CRATER RINGS
BIRDS OF PREY AREA
9/17/07, 917_07_Crater_Rings_Own_828_s.mxd in
R:\loc\gis\...FRFO\NCA\Maps\Sunnyside_9_2007\
Jeff Mork
data layers described in R:\loc\gis\fieldoffice\frfo\nca\maps\sunnyside_9_2007\
Metadata_for_SunnysideEA_Maps.doc
Birds of Prey Area
Map Legend
Trend Site
Evaluation Site
Fence
Rim
Grazing Allotment
BLM
Private
State
1:30,000
0 0.25 0.5 1 Miles
N
W
E
S
No warranty is made by the Bureau of Land Management. The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.
Jeff Mork
917_07_Crater_Rings_Own_828_s.mxd in
R:\loc\gis\fieldoffice\FRFO\NCA\Maps\Sunnyside_9_07\

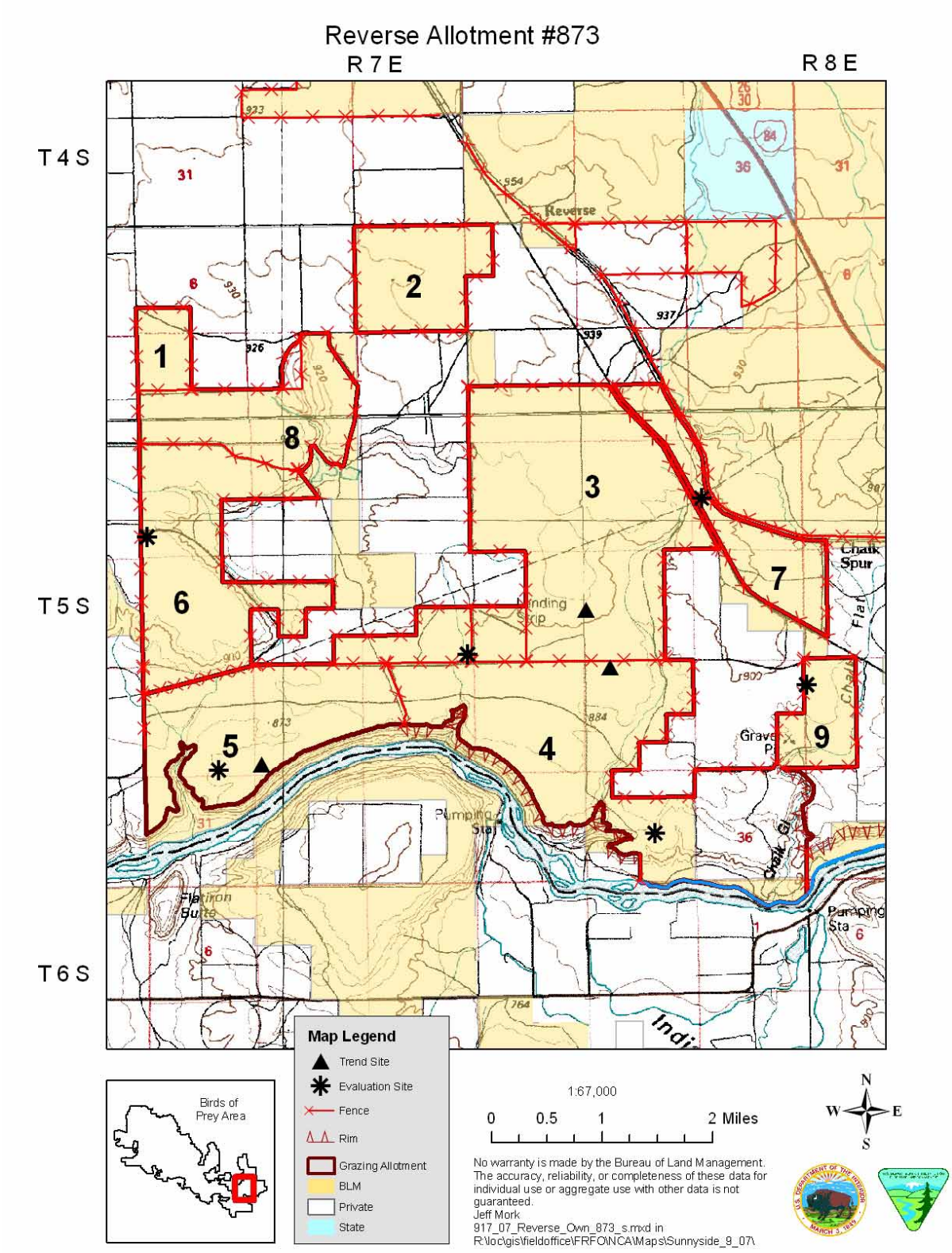

Medbury Hill Allotment #899
T 5 S R 8 E
3
2
1
4
Hammett Seeding
Map Legend
Trend Site
Evaluation Site
Fence
Rim
Grazing Allotment
BLM
Private
State
Birds of Prey Area
1:30,000
0 0.25 0.5 1 Miles
N
W
E
S
No warranty is made by the Bureau of Land Management. The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.
Jeff Mork
917_07_Medbury_Hill_Own_899_s.mxd in R:\loc\gis\fieldoffice\FRFO\NCA\Maps\Sunnyside_9_07\

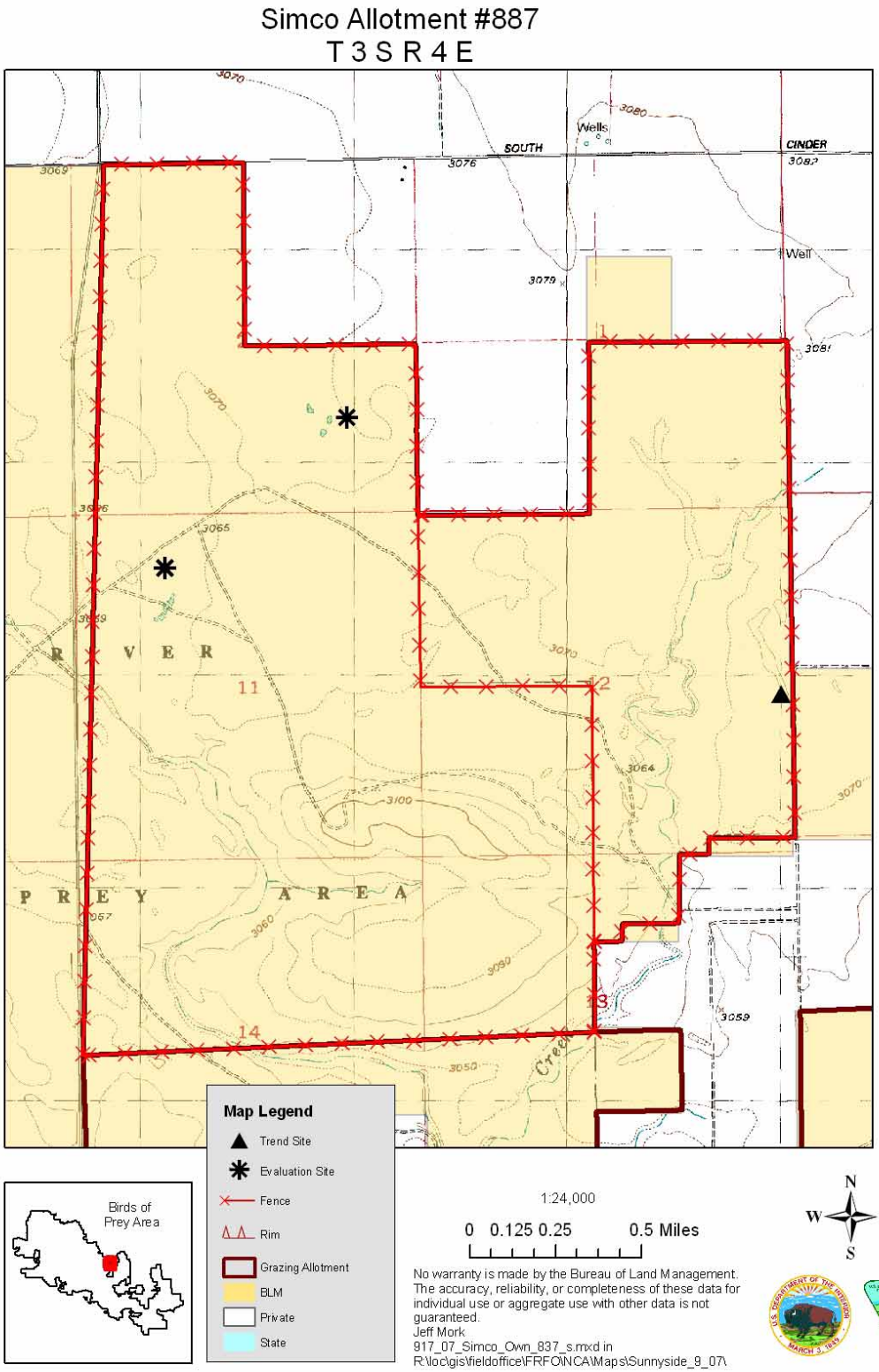

Melba Seeding Allotment #868
R 2 W
R 1 W
T 1 N
T 1 S
T 2 S
Melba Seeding
Melba
BASE
Initial Point
Stoddard
Warrens
Melba FFR
CANYON CO
ADA CO
OWYHEE CO
West River
East River
Guffey Butte
Birds of Prey Area
Map Legend
Trend Site
Evaluation Site
Fence
Rim
Grazing Allotment
BLM
Private
State
1:78,000
0 0.4 0.8 1.6 Miles
N
W
E
S
No warranty is made by the Bureau of Land Management. The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.
Jeff Mork
917_07_Melba_Seeding_Own_868_s.mxd in R:\loc\gis\fieldoffice\FRFO\NCA\Maps\Sunnyside_9_07\

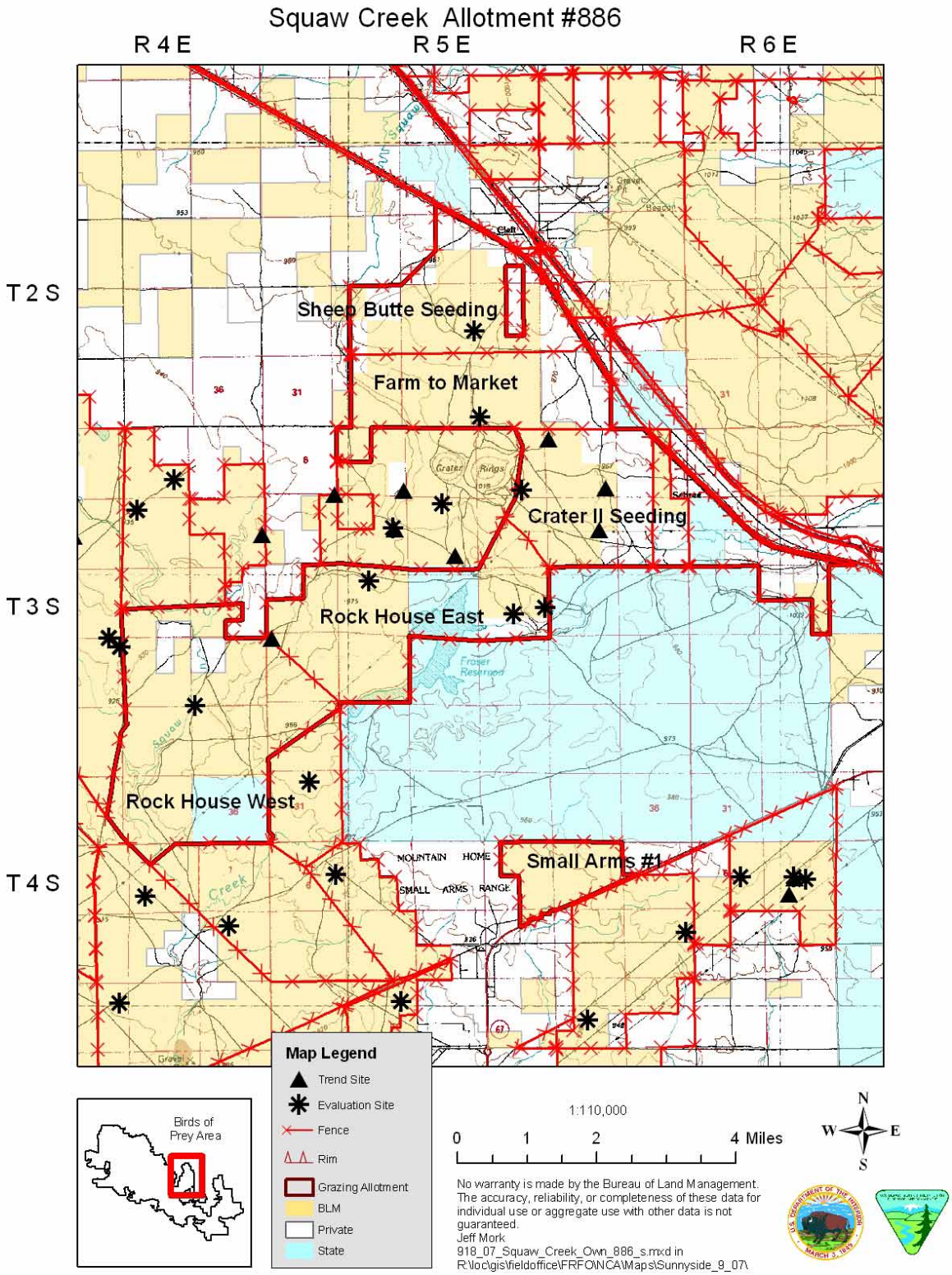

Rabbit Springs Allotment #837
T 4 S R 3 E
North
South
Springs
Gravel Pits
Feedlot
FLAT
CANAL
Creek
Cordar
24
19
20
25
29
36
31
32
Birds of Prey Area
Map Legend
Trend Site
Evaluation Site
Fence
Rim
Grazing Allotment
BLM
Private
State
1:24,000
0 0.25 0.5 Miles
N
W
E
S
No warranty is made by the Bureau of Land Management. The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.
Jeff Mork
917_07_RabbitSprings_Own_837_s.mxd in R:\loc\gis\fieldoffice\FRFO\NCA\Maps\Sunnyside_9_07\

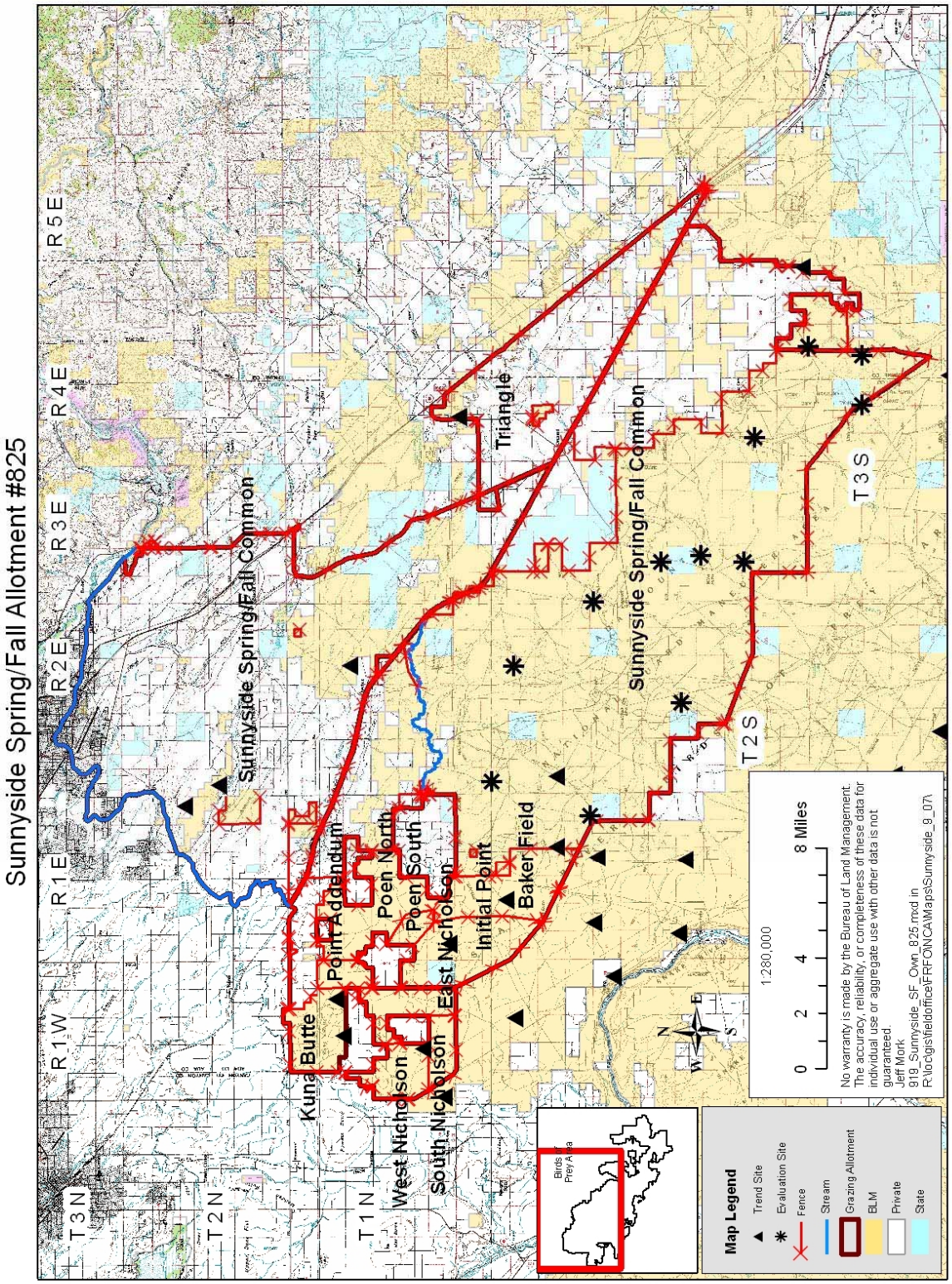

Rattlesnake Creek Allotment #834
R 5 E
R 6 E
T 5 S
Beacons
Rattlesnake Springs
Rattlesnake Creek
Sardine
Mill Creek
West
East
West
East
Birds of Prey Area
Map Legend
Trend Site
Evaluation Site
Fence
Rim
River Bank
Grazing Allotment
BLM
Military
Private
State
0 0.5 1 2 Miles
1:60,000
N
W
E
S
No warranty is made by the Bureau of Land Management. The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.
Jeff Mork
918_Rattlesnake_Creek_Own_834_s.mxd in R:\loc\gis\fieldoffice\FRFO\NCA\Maps\Sunnyside_9_07\

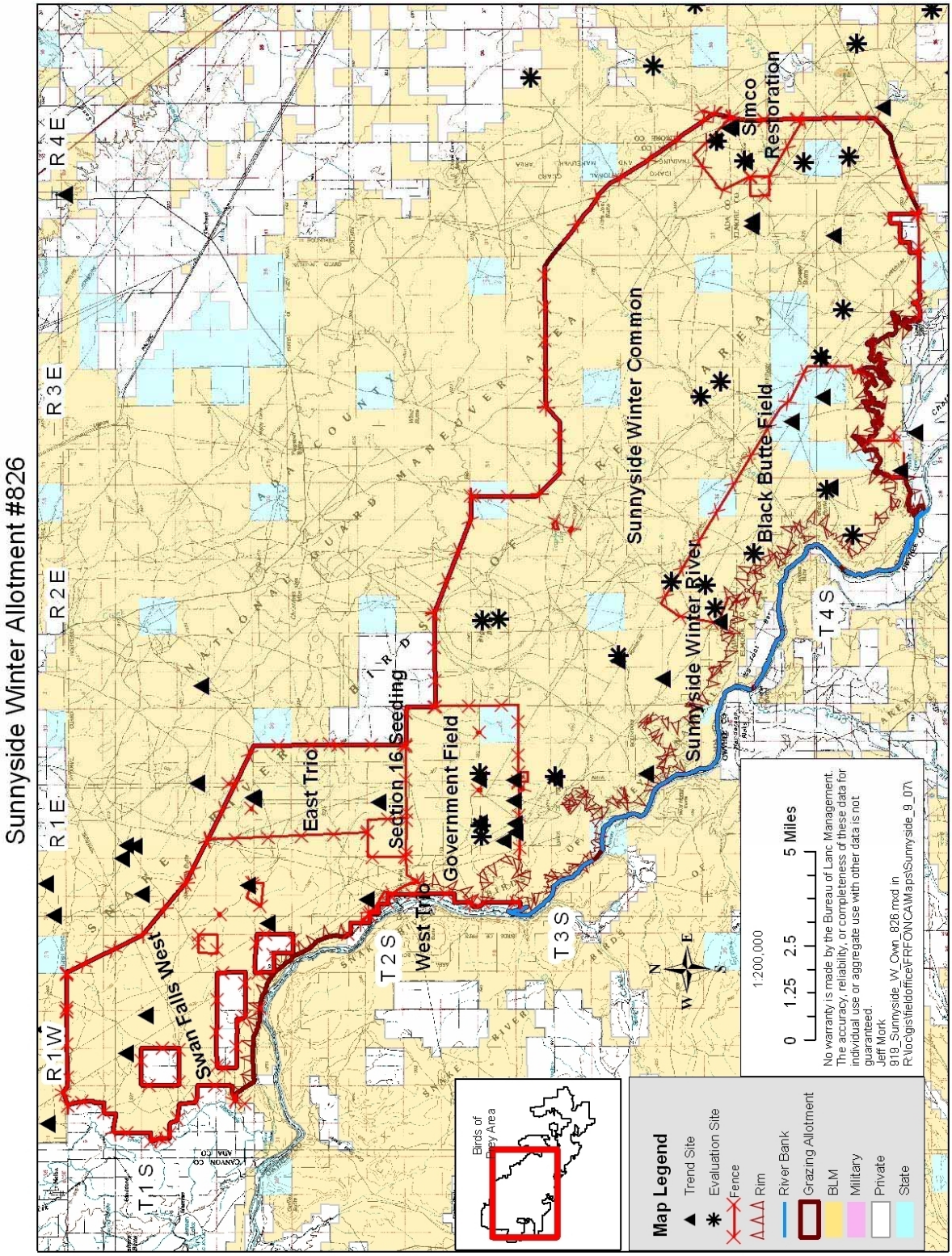

Rattlesnake Seeding Allotment #827
R 5 E
R 7 E
T 3 S
T 4 S
New Field
Small Arms #2
Rock Dam Field
Hog Farm
Air Base Field
West Lamberton
East Lamberton
1
2
3
4
5
Birds of Prey Area
Map Legend
Trend Site
Evaluation Site
Fence
Rim
River Bank
Grazing Allotment
BLM
Military
Private
State
N
W
E
S
1:90,000
0 0.5 1 2 Miles
No warranty is made by the Bureau of Land Management. The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.
Jeff Mork
918_Rattlesnake_Seeding_Own_827_s.mxd in R:\loc\gisfieldoffice\FRFO\NCA\Maps\Sunnyside_9_07\

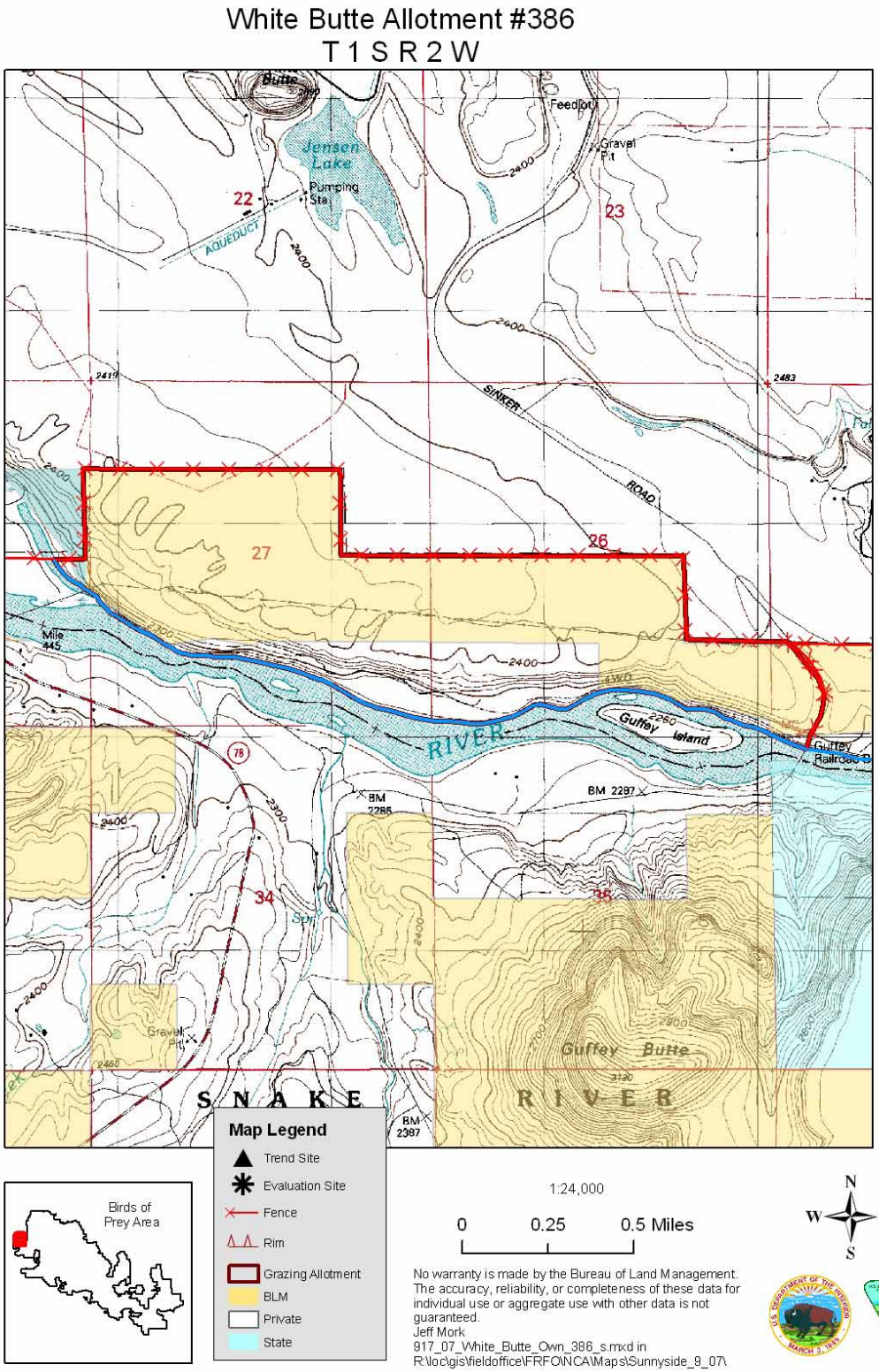

Reverse Allotment #873
R 7 E
R 8 E
T 4 S
T 5 S
T 6 S
1
2
3
4
5
6
7
8
9
Reverse
Chalk Spur
Pumping Sta
Pumping Sta
Flat Iron Butte
Birds of Prey Area
Map Legend
Trend Site
Evaluation Site
Fence
Rim
Grazing Allotment
BLM
Private
State
1:67,000
0 0.5 1 2 Miles
N
W
E
S
No warranty is made by the Bureau of Land Management. The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.
Jeff Mork
917_07_Reverse_Own_873_s.mxd in R:\loc\gis\fieldoffice\FRFO\NCA\Maps\Sunnyside_9_07\


Simco Allotment #887
T 3 S R 4 E
SOUTH
CINDER
Wells
Well
R V E R
P R E Y A R E A
11
12
13
14
Map Legend
Trend Site
Evaluation Site
Fence
Rim
Grazing Allotment
BLM
Private
State
Birds of Prey Area
1:24,000
0 0.125 0.25 0.5 Miles
N
W
E
S
No warranty is made by the Bureau of Land Management. The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.
Jeff Mork
917_07_Simco_Own_837_s.mxd in
R:\loc\gis\fieldoffice\FRFO\NCA\Maps\Sunnyside_9_07\


Squaw Creek Allotment #886
R 4 E
R 5 E
R 6 E
T 2 S
T 3 S
T 4 S
Sheep Butte Seeding
Farm to Market
Crater II Seeding
Rock House East
Rock House West
Small Arms #1
MOUNTAIN HOME
SMALL ARMS RANGE
Map Legend
Trend Site
Evaluation Site
Fence
Rim
Grazing Allotment
BLM
Private
State
Birds of Prey Area
1:110,000
0 1 2 4 Miles
N
W
E
S
No warranty is made by the Bureau of Land Management. The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.
Jeff Mork
918_07_Squaw_Creek_Own_886_s.mxd in R:\loc\gis\fieldoffice\FRFO\NCA\Maps\Sunnyside_9_07\


Sunnyside Spring/Fall Allotment #825
R 1 W
R 1 E
R 2 E
R 3 E
R 4 E
R 5 E
T 3 N
T 2 N
T 1 N
T 2 S
T 3 S
Sunnyside Spring/Fall Common
Kuna Butte
Point Addendum
Poen North
Poen South
West Nicholson
South Nicholson
East Nicholson
Initial Point
Baker Field
Triangle
Birds of Prey Area
Map Legend
Trend Site
Evaluation Site
Fence
Stream
Grazing Allotment
BLM
Private
State
1:280,000
0 2 4 8 Miles
No warranty is made by the Bureau of Land Management. The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.
Jeff Mork
919_Sunnyside_SF_Own_825.mxd in R:\locigis\fieldoffice\FFO\NCA\Maps\Sunnyside_9_07\


Sunnyside Winter Allotment #826
R 1 W
R 1 E
R 2 E
R 3 E
R 4 E
T 1 S
T 2 S
T 3 S
T 4 S
Swan Falls West
East Trio
Section 16 Seeding
West Trio
Government Field
Sunnyside Winter Common
Sunnyside Winter River
Black Butte Field
Simco Restoration
Birds of Prey Area
Map Legend
Trend Site
Evaluation Site
Fence
Rim
River Bank
Grazing Allotment
BLM
Military
Private
State
1:200,000
0 1.25 2.5 5 Miles
No warranty is made by the Bureau of Lanc Management. The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.
Jeff Mork
919_Sunnyside_W_Own_826.mxd in R:\loc\gis\fieldoffice\FRFO\NCA\Maps\Sunnyside_9_07\


White Butte Allotment #386
T 1 S R 2 W
Jensen Lake
Pumping Sta
AQUEDUCT
Feedlot
Gravel Pit
22
23
26
27
34
35
SINKER
ROAD
Mile 445
RIVER
Guffey Island
Guffey Railroad
BM 2297
BM 2285
BM 2387
Gravel pit
Guffey Butte
S N A K E
R I V E R
Map Legend
Trend Site
Evaluation Site
Fence
Rim
Grazing Allotment
BLM
Private
State
Birds of Prey Area
1:24,000
0 0.25 0.5 Miles
N
W
E
S
No warranty is made by the Bureau of Land Management. The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.
Jeff Mork
917_07_White_Butte_Own_386_s.mxd in R:\loc\gis\fieldoffice\FRFO\NCA\Maps\Sunnyside_9_07\