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Bureau of Land Management**

**Environmental Assessment
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Blue Mountain et al. Grazing Permit Renewal

Iron County, Utah

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Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Table of Contents

1.0	PURPOSE AND NEED	4
1.1.	Introduction	4
1.2.	Background	4
1.3.	The Purpose and Need for Action	5
1.4.	Land Use Plan Conformance	6
1.5.	Relationship to Statutes, Regulation or other Plans	9
1.6.	Identification of Issues	9
1.7	Summary	13
2.0	DESCRIPTION OF ALTERNATIVES, INCLUDING THE PROPOSED ACTION....	14
2.1.	Introduction	14
2.2.	Proposed Action	14
2.2.1.	Permit Specifications	14
2.2.2.	Allotment Specific Objectives	17
2.2.3.	Terms and Conditions Common to all Livestock Permittees	18
2.2.4.	Additional Terms and Conditions	20
2.2.5.	Range Improvement Projects	21
2.3.	No Action Alternative (Existing Use)	25
2.4.	Alternatives Considered, but Eliminated from Further Analysis	25
2.5.	Summary	28
3.0	AFFECTED ENVIRONMENT	29
3.1.	Introduction	29
3.2.	General Setting	29
3.3.	Resources Present and Brought Forward for Analysis	30
3.3.1.	Grazing Management	30
3.3.2.	Wildlife	31
3.3.3.	Invasive, Non-Native Species	42
3.3.4.	Soils/Vegetation	43
3.3.5.	Wild Horses	43
3.3.6.	Socioeconomic Values	43
4.0	ENVIRONMENTAL CONSEQUENCES	47
4.1.	Introduction	47
4.2.	Proposed Action	47

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

4.2.1.	Grazing Management.....	47
4.2.2.	Wildlife.....	55
4.2.3.	Invasive, Non-Native Species.....	62
4.2.4.	Soils/Vegetation.....	63
4.2.5.	Wild Horses.....	64
4.2.6.	Socioeconomic Values.....	64
4.3.	No Action Alternative (Existing Use).....	66
4.3.1.	Grazing Management.....	66
4.3.2.	Wildlife (Including Big Game, Upland Game Birds, Special Status Species and Migratory Birds).....	66
4.3.3.	Invasive, Non-Native Species.....	67
4.3.4.	Soils/Vegetation.....	67
4.3.5.	Wild Horses.....	68
4.3.6.	Socioeconomic Values.....	68
5.0	CUMULATIVE IMPACT ANALYSIS.....	69
5.1.	Introduction.....	69
5.2.	Past, Present and Reasonably Foreseeable Future Actions.....	70
5.3.	Effects of Past, Present and Reasonably Foreseeable Future Actions.....	72
5.3.1.	Grazing Management.....	72
5.3.2.	Wildlife.....	73
5.3.3.	Invasive Weed Treatment.....	74
5.3.4.	Soils and Vegetation.....	75
5.3.5.	Wild Horses.....	75
5.3.6.	Socioeconomic.....	75
5.4.	No Action Alternative (Existing Use).....	76
5.5.	Summary of Past, Present, And Reasonably Foreseeable Future Actions.....	76
5.5.1.	Proposed Action.....	76
5.5.2.	No Action Alternative (Existing Use).....	77
6.0	MONITORING.....	78
7.0	CONSULTATION, COOPERATION AND COORDINATION.....	78
7.1.	Introduction.....	78
7.2.	Persons, Groups and Agencies Consulted.....	78
7.3.	Summary of Public Participation.....	78
7.4.	List of Preparers.....	79
8.0	REFERENCES.....	80
9.0	MAPS.....	1
APPENDIX A. INTERDISCIPLINARY TEAM CHECKLIST.....		1
APPENDIX B SUMMARY OF ALL UTAH PRAIRIE DOG CONSERVATION MEASURES FROM THE GRAZING PROGRAMMATIC CONSULTATION OF OCTOBER 2008..		7
APPENDIX C STIPULATIONS FOR NEW PROJECTS AND SUPPLEMENTAL LIVESTOCK MANAGEMENT ACTIVITIES ON GRAZING ALLOTMENTS.....		13

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

APPENDIX D RECOMMENDED PROCEDURES TO MINIMIZE, MONITOR, AND MITIGATE TAKE ASSOCIATED WITH THE MAINTENANCE OF EXISTING FACILITIES ON PUBLIC LANDS.....	16
APPENDIX E MONITORING PLAN FOR GRAZING WITHIN UTAH PRAIRIE DOG HABITAT.....	23
APPENDIX F ALLOTMENT SPECIFIC RESOURCE MANAGEMENT OBJECTIVES	32
APPENDIX G FUNDAMENTALS OF RANGELAND HEALTH.....	33
APPENDIX H STANDARDS AND GUIDELINES FOR HEALTHY RANGELANDS	34
APPENDIX I BIRDS OF CONSERVATION CONCERN, PARTNER’S IN FLIGHT BIRD CONSERVATION PLANS, AND STATE WILDLIFE ACTION PLANS (STATE HABITAT CONSERVATION PLANS).....	38
ATTACHMENT 1 ALLOTMENT SPECIFIC OBJECTIVES.....	40
ATTACHMENT 2 MONITORING STANDARDS	44
ATTACHMENT 3 SOILS/VEGETATION	47
ATTACHMENT 4 GRAZING AGREEMENT FOR THE HOLE-IN-THE-WALL ALLOTMENT	52

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

1.0 PURPOSE AND NEED

1.1. Introduction

This Environmental Assessment (EA) is prepared to analyze livestock grazing impacts on BLM lands within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments. The EA is a site specific analysis of potential impacts that could result with the implementation of a Proposed Action or alternatives to the Proposed Action. This EA assists the BLM in project planning, ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any “significant” impacts could result from the analyzed actions. “Significance” is defined by NEPA and is found in regulation 40 CFR 1508.27. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a statement of “Finding of No Significant Impact” (FONSI). A Decision Record (DR), which includes a FONSI statement, is a document that briefly presents the reasons why implementation of the Proposed Action would not result in “significant” environmental impacts (effects) beyond those already addressed in the Pinyon Management Framework Plan, 1983 (PMFP) and the Cedar Beaver Garfield Antimony Resource Management Plan, 1986 (CBGA RMP). If the decision maker determines that this project has “significant” impacts following the analysis in the EA, then an EIS would be prepared for the project. If not, a Decision Record (DR) may be signed for the EA approving the alternative selected.

The Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments consist of the following acres:

ALLOTMENT	PUBLIC ACRES	STATE ACRES	PRIVATE ACRES	TOTAL ACRES
Antelope	435	0	1,598	2,033
Blue Mountain	9,969	1,609	4,785	16,363
Burn Knoll	18,150	4,151	0	22,249
Hamilton Fort (Shurtz Canyon Pasture)	3,029	0	614	3,643
Hole-In-The-Wall	3,017	0	2,256	5,273
Lower Meadow	504	510	946	1,960
Winsor	119	0	89	208

1.2. Background

The grazing permits for livestock grazing within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments were issued for a ten year period. The Antelope Allotment was renewed in March 2007 and will expire in February 2017. The Blue Mountain and Burn Knoll allotments were renewed in October 2006 and will expire in October 2016. The Hamilton Fort (Shurtz Canyon Pasture) Allotment was renewed in December 2009 and will expire in November 2019. The Hole-In-The-Wall Allotment was renewed in March 2007 and will expire in February 2017.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Lower Meadow was renewed in March 2007 and will expire in February 2017 and Winsor was renewed in March 2007 and will expire in February 2017.

The grazing permits for livestock grazing within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments were issued for a ten year period pursuant to the provisions of Public Law 108-108, Public Law 111-88 or under the authority HR 2996 Section 416. These laws state that the Terms and Conditions contained in the expired or transferred permit have been incorporated into this permit and shall continue in effect under the renewed permit until such time as the Secretary of the Interior completes the processing of this permit in compliance with all applicable laws and regulations, at which time this permit may be cancelled, suspended or modified, in whole or in part, to meet the requirements of such applicable laws and regulations.

Agency policy is that “compliance with all applicable laws and regulations” includes consultation, coordination and cooperation with affected individuals, interested publics, States and Indian Tribes; completion of the applicable level of National Environmental Policy Act (NEPA) review; and consultation with the United States Fish and Wildlife Service (USFWS) under Section 7 of the Endangered Species Act, as appropriate.

Refer to the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotment maps in Section 9.0 of this document.

1.3. The Purpose and Need for Action

The Antelope, Blue Mountain, Burn Knoll, Hole-In-The-Wall, Lower Meadow and Winsor Allotment Monitoring Report concluded that the Standards and Guidelines for Healthy Rangelands were not being fully met within the allotments. The Hamilton Fort (Shurtz Canyon Pasture) Monitoring Report also concluded that the standards and Guidelines for Healthy Rangelands were not being fully met within the allotment.

The purpose and need for the Proposed Action are to:

1. In accordance with Land Use Plan, renew a ten year grazing permit to the livestock permit holders within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor Allotments to administer grazing and implement grazing management practices that would ensure compliance with the following laws and regulations in manner that is consistent with multiple use:

- Taylor Grazing Act
- Federal Land Policy Management Act (FLPMA)
- Fundamentals of Rangeland Health (43 CFR 4180)
- Standards for Healthy Rangelands and Guidelines for Grazing Management (BLM-UT-GI-98-007-1020)
- Cedar Beaver Garfield Antimony Resource Management Plan (1986)
- Pinon Management Framework Plan (1983)

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

2. 43 CFR 4180 – Fundamentals of Rangeland Health and Standards and Guidelines for Grazing Administration states that the authorized officer shall take appropriate action under subparts 4110, 4120, 4130 and 4160 of this part as practicable, but not later than the start of the next grazing year upon determining that existing grazing management needs to be modified to ensure that the following conditions exist:
- Watersheds are in, or are making significant progress toward, properly functioning physical condition, including their upland, riparian-wetland, and aquatic components; soil and plant conditions support infiltration, soil moisture storage, and the release of water that are in balance with climate and landform and maintain or improve water quality, water quantity and timing and duration of flow.
 - Ecological processes, including hydrologic cycle, nutrient cycle and energy flow are maintained, or there is significant progress toward their attainment in order to support healthy biotic populations and communities.
 - Water quality complies with State water quality standards and achieves, or is making significant progress toward achieving, established BLM management objectives such as meeting wildlife needs.
 - Habitats are, or are making significant progress toward being, restored or maintained for Federal threatened and endangered species, Federal Proposed, Category 1 and 2 Federal candidate and other special status species. USFWS revised classifications consist of the following: Federal threatened, endangered species, proposed and candidate species.

1.4. Land Use Plan Conformance

The Proposed Action and alternatives identified below are in conformance with the Cedar Beaver Garfield Antimony Resource Management Plan (1986) and the Pinyon Management Framework Plan (1983). The allotments have been designated as being open for livestock grazing and are within the authority of the 1934 Taylor Grazing Act, the 1976 Federal Land Policy and Management Act and the Code of Federal Regulations under 43 CFR 4100.

The allotment Selective Management Category designated in the land use plans identifies the following for each of the allotments.

1. Category – “I” (Intensive Management)

An “I” Management Allotment has been identified to initiate management prescriptions affecting season of use, grazing systems and grazing use levels through formal grazing agreements, decisions or Allotment Management Plans. These prescriptions would be applied on all allotments identified as having one or more of the following characteristics to resolve problems and conflicts and meet objectives.

- Present range condition is unsatisfactory

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

- Allotments have moderate to high resource production potential and are producing at low to moderate levels
- Serious resource use conflicts exist
- Opportunities exist for positive economic return from public investments
- Present management appears unsatisfactory

Hamilton Fort

The Hamilton Fort Allotment was categorized as an “I” allotment at the time of approval of the CBGA RMP. Specific management objectives for individual allotments include the following:

ALLOTMENT	OBJECTIVES
Hamilton Fort	Improve or Maintain Crucial Big Game Habitat
	Balance Authorized Use with Production
	Provide for Long-Term Physiological Needs of Plants
	Change Management to Provide for Big Game Needs
	Improve Habitat by Improving Quality of Key Species
	Reduce Area in Poor Condition by Improving Key Species

2. Category – “M” (Maintain Management)

An “M” Management Allotment would continue current management practices to maintain or improve on resource conditions and to meet the objectives. The following are the characteristics of a Maintain Management Allotment category.

- Present range conditions is satisfactory
- Allotments have moderate or high resource production potential and are producing near their potential (or trend is moving in that direction)
- No serious resource use conflicts exist
- Opportunities may exist for positive economic return from public investments
- Present management appears satisfactory

Blue Mountain

Management Category	Season of Use	Active Grazing Preference (AUMs)	Suspended (AUMs)	Management System	Number of Pastures
M	10/16-6/30	865	289	Deferred Rotational	4

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

OBJECTIVES
Provide for Long-Term Physiological Needs of Plants
Reduce Area in Poor Condition by Improving Key Species

Burn Knoll

Management Category	Season of Use	Active Grazing Preference (AUMs)	Suspended (AUMs)	Management System	Number of Pastures
M	11/01-05/09 & 05/10-06/30	950	705	Deferred Rotational	7

OBJECTIVES
Provide for Long-Term Physiological Needs of Plants
Reduce Area in Poor Condition by Improving Key Species

3. Category- "C" (Custodial Management)

Category C allotments were identified as having low resource values and little economic return on public investments and conform to the following criteria:

- Present range condition is not a factor.
- Allotments have low resource production potential and are producing near potential.
- Limited – use resource conflicts may exist.
- Opportunities for positive economic return on public investment do not exist or are constrained by technological or economic factors.
- Present management appears satisfactory or is the only logical practice under existing resource conditions.

Antelope

OBJECTIVES
Provide for Long-Term Physiological Needs of Plants
Reduce Area in Poor Condition by Improving Key Species

Hole-In-The-Wall

OBJECTIVES
Improve Habitat by Improving Quality of Key Species
Provide for Long-Term Physiological Needs of Plants

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Lower Meadow

OBJECTIVES
Improve Habitat by Improving Quality of Key Species
Provide for Long-Term Physiological Needs of Plants

Winsor

OBJECTIVES
Improve Habitat by Improving Quality of Key Species
Provide for Long-Term Physiological Needs of Plants

1.5. Relationship to Statutes, Regulation or other Plans

Livestock grazing use within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments, as well as the requirement to conduct grazing activities in a manner consistent with the principles of multiple use and sustainable yield in an ecologically sound manner, are found in the following provisions:

- Taylor Grazing Act of 1934,
- Federal Land Policy and Management Act (FLPMA) of 1976 (43 U.S.C. 1701 et seq.)
- Fundamentals of Rangeland Health (43 CFR 4180)
- Standards and Guidelines for Healthy Rangelands and Grazing Management (BLM-UT-GI-98-007-1020).
- Public Rangelands Improvement Act (PRIA) of 1978
- Endangered Species Act (ESA) of 1973 as amended
- Title 43 CFR 4100 Grazing Administration-Exclusive of Alaska
- Section 106 of the National Historic Preservation Act of 1966 (as amended).
- United States Department of the Interior Manual (910 DM 1.3).
- Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds (January 10, 2001).
- BLM Special Status Species Policy (6840 Manual (December 15, 2009)

1.6. Identification of Issues

Identification of issues for this assessment was accomplished by considering the resources that could be affected by implementation of one of the alternatives, as well as through involvement with the public and input from the BLM interdisciplinary team. Refer to Appendix A for the Interdisciplinary Team Checklist for a summary of the interdisciplinary team findings. Public involvement has consisted of posting the proposal on the BLM's eplanning website.

Monitoring data that has been collected throughout the allotments has included nested frequency, photo trend, key area utilization, Standards and Guidelines for Rangeland Health Assessments, precipitation and actual use. A Monitoring Report has been generated to analyze the monitoring data that has been collected within the allotments. The monitoring report assessed the Standards and Guidelines for Healthy Rangelands and made determinations and recommendations for

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

maintaining/improving upland conditions throughout the allotments. A copy of the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor Allotments Monitoring Report is available upon request at the Cedar City Field Office.

Grazing Management/Standards and Guidelines for Rangeland Health

The Standards and Guidelines were not being fully met within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments. The results of the Standards and Guidelines Assessments are illustrated by allotment as follows:

ALLOTMENT	PASTURE	STANDARD 1		STANDARD 2		STANDARD 3	
		MET	NOT MET	MET	NOT MET	MET	NOT MET
Antelope	----	x	----	----	----	----	x
Blue Mountain	North	x	----	----	----	----	x
	Moonshine	x	----	----	----	----	x
	South East	x	----	----	----	----	x
Burn Knoll	West	----	x	----	----	----	x
	Mertons	x	----	x	----	----	x
	East	x	----	----	----	x	----
	Middle	x	----	----	----	x	----
Hamilton Fort (Shurtz Canyon pasture)	----	x	----	----	----	----	x
Hole-In-The-Wall	East	----	x	----	----	x	----
	West	----	x	----	----	----	x
Lower Meadow	----	----	x	----	----	----	x
Winsor	----	x	----	----	----	----	x

Antelope

- Consider the continuation of the existing grazing management system to provide critical growing period rest and eliminate repeated critical growing period use within any one pasture

Blue Mountain

- Consider the continuation of the existing grazing management system to provide critical growing period rest and eliminate repeated critical growing period use within any one pasture.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Burn Knoll

- Consider the continuation of the existing grazing management system to provide critical growing period rest and eliminate repeated critical growing period use within any one pasture.
- Consider the construction of a pipeline that would extend 3.4 miles from an existing well in the Antelope Peak (Seeding Pasture), down through the Burn Knoll Allotment into the Mertons Spring Pasture to a trough.
- Consider the construction of a pipeline that would extend 4 miles from an existing windmill in the Burn Knoll Allotment (East Pasture), up to the Mertons Spring Pasture to a trough.
- Consider the construction of a pipeline that would extend 1 mile from an existing windmill in the Burn Knoll Allotment (East Pasture) to a trough.

Hole-In-The-Wall

- Consider the continuation of the existing grazing management system to provide critical growing period rest and eliminate repeated critical growing period use within the allotment.
- Consider a rangeland grazing agreement for the management of the Hole-In-The-Wall Allotment. The agreement would restrict the permit holder from running more than 70 head of cattle within the allotment until further monitoring data and analysis has determined to adjust permitted numbers of cattle.

Hamilton Fort Allotment

- Consider the implementation of a grazing management system that implements a season of use change that would eliminate repeated critical growing period use on the Shurtz Canyon Pasture.
- Consider a change in kind of livestock from cattle to sheep, while allowing flexibility for Authorized Officer to approve the use of cattle in lieu of sheep if sheep are not used in a given grazing season.

Lower Meadow

- Consider the continuation of the existing grazing management system to provide critical growing period rest and eliminate repeated critical growing period use within the pasture.

Winsor

- Consider the continuation of the existing grazing management system to provide critical growing period rest and eliminate repeated critical growing period use within any one pasture.

Wildlife

Big Game and Other Game Species

- Blue Mountain, Hamilton Fort and Winsor allotments contain winter crucial mule deer habitat. Competition between livestock, big game and other game species may occur during the grazing season on key upland species including browse, grasses and forbs.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

- Blue Mountain, Burn Knoll and Hole-In-The-Wall allotments contain crucial year-long pronghorn habitat. Competition between livestock, big game and other game species may occur during the grazing season on key upland species including browse, grasses and forbs.
- The Burn Knoll and Hamilton Fort (Shurtz Canyon Pasture) allotments contain substantial year-long rocky mountain elk habitat. Competition between livestock, big game and other game species may occur during the grazing season on key upland species including browse, grasses and forbs.

BLM Sensitive Species

- BLM sensitive species that are most likely to occur on the allotments are the ferruginous hawk, burrowing owl, Pygmy rabbit, Kit Fox, Townsend's big-eared bat and the long-billed curlew. Improper livestock grazing practices may impact habitat for these species or their prey. While no Utah prairie dogs are found on the allotments, they could move into the area in the future. Should this occur, the conservation measures contained in Appendix B would be implemented. Appendices C – E also describe measures to ensure protection of this species.

Neotropical Migratory Birds

- A variety of Neotropical, migratory birds inhabit the allotments during the spring, summer, and fall months. There are eight priority species identified by Utah Partner's in Flight (PIF) that have a high probability of occurrence or are known to occur within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments: Black-throated gray warbler, Brewer's sparrow, broad-tailed hummingbird, ferruginous hawk, long-billed curlew, sage sparrow, and Virginia's warbler. Improper livestock grazing practices may impact habitat for these species.

Invasive, Non-Native Species

- The Proposed Action is expected to provide for proper vegetative management, which would create favorable conditions that would reduce the potential for establishment and the spread of invasive weeds in the allotments.

Soils/Vegetation

- The grazing management systems would reduce soil compaction and increase permeability and infiltration rates.
- Proper vegetative management throughout the allotments would maintain or improve the plant community due to the protection of soil and water resources.

Wild Horses

- A portion of the Antelope Allotment is within the Chloride Herd Management Area.
- Wild horses compete directly with cattle for grass and browse forage species. The kind of livestock, season of use, amount of AUMs, numbers of livestock, utilization levels, water developments, riparian exclosures, grazing systems and other livestock management tools may have an effect on wild horses.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Socioeconomic Values

- The permittees and the interested public have been updated throughout the permit renewal process. In addition, BLM representatives have met with the permittees and interested public throughout the permit renewal process. Issues discussed with the permittees and interested public have pertained to the development of management alternatives that would ensure the continued maintenance/attainment of the Standards and Guidelines for Healthy Rangelands and conform with the Guidelines for Grazing Management, while also maintaining the viability of their livestock operation.

1.7 Summary

This chapter has presented the Purpose and Need of the Proposed Action, as well as the relevant issues (i.e., those elements that could be affected by the implementation of the Proposed Action). In order to meet the purpose and need of the Proposed Action in a way that resolves the issues, the BLM has developed a range of alternatives. These alternatives, including the No Action Alternative, are presented in Chapter 2. The potential environmental impacts or consequences resulting from the implementation of each alternative are then analyzed in Chapter 4 for each of the identified issues.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

2.0 DESCRIPTION OF ALTERNATIVES, INCLUDING THE PROPOSED ACTION

2.1. Introduction

Based on issue identification, two alternatives were considered the Proposed Action and the No Action Alternative.

2.2. Proposed Action

Cancel Existing Grazing Permit and Issue a New Permit with Modifications

The livestock grazing management practices proposed under this alternative (i.e., utilization objectives, trend, and rangeland health objectives) were designed to manage the overall rangeland resources present, provide for a diversity of wildlife and plant species, maintain functioning ecosystems, and maintain and/or improve ecological condition. Livestock grazing would occur during the seasons of use, and with the number of permitted Animal Unit Months (AUMs) as identified in the following tables.

2.2.1. Permit Specifications

Antelope Allotment

Cancel the existing grazing permit and issue a ten year grazing permit to the grazing permittees within the Antelope Allotment that would establish the total active permitted use within the Antelope Allotment for each livestock permittee as follows:

PERMITTEE	ACTIVE AUMS	SUSPENDED AUMS
Jay S. Adams, Larry J. & Kent H. Adams	23	0

ALLOT-MENT	PERMITTEE	NUMBER OF LIVESTOCK	KIND OF LIVESTOCK	SEASON OF USE	PERCENT PUBLIC LAND	AUMS
Antelope	Adams, Larry J., Jay S. & Kent H.	19	Cattle	03/01 – 02/28	10	23

Blue Mountain and Burn Knoll Allotments

Cancel the existing grazing permit and issue a ten year grazing permit to the grazing permittee (Yardley Ranches LLC) within the Blue Mountain and Burn Knoll Allotment that would establish the total active permitted use within the Blue Mountain and Burn Knoll allotments for Yardley Ranches LLC as follows:

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

PERMITTEE	ALLOTMENT	ACTIVE AUMS	SUSPENDED AUMS
Gilbert Yardley	Blue Mountain	865	289
	Burn Knoll	950	705

ALLOTMENT	PERMITTEE	NUMBER OF LIVESTOCK	KIND OF LIVESTOCK	SEASON OF USE	PERCENT PUBLIC LAND	AUMS
Blue Mountain	Gilbert Yardley	204	Cattle	10/16 – 06/30	50	865
Burn Knoll	Gilbert Yardley	162	Cattle	11/01-05/09	83	950
		77	Cattle	05/10-06/30	83	

Hamilton Fort- Shurtz Canyon Pasture

Cancel the existing grazing permit and issue a new ten year grazing permit within the Hamilton Fort Allotment for the Kenneth & Garfae Middleton grazing permit that would:

- Change kind of livestock from cattle to sheep
- Establish the season of use for the grazing permittee within the Hamilton Fort Allotment (Shurtz Pasture) from January 1- February 19th.
- Implement the following grazing management system that would allow the permittee to utilize the Shurtz Canyon Pasture. This system would eliminate grazing during the critical growing season.

ALLOTMENT	PERMITTEE	NUMBER OF LIVESTOCK	KIND OF LIVESTOCK	SEASON OF USE	PERCENT PUBLIC LAND	AUMS
Hamilton Fort (Shurtz Canyon Pasture)	Kenneth & Garfae Middleton	230	Sheep	01/01-02/19	60	45

- If the permittee is unable to use the allotment for the above season with sheep, the permittee may apply for cattle use on the Shurtz Canyon Pasture. If cattle use were requested, the grazing would occur no earlier than June 15 with the same 45 AUMs of use (i.e. 22 head from June 15th – September 26th). If Cattle are grazed on the allotment, there would be no sheep use authorized on the allotment in the same grazing year (March 1st – February 28th), and vice-versa.

Hole-In-The-Wall

Cancel the existing grazing permit and issue a ten year grazing permit to the grazing permittee (Grant Ellsworth & Fern Living Trust) within the Hole-In-The-Wall Allotment that would establish the total active permitted use within the Hole-In-The-Wall Allotment for the livestock permittee as follows:

PERMITTEE	ACTIVE AUMS	SUSPENDED AUMS
Grant Ellsworth & Fern Living Trust	332	0

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

ALLOT-MENT	PERMITTEE	NUMBER OF LIVESTOCK	KIND OF LIVESTOCK	SEASON OF USE	PERCENT PUBLIC LAND	AUMS
Hole-In-The-Wall	Grant	122	Cattle	03/01 - 06/01	36	134
	Ellsworth & Fern Living Trust	122	Cattle	10/15 - 02/28	36	198

- Implement a rangeland grazing agreement for the management of the Hole-In-The-Wall allotment. The agreement would limit the permittee to use no more than 70 head of cattle within the allotment until further monitoring data and analysis has determined to adjust permitted numbers of cattle. The allotment would continue to be used in a two pasture deferred system. The pastures would be flip-flopped with the pasture being scheduled for spring use being used for 2 months to allow for growing season rest. A copy of the agreement can be found in Attachment 4 of the EA.

Grazing system for the Hole-In-The-Wall Allotment (see Attachment 4)

ALLOT-MENT	YEAR	NUMBER OF LIVESTOCK	KIND OF LIVESTOCK	PASTURE/SEASON OF USE	ACTIVE GRAZING PREFERENCE (AUMS)
Hole In The Wall	Year 1	70	Cattle	West 10/15 - 3/31	140
		70	Cattle	East 04/01 - 05/31	51
	Year 2	70	Cattle	East 10/15 - 3/31	140
		70	Cattle	West 04/01 - 05/31	51

Lower Meadow

Cancel the existing grazing permit and issue a ten year grazing permit to the grazing permittee (Kay R. Ence) within the Lower Meadow Allotment that would establish the total active permitted use within the Lower Meadow Allotment for the livestock permittee as follows:

Permittee	Active AUMs	Suspended AUMs
Kay R. & Irvin J. Ence	12	0

ALLOT-MENT	PERMITTEE	NUMBER OF LIVESTOCK	KIND OF LIVESTOCK	SEASON OF USE)	PERCENT PUBLIC LAND	AUMS
Lower Meadow	Kay R. & Irvin J. Ence	47	Cattle	05/01-09/30	52	12

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Winsor

Cancel the existing grazing permit and issue a ten year grazing permit to the grazing permittee (Fenton J. Terry) Within the Winsor Allotment that would establish the total active permitted use within the Winsor Allotment for the livestock permittee as follows:

Permittee	Active AUMs	Suspended AUMs
Fenton J. Terry	15	0

ALLOT-MENT	PERMITTEE	NUMBER OF LIVESTOCK	KIND OF LIVESTOCK	SEASON OF USE)	PERCENT PUBLIC LAND	AUMS
Winsor	Fenton J. Terry	10	Cattle	06/16-08/31	57	15

2.2.2. Allotment Specific Objectives

More information on allotment specific objectives is contained in Attachment 1. Allotment Specific Resource Management Objectives are contained in Appendix F. The Fundamentals of Rangeland Health are contained in Appendix G; Standards and Guidelines for Healthy Rangelands are contained in Appendix H.

Cattle Grazing Permittee Livestock Operations for the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor Allotments

1. Range trend would be static to upward.
2. Utilization of “Key Upland Forage Species” would not exceed 50% utilization, by weight, of the current year’s vegetative growth by the end of the authorized grazing season.
3. Utilization of “Key Shrub Species” would not exceed 40% utilization, by weight, of the current year’s vegetative growth by the end of the authorized grazing season.
4. If utilization objectives reach specified objectives where measurable standards have been established, the permittee would be required to remove livestock from that area. The permittee would have 3-5 days upon notification to remove livestock.
5. The BLM would assess resource conditions through field inspections and determine, in consultation with the permittee, whether management changes (e.g., changes in livestock numbers, adjustment of move dates, or other changes of use within the parameters identified under this alternative) may be implemented prior to reaching maximum utilization. Move dates may be adjusted as needed when monitoring indicates maximum utilization has been reached, or due to unusual climatic conditions, fire, flood, or other act of nature. If maximum utilization is reached on key species/areas in the allotment before a scheduled move, the use of salt, herding, or other management options may be used to distribute livestock away from an area where maximum utilization has been reached, or livestock may be moved from the use area or allotment (after consultation with the permittee), as deemed necessary by the BLM.
6. In order to determine if these Allotment Specific Objectives are being met, monitoring studies would be conducted in accordance with Attachment 1.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Sheep/Cattle Grazing Permittee Livestock Operation for the Hamilton Fort (Shurtz Canyon Pasture) Allotment

1. If utilization objectives within mapped Utah prairie dog habitat reach or exceed specified objectives, this would be considered a trigger for the permittee(s) to remove livestock completely, or to redistribute livestock to outside of the habitat area using salt, herding, water, or fencing. Sheep would be moved immediately and cattle would be moved within 3-5 days, upon notification.
2. Monitoring during periods of drought would be completed and as necessary livestock numbers would be adjusted to reduce utilization levels to <33% in Utah prairie dog habitat as conditions warrant. BLM has the authority to adjust livestock use, as needed, based on annual climatic conditions, forage production and plant vigor. For the purposes of this proposal, drought is defined as 75% or less of normal precipitation in an area as measured by the best available information collected during the critical growing season (such as BLM rain gauge data, local data from the Western Regional Climate Center or National Integrated Drought Information System).
3. All salt/mineral supplements would be located at least ½ mile or further distance from Utah prairie dog habitat. Any variances would need approval of the Authorized Officer.
4. New water haul locations would be located outside of Utah prairie dog habitat, or they would be in conformance with Stipulations for New Projects and Supplemental Livestock Management Activities on Grazing Allotments (Appendix C).
5. Sheep camps, bedding grounds, shearing locations, and temporary sheep troughs would be placed a minimum of 0.25 mile from permanent water. They would be located outside of Utah prairie dog habitat, or they will be in conformance with Stipulations for New Projects and Supplemental Livestock Management Activities on Grazing Allotments (Appendix C).
6. Sheep bedding areas would be located in designated sites within the allotment. The sheep bedding areas would generally be located in previously used sheep bedding areas, in areas that have been previously disturbed or in areas otherwise devoid of vegetation. If possible, all bedding areas would be located along existing roads.
7. Sheepdogs and herd dogs would be under the control of the operator or herder at all times and would not be allowed to hunt or wander within Utah prairie dog colonies, or harass any wildlife.

2.2.3. Terms and Conditions Common to all Livestock Permittees

1. Livestock grazing use would be in accordance with the Livestock Decision and Environmental Assessment (UT-C010-2015-0052) for the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor Allotments dated July 8, 2016).
2. Grazing fees must be paid in full prior to livestock turnout. Actual use information must be reported within 15 days following the completion of the grazing season.
3. Failure to pay the grazing bill within 15 days of the due date specified on the bill shall result in a late fee assessment of \$25 or 10 percent of the bill, whichever is greater, not to exceed \$250. Payment made later than 15 days after the due date, shall include the appropriate late fee assessment [Title 43 CFR 4130.8-1(f)]. Actual use information must be reported within

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

- 15 days following completion of the grazing season. Your paid bill is your authorization to turn out livestock on public lands. Livestock present on public lands without a paid bill are unauthorized and a trespass action would be initiated.
4. Maintenance of all structural range projects are a responsibility of the permittees. Maintenance would be in accordance with the approved cooperative agreements for range improvements (Form 4120-6) or range improvement permit (Form 4120-7). Failure to maintain assigned projects in satisfactory condition constitutes a violation in accordance with Title 43 CFR 4140.1 (a) (4) and may result in the suspension of your license until maintenance is completed.
 5. All salt/mineral supplements would be located at least ¼ mile or further distance from any riparian area, wet meadow or watering facility (either permanent or temporary) unless stipulated through a written agreement or decision.
 6. The permittee would be allowed 3-5 days flexibility following the scheduled use dates to move livestock.
 7. All enclosures on public land throughout the allotment(s) would be closed to livestock grazing unless grazing use is applied for by the permittee and is authorized in writing by the authorized officer.
 8. Livestock are to be managed (herding, salting, water hauling or removal) to ensure that the allotment specific objectives are met.
 9. Permits and leases would be subject to cancellation, suspension or modification for any violation of these regulations or of any term or condition of the permit.
 10. If annual monitoring standards reach specified objectives where measurable standards have been set, the permittee would be required to remove livestock from that area. The permittee would have 3-5 days upon notification to remove livestock.
 11. Supplemental feeding of roughage is prohibited on public lands unless emergency conditions exist, then only by written permission from the authorized officer [Title 43 CFR 4140.1 (a) (3)].
 12. The season of use in the allotments may be temporarily modified from the proposed grazing management system at the discretion of the authorized officer on an annual basis if monitoring data indicates that changes are necessary to meet multiple use objectives and the Standards for Rangeland Health. Any use in excess of the total permitted use for the permittee within any of the allotments would constitute temporary non-renewable use.
 13. Grazing would, by regulation, conform to the Fundamentals of Rangeland Health as well as Utah BLM's Standards and Guidelines for Grazing Management. Grazing would also be subject to standard terms and conditions for grazing on public lands. This permit, including the terms and conditions, may be modified or withheld if additional information indicates that such actions are necessary in order to conform with the Utah Standards for Rangeland Health, the Fundamentals of Rangeland Health, regulations at Title 43 CFR 4100 and allotment specific objectives.
 14. If utilization objectives reach or exceed specified objectives where measurable standards have been set, the permittee would be required to remove livestock from that area. If it is determined that utilization levels have been reached or exceeded the permittee would have 5 days upon notification to remove livestock.
 15. Actual use information for each pasture within the allotments would be submitted to the authorized officer within 15 days of completing grazing use as specified on the grazing permit and/or grazing licenses.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

16. All permits and leases shall be subject to cancellation, suspension or modification for any violation of these regulations or of any term and conditions of the permit or lease. The terms and conditions of this permit may be modified if additional information indicates that revision is necessary to conform with 43 CFR 4180.
17. In accordance with 43 CFR 4130.3-3: The authorized officer may modify terms and conditions of the permit or lease when the active use or related management practices are not meeting the land use plan, allotment management plan or other activity plans, or management objectives, or is not in conformance with the provision of subpart 4180 RAC Standards and Guidelines.
18. In order to improve livestock and rangeland management on public lands, all salt and/or mineral supplements would not be placed with ¼ mile of any riparian areas, wet meadow, or watering facility (either permanent or temporary) unless stipulated through a written agreement or decision.
19. An increase in livestock grazing preference may be authorized in the future through a re-evaluation if it is determined through further monitoring that additional forage has become available and CBGA, RMP objectives, Standards and Guidelines for Healthy Rangelands, and multiple use objectives are being met. Any change in grazing preference must be supported by monitoring, field observations, production, or other data acceptable to the authorized officer. The authorization of a grazing increase would be dependent upon further monitoring, NEPA analysis and the issuance of a Decision or Agreement.
20. The Permittees' would provide access across their private or leased lands for the orderly management and protection of the public land. The BLM would contact the permittee and coordinate the necessary access.

2.2.4. Additional Terms and Conditions

Hamilton Fort (Shurtz Canyon Pasture) Allotment

1. If the permittee is unable to use the allotment for the above season with sheep, the permittee may apply for cattle use on the Shurtz Canyon Pasture. If cattle use were requested, the grazing would occur no earlier than June 15 with the same 45 AUMs of use (i.e. 22 head from June 15th – September 26th). If Cattle are grazed on the allotment, there would be no sheep use authorized on the allotment in the same grazing year (March 1st – February 28th), and vice-versa.
2. Maintenance of existing rangeland improvement projects such as fences, ponds, water pipelines, troughs or other projects would be in accordance with the stipulations in Recommended Procedures to Minimize, Monitor, and Mitigate Take Associated with the Maintenance of Existing Facilities on Public Lands (Refer to Appendix D).
3. All new range projects on BLM lands, including new water locations, salt, mineral and supplemental feed locations would be in accordance with the stipulations in Stipulations for New Projects and Supplemental Livestock Management Activities on Grazing Allotments (Refer to Appendix C).
4. Temporary fencing would be authorized at the discretion of the authorized officer on an as needed basis for the immediate protection of Utah prairie dog habitat within the allotment. This would provide the permittee with the option of remaining within a pasture/allotment if

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

utilization objectives within Utah prairie dog habitat are exceeded as long as utilization objectives within the remaining portion of the allotment/pasture is not exceeded. If the permittee is unwilling or unable to construct temporary fencing to protect Utah prairie dog habitat in the event that utilization objectives are exceeded, the livestock permittee would be required to remove livestock from that pasture/allotment immediately upon notification. Construction of temporary fencing would be to BLM standards and in compliance with Stipulations for New Projects and Supplemental Livestock Management Activities on Grazing Allotments (Refer to Appendix C). Temporary fencing would be required to be removed immediately by the permittee at the completion of the grazing season within the pasture/allotment.

2.2.5. Range Improvement Projects

Burn Knoll Allotment

The following projects would apply under the Proposed Action Alternative within the Burn Knoll Allotment Alternative as resource management projects:

- Extend a pipeline from an existing well within the Antelope Peak Allotment (Seeding Pasture) down into the Burn Knoll Allotment (Mertons Pasture). This would consist of approximately 3.5 miles of pipeline and 2 troughs crossing public and state land (Refer to Burn Knoll Allotment Project Map in Chapter 9.0 for project location).
- Extend a pipeline from an existing well (windmill) within the Burn Knoll Allotment located within the East Pasture into the Mertons Spring Pasture. This would consist of approximately 4 miles of pipeline and two troughs crossing public and state land. (Refer to Burn Knoll Allotment Project Map in Chapter 9.0 for project location).
- Extend a pipeline from an existing windmill within the Burn Knoll Allotment located within the East Pasture. This would consist of approximately 1 mile of pipeline and water trough being located on public land (Refer to Burn Knoll Allotment Project Map in Chapter 9.0 for project location).

Fremont Allotment

- Extend a pipeline from an existing well within the Lower Coyote Bench Pasture into the Upper Coyote Bench Pasture. This would consist of approximately 3.5 miles of pipeline and two troughs crossing public land (Refer to Fremont Allotment Project Map in Chapter 9.0 for project location).

Mineral Range (North Use Area) Allotment

- Construct two earthen water catchment ponds on the Mineral Range Allotment using drainages within the south portion of the West Hodsens Pasture. These ponds would provide intermittent water for livestock and wildlife. (Refer to Mineral Range (North Use Area) Allotment Project Map in Chapter 9.0 for project location).
- Construct two pipelines, 3 troughs and 3 ponds from an existing well within the Mineral Range (North Use Area) Allotment located within the East and West Hodsens Pasture. This

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

would consist of approximately 5 miles of pipeline crossing public land. (Refer to Mineral Range (North Use Area) Allotment Project Map in Chapter 9.0 for project location).

Mineral Range (South Use Area) Allotment

- Construct a pipeline, 2 troughs and 2 ponds from Beaumont Spring within the Mineral Range (South Use Area) Allotment located within the Porcupine Pasture. This would consist of approximately 5 miles of pipeline crossing public land. (Refer to Mineral Range (South Use Area) Allotment Project Map in Chapter 9.0 for project location).
- Construct a pipeline, 1 trough and 1 pond from an existing trough within the Mineral Range (South Use Area) Allotment located within the Wildcat Pasture. This would consist of approximately 2 miles of pipeline crossing public land. (Refer to Mineral Range (South Use Area) Allotment Project Map in Chapter 9.0 for project location).

Minersville 2 Allotment

- Authorize the construction of one water well and a short pipeline to a trough within the Minersville 2 Allotment. The construction of the well would ensure that adequate livestock water is always available within the Minersville 2 Allotment. A BLM approved bird ladder would be placed in all water troughs. Refer to Minersville 2 Allotment Project Map in Chapter 9.0 for project location).

Neck of the Desert Allotment

- Extend a pipeline from an existing pipeline within the Neck of the Desert Allotment. This would consist of two possible alternatives. Option 1 would consist of approximately 2.4 miles of pipeline crossing public, state and private land. Option 2 would consist of approximately 1.4 miles of pipeline crossing public and private land. (Refer to Neck of the Desert Allotment Project Map in Chapter 9.0 for project location).

North Pine Valley Allotment

- Authorize the construction of one water well and a short pipeline to an existing pipeline within the North Pine Valley Allotment. The construction of the well would ensure that adequate livestock water is always available within the North Pine Valley Allotment. A BLM approved bird ladder would be placed in all water troughs. Refer to North Pine Valley Allotment Project Map in Chapter 9.0 for project location).

Pinto Creek Allotment

- Construct a livestock drift fence within the Pinto Creek Allotment to prevent livestock movement across the highway. This would help prevent vehicle collisions with livestock providing for public safety while also improving livestock management on the allotment. (Refer to Pinto Creek Allotment Project Map in Chapter 9.0 for project location).
- Construct two earthen water catchment ponds on the Pinto Creek Allotment using two main drainages within T. 36 S, R. 15 W, Sec. 29. These ponds would provide intermittent water for

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

livestock and wildlife. (Refer to Pinto Creek Allotment Project Map in Chapter 9.0 for project location).

Swett Hills Allotment

- Construct a fence that would be adjacent to Highway 56 within the Swett Hills Allotment. This would consist of approximately 1 mile of fence crossing public land and connecting into an already existing private fence. (Refer to Swett Hills Project Map in Chapter 9.0 for project location).

Range Improvement Projects within the Allotments would be Subject to the Following Project Standards:

Livestock Water Pipelines:

- Pipelines would be placed in existing roads or vehicle trails where possible. If this is not possible disturbance would be limited to a minimum. Disturbed areas would be reseeded following construction. No berms higher than six inches would be left within the area following construction.
- Troughs could be of various sizes adequate to water permitted livestock numbers. In addition, troughs would have wildlife escape ramps constructed of metal or rock installed.
- Construction of pipelines would not be authorized until approval from the State Water Engineer is received.

Livestock Fences:

- The fence would be constructed of steel "T" posts with white tops to make it more visible for wildlife such as mule deer and pronghorn.
- Posts would be spaced from 16.5 to 20 foot intervals with one to two stays in between. Wooden fence stays would also be allowed for increased visibility.
- Wire spacing would be 16, 6, 6, 12 inches from the ground up and the bottom wire would be smooth. The fence would not exceed 40" in total height above the ground.
- No blading of vegetation along the fence line would be required.
- In areas identified as high use or migration areas for big game, fences would be marked to minimize collisions. Noxious weed areas would be treated or avoided. Equipment exposed to noxious weed seeds prior to or during construction would be power washed to avoid weed spread.

Water Catchment Ponds

- Dam would not exceed 8 feet tall.
- Ponds would be lined with Bentonite (as determined necessary)

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

All Range Improvement Projects would be Subject to the Following:

The incorporation of Range Improvement Projects within the allotments is not necessary to achieve the Standards and Guidelines for Healthy Rangelands. The Range Improvement Projects would aid in providing for the orderly administration and management of the allotments. The Range Improvement Projects would be based on the livestock permittees ability to gain funding through avenues including, but not limited to, the Grazing Improvement Program, wildlife organizations or private funding, etc... In addition, the Range Improvement Projects would be based on Survey and Design feasibility, amount of water supplied, forage values, best management practices for wildlife, etc... The implementation of Range Improvement Projects would be subject to all BLM specifications/requirements to ensure multiple use and would be developed cooperatively with the livestock permittees prior to construction through a Cooperative Range Improvement Agreement.

A wildlife site clearance for U.S. Fish and Wildlife listed (threatened, endangered, and candidate) species and BLM/State Special Status plant and animal species would be completed prior to authorization of any ground disturbing activities. Clearance would be completed by a BLM appointed wildlife biologist. All projects would be designed to avoid all U.S. Fish and Wildlife listed species. Site specific mitigations may be developed and implemented to avoid and/or minimize disturbance to all BLM/State Special Status plants and animals. Best management practices would be implemented to avoid and/or minimize disturbances to all wildlife species. Bird ladders would be installed in all livestock water troughs and all water developments would be designed to ensure that spring sources have adequate residual water to support the needs of wildlife.

An intensive/pedestrian Class III inventory would be conducted prior to all potentially ground disturbing range improvement projects. The purpose of these inventories would be to locate and record all cultural resources within the project area. An evaluation of significance or eligibility to the National Register of Historic Places would occur at each site. If a significant site(s) are located within the project area, the project would be redesigned to avoid an adverse effect to the site. If avoidance of a significant site is not feasible, the Range Improvement Project would be discontinued or other mitigation measures would be conducted to prevent or minimize the effects to this site.

The Survey and Design of the Range Improvement Projects would be completed by the Cedar City Field Office BLM in cooperation with the livestock permittee prior to authorization of construction. A Statement of Work, which would include project maps and Range Improvement specifications, would be provided to the livestock permittee prior to construction. The livestock permittee would be responsible for the maintenance of all Range Improvement Projects.

As discussed, the incorporation of Range Improvement Projects (pipelines, troughs, ponds, etc...) within the Burn Knoll, Fremont, Mineral Range (NUA), Mineral Range (SUA), Minersville 2, Neck of the Desert, North Pine Valley, Pinto Creek and Swett Hills allotments is not necessary to achieve the Standards and Guidelines for Healthy Rangelands. The pipeline extensions within the allotment would provide additional reliable water sources for livestock and wildlife. This would be expected to aid in ensuring proper livestock distribution throughout the allotments in the long-term.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

2.3.No Action Alternative (Existing Use)

The No Action Alternative would continue the existing management within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments. Grazing management systems would not be identified within the allotments under the alternative. This alternative would not include the additional Terms and Conditions identified in the Proposed Action on the grazing permit. Authorized use would be adjusted, as needed, based on annual climatic conditions, forage production and plant vigor. In addition, Range Improvement Projects within the Burn Knoll, Fremont, Mineral Range (North Use Area), Mineral Range (South Use Area), Minersville 2, Neck of the Desert, North Pine Valley, Pinto Creek and Swett Hills allotments would not be authorized or constructed.

The following table identifies the current season of use, kind of livestock, percent public land, number of livestock and AUMs within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments.

ALLOTMENT	PERMITTEES	NUMBER OF LIVESTOCK	KIND OF LIVESTOCK	SEASON OF USE	PERCENT PUBLIC LAND	AUMS
Antelope	Jay S. Adams, Larry J. & Kent H. Adams	19	Cattle	03/1-02/28	10%	23
Blue Mountain	Gilbert Yardley	204	Cattle	10/16-06/30	50%	1154
Burn Knoll	Gilbert Yardley	162 77	Cattle Cattle	11/01-05/09 05/10-06/30	83% 83%	1655
Hamilton Fort (Shurtz Canyon Pasture)	Kenneth & Garfae Middleton	230	Sheep	01/01-02/19	60%	45
Hole-In-The-Wall	Grant Ellsworth & Fern Living Trust	122 122	Cattle Cattle	03/01-06/01 10/15-02/28	36% 36%	134 198
Lower Meadow	Kay R. & Ellen S. Ence, Irvin J. & Betty H. Ence c/o Ray R. Ence	47	Cattle	05/1-09/30	52%	12
Winsor	Fenton J. Terry	10	Cattle	06/16-08/31	57%	15

2.4.Alternatives Considered, but Eliminated from Further Analysis

Eliminate livestock grazing within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor Allotments Alternative

Livestock grazing on public lands continues to be a much debated topic. While certain organizations desire to see the elimination of livestock grazing on public lands, others depend on this practice to support their way of life. Opponents of livestock grazing argue that livestock grazing is an unnatural practice and ecosystems are not adapted to the specific type of use made by livestock. Often, compelling site specific evidence is provided to make the case that livestock

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

grazing is destructive across all public lands and that public lands should be protected solely to provide for uses such as native wildlife and non-consumptive uses. Proponents of livestock grazing often acknowledge the potential problems associated with the practice, but stress that proper livestock management ensures sustainability and can benefit resources. Livestock can even be used as a tool to 1) alter vegetative composition 2) increase productivity of certain species 3) increase forage nutrition, and 4) increase habitat diversity by altering its structure (Severson and Urness 1994) and thereby benefit wildlife. In some situations eliminating livestock grazing is of no more benefit to rangeland vegetation than a continuation of light to moderate grazing intensities (Holechek et al. 2006). In most instances positive or negative results of livestock grazing are site specific and result from a site specific management situation. Effective livestock management can ensure that negative impacts are minimized.

Section 1.6 of this document details site specific issues/concerns associated with livestock grazing in the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments and actions including the identification of grazing management systems, changes in kind of livestock, changes to season of use, etc... to consider in the development of alternatives that would lead to the maintenance/attainment of the Standards and Guidelines for Rangeland Health. As discussed, the monitoring data available for interpretation indicates that livestock grazing was contributing to conditions that did not fully meet the Standards and Guidelines for Rangeland Health. Following the analysis of monitoring data alternatives were developed, which include the identification of grazing management systems, changes in kind of livestock, season of use changes, etc... that would ensure that resource objectives are met and that progress toward the attainment of the Standards and Guidelines occur. Monitoring data would continue to be collected to determine if current livestock management is providing for the maintenance/attainment of the Standards and Guidelines for Rangeland Health.

Livestock grazing on public lands within the Cedar City Field Office has been established by statute and is in conformance with the CBGA RMP and the PMFP. The "No Grazing" Alternative was considered, but eliminated from further analysis in the Land Use Planning process. This alternative is not analyzed in this EA due to this alternative being in conflict with the land use plans. Furthermore, FLPMA and the Taylor Grazing Act recognize grazing in the context of multiple use. The allotments are within Utah's Grazing District 1, which was established under the authority of the Taylor Grazing Act. The Taylor Grazing Act provides that the Secretary shall make provision for the protection, administration, regulation and improvement of such grazing districts. The law further requires that grazing privileges recognized and acknowledged shall be adequately safeguarded (43 U.S.C. 315b). The land use plans and the alternatives analyzed in this EA provide for these requirements. The no grazing alternative was considered, but eliminated in the EIS for the CBGA (see page 2-24 of the Draft Environmental Impact Statement (DEIS)). This was neither changed in the Final EIS nor overturned by protest of the final CBGA RMP. The no grazing alternative would require a plan amendment since it would not be in conformance with the CBGA RMP, which presently allocates these allotments for livestock grazing. Furthermore, this alternative was not considered in the EIS because it did not provide a reasonable form of alternative management.

Livestock grazing has been sustained as a traditional use within the project area and existing laws provide for such use on public lands. The intent of this EA is to determine if livestock

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

grazing can be sustained in the future and under what conditions it may or may not be sustained within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments. While existing laws do not mandate that livestock grazing occurs on every acre of public land, the purpose and need for this analysis is based on an application to renew the grazing permits to authorize livestock grazing in the project area. If it is determined through the collection of future monitoring data that current livestock management is not providing for the maintenance/attainment of the Standards and Guidelines further modifications to livestock grazing management including adjustment to grazing management systems, livestock numbers, season of use, etc... would be identified. The authorization of changes to the grazing permit would be dependent upon the collection of further monitoring data, NEPA analysis and the issuance of a decision.

Reduction in Grazing Preference within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor Allotments Alternative

Following the analysis, interpretation and evaluation of monitoring data, it was determined that Standards and Guidelines for Healthy Rangelands were not being fully met within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments failed to meet at least one of the Standards and Guidelines. Through the evaluation of available monitoring data it has been determined that livestock utilization has been within acceptable parameters throughout the allotments; however, grazing management systems would be identified to provide critical growing period rest throughout the allotments. A decrease in livestock numbers is not warranted at this time; however, a decrease may be authorized in the future through a re-evaluation if it is determined that the Standards and Guidelines for Healthy Rangelands are not being met and livestock are determined to be the causal factor. The authorization of a grazing decrease would be dependent upon the collection of further monitoring data, NEPA analysis and the issuance of a decision.

Increase in Grazing Preference within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor Allotments Alternative

The Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor Allotments failed to meet at least one of the Standards and Guidelines. Although recent monitoring data reveals that utilization within Antelope, Blue Mountain, Burn Knoll and Hole-In-The-Wall is within acceptable parameters an increase in grazing preference is not warranted at this time. An increase in livestock numbers may be authorized in the future through a re-evaluation, if it is determined through the collection of further monitoring data that additional forage has become available and the Standards and Guidelines for Healthy Rangelands are continuing to be met. The authorization of a grazing increase would be dependent upon further monitoring, NEPA analysis and the issuance of a decision.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

2.5. Summary

The alternatives being addressed in this document cover a reasonable range of alternatives for this grazing permit renewal. No other alternatives have been developed by the public or the Cedar City Field Office staff at this time.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

3.0 AFFECTED ENVIRONMENT

3.1. Introduction

This chapter presents the potentially affected existing environment (i.e., the physical, biological, social, and economic values and resources) of the impact area as identified in the Interdisciplinary Team Checklist (found in Appendix A) and presented in Chapter 1 of this assessment. This chapter provides the baseline for comparison of impacts/consequences described in Chapter 4.

3.2. General Setting

The Blue Mountain and Burn Knoll allotments are Maintenance “M” category management allotments, both are located in Beaver County approximately 12 to 15 miles southwest of Milford, Utah. Elevations on the Blue Mountain Allotment range from approximately 5,000 feet to near 7,000 feet above sea level. Elevations on the Burn Knoll Allotment range from approximately 5,000 feet to 6,225 feet above sea level. Vegetation is comprised primarily of sagebrush/ perennial grass communities, non-native seeding’s and pinyon/juniper woodlands. The Blue Mountain and Burn Knoll allotments are within the Sevier Lake and Beaver Bottoms/Upper Beaver watersheds (HUC Level 4) as determined by the USGS. Soil types and conditions on the allotments are variable. Soils are comprised primarily of shallow loams. Slopes are generally 2 to 10 percent. The current erosion condition is slight. Detailed soils information for both the Blue Mountain and Burn Knoll allotments is available in the USDA-NRCS Soil Survey for Beaver County, Utah.

Antelope, Lower Meadow and Winsor allotments are custodial or “C” category management allotments. They are small allotments surrounded by large parcels of private land. These allotments generally have lower productivity and low potential for improvement through management practices. The combination of small public land acreage, vast amount of surrounding private lands, and lower resource values, generally make these lands lower priority for improvement from a BLM perspective.

The Hole-In-The-Wall Allotment is a custodial “C” management allotment located 20 miles northwest of Cedar City adjacent to Lund Highway. Vegetation is comprised of sagebrush/ perennial grass communities. High percentage of grasses being non-native.

The Hamilton Fort Allotment (Shurtz Canyon Pasture) is an Intensive “I” management allotment. The Native Species Standard was not being fully met within the allotment. The upper elevations of the Shurtz Canyon Pasture are dominated by Pinyon and Juniper. Perennial grasses including galleta grass and bluegrass were present; however, they were widely scattered and uncommon. The lower elevations of the Shurtz Canyon Pasture were dominated by Wyoming Big Sagebrush. Perennial grasses including galleta grass, Indian ricegrass and bottlebrush squirreltail were present; however, like the upper elevations they were widely scattered and uncommon. A noticeable conversion from cool season to warm season grasses has occurred in this portion of the allotment.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

It was determined that historic grazing within the allotment were the causal factors for the non-attainment of Standard 3. Monitoring data is insufficient at this time to determine whether progress towards the attainment of the Standards and Guidelines for Healthy Rangelands is occurring at this time.

3.3.Resources Present and Brought Forward for Analysis

3.3.1. Grazing Management

Refer to the table in Section 2.3, which identifies the current season of use and grazing preference within each of the allotments. Monitoring data including nested frequency, use pattern mapping, key area utilization, livestock, actual use, Standards and Guidelines Assessments, precipitation data, etc... has been collected throughout the allotments.

Antelope

There are no pastures within the Antelope Allotment. The following table identifies the total acreages within the allotment:

ALLOTMENT	PUBLIC ACRES	STATE ACRES	PRIVATE ACRES	TOTAL ACRES
Antelope	435	0	1,598	2,033

Blue Mountain

There are 4 pastures within the Blue Mountain Allotment. The following table identifies the total acreages within the allotment:

PASTURE	PUBLIC ACRES	STATE ACRES	PRIVATE ACRES	TOTAL ACRES
North	4030	0	0	4030
Southeast	320	641	3183	4144
Horse	0	0	633	633
Moonshine	4995	949	967	6911
TOTAL ACRES	9345	1590	4783	15718

Burn Knoll

There are 7 pastures within the Burn Knoll Allotment. The following table identifies the total acreages within the allotment:

PASTURE	PUBLIC ACRES	STATE ACRES	PRIVATE ACRES	TOTAL ACRES
East	2913	1000	0	3913
Middle	2973	0	0	2973
West	4874	1615	0	6489
Merton's Spring	5190	567	0	5757

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

PASTURE	PUBLIC ACRES	STATE ACRES	PRIVATE ACRES	TOTAL ACRES
Long Lick	1827	480	0	2307
Redrock	113	149	0	262
North (Cottontail)	234	313	0	547
TOTAL ACRES	18124	4124	0	22248

Hamilton Fort (Shurtz Canyon Pasture)

PASTURE	PUBLIC ACRES	STATE ACRES	PRIVATE ACRES	TOTAL ACRES
Shurtz Canyon	3,029	0	614	3,643

Hole-In-The-Wall

There are two pastures within the Hole-In-The-Wall Allotment. The pastures within the Hole-In-The-Wall Allotment consist of the following acreages:

PASTURE	PUBLIC ACRES	STATE ACRES	PRIVATE ACRES	TOTAL ACRES
West	1058	0	1611	2669
East	1958	0	645	2603
TOTAL ACRES	3016	0	2256	5272

Lower Meadow

There are no pastures within the Lower Meadow Allotment. The following table identifies the total acreages within the allotment:

ALLOTMENT	PUBLIC ACRES	STATE ACRES	PRIVATE ACRES	TOTAL ACRES
Lower Meadow	504	510	946	1,960

Winsor

There are no pastures within the Winsor Allotment. The following table identifies the total acreages within the allotment:

ALLOTMENT	PUBLIC ACRES	STATE ACRES	PRIVATE ACRES	TOTAL ACRES
Winsor	119	0	89	208

3.3.2. Wildlife

Federally Listed Threatened, Endangered, and Candidate

BLM's 6840 Manual directs management of Special Status Species: Special status species are those species which are proposed for listing, officially listed as threatened or endangered, or are candidates for listing as threatened or endangered under the provisions of the Endangered Species Act (ESA); those listed by a State in a category such as threatened or endangered

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

implying potential endangerment or extinction; and those designated by each State Director as sensitive.

Further guidance is provided in Utah BLM Instruction Memorandum No. IM 2011-037 identifies and implements the BLM Sensitive Species List.

The following table identifies the threatened, endangered, and candidate species that are known to occur in Beaver, Iron County and Washington Counties, where the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort, Hole-In-The-Wall, Lower Meadow and Winsor allotments are located.

Information for Planning and Conservation (IpaC) assessed on July 27, 2015

Common Name	Scientific Name	Status	Habitat suitability or known occurrence of the species in or near Project Area.	Determination
California condor	<i>Gymnogyps californianus</i>	E	The project area is within known distribution. Occurrence would be rare within the allotment and would be closely associated with feeding on carrion	No Affect ¹
Least Chub	<i>Iotichthys phlegethontis</i>	C	No suitable habitat present within the allotments.	No Affect ²
Mexican spotted owl	<i>Strix occidentalis lucida</i>	T	No suitable habitat present within the allotments.	No Affect ¹
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	E	No suitable habitat exists within the allotment.	No Affect ¹
Utah prairie dog	<i>Cynomys parvidens</i>	T	Refer to EA for discussion and potential impacts.	No Affect
Virgin river chub	<i>Gila seminude</i>	E	No suitable habitat exists within the allotment and no water depletion from the applicable HUC8.	No Affect ³
Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	T	No suitable habitat exists within the allotments.	No Affect ¹
Woundfin	<i>Plagopterus argentissimus</i>	E	No suitable habitat exists within the allotment and no water depletion from the applicable HUC8.	No Affect ³

E= Endangered, T= Threatened, C= Candidate, P=Petitioned

1 Refer to the *Biological Assessment of Livestock Grazing in Bald Eagle, Mexican Spotted Owl, Southwestern Willow Flycatcher, California Condor, and Western Yellow-Billed Cuckoo Habitat on Bureau Of Land Management Lands, Beaver and Iron Counties, Utah* (USDI BLM 2006) for additional information. The U.S. Fish and Wildlife Service concurred with BLM's findings in this Biological Assessment on 6 May 2006. There has been no substantial new information since the 2006 consultation. These species will not be discussed further in this document.

2 These species are not discussed further due to a lack of habitat within the project area. Further coordination with FWS is not required for these species.

3 The Virgin River chub and Woundfin will not be discussed further. These species are not present in Iron or Beaver County. There would be no water depletion from a hydrologic unit (8-digit HUC) in these counties that is occupied by the species in an adjacent county. No further coordination with FWS is required.

Utah Prairie Dog

Hamilton Fort Allotment (Shurtz Canyon Pasture)

Utah prairie dog habitat has not been mapped within the Hamilton Fort (Shurtz Canyon) Allotment; however, it has been mapped on private lands within less than 0.5 miles (colonies 0112b, 0122d).

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

The proposed action includes a deferred season of use for sheep (January 1st – February 19th) grazing systems ensuring the same area is not continuously grazed. If cattle use were requested, the grazing would occur no earlier than June 15 with the same 45 AUMs of use (i.e. 22 head from June 15th – September 26th). If Cattle are grazed on the allotment, there would be no sheep use authorized on the allotment in the same grazing year (March 1st – February 28th), and vice-versa.

BLM Sensitive Species

In addition to federally listed species, BLM protects by policy (Section 6840 of the BLM Manual) other special status animal species. This section provides a discussion of those species that have the potential to occur in the project area. For each species, a brief description of habitat requirements is provided, followed by a summary of the species' status, general threats, and data supporting the potential for its occurrence. Determination of potential occurrence was based on an analysis of recorded occurrences, UDWR distribution maps based on GAP analysis, current habitat condition, and knowledge of the allotments. Recorded occurrences were obtained from data layers maintained by Utah Natural Heritage Program (UNHP 2008). UDWR Distribution Maps are based on an analysis of GAP data (Edwards et al. 1995). These maps designate potential habitat by species into one or more of four categories. These categories include:

- **Critical Value Habitat** – sensitive areas that, because of limited abundance and/or unique qualities, constitute irreplaceable, critical requirements for the wildlife species
- **High Priority Habitat** – intensive use areas that, due to relatively wide distribution do not constitute critical values, but which are highly important to the wildlife species
- **Substantial Value Habitat** – existence areas used regularly by wildlife, but at moderate levels with little or no concentrated use
- **Limited Value Habitat** – occasional use areas that either is sparsely populated or that show sporadic or unpredictable use by the wildlife species.

For more information on study design and results of the GAP Analysis, consult Edwards et al. 1995.

Common to All Wildlife

Mertons Spring in the Burn Knoll Allotment is considered a lentic riparian area of approximately 0.1 acre. The area is dominated by thick pinyon-juniper woodlands and riparian woody species (i.e. cottonwood, willow) are not present. This area would not be considered a migration corridor for big game, upland game birds and migratory birds. The Mertons Spring does not provide any breeding, nesting or foraging habitat for wildlife. The area functions only as a water resource for wildlife.

Burrowing Owl: Primary breeding habitat for this species is high desert scrub and grasslands are used as secondary breeding habitat. Nesting may occur in sparsely vegetated sagebrush-steppe and desert scrub habitats. Abandoned wildlife burrows associated with badger, ground squirrels, etc. is an important component of the habitat.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Allotment	Pasture	Utah Gap Analysis Habitat Values			
		Critical	High	Substantial	Limited
Antelope	Antelope		X		
Blue Mountain	North			X	
	Southeast		X		
	Moonshine		X		
	Horse (Private)	---	---	---	---
Burn Knoll	East			X	
	Long Lick			X	
	Mertons Spring				X
	Middle			X	
	North			X	
	Redrock				X
	West			X	
Hole-In-The-Wall	East			X	
	West			X	
Lower Meadow	Lower Meadow			X	
Winsor	Winsor			X	

Specific threats identified in the Utah State Action Plan (UDWR 2015) were attributed primarily to development and associated loss of nesting habitat.

Ferruginous Hawk: Primary breeding habitat is pinyon-juniper and secondary breeding habitat is shrubsteppe. Edges of pinyon-juniper woodlands, utility structures (transmission poles), cliffs, and isolated trees serve to provide nesting as well as perching structures for ferruginous hawk.

Allotment	Pasture	Utah Gap Analysis Habitat Values			
		Critical	High	Substantial	Limited
Antelope	Antelope		X		
Blue Mountain	North		X		
	Southeast		X		
	Moonshine	X			
	Horse (Private)	---	---	---	---
Burn Knoll	East		X		
	Long Lick	X			
	Mertons Spring	X			
	Middle		X		
	North	X			
	Redrock		X		
	West		X		
Hamilton Fort	Shurtz Canyon	X			
Hole-In-The-Wall	East		X		
	West		X		
Lower Meadow	Lower Meadow	X			
Winsor	Winsor	X			

Habitat loss associated with destruction of preferred habitats due to chaining, timber harvest, fire management, and livestock grazing was recognized as a specific threat to this species in the Utah State Action Plan (UDWR 2015). Ferruginous hawks have been documented in the Blue Mountain, Burn Knoll and Winsor Allotments (UNHP, 2015).

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Conservation recommendations identified in Utah Partners in Flight Avian Conservation Strategy Version 2.0 (Parrish et al. 2002) include:

- Discourage clearing of juniper woodlots and sagebrush shrub lands.
- Encourage maintenance of native grasslands for cattle grazing where prey populations may be maintained.

Kit Fox: The kit fox favors arid climates, such as desert scrub, chaparral and grasslands in elevation of 1,300 to 6,200 feet. Primary breeding habitat is high desert scrub.

Allotment	Pasture	Utah Gap Analysis Habitat Values			
		Critical	High	Substantial	Limited
Antelope	Antelope		X		
Blue Mountain	North		X		
	Southeast			X	
	Moonshine		X		
	Horse (Private)	---	---	---	---
Burn Knoll	East		X		
	Long Lick	---	---	---	---
	Mertons Spring		X		
	Middle		X		
	North	---	---	---	---
	Redrock	---	---	---	---
	West		X		
Hole-In-The-Wall	East		X		
	West		X		
Lower Meadow	Lower Meadow		X		
Winsor	Winsor		X		

General threats, identified in the Utah State Action Plan (UDWR 2015), to this species include harvest (trapping), environmental contamination (bioaccumulation of rodenticides), and water development (resulting in expansion of coyotes and other competitors into kit fox habitat).

Long-billed Curlew: Grassland habitat is the primary breeding habitat for this species and agricultural lands are used as secondary breeding habitat.

Allotment	Pasture	Utah Gap Analysis Habitat Values			
		Critical	High	Substantial	Limited
Antelope	Antelope	---	---	---	---
Blue Mountain	North		X		
	Southeast	X			
	Moonshine	---	---	---	---
	Horse (Private)	---	---	---	---
Burn Knoll	East	X			
	Long Lick	---	---	---	---
	Mertons Spring	---	---	---	---
	Middle	---	---	---	---
	North	---	---	---	---
	Redrock	---	---	---	---
	West	---	---	---	---
Hole-In-The-Wall	East	---	---	---	---

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Allotment	Pasture	Utah Gap Analysis Habitat Values			
		Critical	High	Substantial	Limited
	West	---	---	---	---
Lower Meadow	Lower Meadow	---	---	---	---
Winsor	Winsor	---	---	---	---

General threats, identified in the Utah State Action Plan (UDWR 2015) include human disturbance, fragmentation of nesting habitat and predation from introduced species.

Pygmy Rabbit: Pygmy rabbits are considered sagebrush obligate and are reliant upon big sagebrush species for cover and food. Primary breeding habitat is shrub steppe communities.

Allotment	Pasture	Utah Gap Analysis Habitat Values			
		Critical	High	Substantial	Limited
Antelope	Antelope	X			
Blue Mountain	North	X			
	Southeast		X		
	Moonshine	X			
	Horse (Private)	---	---	---	---
Burn Knoll	East	X			
	Long Lick	X			
	Mertons Spring	X			
	Middle	X			
	North	X			
	Redrock	X			
	West	X			
Hole-In-The-Wall	East	X			
	West	X			
Lower Meadow	Lower Meadow	X			
Winsor	Winsor	X			

General threats as identified in the Utah State Action Plan (UDWR 2015) are habitat loss; and the fact that Utah has a substantial portion of the population. Pygmy rabbits have been documented in the Blue Mountain, Burn Knoll and Lower Meadow Allotments (UNHP 2015).

Short-eared Owl: The short-eared owl is a BLM Sensitive Species (BLM 2010). The Short-eared owl is a ground-nesting species, usually found in grassland, shrub lands and other open habitats (UCDC 2010). Populations of short-eared owls are largely dependent on the cyclic abundance of small mammals (Parrish et al. 2002).

Allotment	Pasture	Utah Gap Analysis Habitat Values			
		Critical	High	Substantial	Limited
Antelope	Antelope		X		
Blue Mountain	North	---	---	---	---
	Southeast	---	---	---	---
	Moonshine	---	---	---	---
	Horse (Private)	---	---	---	---
Burn Knoll	East	---	---	---	---
	Long Lick	---	---	---	---
	Mertons Spring	---	---	---	---
	Middle	---	---	---	---

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Allotment	Pasture	Utah Gap Analysis Habitat Values			
		Critical	High	Substantial	Limited
	North	---	---	---	---
	Redrock	---	---	---	---
	West	---	---	---	---
Hole-In-The-Wall	East		X		
	West		X		
Lower Meadow	Lower Meadow		X		
Winsor	Winsor		X		

General threats as identified in the Utah State Action Plan (UDWR 2015), include habitat loss, human disturbance, and invasive animal species.

Townsend's Big-eared Bat: Primary breeding habitat for this species is pinyon pine-juniper and secondary breeding habitat is mountain shrub communities.

Allotment	Pasture	Utah Gap Analysis Habitat Values			
		Critical	High	Substantial	Limited
Antelope	Antelope				X
Blue Mountain	North		X		
	Southeast				X
	Moonshine		X		
	Horse (Private)	---	---	---	---
Burn Knoll	East				X
	Long Lick		X		
	Mertons Spring		X		
	Middle				X
	North		X		
	Redrock			X	
Hamilton Fort	Shurtz Canyon		X		
	West				X
Hole-In-The-Wall	East				X
	West				X
Lower Meadow	Lower Meadow		X		
Winsor	Winsor				X

General threats to this species as outlined in the Utah State Action Plan include disease, habitat loss, and energy development.

Upland Game Species

UDWR Bird Habitat Coverages	Value	Season	Allotment						
			Antelope	Blue Mountain	Burn Knoll	Hamilton Fort	Hole-In-The-Wall	Lower Meadow	Winsor
Band-tailed Pigeon	Substantial	Spring-early fall	X	---	---	X	X	X	---
	Crucial	Spring-early fall	X	---	---	---	---	X	---
Chukar	Substantial	Year-long	X	---	---	---	---	---	---
Wild Turkey	Crucial	Year-long	---	---	---	---	---	X	---

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Band-tailed Pigeon (*Patagioenas fasciata*): Band-tailed pigeons are migratory and primarily utilize coniferous forests. This species is fairly common in southern Utah and nests at mid-elevations. Ponderosa pine is utilized as primary breeding habitat and mixed conifer as secondary breeding habitat; however, there are no Ponderosa pine within the allotments. Primary food includes acorns, berries, pine buds, seeds, and needles. Insects, such as grasshoppers account for a small portion of the diet. Due to the lack of Ponderosa Pine within the Antelope, Hamilton Fort, Hole-In-the-Wall and Lower Meadow Allotments, impacts would not be expected to occur and thus the species will not be discussed further.

Chukar Partridge (*Alectoris chukar*): Chukar prefers steep, rocky slopes as a means of escaping predators and can be found up to 16,000 feet in elevation. Chukar prefers assorted grass and forb understory for nesting, cover and food with some desert shrubs. Chukar partridge pair bonding typically occurs in mid-March.

Merriam's Wild Turkey (*Meleagris gallopavo merriami*): Merriam's wild turkey prefers open stands of ponderosa pine interspersed with aspen, meadow and oak. Grasses and sedges are important food year-round including large quantities of insects during the summer months.

Rio Grande Wild Turkey (*Meleagris gallopavo intermedia*): The Rio Grande turkey can be found in a variety of habitats throughout the allotments. Plants such as pine nuts, juniper berries and acorns are important food sources. Insects are extremely crucial in the diet of young during the summer.

Big Game

Mule Deer (*Odocoileus hemionus*): Crucial mule deer winter range has been identified in the Blue Mountain and Winsor allotments. Mule deer utilize a variety of vegetation types and habitats seasonally within the project area in pursuit of forage, thermal cover, and escape cover. Mule deer habitat should be capable of providing thermal and escape cover; mosaics on the landscape are capable of providing this protection. Shrubs are utilized during all seasons with greatest use occurring during the fall and winter seasons. Juniper woodlands provide valuable migration corridors between summer and winter habitat.

Utah Division of Wildlife Resources has identified approximately 7,871 acres of crucial winter and 7,629 substantial ranges within the Antelope (377 acres), Blue Mountain (4,994 acres), Burn Knoll (6,476 acres), Hamilton Fort (3,039 acres), Lower Meadow (503 acres) and Winsor (111 acres) allotments as mule deer habitat.

Allotment	Pasture	UDWR Habitat Values
		Substantial/Crucial Winter
Antelope	Antelope	Substantial
Blue Mountain	Horse (Private)	---
	Moonshine	Crucial
	North	Crucial
	Southeast	---
Burn Knoll	Long Lick	Substantial
	Mertons Spring	Substantial
	North	Substantial
	Redrock	Substantial

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Allotment	Pasture	UDWR Habitat Values
		Substantial/Crucial Winter
Hamilton Fort	Shurtz Canyon	Crucial
Lower Meadow	Lower Meadow	Substantial
Winsor	Winsor	Crucial

Mule deer typically utilize winter range from November – April. Mule deer populations may respond to climatic indicators which may cause populations to become more concentrated in portions of the crucial winter range. During periods of heavy snowfall or events leading up to heavy snowfall, populations may concentrate in these areas from December – February. Tall shrubs become increasingly important during this time. Dietary composition for mule deer on winter range would primarily consist of browse species such as antelope bitterbrush, sagebrush species (Wyoming big sagebrush, black sagebrush), Gambel oak, curl-leaf Mountain mahogany, serviceberry, and snowberry.

The Blue Mountain and Burn Knoll allotments are located within the Southwest Desert Deer Herd Unit Management Plan. Goals and objectives identified in the DHUM Unit #20 follow:

Unit Management Goals: Overall deer numbers on this unit are considerably below recent averages and greatly below historic highs and averages. Significant increase in deer numbers will be pursued if conditions allow. Buck: doe ratios are within the minimum statewide guideline and should be maintained within that guideline.

Population Management Objective:

- Target Winter Herd Size – Manage for a winter population of 3,200 deer through 2001, or until this plan is amended. This is a short-term reduction of 20% from the previous plan period and is justified as based on the discussion in Permanent Range Trend Summaries at the end of the Southwest Desert Deer Herd Unit Management Plan. The long-term objective of 4,000 deer remains unless and until a permanent change occurs in the quantity or quality of deer range on the unit.
- Herd Composition – Maintain a region-wide three-year average post-season buck to doe ratio ranging from 15 to 20 bucks per 100 does.

Habitat Management Objectives:

- Maintain and/or enhance forage production through direct range improvements on winter and summer range throughout the unit to achieve population management objectives.
- Maintain critical fawning habitats in good condition. Fawn recruitment is a major concern on this unit and may be the single greatest factor limiting the population.

The Antelope, Hole-In-The-Wall, Lower Meadow and Winsor allotments are located within the Pine Valley Deer Herd Unit Management Plan. Goals and objectives identified in the DHUM Unit #30 follow:

Unit Management Goals: Overall deer numbers are significantly below both long term and recent (1980's) levels. The unit will be managed to permit deer numbers to increase somewhat,

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

while precluding overuse of ranges and reducing agricultural damage. The unit will be evaluated for different hunt strategies.

Population Management Objective:

- Population of 12,800 deer on the entire WMU. This is a reduction of 20% from the previous plan period and is justified as based on the discussion in Permanent Range Trend Summaries at the end of the Pine Valley Deer Herd Unit Management Plan. If range trend indicators rebound to the Fair category in the future, the population objective will be amended upward to the long term value of 16,000 deer. This change will be contingent on range quality and quantity increasing to levels capable of sustaining populations at long-term objective levels.

Herd Composition – Maintain a region-wide three-year average post-season buck to doe ratio ranging from 15 to 20 bucks per 100 does. Habitat Management Objectives:

- Maintain and/or enhance forage production through direct range improvements throughout the unit on winter and summer range to achieve population management objectives.
- Maintain critical fawning habitats in good condition.
- Maintain public lands adjacent to areas with heavy agricultural depredation to promote deer use during late summer.
- Maintain and protect critical winter range from future losses. Acquire critical winter range when the opportunity arises.

The Hamilton Fort Allotments are located within the Zion Deer Herd Unit Management Plan. Goals and objectives identified in the DHUM Unit #29 follow:

Unit Management Goals: Maintain a healthy deer population with post-season numbers that are in balance with available winter range. A major proportion of this herd unit is on private land and herd size must be compatible with private land uses, particularly in such areas as Smith's Mesa, which has some dry land fawning but also is important season range for deer.

Population Management Objective:

- Target Winter Herd Size – A modeled winter population of 9,000 deer on the entire WMU. This population objective remains for both the short-term (f-year life of this plan) and long term, barring significant changes in range conditions.
- Herd Composition – Maintain a region wide three-year average post-season buck: doe ratio ranging from 15 to 20 bucks per 100 does.

Habitat Management Objectives:

- Maintain and protect adequate habitat to support herd objectives.
- Improve quality of critical deer winter range east of I-15 and south of Cedar City.
- Reduce highway deer mortality along Interstate I-15 south of Cedar City and along

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Highway 14 east of Cedar City.

- A major proportion of both summer and winter habitat for deer on this unit is on private land. Therefore, it is paramount to work with private landowners to maintain both summer and winter habitat. Currently, there is one CWMU of 13,000 acres (Mt. Carmel – Zion) in the Muddy Creek drainage on the east portion of this unit. Other landowners have expressed interest in a CWMU and they may be organized in the future.
- Work with BLM to maintain deer winter range between Cedar City and Anderson Junction on the west side of the unit.

Pronghorn (*Antilocapra americana*): Pronghorn are primarily found in grassland and sagebrush habitats often consisting of low vegetation structure allowing for long-range visibility.

Pronghorn utilize a variety of vegetation with shrubs typically being highest in composition followed by forbs and grasses. Use of shrubs is typically highest during the fall and winter months. Forage preference for forbs is high, but is limited due to seasonal availability.

Approximately 28,454 acres total within the Blue Mountain (7,386 acres), Burn Knoll (18,098 acres) and Hole-In-The-Wall (2,970 acres) allotments have been identified by UDWR as crucial year-long pronghorn habitat.

Allotment	Pasture	UDWR Habitat Values
		Crucial Yearlong
Blue Mountain	Horse (Private)	---
	Moonshine	X
	North	X
	Southeast	X
Burn Knoll	East	X
	Long Lick	X
	Mertons Spring	X
	Middle	X
	North	X
	Redrock	X
	West	X
Hole-In-The-Wall	East	X
	West	X

Rocky Mountain Elk (*Cervus Canadensis*): Substantial year-long habitat has been identified in the Burn Knoll allotment. Elk commonly occur in mountain meadows and forests during the summer months and foothills and valleys during the winter. Elk typically use areas that consist of grasslands with interspersed forest with a sufficient forest edge that provides thermal and hiding cover.

Elk diets are extremely variable. Elk primarily forage on grasses, but also utilize shrubs, trees (i.e. aspen) and forbs. Grasses and forbs are more typically used during the spring and summer months with browse species being more utilized during the winter months. Elk are likely to utilize the lower elevation ranges during the winter, spring and early summer seasons coinciding with spring green-up and would move to higher elevation ranges during the hot summer months.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Approximately 6,877 acres within the Burn Knoll (4,220 acres) and Hamilton Fort (2,657 acres) allotments have been identified by UDWR as substantial year-long rocky mountain elk habitat.

Allotment	Pasture	UDWR Habitat Values
		Substantial Yearlong
Burn Knoll	Long Lick	X
	Mertons Spring	X
	North	X
	Redrock	X
Hamilton Fort	Shurtz Canyon	X

Utah Big Game Range Trend Studies: There are no Trend Studies identified within or in close proximity to the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort, Hole-In-The-Wall, Lower Meadow and Winsor allotments.

Migratory Birds

The Migratory Bird Treaty Act (16 U.S.C. §703-712, July 3, 1918, as last amended in 1989) prohibits taking, killing, or possessing migratory birds including nests and eggs. In 2001, Executive Order 13186 was issued to outline responsibilities of federal agencies to protect migratory birds under the Migratory Bird Treaty Act (66 FR 3853-3856). Instruction memorandum 2008-050 provides interim guidance to enhance coordination and communication towards meeting BLM's obligations to the Migratory Bird Treaty Act and Executive Order 13186. A variety of avian fauna inhabit the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments during the spring, summer, and fall months.

Birds of Conservation Concern (USFWS 2008) that were identified on the Information for Planning and Conservation (IpaC) list include a list of species that have a high probability of occurrence or are known to occur within the allotments: Black-chinned sparrow, Brewer's sparrow, Cassin's finch, Grace's warbler, Gray vireo, Lewis woodpecker, Loggerhead shrike, Pinyon jay, Sage thrasher and Williamson's sapsucker (see Appendix I).

3.3.3. Invasive, Non-Native Species

There are no known noxious weeds present in the Antelope, Blue Mountain, Burn Knoll, Hole-In-The-Wall, Lower Meadow and Winsor allotments. However, there are noxious weeds present in the Hamilton Fort Allotment, (Shurtz Canyon Pasture). There is 12 acres of scotch thistle present. It is important to apply best range management practices and maintain healthy plant communities with few disturbed areas where these biennial thistles and noxious weeds can establish.

Noxious weed infestations are spread in part by the movement of animals, including livestock, by the transport of seed through physical contact and ingestion. The Cedar City Field Office currently has an aggressive noxious weed control program and annually removes large quantities of noxious weeds throughout BLM administered lands in both Iron and Beaver counties. The BLM coordinates with County, State and Federal agencies in order to locate, treat and monitor

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

noxious weed infestations throughout both counties. With in-place measures to decrease opportunities for introduction and current methods of control, the presence of noxious weeds should be minimized if they become present.

Non listed, non-native and/or invasive plant species occur on the public lands within all allotments discussed in this EA. Cheatgrass was the primary non-native invader species and is present within all allotments.

3.3.4. Soils/Vegetation

Refer to Attachment 3 for information pertaining to the soils and vegetation present within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments.

3.3.5. Wild Horses

The Antelope Allotment comprises 4% of the Chloride HMA. The current population of wild horses within the Antelope Allotment is estimated at 94 wild horses. On average 10% of the total number of wild horses on the Chloride HMA are within the allotment year-round.

Wild horse movement is influenced by seasonal changes, forage and water resources, and space availability within the HMA. Seasonal movements occur during the summer and winter seasons when wild horses move to higher and lower elevations in accordance with accessibility.

During summer months, wild horses are known to spend the majority of their time in the higher elevations on the steep rocky mountain slopes on the east side of the Antelope Allotment. These areas are often inaccessible to cattle. The lower elevations (foothills and valley bottoms) are utilized by wild horses during the winter when conditions do not allow for access to the higher elevations. Competition for forage typically increases when livestock and wild horses utilize the lower elevations.

3.3.6. Socioeconomic Values

The Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments are located within Iron, Beaver and Washington County, Utah. Employment within the counties is generally provided by industries, business and agencies such as mining, government, trade services, manufacturing, construction, finance, insurance and real estate. A number of socio-economic values, important locally and regionally, are associated with the Project Area. Traditional socio-economic activities within the Project Area include livestock grazing, mining and mineral exploration (although no mines are currently active inside the Project Area), along with pine nut, fuel wood and fence post harvesting. Outdoor recreation, which includes off-road vehicle use, hunting, hiking, camping, rock hounding, along with wildlife and wild horse viewing, has become increasingly important to local economies as well.

The following table illustrates the active AUMs, suspended AUMs and the total AUMs for each allotment:

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

ALLOTMENT	ACTIVE AUMS	SUSPENDED AUMS	TOTAL AUMS
Antelope	23	0	23
Blue Mountain	865	289	1,154
Burn Knoll	950	705	1,655
Hamilton Fort (Shurtz Canyon Pasture)	43	0	43
Hole-In-The-Wall	332	0	332
Lower Meadow	12	0	12
Winsor	15	0	15
Fremont	5,303	73	5,376
Mineral Range (NUA)	4,925	4,095	9,020
Mineral Range (SUA)	4,681	4,432	9,113
Minersville 2	781	879	1,660
North Pine Valley	5,172	452	5,624
Neck of the Desert	656	72	728
Pinto Creek	149	0	149
Swett Hills	105	0	105
Total AUMs	24,012	10,997	35,009

The existing grazing permits include 18,059 AUMs of active grazing preference. Livestock grazing permits are not property; however, they do provide revocable privileges to harvest forage from the public lands.

The following tables illustrate the Geographic Characteristics and Population Demographics for Iron County.

Geographic Characteristics of Iron County

Geographic Area	Land Area (millions of acres)	% Public Land	Land Area (square miles)	Population (2013 estimate)	Persons/Square Mile (2010 estimate)
Iron	2.1	57%	3,301	46,780	14

Population Demographics of Iron County

Population Demographics Based on 2000 Census Data				
County	Total Population	Median Age	Race/Ethnicity	Composition (%)
Iron	33,779	24.4	White	86.6%
			Minority	13.4%

Iron County was created in 1850 and was largely supported by the mining and smelting activity at the time. Farming and ranching became increasingly important to settlers. Iron County is traversed from north-south by I-15 along the eastern boundary and east-west by Highway 56. Iron County also provides access to many of Utah's National Parks and is supported by the tourism industry. Recreational opportunities within Iron County are abundant. The main population center within the county is Cedar City with a population 29,162 in 2013. Iron County is projected to increase by about 102.2% by 2020. Average earnings per job are approximately \$33,000 annually. The majority of job related income is derived from the trade sector. The unemployment rate for the county was 4.1 percent in April 2015. Utilities also provided the highest average annual earnings by industry at \$71,393. The total number of farms in 2002 was 509, which was up 5 percent from 2007. The average size of the farms is 1,046 acres. The total

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

market value of production in 2012 was \$136,747,000. Livestock sales accounted for \$83,223,000 of the total value in 2012. The overall employment in the agricultural industry including ranching is relatively low in Iron County.

The following tables illustrate the Geographic Characteristics and Population Demographics for Beaver County.

Geographic Characteristics of Beaver County

Geographic Area	Land Area (millions of acres)	% Public Land	Land Area (square miles)	Population (2013 estimate)	Persons/Square Mile (2010 estimate)
Beaver	2.1	>77%	2,590	6,459	2.6

Population Demographics of Beaver County

Population Demographics Based on 2000 Census Data				
County	Total Population	Median Age	Race/Ethnicity	Composition (%)
Beaver	6,105	32	White	86.0%
			Minority	14%

Average earnings per job are approximately 39,253 annually. The majority of job related income is derived from the trade and industrial sectors. The unemployment rate for the county was 3.5 percent in April 2015.

The total number of farms in 2012 was 277, which is up 21 percent from 2007. The average size of the farms is 686 acres in 2012. The total market value of production in 2012 was \$288,501,000. Livestock sales accounted for \$266,919,000 of the total value in 2012.

The overall employment in the agricultural industry including ranching is moderate in Beaver County. This is largely due to the large corporate hog farm, which employed 450 people in 2013. People employed in ranching would be directly impacted by any changes in livestock grazing management. Due to financial disclosure concerns on individual ranching operations within the state, grazing allotment specific financial information is unavailable.

The following tables illustrate the Geographic Characteristics and Population Demographics for Washington County.

Geographic Characteristics of Washington County

Geographic Area	Land Area (millions of acres)	% Public Land	Land Area (square miles) (2010)	Population (2014 estimate)	Persons/Square Mile (2010 estimate)
Washington	1.56	>66%	2,427	151,948	56.9

Population Demographics of Washington County

Population Demographics Based on 2000 Census Data				
County	Total Population	Median Age	Race/Ethnicity	Composition (%)
Washington	151,948	32.3	White	85.4
			Minority	14.6

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Washington County is 2,427 square miles in area, with 75 percent of the county held in federal government ownership (26 percent [408,365 acres] is Dixie National Forest administered land) the majority of the federally-owned land is under the jurisdiction of the Forest Service and the BLM, and a portion is managed as Zion National Park. The lack of future developable private lands to accommodate projected growth is a major issue for county leaders. The major source of employment in Washington County was the Trade, Transportation, and Utilities sector. The Construction sector was the next largest source of employment. The agricultural industry including ranching is low in Washington County. The total number of farms in 2012 was 579, which is down 2 percent from 2007. The average size of the farms is 256 acres in 2012. The total market value of production in 2012 was \$12,647,000. Livestock sales accounted for \$6,189,000 of the total value in 2012.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

4.0 ENVIRONMENTAL CONSEQUENCES

4.1. Introduction

The potential consequences or effects of each alternative are discussed in this section. The intent is to provide the scientific and analytical basis for comparison of each alternative's direct and indirect effects.

4.2. Proposed Action

4.2.1. Grazing Management

The direct impacts would be the following within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments: The following is the total active grazing preference within the allotments: Antelope Allotment (23 AUMs), Blue Mountain Allotment (1154 AUMs), Burn Knoll Allotment (1655 AUMs), Hamilton Fort Allotment (45 AUMs), Hole-In-The-Wall Allotment (332 AUMs), Lower Meadow Allotment (12 AUMs) and Winsor allotment (15 AUMs). In addition, refer to Section 2.2 Proposed Action for the season of use, livestock numbers, AUMs, grazing management system and Terms and Conditions within the allotments.

There would be minimal direct impacts to livestock operators on the Antelope, Blue Mountain, Burn Knoll, Hole-In-The-Wall, Lower Meadow and Winsor allotments. There would be no changes to the permitted use, season of use, number of livestock (AUMs), or kind of livestock. A season of use and kind of livestock change would occur within the Hamilton Fort (Shurtz Canyon Pasture); however, this is expected to be more conducive to the permittees livestock operation. In addition, it is expected that the implementation of terms and conditions as well as Allotment Specific Objectives would minimally affect how livestock operations are operated. The terms and conditions established in the Proposed Action would ensure conformance with the Fundamentals of Rangeland Health and regulations at title 43 CFR 4100 as well as the Standards and Guidelines for Healthy Rangelands. Allotment Specific Objectives would ensure maintenance of or lead towards improvements in current conditions within these allotments.

Antelope Allotment

Through the evaluation of monitoring data within the Antelope Allotment Monitoring Report, it has been determined that the Standards and Guidelines for Healthy Rangelands were not being fully met for Standard 3 within the allotment. Casual factors for the non-attainment of this standard include historic wild horse use; however, current utilization is within acceptable parameters.

Within the Antelope Allotment cattle rarely graze the public land portions of the allotment due to steep and inaccessible terrain and lack of water developments. A recent petition fence has been placed on private land to help keep wild horses off adjacent private property where water developments are located. The fence prevents livestock access to the public land portion of land unless the permittee allows access through a gate. The current season of use is March 1st –

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

February 28th authorizing year round use. However, livestock rarely utilize public land; therefore, it is expected that utilization would continue to be within acceptable parameters.

Since public land within the allotment receives minimal utilization livestock use it is expected to maintain - improve the vegetative community by allowing for sufficient key herbaceous plant seedling and young plant recruitment. This would allow for maintenance/improvement in the plant communities by enhancing key perennial species productivity, which would in turn provide plants an opportunity to produce seed and increase in the vegetative communities. The expected maintenance/improvement in the vegetative community would enhance soil site stability, which would limit the redistribution and loss of soil resources by wind and water. Hydrologic function would also be enhanced with maintenance/improvement in the vegetative community. This would allow the site to adequately capture, store and release water from rainfall or snowmelt events. Furthermore, maintenance/improvement in the plant community would improve the integrity of the biotic community, which would permit the allotments to resist loss of function and structure following disturbance allowing for recovery.

The indirect impacts would be the following: It is expected that the implementation of proper use levels and the additional Terms and Conditions that progress towards the attainment of the Standards and Guidelines for Healthy Rangelands would occur throughout the Antelope Allotment. Refer to Attachment 1 and 2 of this document for monitoring objectives and the monitoring plan for the Antelope allotment.

Blue Mountain Allotment

Through the evaluation of monitoring data within the Blue Mountain Allotment Monitoring Report, it has been determined that the Standards and Guidelines for Healthy Rangelands were not being fully met for Standard 3 within the allotment. The casual factor for the non-attainment of the standards was determined to be historic livestock grazing. The current livestock utilization is well within acceptable parameters throughout the allotment.

The season of use for livestock would be from October 16th – June 30th within the Blue Mountain allotment. The majority of use on key perennial grasses would be deferred until after the completion of the critical growing period, due to the grazing management system and season of use. Although livestock grazing would occur within the critical growing period in some pastures a rotational grazing management system would be implemented within 4 pastures of the Blue Mountain allotment which would allow critical growing period rest to each pasture within the allotment on a yearly basis., proper use levels would be identified through utilization objectives and monitoring. The grazing management system is expected to improve the vegetative community by allowing for sufficient key herbaceous plant seedling and young plant recruitment. The expected improvement in the plant community would also improve the integrity of the biotic community, which would limit the redistribution of and loss of soil resources that may occur due to wind and water.

The indirect impacts would be the following: The implementation of proper use levels and the additional Terms and Conditions would ensure that progress towards the attainment of the Standards and Guidelines for Healthy Rangelands would occur throughout the Blue Mountain

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Allotment. Refer to Attachment 1 of this document for monitoring objectives and the monitoring plan for the Blue Mountain Allotment.

Burn Knoll Allotment

Through the evaluation of monitoring data within the Burn Knoll Allotment Monitoring Report, it has been determined that the Standards and Guidelines for Healthy Rangelands were not being fully met for standard 1 and 3 within the allotment. The current livestock utilization is well within acceptable parameters throughout the allotment.

The season of use for livestock would be from November 1st - May 9th (162 cattle) and May 10th - June 30th (77 cattle) within the Burn Knoll Allotment. Livestock grazing would occur during a portion of the critical growing period within the Burn Knoll Allotment. A deferred rotational grazing management system would be established that would encompass the majority of the 7 pastures within the Burn Knoll Allotment. The majority of livestock grazing within the allotment would be during the dormant season within the Burn Knoll Allotment. Although a portion of livestock grazing would occur during the critical growing period a rotational grazing management system would allow critical growing period rest to each pasture within the allotment on a yearly basis. It is expected that the livestock numbers that have been identified along with the establishment of grazing management systems that utilization would remain within allowable limits. Proper use levels would be identified through utilization objectives and monitoring. The grazing management system is expected to improve the vegetative community by allowing for sufficient key herbaceous plant seedling and young plant recruitment. The expected improvement in the plant community would also improve the integrity of the biotic community, which would limit the redistribution of and loss of soil resources that may occur due to wind and water.

The Proposed Action has identified two livestock pipelines that would extend from existing wells into the Mertons Spring Pasture within the Burn Knoll Allotment to provide an additional reliable water source to livestock and wildlife. The construction of the pipelines would be expected to aid in livestock distribution throughout the allotment and help to maintain current conditions.

The indirect impacts would be the following: It is expected that the Proposed Action, which would include the implementation of a grazing management system that would be based on the elimination of repeated critical growing period use within any one pasture, herding to distribute livestock, maintenance of Range Improvement Projects, the implementation of proper use levels and the additional Terms and Conditions that progress towards the attainment of the Standards and Guidelines for Healthy Rangelands would continue to occur throughout the Burn Knoll Allotment. Although it has been determined that the construction of Range Improvement Projects is not necessary to provide for progress toward the attainment of the Standards and Guidelines, they are expected to provide for long-term livestock distribution and the orderly administration of the range. Refer to Attachment 1 and 2 of this document for monitoring objectives and the monitoring plan for the Burn Knoll Allotment.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Hamilton Fort (Shurtz Canyon Pasture)

There is one livestock grazing permittee (Kenneth & Garfae Middleton) within the Shurtz Canyon Pasture of the Hamilton Fort Allotment.

As discussed the Standards and Guidelines for Healthy Rangelands were not being fully met within the Hamilton Fort (Shurtz Canyon pasture) Allotment. The upper elevations of the Shurtz Canyon Pasture are dominated by pinyon and juniper while the lower elevations of the pasture are dominated by Wyoming Big Sagebrush. It has been determined that historic grazing within the allotment were the causal factors for the non-attainment of the Standards and Guidelines for Healthy Rangelands.

As discussed, Kenneth & Garfae Middleton has historically utilized the Shurtz Canyon Pasture within the Hamilton Fort Allotment. The permittees have taken a considerable amount of non-use within their portion of the allotment. The season of use within the Shurtz Canyon Pasture of the Hamilton Fort Allotment would be changed from May 1st – July 1st to January 1st – February 19th. In addition, a Term and Condition would be added to the grazing permit that states the following:

If the permittee is unable to use the allotment for the above season with sheep, the permittee may apply for cattle use on the Shurtz Canyon Pasture. If cattle use were requested, the grazing would occur no earlier than June 15 with the same 45 AUMs of use (i.e. 22 head from June 15th – September 26th). If Cattle are grazed on the allotment, there would be no sheep use authorized on the allotment in the same grazing year (March 1st – February 28th), and vice-versa.

It is expected that the majority of livestock use would occur during the dormant season because the permittee would typically utilize sheep within the allotment. This is expected to provide maintenance/improvement of the vegetative community. In addition, it is expected that the majority of livestock use would occur on private lands that are more accessible than public lands.

Hole-In-The-Wall Allotment

Through the evaluation of monitoring data within the Hole-In-The-Wall Allotment Monitoring Report, it has been determined that the Standards and Guidelines for Healthy Rangelands were not being fully met for standard 1 and 3 within the allotment. The casual factor for the non-attainment of the standards was determined to be historic livestock grazing. Current livestock utilization is within acceptable parameters.

The Hole in the Wall Allotment would continue to be used in a two pasture deferred system. The pastures would be flip-flopped with the pasture being scheduled for spring use being used for 2 months to allow for growing season rest. The permittee has been employing a similar grazing system since it was initiated in 1989 and it meets vegetation/watershed needs and the permittees operational requirements.

Current utilization levels in the allotment are slight to light with a moderate recorded in 2010, which is still well within acceptable use levels. However, rangeland health data collected shows

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

that forage availability may not be able to withstand cattle grazing at the maximum amount of cattle shown on the previous grazing permit (122). The current permittee has a livestock lease agreement to run livestock on the allotment. The permittee has utilized 70 head of cattle for the last 5 years due to his recognition that the allotment may not support full numbers as identified on the grazing permit. This has allowed for the Allotment to maintain current conditions or may move toward meeting Standards and Guidelines with implementation of the Allotment Specific Objectives listed as part of the Proposed Action. To ensure continuation of this livestock grazing management a Livestock Grazing Agreement has been completed with the permittee to continue to allow 70 head of livestock permitted use to be utilized on an annual basis. This would allow the allotment proper rest and distribution of livestock to improve the overall plant community and key species within the allotment. With the Livestock Grazing Agreement in place the allotment would likely maintain current conditions or may move toward meeting Standards and Guidelines.

The elimination of repeated critical growing period livestock use is expected to maintain/improve the vegetative community by allowing for sufficient key herbaceous plant seedling and young plant recruitment. This would allow for maintenance/improvement in the plant communities by enhancing key perennial species productivity, which would in turn provide plants an opportunity to produce seed and increase in the vegetative communities. The expected maintenance/improvement in the vegetative community would enhance soil site stability, which would limit the redistribution of and loss of soil resources by wind and water. Hydrologic function would also be enhanced with maintenance/improvement in the vegetative community. This would allow the site to adequately capture, store and release water from rainfall or snowmelt events. Furthermore, maintenance/improvement in the plant community would improve the integrity of the biotic community, which would permit the allotments to resist loss of function and structure following disturbance allowing for recovery.

The indirect impacts would be the following: The implementation of proper use levels and the additional Terms and Conditions would ensure that progress towards the attainment of the Standards and Guidelines for Healthy Rangelands would occur throughout the Hole-In-The-Wall Allotment. Any long term adjustments would be based on monitoring data and would in compliance with applicable regulations.

Lower Meadow Allotment

Through the evaluation of monitoring data within the Lower Meadow Allotment Monitoring Report, it has been determined that the Standards and Guidelines for Healthy Rangelands were not being fully met for Standard 1 and 3 within the allotment. The causal factor for non-attainment of the Standards was determined to be heavy pinyon and juniper encroachment within the area. Excessive pinyon and juniper dominate the shrub and perennial grass community that should be associated with the ecological site.

Livestock use within the Lower Meadow Allotment is authorized because it is adjacent to unfenced private land that allows for livestock use on public land within the allotment. Vegetation within the allotment consists of pinyon/juniper and annual forbs with little shrub community and minimal perennial grass understory. It would be expected that the site would be

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

capable of supporting a more diverse perennial grass, forb and shrub understory. Livestock utilization is minimal within the public land portion of the allotment due to the current dominance of pinyon/juniper, which limits the productivity of the ecological site.

The season of use would be from May 1st – September 30th within the Lower Meadow Allotment. This allotment provides only 12 AUMs towards the permittees grazing operation. The terms and conditions as well as Allotment Specific Objectives identified in the Proposed Action would most likely be sufficient to maintain use of the 12 AUMs due to the majority of livestock grazing occurring on private land.

The indirect impacts would be the following: It is expected that even with the continuation of the grazing management system that progress towards the attainment of the Standards and Guidelines for Healthy Rangelands would not occur throughout the Lower Meadow Allotment. Even with adequate rest for perennial grasses, accompanied by favorable precipitation that the plant community would not be improved. A significant amount of investment would have to take place to remove the pinyon/juniper that is present for the allotment to reach a desired plant community. Refer to Attachment 1 and 2 of this document for monitoring objectives and the monitoring plan for the Lower Meadow allotment.

Winsor Allotment

Through the evaluation of monitoring data within the Winsor Allotment Monitoring Report, it has been determined that the Standards and Guidelines for Healthy Rangelands were not being fully met for standard 1 and 3 within the allotment. The casual factor for the non-attainment of the standards was determined to be pinyon/juniper encroachment. Utilization was conducted in 2009 that showed heavy use was occurring within this allotment.

The Winsor allotment is considered a custodial “C” allotment that consists of 119 public land acres and 89 private acres. The allotment has heavy pinyon/juniper encroachment on majority of allotment that is affecting the shrub and perennial grass community that should be present with the allotment. It is expected that the permittees current number of livestock, season of use from June 16th – August 31st and AUMs that the allotment would likely maintain current conditions or may move toward meeting Standards and Guidelines in the long term.

The indirect impacts would be the following: It is expected that even with the continuation of the grazing management system that progress towards the attainment of the Standards and Guidelines for Healthy Rangelands would not occur throughout the Winsor Allotment. Even with adequate rest for perennial grasses, accompanied by favorable precipitation that the plant community would not be improved. A considerable amount of investment would have to take place to remove the pinyon/juniper that is present for the allotment to reach a desired plant community. Refer to Attachment 1 and 2 of this document for monitoring objectives and the monitoring plan for the Winsor Allotment.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Range Improvement Projects

Fremont Allotment

The Proposed Action has identified a pipeline extension from an existing well within the Lower Coyote Bench Pasture into the Upper Coyote Bench Pasture. This would consist of approximately 3.5 miles of pipeline, crossing public land, and 2 troughs (Refer to Fremont Allotment Project Map in Chapter 9.0 for project location). Utilization objectives within these two pastures have been well within allowable limits. The construction of the pipeline would be expected to aid in livestock distribution throughout the allotment and help to maintain current conditions.

Mineral Range (North Use Area) Allotment

The Proposed Action has identified two pipeline extensions from an existing well within the East and West Hodsen pastures. This would consist of approximately 5 miles of pipeline, crossing public and state land, 3 troughs and 3 ponds (Refer to Mineral Range (North Use Area) Allotment Project Map in Chapter 9 for project location). Utilization objectives within this pasture have been well within allowable limits. The construction of the pipelines would be expected to aid in livestock distribution throughout the allotment and help to maintain current conditions.

The Proposed Action also identified two earthen water catchment ponds within the West Hodsen Pasture. The water catchment ponds would be constructed in two drainages that run through the southern portion of the pasture. Each pond would not be expected to exceed 1 acre in size (Refer to Mineral Range (North Use Area) Allotment Project Map in Chapter 9 for project location).

Mineral Range (South Use Area) Allotment

The Proposed Action has identified two pipeline extensions, 3 troughs and 3 ponds. The pipeline would include an extension from Beaumont Spring within the Porcupine Pasture and an existing pipeline within the southern portion of the Wildcat Pasture. This would consist of approximately 7 miles of pipeline crossing public and state land (Refer to Mineral Range (North Use Area) Allotment Project Map in Chapter 9.0 for project location). Utilization objectives within this pasture have been well within allowable limits. The construction of the pipelines would be expected to aid in livestock distribution throughout the allotment and help to maintain current conditions.

Minersville 2 Allotment

The Proposed Action has identified the construction of one water well and a short pipeline to a trough within the Minersville 2 Allotment. The construction of the well would ensure that adequate livestock water is always available within the Minersville 2 Allotment. A BLM approved bird ladder would be placed in all water troughs. Refer to Minersville 2 Allotment Project Map in Chapter 9.0 for project location). Utilization objectives within the allotment

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

pasture have within allowable limits. The construction of the water well and pipeline would be expected to aid in livestock distribution throughout the allotment and help to maintain current conditions.

Neck of the Desert Allotment

The Proposed Action has identified a pipeline extension from an already existing pipeline within the Neck of the Desert Allotment. This would consist of two possible options. Option 1 would consist of approximately 2.4 miles of pipeline crossing public, state and private land. Option 2 would consist of approximately 1.4 miles of pipeline crossing public and private land. (Refer to Neck of the Desert Allotment Project Map in Chapter 9.0 for project location). Utilization objectives within these two pastures have been well within allowable limits. The construction of the pipelines would be expected to aid in livestock distribution throughout the allotment and help to maintain current conditions.

North Pine Valley Allotment

The Proposed Action has identified the construction of one water well and a short pipeline to an existing pipeline within the North Pine Valley Allotment. The construction of the well would ensure that adequate livestock water is always available within the North Pine Valley Allotment. A BLM approved bird ladder would be placed in all water troughs. Refer to North Pine Valley Allotment Project Map in Chapter 9.0 for project location). Utilization objectives within the allotment pasture have within allowable limits. The construction of the water well and pipeline would be expected to aid in livestock distribution throughout the allotment and help to maintain current conditions.

Pinto Creek Allotment

The proposed action has identified a livestock drift fence and two earthen water catchment ponds within the Pinto Creek Allotment. The fence would be approximately 1 mile in length crossing BLM administered lands. The water catchment ponds would be constructed in two drainages that run through the central portion of the allotment. Each pond would not be expected to exceed 1 acre in size. The proposed fence would be expected to prevent livestock drift across the highway and prevent vehicle collisions with livestock. The fence would also aid in more efficient grazing use within the allotment. The proposed water catchment ponds would provide intermittent water for livestock and wildlife while also reducing the need for the livestock permittee to haul water to his cattle.

Swett Hills Allotment

The Proposed Action has identified construction of a fence that would run along Highway 56 within the Swett Hills Allotment. This would consist of approximately 1 mile of fence crossing public land and connect into an existing private fence. (Refer to Swett Hills Project Map in Chapter 9.0 for project location). The proposed fence would allow livestock to access a portion of the allotment that previously not been utilized due to its proximity to highway 56. The fence would also provide for public safety and aid in more efficient grazing use within the allotment.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Indirect Impacts Common to All

The indirect impacts would be the following: It is expected that the Proposed Action, which would include the implementation of a grazing management system that would be based on the elimination of repeated critical growing period use within any one pasture, herding to distribute livestock, maintenance of Range Improvement Projects, the implementation of proper use levels and the additional Terms and Conditions that progress towards the attainment of the Standards and Guidelines for Healthy Rangelands would continue to occur throughout all of the allotments. Although it has been determined that the construction of Range Improvement Projects is not necessary to provide for progress toward the attainment of the Standards and Guidelines, they are expected to provide for long-term livestock distribution and the orderly administration of the range.

4.2.2. Wildlife

Federally Listed Threatened, Endangered, and Candidate

Hamilton Fort Allotment (Shurtz Canyon Pasture)

Utah prairie dog habitat has not been mapped within the Hamilton Fort (Shurtz Canyon) Allotment; however, it has been mapped on private lands within less than 0.5 miles (colonies 0112b, 0122d).

Since Utah prairie dogs or their habitat do not currently occur on the Hamilton Fort (Shurtz Canyon) Allotment and therefore this alternative is not required to be in compliance with the programmatic grazing consultation. However, the likelihood of prairie dogs establishing on the allotment during the term of the permit is high, therefore the proposed action was brought into compliance with the consultation.

The terms and conditions regarding maintenance of existing projects, and stipulations for new projects, in Utah prairie dog habitat are incorporated. Implementation of these terms and conditions and committed conservation measures would minimize the effects of livestock grazing on Utah prairie dogs. However, some grazing associated activities, including the physical presence of livestock, may cause short term impacts to forage or disrupt normal prairie dog behavior. BLM determined in both the grazing programmatic BA and the land use plan programmatic consultation (2007) that livestock grazing “*may adversely affect*” the Utah prairie dog. The FWS determined in their grazing programmatic BO that grazing, as proposed, is not likely to jeopardize the continued existence of the Utah prairie dog and is not likely to destroy or adversely modify critical habitat.

Please refer to the BE and grazing programmatic BA and BO for more detailed information on the effects of livestock grazing on Utah prairie dogs. The discussion below is tiered to these documents and is specific to Hamilton Fort (Shurtz Canyon Pasture) Allotment. If this alternative is selected without modification; no further coordination with FWS on this EA is needed since this alternative is in conformance with the programmatic biological opinion.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

BLM Sensitive Species

Based on observation records by Utah Natural Heritage Program, professional knowledge, and Utah GAP Analysis, habitat for a variety of special status wildlife species as identified in the Affected Environment section of this EA may occur within the allotments.

Bat Species: Livestock would not be expected to impact roosting habitats for Townsend big-eared bats. Bat species tend to forage where insect populations are abundant, which typically coincides with water resources such as livestock ponds, troughs, riparian areas, and ephemeral washes. Bat mortality associated with drowning in livestock troughs can occur. BLM approved bird ladders can aid in reducing this impact. The Proposed Action should allow for the maintenance of foraging habitats and insect populations for bat species within the allotments.

Burrowing Owl: Direct impact to the burrowing owl includes trampling at nest burrow sites. Indirect impacts of livestock grazing could reduce or alter small mammal prey abundance. Burrowing owls prefer habitat where ground cover makes prey more easily seen and captured. Livestock grazing as described in the Proposed Action should ensure maintenance of suitable habitat to support burrowing owl species within the Antelope, Blue Mountain, Burn Knoll, Hole-In-The-Wall, Lower Meadow and Winsor Allotments.

Ferruginous Hawk: Ferruginous hawks have been documented in the Blue Mountain, Burn Knoll and Winsor Allotments (UNHP, 2008) and livestock grazing would coincide with the ferruginous hawk breeding and/or nesting season (March 1st – August 1st). Livestock grazing as described in the Proposed Action should ensure maintenance of suitable habitat to support prey populations utilized by ferruginous hawks within the Blue Mountain, Burn Knoll and Winsor Allotments.

Kit Fox: Direct impacts to the kit fox include habitat loss, degradation and fragmentation which reduce the potential for successful dispersal of the kit fox and reduce the ability to detect and elude predators. Indirect impacts of livestock grazing relates to the potential to reduce or alter small mammal prey abundance. The placement of artificial water sources for use by livestock has permitted range expansion by coyotes and red fox into arid areas which predate on kit fox.

Kit fox can excavate their own burrows, but they often enlarge existing burrows created by badgers and ground squirrels. Livestock grazing would not be expected to alter the presence of fossorial mammals. Dens would not be expected to be trampled by livestock, usually kit fox dens are quite elaborate with many entrances. Livestock grazing as described in the Proposed Action should ensure maintenance of suitable habitat to support Kit fox species within the Antelope, Blue Mountain, Burn Knoll, Hole-In-The-Wall, Lower Meadow and Winsor Allotments.

Long-billed Curlew: Direct impacts that may be associated with the Proposed Action would be the occasional destruction of nests and eggs due to trampling by livestock, or associated nest abandonment of birds intolerant to disturbances. Indirect impacts may be associated with changes in vegetation as a result of livestock grazing management practices, which may lead to loss of nesting, roosting or foraging habitat.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Long-billed curlews migrate through southern Utah and some nesting has been documented. The Proposed Action would aid in the maintenance of or lead to improvements to the upland key species with the incorporation of the grazing management system, livestock season of use, and utilization objectives which may improve habitat for long-billed curlew. The Proposed Action would help ensure that enough residual vegetation remains to provide adequate cover requirements to meet the needs of nesting birds within the Blue Mountain and Burn Knoll Allotments.

Pygmy Rabbit: Pygmy rabbits have been identified and documented within the Blue Mountain, Burn Knoll and Lower Meadow Allotments. Direct impacts potentially associated with the Proposed Action include: livestock grazing can trample and/or cause sagebrush breakage which can create unsuitable habitat for pygmy rabbits when shrubs damage result in open canopy habitats. Indirect impacts may be associated as a result of livestock grazing management practices which may lead to loss of burrowing and foraging habitat. Dense stands of sagebrush are essential avenues for dispersal of pygmy rabbits and for evading predators. During the winter the diet of the pygmy rabbit consist of 99% sagebrush. Livestock grazing as described in the Proposed Action should ensure maintenance of suitable sagebrush habitat to support pygmy rabbits.

Short-eared Owl: Direct impact that may be associated with the Proposed Action would be the occasional destruction of nests and eggs due to trampling by livestock or associated nest abandonment of birds intolerant to disturbance. Indirect impacts of livestock grazing relates to the potential to reduce small mammal prey abundance. Livestock grazing as described in the Proposed Action should ensure maintenance of suitable habitat to support prey populations utilized by short-eared owls within the Antelope, Hole-In-The-Wall, Lower Meadow and Winsor Allotments.

Upland Game Species

Chukar Partridge: The Proposed Action should allow for the maintenance for foraging and nesting habitats within the Antelope, Blue Mountain and Burn Knoll Allotments.

Merriam's and Rio Grande Wild Turkey: The Proposed Action should allow for the maintenance for foraging and nesting habitats within the allotments.

Big Game Species

Mule Deer: Crucial winter mule deer range has been identified in the Blue Mountain, Hamilton Fort and Winsor Allotments. The proposed season of use for the Burn Knoll Allotment would coincide with mule deer use on crucial winter range.

Blue Mountain Allotment

The Blue Mountain Allotment is identified as crucial mule deer winter range. Mule deer typically utilize winter range from November – April. The season of use for the Blue Mountain allotment is October 16th – June 30th. Under the Proposed Action, direct competition for browse species would occur between livestock and mule deer. Dietary composition for mule deer on

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

winter range would primarily consist of browse species such as antelope bitterbrush, sagebrush species (Wyoming big sagebrush, black sagebrush). Livestock would be expected to continue utilizing residual grasses during the dormant season; however, utilization may increase on those important browse species. Competition between cattle and mule deer is expected to occur if residual grasses are not meeting the demands of livestock.

Standard 3 (habitat) was not being met within the Moonshine and North pastures of the Allotment. Historic livestock grazing are the causal factors for the non-attainment of the standard and utilization monitoring data collected from 2005-2015 shows slight-light use in both pastures. Perennial grasses in the Moonshine pasture are beginning to convert to a warm season grass species and encroachment by pinyon-juniper woodlands is starting to occur. The North pasture should have higher percentages of perennial grasses and forbs.

It is expected that the continuation of a formal grazing management system as well as proper use levels, and additional Terms and Conditions would ensure that progress would be expected toward the attainment of the Standards and Guidelines for Healthy Rangelands.

Hamilton Fort Allotment (Shurtz Canyon Pasture)

The season of use for sheep under the Proposed Action would be from January 1st – February 19th. The kind of livestock would be changed from cattle to sheep. However, if the permittee is unable to use the allotment for the above season with sheep, the permittee would have the option to apply for cattle use within the Shurtz Canyon Pasture. If cattle use were requested, the grazing would occur no earlier than June 15 with the same 45 AUMs of use (i.e. 22 head from June 15th – September 26th). If cattle are grazed on the allotment, there would be no sheep use authorized on the allotment in the same grazing year (March 1st – February 28th), and vice-versa.

Standard 3 (Habitat) was not being met on the Shurtz Canyon pasture. The lower elevations of the pasture were dominated by Wyoming Big Sagebrush. Perennial grasses including galletta grass, Indian ricegrass and bottlebrush squirreltail were present; however, like the upper elevations they were widely scattered and uncommon. A noticeable conversion from cool season to warm season grasses has occurred in this portion of the allotment. Historic grazing and excessive pinyon-juniper encroachment are the causal factors for the non-attainment of the Standards and Guidelines for Healthy Rangelands. The vegetative community is dominated by either a pinyon-juniper or sagebrush component.

It is expected that the continuation of a formal grazing management system as well as proper use levels, and additional Terms and Conditions would ensure that progress would be expected toward the attainment of the Standards and Guidelines for Healthy Rangelands.

Winsor Allotment

The Winsor allotment is identified as crucial mule deer winter range. The season of use on the Winsor allotment is June 16th – August 31st. Livestock grazing would not coincide with mule deer on crucial winter range within the Winsor Allotment.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Pronghorn

The Blue Mountain, Burn Knoll and Hole-In-The-Wall allotments are identified as crucial year-long pronghorn range.

Blue Mountain Allotment

The Blue Mountain Allotment is identified as crucial yearlong pronghorn habitat. Under the Proposed Action the season of use would coincide with pronghorn use. There is a deferred rotation between 4 pastures within the allotment and the season of use is from October 16th – June 30th /. There is very little dietary overlap between cattle and pronghorn; however, dietary overlap can increase on rangelands where forb and shrub abundance and diversity are low. Direct competition would occur during the early spring period. Forb consumption is crucial during the early spring months for pronghorn does in order to maintain a healthy body condition while meeting the nutrient requirements of nursing fawns. Cattle may also displace pronghorn from preferred fawning areas. Utilization of shrubs by pronghorn in winter may increase as a result of increased nutritional value as well as forage availability during the winter season. Pronghorn consumption of dry grasses may occur, but would likely not constitute a major portion of their diet. Livestock are most likely to utilize the dry grasses during winter; however, utilization on shrubs may also increase as well during this time. The amount of dietary overlap between pronghorn and livestock depends on the vegetation resources available on the range.

Standard 3 (habitat) was not being met within the Moonshine and North pastures of the Allotment. Historic livestock grazing are the causal factors for the non-attainment of the standard and utilization monitoring data collected from 2005-2015 shows slight-light use in both pastures. Perennial grasses in the Moonshine pasture consist of warm season grass species and encroachment by pinyon-juniper woodlands is present. The North pasture should have higher percentages of perennial grasses and forbs.

It is expected that the continuation of a formal grazing management system as well as proper use levels, and additional Terms and Conditions would ensure that progress would be expected toward the attainment of the Standards and Guidelines for Healthy Rangelands.

Burn Knoll Allotment

The Burn Knoll Allotment is identified as crucial yearlong pronghorn habitat. There is a deferred rotation system in place between 7 pastures. The season of use is November 1st – May 9th and May 10th – June 30th. Impacts between pronghorn and cattle would be similar to those described above.

Standard 3 (habitat) was not being met within the Mertons Spring and West pastures. Historic livestock grazing are the causal factors for the non-attainment of the standard and utilization monitoring data collected from 2005-2015 shows slight-light use in both pastures. Mertons Spring pasture is lacking key perennial grasses and rabbitbrush has invaded affecting annual production. The West pasture shows that production of perennial grasses was well below what would be expected. A moderate departure from the ecological site description is occurring.

It is expected that the continuation of a formal grazing management system as well as proper use levels, and additional Terms and Conditions would ensure that progress would be expected toward the attainment of the Standards and Guidelines for Healthy Rangelands.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Hole-In-The-Wall Allotment

The Hole-In-The-Wall Allotment is identified as crucial yearlong pronghorn habitat. Under the Proposed Action the season of use would coincide with pronghorn and livestock grazing. There is a deferred rotation system in place between 2 pastures. The season of use is Year 1 East Pasture April 1st – May 31st and West Pasture October 15 – March 31st. Year 2 East Pasture October 15th – March 31st and West Pasture April 1st – May 31st. Impacts between pronghorn and cattle would be similar to those described above.

Rocky Mountain Elk

Burn Knoll Allotment

The Burn Knoll Allotment is identified as substantial year-long rocky mountain elk habitat. Direct competition for available forage between elk and livestock would be expected to occur within the Burn Knoll Allotment. The season of use on the Burn Knoll Allotment is November 1st – May 9th – June 30th. Elk would likely be utilizing the lower elevations of the pasture during the early spring season and traveling to the higher elevations in response to increased temperatures, which would result in direct competition for forage resources such as residual grasses and important browse species. Elk may be expected to use the lower elevations during the cool-season in association with early spring green-up, which may result in some dietary overlap. Grasses and forbs are more typically used during the spring and summer months with browse species being more utilized during the winter months.

Standard 3 (Habitat) – refer to the analysis above regarding the allotment and pastures.

Hamilton Fort Allotment (Shurtz Canyon Pasture)

The Hamilton Fort Allotment is identified as substantial year-long rocky mountain elk habitat. Direct competition for available forage between elk and livestock would be expected to occur within the allotment. If cattle use were requested, the grazing would occur no earlier than June 15 with the same 45 AUMs of use (i.e. 22 head from 6/15-9/26). If Cattle are grazed on the allotment, there would be no sheep use authorized on the allotment in the same grazing year (March 1st – February 28th), and vice-versa.

Elk would likely be utilizing the lower elevations of the pasture during the early spring season and traveling to the higher elevations in response to increased temperatures, which would result in direct competition for forage resources such as residual grasses and important browse species. Elk may be expected to use the lower elevations during the cool-season in association with early spring green-up, which may result in some dietary overlap. Grasses and forbs are more typically used during the spring and summer months with browse species being more utilized during the winter months.

Standard 3 (Habitat) – refer to the analysis above regarding the Shurtz Canyon pasture.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Migratory Birds

A variety of avian species are found within the habitat associated with the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort, Hole-In-The-Wall, Lower Meadow and Winsor Allotments. Direct impacts common to all avian species that may be associated with the Proposed Action, would be the occasional destruction of nest and eggs due to trampling by livestock, or associated nest abandonment of birds intolerant to disturbances. Indirect impacts may be associated with changes in vegetation as a result of livestock grazing management practices, which may lead to loss of nesting, roosting, or foraging habitat. Habitat degradation appears to be one of the largest factors influencing migratory bird populations.

The Proposed Action would implement a grazing management system within the allotments. The Proposed Action is expected to provide long term improvements to vegetation conditions within the allotments, and improve migratory bird nesting and foraging habitat values through implementation of formal grazing rotations, season of use, etc...

Proposed Range Improvement Projects

A wildlife inventory would be completed prior to construction of all range improvement projects to ensure that no Special Status Species are within the disturbance area. Additional stipulations may be incorporated based on results of the wildlife site inventory.

Refer to the Proposed Action for detailed information pertaining to the Proposed Range Improvement Projects.

Common to All Wildlife

Burn Knoll, Fremont, Mineral Range (North Use Area), Mineral Range (South Use Area), Minersville 2, Neck of the Desert, North Pine Valley and Pinto Creek Allotments

Pipelines, pipeline extensions, water wells and water developments (ponds) would provide additional water resources for a variety of wildlife within the allotments. Livestock water developments are often one of the few available water resources within an area and can be an important component of wildlife management in arid regions, particularly during the hot summer season (May – September). It is expected a temporary short-term disturbance to wildlife would occur during construction of the pipelines and water developments. Minimize construction of pipelines, pipeline extensions and water developments during the migratory bird nesting season (March 15 – July 30).

Neck of the Desert Allotment

Pipelines, pipeline extensions and water developments (ponds) fragment pygmy rabbit habitat and remove the native vegetation. Noise from increased vehicles and human activity has the potential to impact rabbits within the area. Surveys would be required prior to construction and a 300 foot buffer would be required if rabbits are using the area.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Pinto Creek Allotment

Fences

Direct and indirect impacts to mule deer associated with a fence may impede movement and distribution within seasonal range and habitat. This would result in increased energy expenditure as mule deer encounter fences, populations may experience direct mortality if mule deer are not able to safely negotiate getting over/under the fence and become entangled. Juvenile mule deer and may experience higher mortality if fences are not maintained. A loose top wire often contributes to mule deer deaths as a result of hind feet becoming entangled when jumping the obstacle. The standard BLM stipulation for construction ‘wildlife friendly fences’ identified in the Proposed Action should allow continued movement and distribution throughout the allotment.

Direct impacts common to migratory birds may be associated with the occasional destruction of nests and eggs due to construction or associated nest abandonment of birds intolerant to human disturbances. Migratory birds could potentially become entangled in the fence. Indirect impacts may be associated with changes in vegetation as a result of range improvement projects, which may lead to loss of nesting, roosting or foraging habitat. Construction of all fences should be outside the migratory bird nesting typically April 1 – July 30.

4.2.3. Invasive, Non-Native Species

The Proposed Action is expected to provide for proper vegetative management, which would create favorable conditions that would reduce the potential for establishment and the spread of invasive weeds in the allotments.

The direct impact of the Proposed Action would be the following: As discussed, there are no known noxious weeds within the Antelope, Blue Mountain, Burn Knoll, Hole-In-The-Wall, Lower Meadow and Winsor Allotments. However there are noxious weeds present in the Hamilton fort Allotment, (Shurtz Canyon Pasture). There is 12 acres of scotch thistle present. The Proposed Action is expected to maintain/improve upland areas throughout the allotments allowing these areas to be less susceptible to invasive non-native species. The livestock grazing management systems, which eliminate repeated critical growing period use would aid in proper permeability and infiltration rates. The Proposed Action would increase the production of the dominant and/or co-dominant native perennial grass and forb components on the range sites. The maintenance/improvement of range conditions would over time provide increased competition against the possibility of future invasive species infestations. CCFO would continue to monitor the allotments for the presence of invasive weeds.

The Range Improvement Projects within the Burn Knoll, Fremont, Mineral Range (North Use Area), Mineral Range (South Use Area), Minersville 2, Neck of the Desert, North Pine Valley, Pinto Creek and Swett Hills Allotments would provide additional reliable water sources for livestock and wildlife within the allotments, which would aid in improving livestock distribution. Improvements in livestock distribution throughout the allotments would be expected to improve the plant community, which would allow it to be less susceptible to noxious weed invasion. If noxious weeds were identified they would be avoided or controlled during Range Improvement

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Project construction. A seed mix would be developed and the pipeline construction disturbance would be re-vegetated following construction activities. The improvements in livestock distribution through the construction pipelines are expected to improve the plant community, which would allow it to be less susceptible to noxious weed invasion. There are a considerable amount of two-track disturbed roads within the allotment and these would be used to locate projects to limit further disturbance within the allotment as much as possible.

The indirect impact of the Proposed Action would be the following: The Proposed Action would allow for the maintenance/attainment of the Standards and Guidelines for Healthy Rangelands. The maintenance/attainment of the standards would reduce the potential for the establishment of invasive weeds throughout the allotments. Refer to Attachment 1 and 2 of this document for monitoring objectives and the monitoring plan for the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor Allotments.

4.2.4. Soils/Vegetation

The direct impacts of the Proposed Action would be the following: Grazing management systems have been identified throughout the allotments, which would eliminate repeated critical growing period use. In addition, current season of use, kind of livestock, AUMs, etc... that are in place are expected to lead to the maintenance/attainment of the Standards and Guidelines for Rangeland Health.

The grazing management systems would reduce soil compaction and increase permeability and infiltration rates. In addition, it is important to note that through the collection of monitoring data that soil compaction issues have not been identified within any of the allotments. Proper vegetative management throughout the allotments would maintain or improve the plant community due to the protection of soil and water resources. Sufficient seedling and young plant recruitment is needed to maintain or increase the abundance of species in the community. Reduced soil compaction would increase the production of the dominant and/or co-dominant native perennial grass and forb components on the range sites. Improved ecological condition would increase productivity, litter, soil fertility, infiltration and nutrient cycling. Healthy plant communities must be able to complete their life cycle by preventing damage during the critical growing period. Grazing is most harmful during the critical growth period of a plant because food reserves are the lowest. The critical growth period begins in the boot stage and closes with complete mature seed.

The pipeline extensions, water wells and ponds within the Burn Knoll, Fremont, Mineral Range (North Use Area), Mineral Range (South Use Area), Minersville 2, Neck of the Desert and North Pine Valley Allotments would provide for additional reliable water sources to livestock and wildlife and aid in livestock distribution within the allotments. As discussed, through the collection of monitoring data it has been determined that utilization levels have been within acceptable parameters within the allotments. Improvements in livestock distribution as a result of the implementation of the Range Improvement Project would be expected to aid in proper permeability and infiltration rates. At the time of construction of the pipelines it would be expected that soils would be disturbed/compacted; however, this would be limited to

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

construction activities along the pipeline route. There are a considerable amount of two-track disturbed roads within the allotments and these would be used to locate projects to limit further ground disturbance as much as possible. A seed mix would be developed and the disturbance would be re-vegetated following construction activities.

The indirect impact of the Proposed Action would allow for the maintenance/attainment of the Standards and Guidelines for Healthy Rangelands. The maintenance/attainment of the standards would allow maintenance/improvement of upland areas and provide for livestock and wildlife habitat requirements throughout the allotments. Refer to Attachment 1 and 2 of this document for monitoring objectives and the monitoring plan for the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor Allotments.

4.2.5. Wild Horses

Minor competition for the forage and water resources between wild horses and livestock would continue on the Antelope Allotment. The number of wild horses on the allotment would continue to vary depending on forage and water availability. Wild horses would continue to spend much of their time on the steep rocky mountain slopes on the eastside of the allotment that is not accessible to cattle. Winter conditions or drought would continue to force them to visit the valley bottoms where they compete with livestock for the available forage and water. Implementation of Standards and Guidelines for Healthy Rangelands would result in overall improved rangeland conditions on the Antelope Allotment, thereby improving forage conditions for wild horses. A utilization objective would ensure that sufficient forage would remain for wild horse use.

4.2.6. Socioeconomic Values

Refer to the tables and Terms and Conditions identified in Section 2.2 of the Proposed Action. The tables identify the livestock grazing management systems for the permittees, number of livestock, kind of livestock, season of use, percent public land, AUMs, Terms and Conditions, etc...

There are diverse viewpoints relative to livestock grazing on public lands; however, the BLM is required by the land use plans to provide the opportunity for livestock grazing on public lands consistent with multiple use. From an economic standpoint, the ranching industry in Iron, Beaver and Washington County is a relatively minor component; however, it supports a lifestyle that is important socially and financially to a number of individuals and families.

The direct impacts of the Proposed Action would be the following: Ranching revenues would continue to be based on the issuance of ten-year permits. There would be some expense to the livestock permittee to maintain existing Range Improvement Projects. The implementation of grazing management system, changes in season of use, implementation of Range Improvement Projects and additional Terms and Conditions identified in the Proposed Action is expected to have short-term effects on the ranching operations that hold the grazing permits within the allotments as grazing permittees adapt. In order to maintain/attain the Standards and Guidelines

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

for Healthy Rangelands throughout the allotments, the Proposed Action would identify number of livestock, kind of livestock, season of use, percent public land, AUMs, Terms and Conditions, etc...

Individual livestock operator financial conditions cannot be disclosed in this document; however, the extent to which a proportional impact to individual livestock operators may or may not become apparent. As discussed, changes in grazing management including identification of grazing management systems, changes to season of use, livestock numbers, kind of livestock, etc... have been identified. It is expected that these changes would improve the vegetative communities throughout the allotments and that maintenance/attainment of the Standards and Guidelines would occur. The majority of livestock grazing within the allotments would occur in the dormant season when plants are least susceptible to harm by livestock grazing. Grazing management systems based on the elimination of repeated critical growing period use in any one pasture have been identified for all of the allotments.

Although additional Terms and Conditions have been identified for the allotments it is not expected that economic effects would occur. The extent to which individual ranching operations would be economically impacted depends to a large degree on the ability of the operators to adjust to the changing conditions. If rangeland conditions deteriorate livestock operations would have to adjust, regardless of any actions taken by this effort and the operator may have to voluntarily remove livestock or adjust carrying capacity to reflect the rangeland degradation. It is expected that the Proposed Action would allow the livestock operators to remain viable during drought years and maintain consistent herd sizes, which would provide for meeting financial goals of the operation and the Standards and Guidelines for Healthy Rangelands.

The Proposed Action would maintain/improve rangeland conditions throughout the allotments. This would allow for the sustainability of the livestock operators within the allotments. Maintenance/improvement in current conditions would be reflected by the attributes of Rangeland Health and would ultimately lead to healthy vegetative communities and static/upward trends throughout the allotments.

The indirect impacts of the Proposed Action would provide for the maintenance/attainment of the Standards and Guidelines for Healthy Rangelands. The maintenance/attainment of the standards would provide for improved vegetative conditions throughout the allotments. This may result in increases to the active grazing preference in the future, which would improve the potential annual revenues of the livestock permittee. Monitoring data would continue to be collected within the allotments to determine if future adjustments to the active grazing preference are reasonable. Refer to Attachment 1 of this document for monitoring objectives and the monitoring plan for the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

4.3.No Action Alternative (Existing Use)

4.3.1. Grazing Management

The No Action Alternative would not identify grazing management systems, Terms and Conditions, Allotment Specific Objectives, Range improvements etc..., which are expected to lead to the maintenance/attainment of the Standards and Guidelines within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments.

The direct impacts would be the following within the allotments: Refer to table in Section 3.4.6 Socioeconomic Values for the total active grazing preference within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments. In addition, refer to the season of use, livestock numbers, kind of livestock and Terms and Conditions, etc... identified for the alternative in Section 2.2.

Refer to Section 3.4.1 Grazing Management for a detailed discussion of the pastures and acres within each allotment. The alternative would not provide for changes to season of use, changes in kind of livestock, implementation of grazing management systems, Terms and Conditions, Proper Use Levels, etc... that were identified under the Proposed Action Alternative. The Range Improvement Projects that were identified within the Burn Knoll, Fremont, Mineral Range (North Use Area), Mineral Range (South Use Area), Minersville 2, Neck of the Desert, North Pine Valley, Pinto Creek and Swett Hills allotments would not be initiated; therefore, there would be no direct or indirect impacts as a result of the project construction. Although these projects are not necessary to ensure attainment of the Standards and Guidelines for Healthy Rangelands they would be expected to provide for the orderly administration while providing for long-term livestock distribution.

The indirect impacts of the No Action Alternative would allow for the continuation of existing livestock management practices. It is expected that the Proposed Action, which initiates grazing management systems, eliminates repeated livestock grazing during the critical growing period, identifies Terms and Conditions, proper use levels, etc... that the vegetative community would be maintained/improved throughout the allotments; however, under the No Action Alternative there would be no range improvement projects, terms and conditions or proper use levels etc... identified to help attain/maintain the rangeland health standards and guidelines that are not being fully within Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments.

4.3.2. Wildlife (Including Big Game, Upland Game Birds, Special Status Species and Migratory Birds)

The No Action Alternative would directly impact wildlife populations within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments. Indirect impacts would be related to the impacts associated with forage competition between livestock and wildlife and degraded habitat conditions as a result of inappropriate livestock grazing and seasons of use.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

As discussed, it is expected that the livestock grazing management systems identified in the Proposed Action, which is essentially a continuation of existing grazing management with the exception of the Hamilton Fort (Shurtz Canyon Pasture), would provide for maintenance/attainment of the Standards and Guidelines for Healthy Rangelands within the Antelope, Blue Mountain, Burn Knoll, Hole-In-The-Wall, Lower Meadow and Winsor allotments.

In addition, Range Improvement Projects, etc... identified in the Proposed Action (Section 2.2) would not be incorporated under the alternative, which is expected to help attain/maintain Rangeland Health within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow, Mineral Range (NUA), Mineral Range (SUA), Swett Hills and Winsor allotments.

4.3.3. Invasive, Non-Native Species

As discussed, it is expected that the livestock grazing management systems identified in the Proposed Action, which is essentially a continuation of existing grazing management with the exception of the Hamilton Fort (Shurtz Canyon Pasture), would provide for maintenance/attainment of the Standards and Guidelines for Healthy Rangelands within the Antelope, Blue Mountain, Burn Knoll, Hole-In-The-Wall, Lower Meadow and Winsor allotments.

In addition, Range Improvement Projects, etc... identified in the Proposed Action (Section 2.2) would not be incorporated under the alternative, which is expected to help attain/maintain Rangeland Health within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow, Mineral Range (NUA), Mineral Range (SUA), Swett Hills and Winsor allotments.

4.3.4. Soils/Vegetation

The direct impacts of the No Action Alternative would be that the changes to terms and conditions and range improvement projects would not be initiated. In addition, the proposed projects would not be constructed under the alternative. Therefore, there would be no direct impacts to soils or vegetation as a result.

The indirect impacts of the No Action Alternative would not provide for the maintenance/attainment of the Standards and Guidelines for Healthy Rangelands within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments. The failure of the maintenance/attainment of the Standards within these allotments under the alternative would be primarily because a grazing management systems would longer be implemented, which is expected to provide for long-term grazing management within the allotments, which is expected to maintain/attain the Standards and Guidelines for Healthy Rangelands. In addition, the Terms and Conditions identified in the Proposed Action (Section 2.2) including proper use levels would not be incorporated under the No Action Alternative.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

4.3.5. Wild Horses

Competition for forage, water and shelter resources between wild horses and livestock would continue at the present level in the Antelope Allotment. The number of wild horses on the allotment would continue to vary depending on forage and water availability. The wild horses would continue to spend much of their time on the steep rocky mountain slopes on the eastside of the allotment that is not accessible to cattle. Winter conditions or drought would continue to force them to visit the valley bottoms where they would compete with livestock for the available forage and water. This increases the competition for forage between livestock and wild horses during the times horses are in the valley bottoms.

4.3.6. Socioeconomic Values

The direct impacts of the No Action Alternative would be the following: Ranching revenues would continue to be based on the issuance of ten-year permits, which would retain the current grazing preference. There would be some expense to the livestock operators to maintain existing Range Improvement Projects. As discussed, it is expected that the livestock grazing management systems identified in the Proposed Action, which is essentially a continuation of existing grazing management with the exception of the Hamilton Fort (Shurtz Canyon Pasture), would continue to provide for maintenance/attainment of the Standards and Guidelines for Healthy Rangelands within the Antelope, Blue Mountain, Burn Knoll, Hole-In-The-Wall, Lower Meadow and Winsor allotments.

In addition, Range Improvement Projects, etc... identified in the Proposed Action (Section 2.2) would not be incorporated under the alternative, which is expected to help attain/maintain Rangeland Health within the Burn Knoll, Mineral Range (NUA), Mineral Range (SUA), Neck of the Desert, Pinto Creek and Swett Hills allotments.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

5.0 CUMULATIVE IMPACT ANALYSIS

5.1. Introduction

The Council of Environmental Quality (CEQ) regulations implementing NEPA defines cumulative impacts as: "...The impact on the environment which results from incremental impact of the action when added to past, present or reasonably foreseeable future actions regardless of what agency (Federal or Non-Federal) or person undertakes such actions. Cumulative impacts can result from individually minor, but collectively significant actions taking place over a period of time (40 CFR 1508.7).

The Antelope Allotment is located approximately 22 miles west of Cedar City, UT. The Blue Mountain and Burn Knoll Allotments are located approximately 12-15 miles Southwest of Milford, UT, the Fremont Allotment is about 8 miles south of Beaver, Utah, the Hamilton Fort (Shurtz Canyon Pasture) Allotment is about 2 miles south of Cedar City, Utah the Lower Meadow Allotment is located approximately 26 miles west of Cedar City, UT, the Mineral Range (NUA) Allotment is located approximately 10 miles northwest of Beaver, UT, the Mineral Range (South Use Area) Allotment is located approximately 4 miles northwest of Beaver, Utah, the Minersville 2 Allotment is located approximately 1 mile north of Minersville, UT, the Neck of the Desert Allotment is located approximately 11 miles west of Cedar City, UT, the North Pine Valley Allotment is located approximately 40 miles west of Milford, UT, the Pinto Creek Allotment is located approximately 4 miles southeast of Newcastle, UT, the Swett Hills Allotment is located west of Cedar City, Utah approximately 8 miles and the Winsor Allotment is located approximately 3-5 miles northwest of Enterprise, UT. A Map of each of the allotments is located in Section 9.0.

The Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments are located within the Escalante Desert Hydrologic Unit Boundary (HUB) as determined by the USGS. The term of the grazing permit within the allotments would be for a period of ten years. The Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments consist of the following acres:

ALLOTMENT	PUBLIC ACRES	STATE ACRES	PRIVATE ACRES	ESCALANTE DESERT HYDROLOGIC UNIT BOUNDARY TOTAL ACRES	PERCENTAGE OF ALLOTMENT WITHIN ESCALANTE DESERT HYDROLOGIC UNIT BOUNDARY
Antelope	434	.37	1,598	2,106,703	0.096
Blue Mountain	9,969	1,609	4,785	2,106,703	0.777
Burn Knoll	14,355	3,026	----	2,106,703	0.825
Hamilton Fort	4,049	82	1,094	2,106,703	0.002
Hole-In-The-Wall	3,017	0	2,256	2,106,703	0.250
Lower Meadow	504	510	946	2,106,703	0.093

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

ALLOTMENT	PUBLIC ACRES	STATE ACRES	PRIVATE ACRES	ESCALANTE DESERT HYDROLOGIC UNIT BOUNDARY TOTAL ACRES	PERCENTAGE OF ALLOTMENT WITHIN ESCALANTE DESERT HYDROLOGIC UNIT BOUNDARY
Neck of the Desert	10,918	1,997	8,735	2,106,703	0.010
Pinto Creek	1,951	0	664	2,106,703	0.001
Swett Hills	8,023	71	2,570	2,106,703	0.005
Winsor	111	----	97	2,106,703	0.001

The Fremont, Mineral Range (North Use Area) and Mineral Range (South Use Area) allotments are located within the Beaver Bottoms Hydrologic Unit Boundary (HUB) as determined by the USGS.

ALLOTMENT	PUBLIC ACRES	STATE ACRES	PRIVATE ACRES	BEAVER BOTTOMS-UPPER BEAVER HYDROLOGIC UNIT BOUNDARY TOTAL ACRES	PERCENTAGE OF ALLOTMENT WITHIN BEAVER BOTTOMS-UPPER BEAVER HYDROLOGIC UNIT BOUNDARY
Fremont	67,246	9,627	9,837	1,105,023	0.078
Mineral Range (NUA)	36,526	3,527	2,420	1,105,023	0.038
Mineral Range (SUA)	29,196	2,737	1,966	1,105,023	0.031
Minersville 2	21,284	2,139	1,877	1,105,023	0.02

The North Pine Valley Allotment is located within the Pine Valley Hydrologic Unit Boundary (HUB) as determined by the USGS.

ALLOTMENT	TOTAL ACRES IN PINE VALLEY HYDROLOGIC UNIT BOUNDARY	PINE VALLEY HYDROLOGIC UNIT BOUNDARY TOTAL ACRES	PERCENTAGE OF PINE VALLEY HYDROLOGIC UNIT MADE UP BY ALLOTMENT
North Pine Valley	75,675	468,997	0.16

5.2. Past, Present and Reasonably Foreseeable Future Actions

The Past, Present and Reasonably Foreseeable Future Actions applicable to the assessment area are the following:

PROJECT/ACTION	NAME OR DESCRIPTION	STATUS (X)		
		PAST	PRESENT	FUTURE
Historic Livestock Grazing (1870's)	1870's to 1934 unregulated grazing on public lands led to vegetative community changes resulting in the current environment.	X		
Taylor Grazing	1934 regulated grazing on public lands leading to	X	X	X

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

PROJECT/ACTION	NAME OR DESCRIPTION	STATUS (X)		
		PAST	PRESENT	FUTURE
Act (1934)	livestock grazing reform.			
Livestock Management	Current and past grazing preference on the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor Allotments	X	X	
Wild Horses Management	In 1971 the Wild Horse and Burros Act was enacted protecting wild horses from commercial exploitation and harassment. Management was given to the BLM and FS. Planned wild horse removals and projects have been implemented to benefit horse herds.	X	X	X
Cedar Beaver Garfield Antimony Resource Management Plan (1986)	Established the Blue Mountain, Burn Knoll and Hole-In-The-Wall Allotments as category "M" for Maintenance. Established the Antelope and Lower Meadow as category "C" for Custodial.	X	X	
Pinyon Management Framework Plan	Established the Winsor allotment as category "C" for custodial	X	X	
Grazing Permits	Issuance of ten year grazing permits for the allotments throughout the Cedar City Field Office district	X	X	X
Construction of Fences	Construction of fences throughout the Cedar City Field Office district	X	X	X
Vegetative and Wildlife Habitat Improvements Projects	Habitat Improvement Projects throughout the Cedar City Field Office District	X	X	X
Invasive Weed Treatment	Invasive weed treatment throughout the Cedar City Field Office District	X	X	X
Range Improvements	Maintenance and construction of Range Improvement Projects throughout the district	X	X	X
Wildfire Suppression and Rehabilitation	Wildfire Suppression and Rehabilitation activities throughout the Cedar City Field Office District	X	X	X
Off Highway Vehicle (OHV) use	OHV use throughout the Cedar City Field Office District	X	X	X
Livestock Operations on Adjacent Allotments	Livestock operations throughout the Cedar City Field Office District	X	X	X
Farming	Farming on private lands throughout the Cedar City Field Office District	X	X	X
Urban Growth	Portions of the Cedar City Field Office are experiencing rapid expansions in population growth		X	X
Land Use Planning	Past plans established management goals and objectives which were used as the basis for management of public lands. The Cedar City Field Office has initiated the Land Use Planning process which will direct future management of	X	X	X

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

PROJECT/ACTION	NAME OR DESCRIPTION	STATUS (X)		
		PAST	PRESENT	FUTURE
	the following Resources, Resource Uses and Special Designations: Air Quality, Cultural Resources, Fish and Wildlife Habitat, Paleontology, Riparian and Wetlands, Special Status Species, Visual Resources, Vegetation and Rangeland Health, Watershed and Soils, Water Quality, Wild Horses, Wildland Fire Ecology, Forestry and Woodland Products, Lands and Realty, Livestock Grazing, Minerals, Recreation, Renewable Energy, Trails and Travel, Areas of Critical Environmental Concern, National Trails, Wild and Scenic Rivers, Wilderness, Wilderness Study Areas, and Wild Lands and other Special Designations.			

5.3. Effects of Past, Present and Reasonably Foreseeable Future Actions

Proposed Action

5.3.1. Grazing Management

Livestock grazing in the region has evolved and changed considerably since it began in the 1870s, and is one factor that has created the current environment. At the turn of the century, large herds of livestock grazed on unreserved public domain in uncontrolled open range. Eventually, the range was stocked beyond its capacity, causing changes in plant, soil and water relationships. Some speculate that the changes were permanent and irreversible, turning plant communities from grass and herbaceous species to brush and trees. Protective vegetative cover was reduced, and more runoff brought erosion, rills and gullies.

In response to these problems, livestock grazing reform began in 1934 with the passage of the Taylor Grazing Act. Subsequent laws, regulations, and policy changes have resulted in adjustments in livestock numbers, season-of-use changes, and other management changes. Given the past experiences with livestock impacts on resources on public lands, as well as the cumulative impacts that could occur on the larger ecosystem from grazing on various public and private lands in the region, management of livestock grazing is an important factor in ensuring the protection of public land resources.

The Antelope, Blue Mountain, Burn Knoll, Hamilton Fort, Hole-In-The-Wall, Lower Meadow and Winsor Allotment Monitoring Report determined that the Standards and Guidelines for Healthy Rangelands were not being fully met. Refer to Proposed Action in the Environmental Consequences Section. The implementation of grazing management systems, changes in season of use, livestock numbers and the additional Terms and Conditions, which include proper use levels would ensure that maintenance/attainment of the Standards and Guidelines for Healthy Rangelands occurs. The maintenance/attainment of the standards would ensure that upland communities throughout the allotments would function properly. This would allow for forage to be available for wildlife and livestock on a continual basis.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

The effects of reasonable foreseeable future actions for the Proposed Action are as follows: Invasive weed inventory and treatment, wildfire rehabilitation, Range Improvement Project construction (pipelines) and vegetation rehabilitation treatments would be beneficial for livestock management. These projects would provide for the long-term sustainability of the livestock operator due to increased forage production and the ability to manage livestock, which would lead to the attainment of the Standards and Guidelines for Healthy Rangelands.

Off Highway Vehicle (OHV) use may have an adverse effect on livestock management within portions of the allotments. OHV use may increase in these areas as the population within Beaver Washington and Iron Counties increases. This may negatively impact livestock management throughout the area due to increased disturbance to livestock, which may result in areas that receive excessive utilization.

Wildfires are common within southern Utah. Intensive rehabilitation efforts have been undertaken in the past to limit acres that may be converted to annual species. Wildfire suppression would be beneficial to livestock management by providing a means of controlling the number of acres that are burned. Following a wildfire, a short-term adverse impact would occur. This would be primarily the temporary reduction of AUMs and closure of the area that is burned while it is being rehabilitated. Wildfire has the potential to convert native range to non-native species. Rehabilitation may vary in the degrees of success and may provide additional forage if successful.

Past and present Range Improvement Projects including fences, exclosures, wells, pipelines and vegetation projects have been completed within the allotments. These projects provide a means to continue the maintenance/attainment of the Standards and Guidelines for Healthy Rangelands within the allotments. This in the form of improved livestock distribution, livestock control, establishment of season of use, etc....

5.3.2. Wildlife

The effects of past and present actions were discussed in the Affected Environment and Environmental Consequences section of this document and the Grazing Management portion of the Cumulative Impacts section. The grazing management practices identified in the Proposed Action would provide for the long-term sustainability and health of wildlife due to increased forage production and water availability, which would ensure the maintenance/attainment of the Standards and Guidelines for Healthy Rangelands.

Increased OHV use may have an adverse effect on wildlife within the allotment. OHV users may increase in this area as populations in Beaver, Iron and Washington Counties increase and have detrimental effects to wildlife throughout the year through increased disturbances. In addition, OHV users may negatively impact the ability of wildlife to maintain long-term viability. Users may have adverse impacts on feed, water, cover and living space for wildlife as well as the ability for wildlife to maintain historic patterns of habitat use. Increased competition by OHV users for space within the area may concentrate wildlife in isolated areas and result in excessive utilization.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Wildfire suppression would be beneficial to wildlife including migratory birds by providing a means to control the number of acres that are burned thereby eliminating habitat fragmentation and alteration to an undesirable community. Following a wildfire rehabilitation of the burned area would occur, which is expected to improve wildlife habitat through the prevention of cheatgrass and other invasive species.

Declines in migratory bird populations are becoming well documented through cooperative efforts among conservation groups, federal, and state agencies and can be attributed to many factors such as habitat fragmentation (breeding and non-breeding habitats), alteration of vegetative communities, urban expansion, natural disasters, and brood parasitism. In the Willow Spring Allotment, native vegetation communities have been altered through crested wheatgrass seedings in the past. Habitat in the other allotments has been negatively altered by pinyon/juniper encroachment, dense sagebrush with little understory caused by intense historic grazing, and invasion of annual weeds and grasses. Migratory birds may also be impacted by human disturbance associated with land use and recreational activities in the allotments.

5.3.3. Invasive Weed Treatment

As discussed there were no invasive weeds present within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments. CCFO would continue to monitor the allotments for the presence of invasive weeds. The effects of past and present actions were discussed in the Affected Environment and Environmental Consequences section of this document and the Grazing Management portion of the Cumulative Impacts section. The effects of the reasonable and foreseeable future actions are as follows: Invasive weed monitoring and treatment, wildfire rehabilitation and vegetation rehabilitation treatments would be beneficial to invasive species management. These projects would provide for invasive weed control in areas that may be susceptible to the presence of invasive species, which would ensure the maintenance/attainment of the Standards and Guidelines for Healthy Rangelands.

Increased OHV use may increase the proliferation of invasive species due to disturbance of native plant communities. OHV users may increase use of this area and may have detrimental effects to natural plant communities if they stray off established roads and trails. In addition, OHV users may negatively impact livestock and wildlife throughout the area due to increased disturbance, which may result in areas that receive excessive utilization. This may lead to an increase in invasive species where over utilization occurs as a result of the concentration of animals.

Wildfire suppression would be beneficial for the control of invasive species by providing a means of controlling the number of acres that are burned. Wildfire may convert native range to non-native species. Rehabilitation may vary in degrees of success and may or may not control the establishment of invasive species.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

5.3.4. Soils and Vegetation

The effects of past and present actions were discussed in the Affected Environment and Environmental Consequences section of this document and the Grazing Management portion of the Cumulative Impacts section. The effects of the reasonable and foreseeable future actions are as follows: Invasive weed monitoring and treatment, wildfire rehabilitation, construction of Range Improvement Projects (pipelines) and vegetation rehabilitation treatments would be beneficial to soils and vegetation. These projects would provide for protection of upland habitat, which would provide for the maintenance/attainment of the Standards and Guidelines for Healthy Rangelands throughout the allotments.

Increased OHV use may impact soil and vegetative communities through disturbance. OHV users may increase use of this area and may have detrimental effects to natural plant communities, which may lead to soil erosion if they stray off established roads and trails. In addition, OHV users may negatively impact livestock throughout the area due to increased disturbance, which may result in areas that receive excessive utilization. This may lead to an increase in invasive species where over utilization occurs as a result of the concentration of animals.

Wildfire suppression would be beneficial for the protection of soil and vegetative communities by providing a means of controlling the number of acres that are burned. Upland communities may be susceptible to erosion following wildfire in a watershed. Wildfire may convert native range to non-native species, which could lead to proliferation of invasive weeds in these areas. Rehabilitation may vary in degrees of success and may control the spread of invasive species.

5.3.5. Wild Horses

The AML for wild horses within the Chloride HMA portion of the Antelope Allotment would continue to be maintained at 30 wild horses until adjustments are determined through additional monitoring and analysis of monitoring data. Currently, the wild horse population within this portion of the Antelope Allotment is estimated at 94 head, 64 wild horses over AML. Future wild horse gathers would maintain the HMA at the AML which would allow for improved rangeland conditions and establish a thriving natural ecological balance within the multiple-use concept. The authorization of an AML adjustment would be dependent upon further monitoring, NEPA analysis and the issuance of a Decision.

5.3.6. Socioeconomic

The effects of past and present actions were discussed in the Affected Environment and Environmental Consequences section of this document and the Grazing Management portion of the Cumulative Impacts section. The effects of the reasonable and foreseeable future actions are as follows: Invasive weed monitoring and treatment, wildfire rehabilitation, construction of Range Improvement Projects (pipelines) and vegetation rehabilitation treatments would be beneficial to soils and vegetation. These projects would provide for the maintenance/attainment of the Standards and Guidelines for Healthy Rangelands. This is also expected to aid in the long-term viability of the livestock operators.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Increased OHV use may impact soil and vegetative communities through disturbance. OHV users may increase use of this area and may have detrimental effects to natural plant communities, which may lead to soil erosion if they stray off established roads and trails. In addition, OHV users may negatively impact livestock throughout the area due to increased disturbance, which may result in areas that receive excessive utilization. This may lead to an increase in invasive species where over utilization occurs as a result of the concentration of animals. OHV users may generate additional revenues for local economies.

Wildfire suppression would be beneficial for the protection of soil and vegetative communities by providing a means of controlling the number of acres that are burned. Upland communities may be susceptible to erosion following wildfire in a watershed. Wildfire may convert native range to non-native species, which could lead to proliferation of invasive weeds in these areas. Rehabilitation may vary in degrees of success and may or may not control invasive species.

5.4. No Action Alternative (Existing Use)

The Antelope, Blue Mountain, Burn Knoll, Hamilton Fort, Hole-In-The-Wall, Lower Meadow and Winsor Allotment Monitoring Report determined that the Standards and Guidelines for Healthy Rangelands were not being fully met within the Allotments. Refer to Proposed Action in the Environmental Consequences Section. The alternative would not provide for changes to season of use, changes in kind of livestock, implementation of grazing management systems, Terms and Conditions, Proper Use Levels, etc... that were identified under the Proposed Action Alternative, which are expected to provide for maintenance/attainment of the Standards and Guidelines for Healthy Rangelands.

5.5. Summary of Past, Present, And Reasonably Foreseeable Future Actions

5.5.1. Proposed Action

The effects of past and present livestock management have been determined to have led to the non-attainment of the Standards and Guidelines for Healthy Rangelands within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments. As discussed, it has been determined through the analysis and interpretation of monitoring data that the Standards and Guidelines for Healthy Rangelands were not being fully met within all the allotments.

The Proposed Action identifies season of use, a grazing management system, additional Terms and Conditions including proper use levels. It is expected that the Proposed Action would maintain/improve upland vegetative communities. The maintenance/improvement would be in the form of the attainment of the annual monitoring standards and the maintenance/attainment of long-term objectives as identified in Attachment 1. The Proposed Action would provide for the maintenance/attainment of these standards and objectives by allowing a considerable portion of the allotments to be deferred until after the completion of the critical growing period throughout the majority of the allotments. In addition, proper use levels would be identified within the allotments. The Proposed Action would allow for key herbaceous species to increase vigor,

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

productivity and seedling establishment. This would improve upland vegetative communities by allowing for sufficient key herbaceous plant seedling and young plant recruitment.

Reasonably Foreseeable Future Actions including establishment of wildlife guzzlers, wildfire suppression, wildfire rehabilitation, invasive weed treatment, construction of Range Improvement Projects (pipelines and fences) and vegetation rehabilitation treatments would be expected to aid in the maintenance/attainment of the Standards and Guidelines for Healthy Rangelands. Reasonable Foreseeable Future Actions including Off Highway Vehicle (OHV) use would not be expected to aid in the attainment of the Standards and Guidelines for Healthy Rangelands.

It is expected that the Proposed Action and the reasonably foreseeable future actions would ensure maintenance/attainment of the Standards and Guidelines for Healthy Rangelands.

5.5.2. No Action Alternative (Existing Use)

The No Action Alternative would not provide for changes to season of use, changes in kind of livestock, implementation of grazing management systems, Terms and Conditions, Proper Use Levels, etc... that were identified under the Proposed Action Alternative, which are expected to provide for the maintenance/attainment of the Standards and Guidelines for Healthy Rangelands. The Range Improvement Projects that were identified in the Proposed Action would not be initiated. Although these projects are not necessary to ensure attainment of the Standards and Guidelines for Healthy Rangelands, they would be expected to provide for the orderly administration while providing for long-term livestock distribution.

The effects of livestock grazing on resources in the allotments identified in this EA have been analyzed under each alternatives "Direct and Indirect Impacts" in this Section. Since livestock grazing occurs throughout the area, it is reasonable to assume that impacts similar to those identified earlier in this chapter would occur elsewhere in the area. This additive impact may affect wildlife habitat or corridors, and the greater ecosystems by altering vegetation associations or decreasing water quality. These systems and the health of the region as a whole are important for the survival of many native species.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

6.0 MONITORING

Monitoring data would be collected to periodically evaluate the effects of livestock grazing and determine if the Standards and Guidelines for Healthy Rangelands are being maintained/attained. Monitoring would be in accordance with BLM policy and BLM technical references.

BLM would continue to collect monitoring data within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor allotments in order to determine the effectiveness of the management actions being proposed in this evaluation. Maintenance/improvement would be attained through meeting the short term and long term objectives being proposed. At a minimum, the monitoring plan for the allotments would include the studies for upland communities as identified in Attachment 1 of this document.

7.0 CONSULTATION, COOPERATION AND COORDINATION

7.1. Introduction

This chapter identifies those who have been involved in the development of this document. Individuals, groups, and agencies that had input into the document are also listed. The alternatives, resources of concern, and issues were identified by those listed below. Comments and responses are summaries or are written in their entirety.

7.2. Persons, Groups and Agencies Consulted

Kent H. Adams (Livestock Grazing Permittee)
Gilbert Yardley and Steven Yardley (Livestock Grazing Permittee)
Staci Shaha & Fern Living Trust (Livestock Grazing Permittee)
Bret Whittier (Livestock Grazing Permittee) (Lease Agreement)
Kay R. & Ellen S. Ence (Livestock Grazing Permittee)
Fenton J. Terry (Livestock Grazing Permittee)
Kenneth and Garfae Middleton (Livestock Grazing Permittee)

7.3. Summary of Public Participation

Public involvement has consisted of posting the proposal on the Utah BLM Environmental Notification Bulletin Board in 2015. The status of the project has been updated on the BLM Environmental Notification Bulletin Board on a continual basis since 2015.

An initial scoping letter was sent to the interested public on June 8, 2015 explaining the permit renewal process. The letter also asked the interested public to provide alternatives for management of the allotments, which could be considered in the environmental assessment.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

7.4. List of Preparers

Those responsible for completing this EA are listed as part of the Interdisciplinary Team Record in Appendix A.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

8.0 REFERENCES

Manuals, Handbooks and Technical References

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Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

9.0 MAPS

BLM Cedar City Field Office
Range Allotments
ANTELOPE
Feb 14, 2007

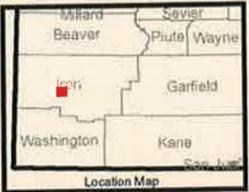
- Allotment Boundary
- Pasture Boundary

Land Status

- BLM
- Private
- State

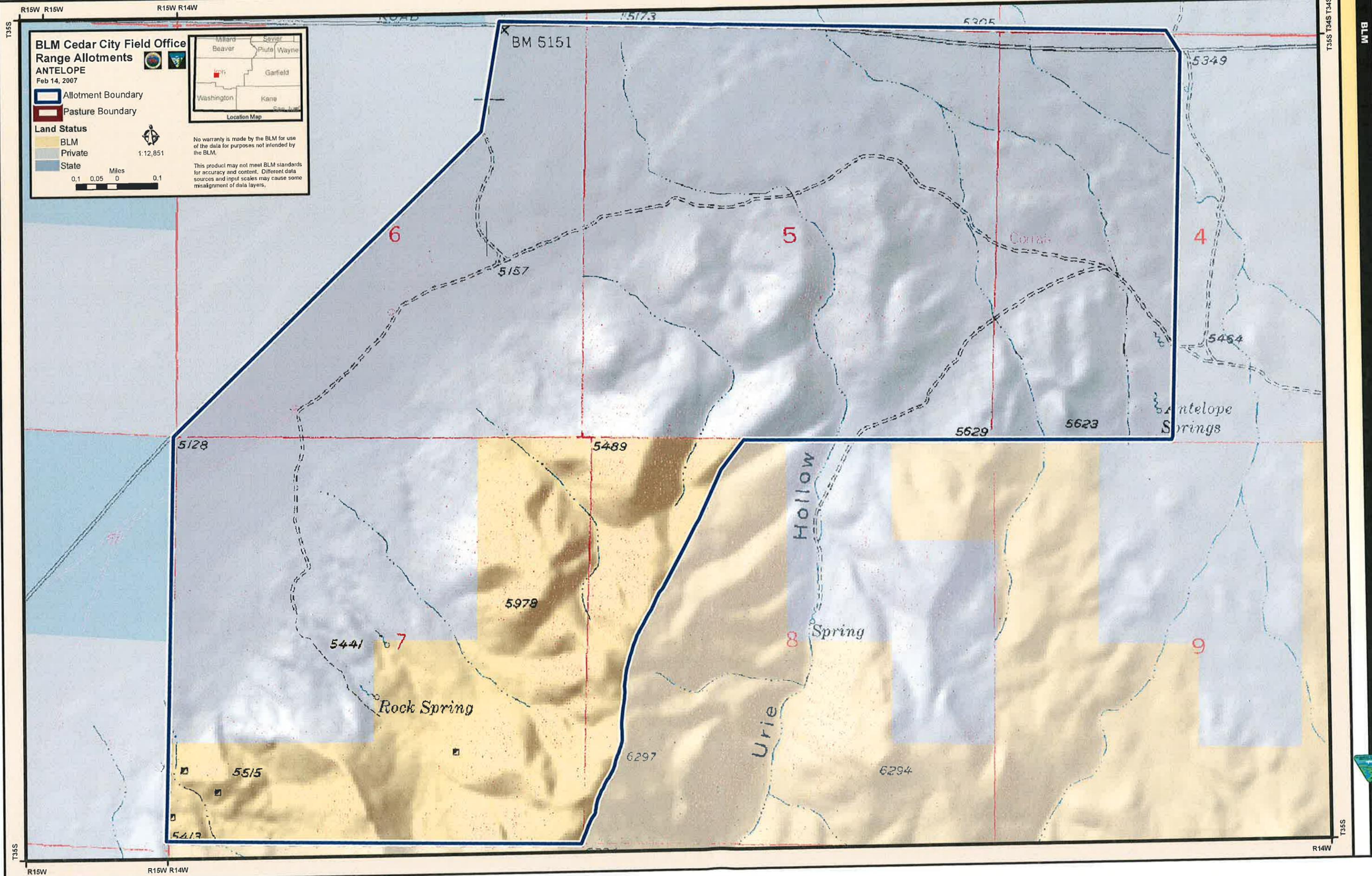
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Miles
0.1 0.05 0 0.1



No warranty is made by the BLM for use of the data for purposes not intended by the BLM.

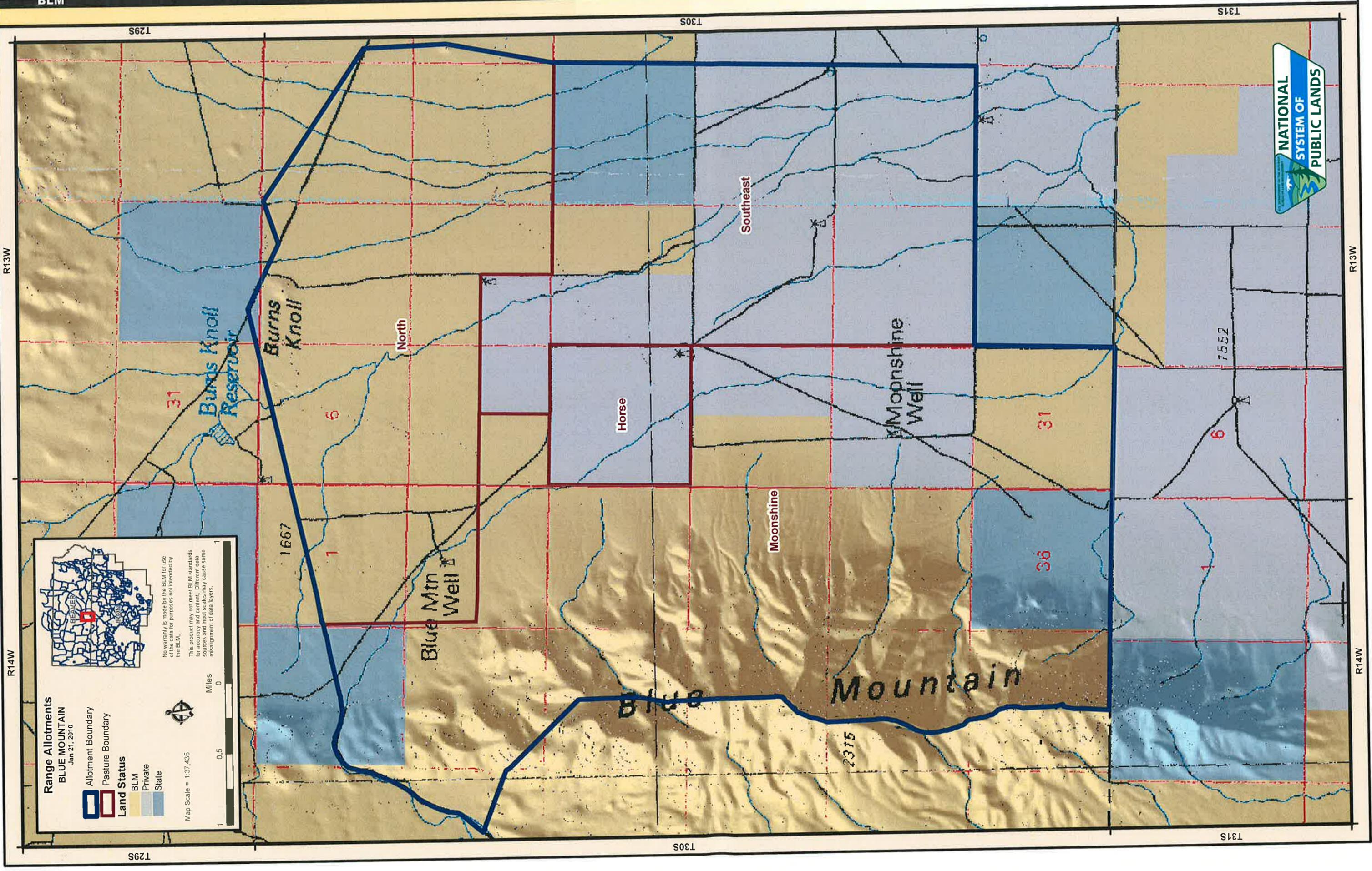
This product may not meet BLM standards for accuracy and content. Different data sources and input scales may cause some misalignment of data layers.



BLM

T35S

R14W



Range Allotments
BLUE MOUNTAIN
 Jan 21, 2010

Allotment Boundary
 Pasture Boundary

Land Status

	BLM
	Private
	State

Map Scale = 1:37,435

Miles
 0
 0.5
 1

No warranty is made by the BLM for use of the data for purposes not intended by the BLM.
 This product may not meet BLM standards for accuracy and completeness. Different data sources and map scales may cause some misalignment of data layers.



R13W

R14W

R13W

R14W

1295

1305

1315

1295

1305

1315

BLM Cedar City Field Office
Range Allotments
BURN KNOLL
Feb 14, 2007

Allotment Boundary (Blue outline)
Pasture Boundary (Red outline)

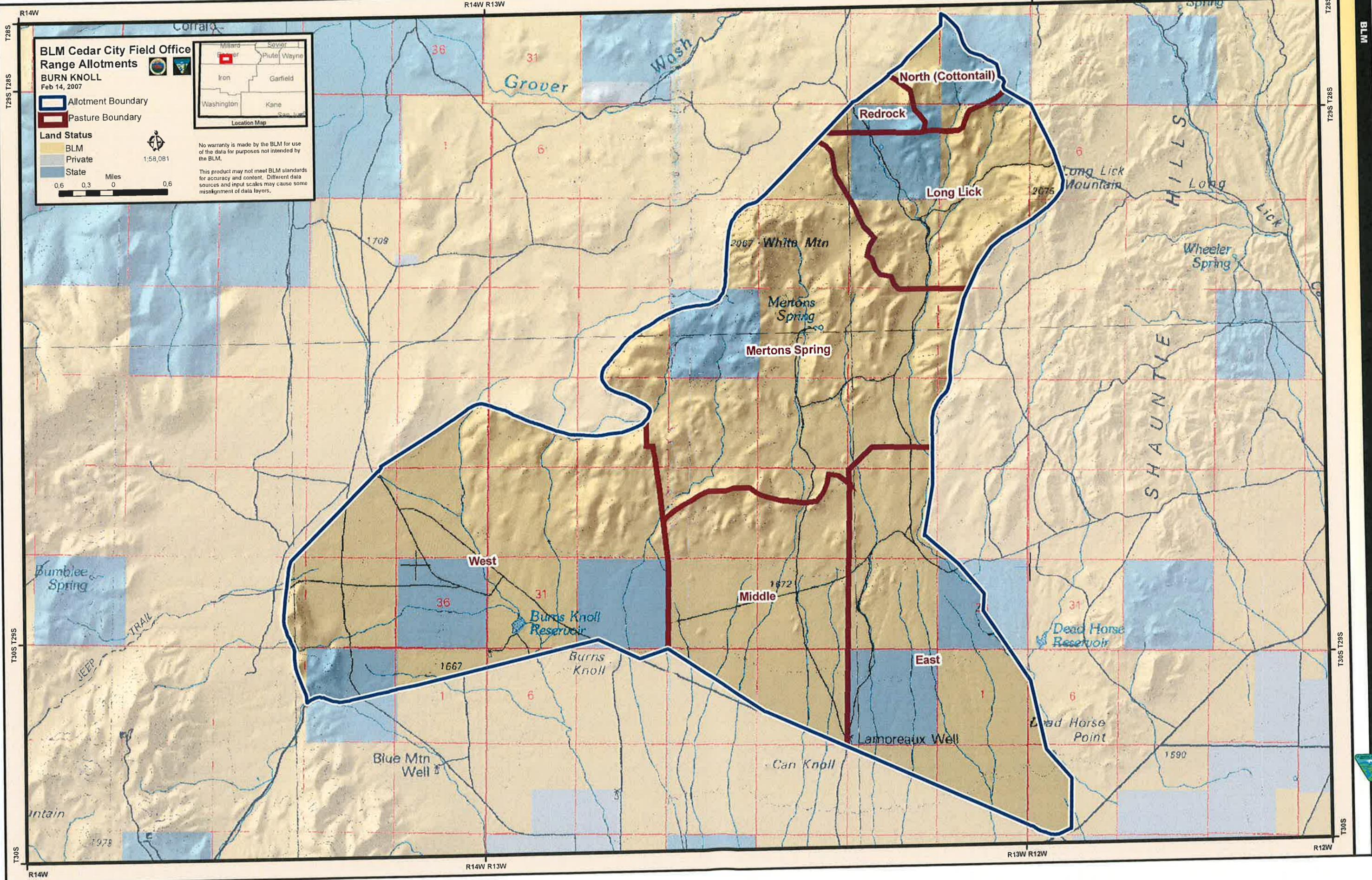
Land Status
BLM (Yellow)
Private (Light Blue)
State (Dark Blue)

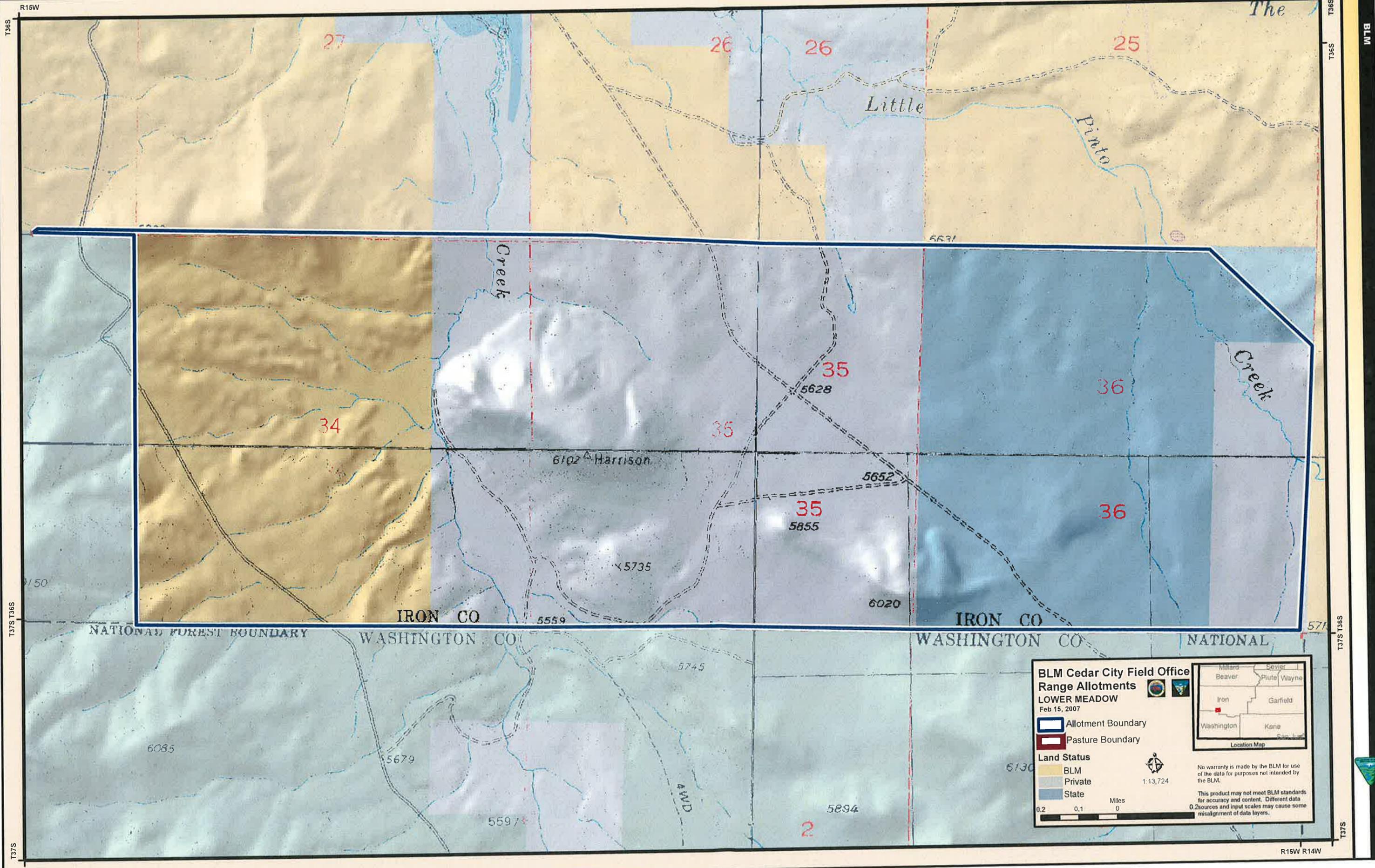
Miles
0.6 0.3 0 0.6



No warranty is made by the BLM for use of the data for purposes not intended by the BLM.

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BLM Cedar City Field Office
Range Allotments
LOWER MEADOW
 Feb 15, 2007

Allotment Boundary
 Pasture Boundary

Land Status
 BLM
 Private
 State

1:13,724
 Miles
 0.2 0.1 0

No warranty is made by the BLM for use of the data for purposes not intended by the BLM.
 This product may not meet BLM standards for accuracy and content. Different data sources and input scales may cause some misalignment of data layers.

Location Map

T36S
T37S
R15W

R15W
T36S
T37S
BLM



This product may not meet BLM standards for accuracy and content. Different data sources and input scales may cause some misalignment of data layers.

Projection: UTM, Zone 12 North
Datum: North American Datum of 1983 (NAD83)
Cedar City Field Office, GIS
November 30, 2012

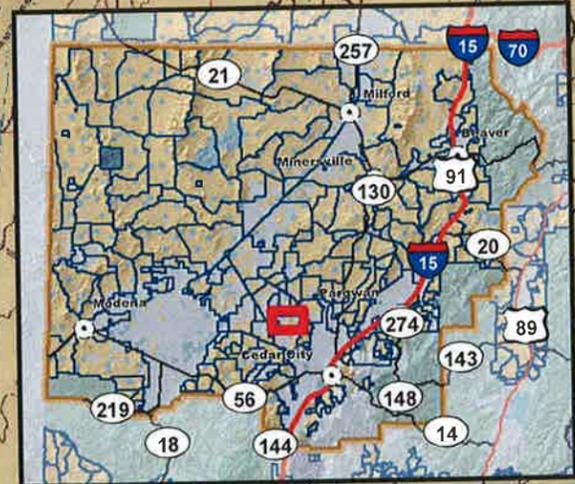
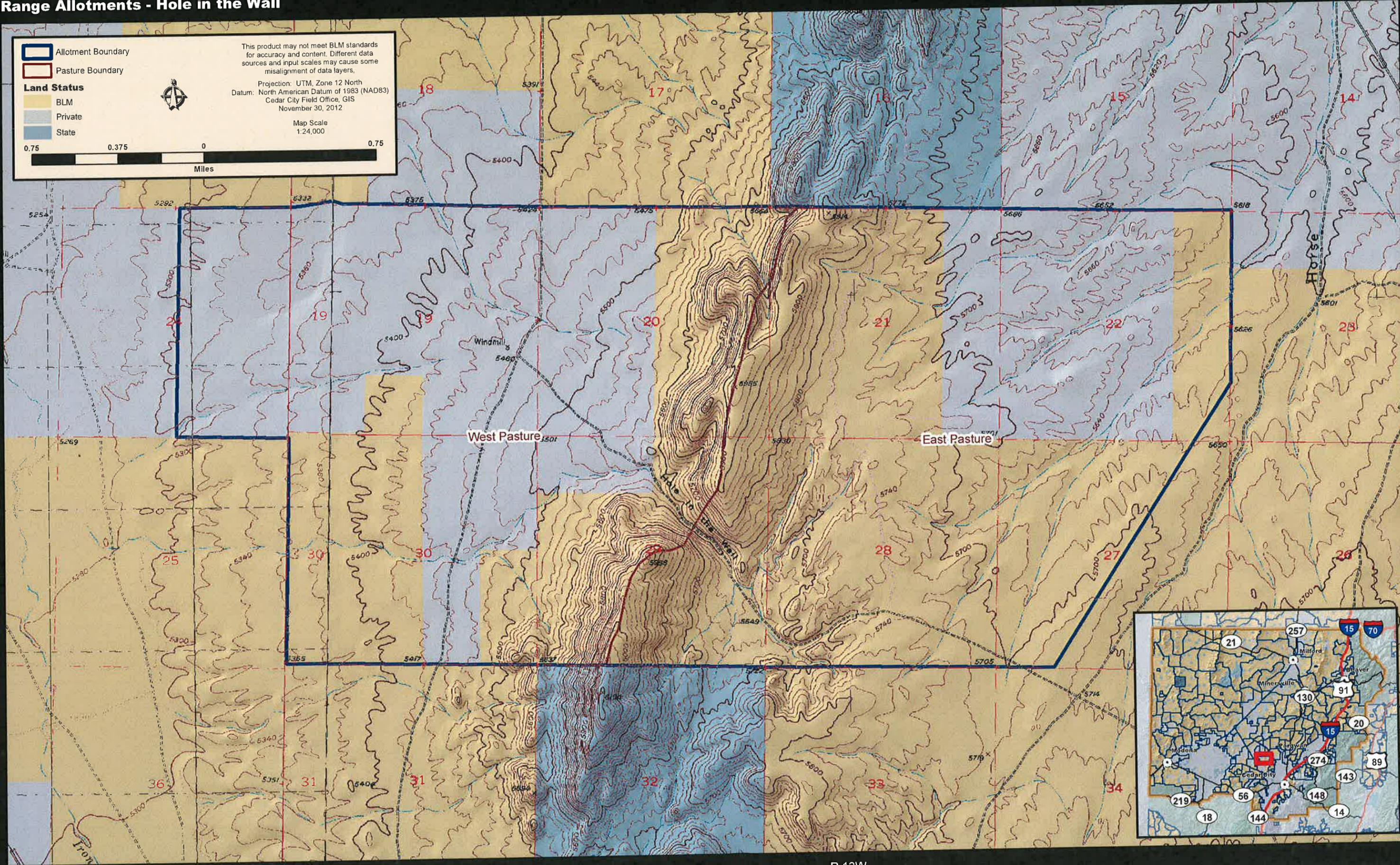
Map Scale
1:24,000

0.75 0.375 0 0.75
Miles

Land Status

- BLM
- Private
- State

Allotment Boundary
Pasture Boundary



T 34S

T 34S

R 13W

R 12W

137S R17W 137S R17W

137S R17W 137S R17W

BLM Cedar City Field Office
Range Allotments
WINSOR
 Feb 20, 2007

Land Status

- BLM (Yellow)
- Private (Light Blue)
- State (Dark Blue)

Scale: 0, 0.025, 0.05 Miles

Legend:

- Allotment Boundary (Blue outline)
- Pasture Boundary (Red outline)

No warranty is made by the BLM for use of the data for purposes not intended by the BLM.
 This product may not meet BLM standards for accuracy and content. Different data sources and map scales may cause some misalignment of data layers.

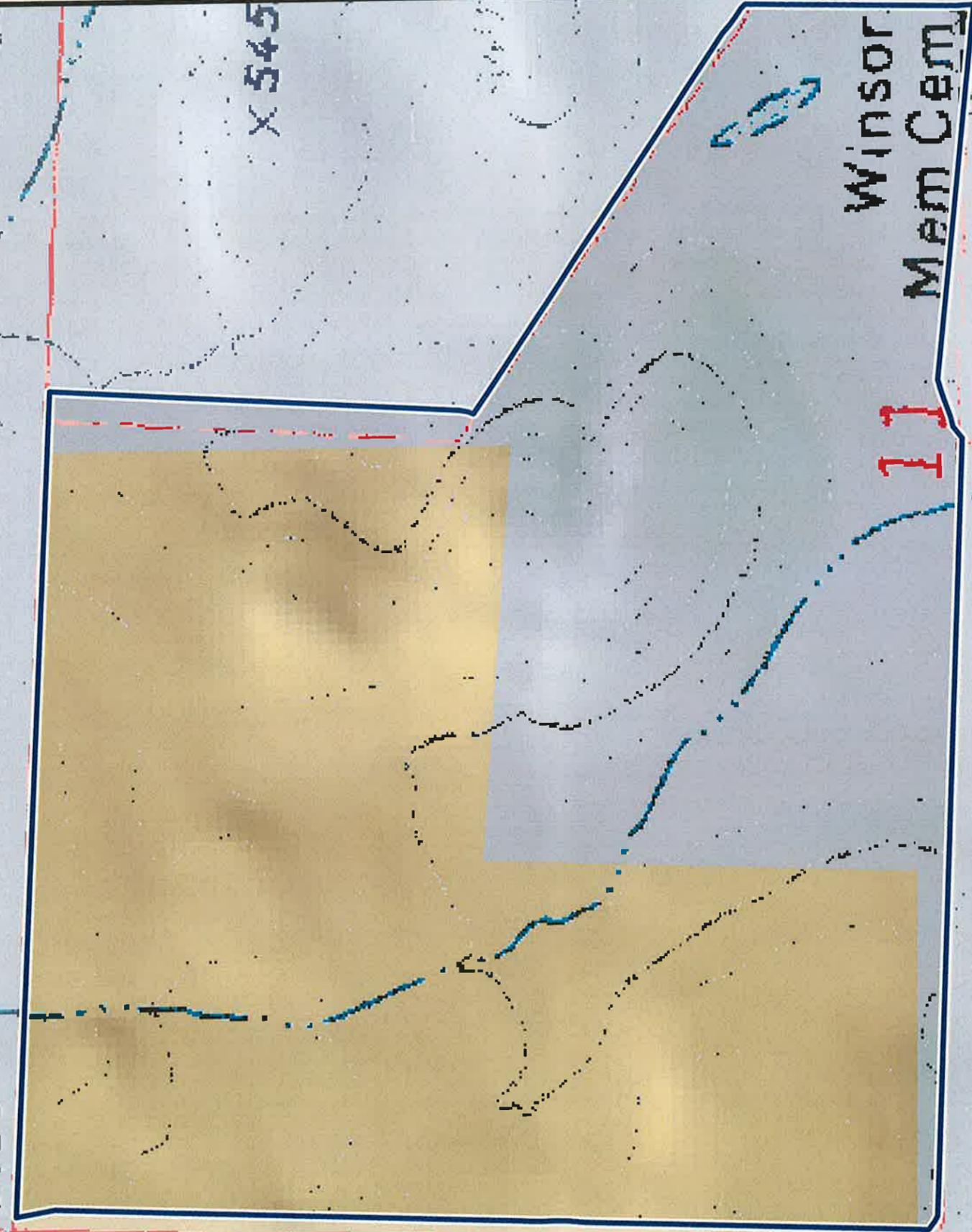
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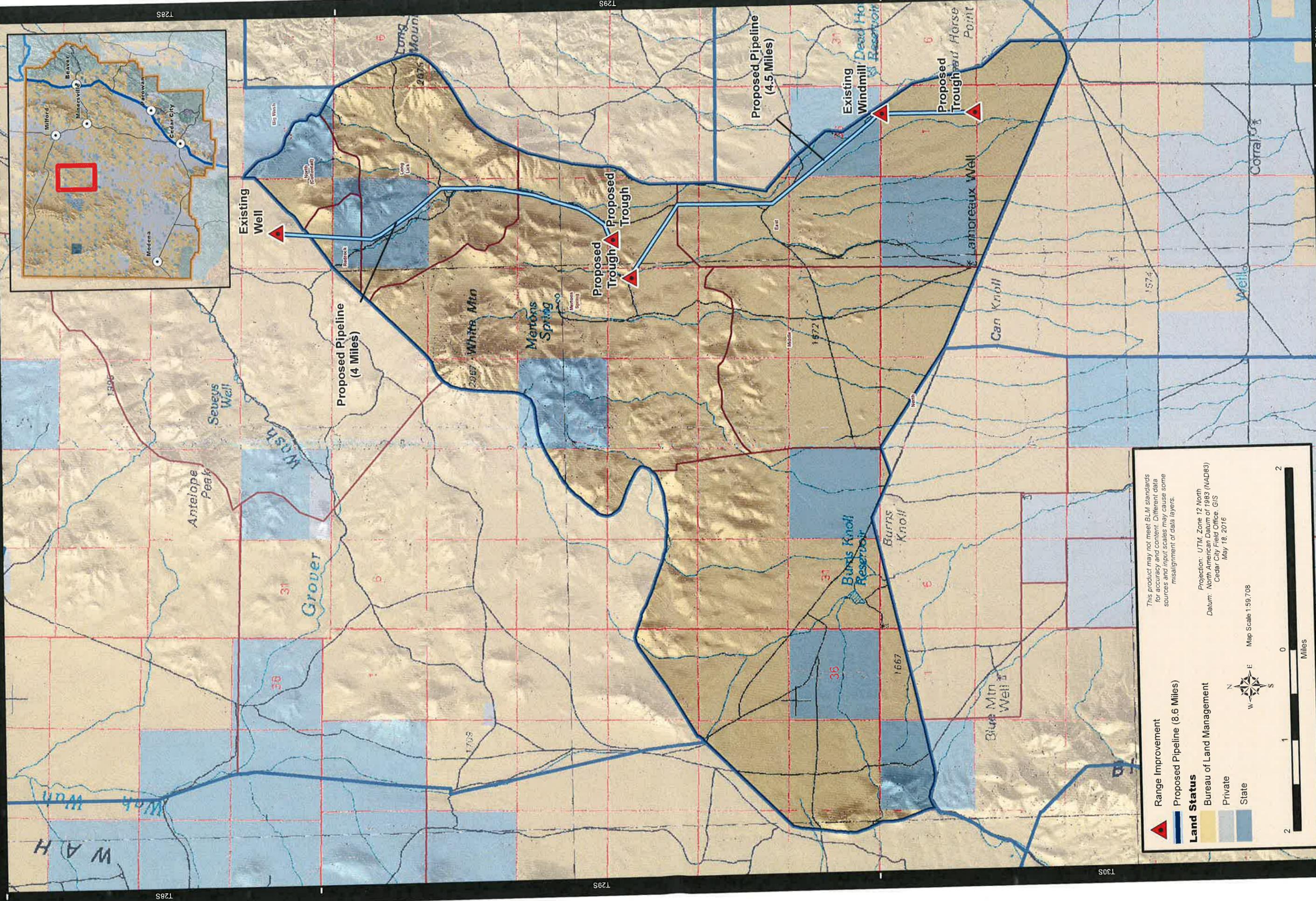
X 545

X 5437

Winsor
Mem Cem

11





This product may not meet BLM standards for accuracy and content. Different data sources and input scales may cause some misalignment of data layers.

Projection: UTM, Zone 12 North
Datum: North American Datum of 1983 (NAD83)
Cedar City Field Office, GIS
May 18, 2016

Map Scale 1:59,708

2 1 0 2
Miles

Range Improvement
▲ Proposed Pipeline (8.6 Miles)

Land Status
 Bureau of Land Management
 Private
 State

128S

129S

130S

128S

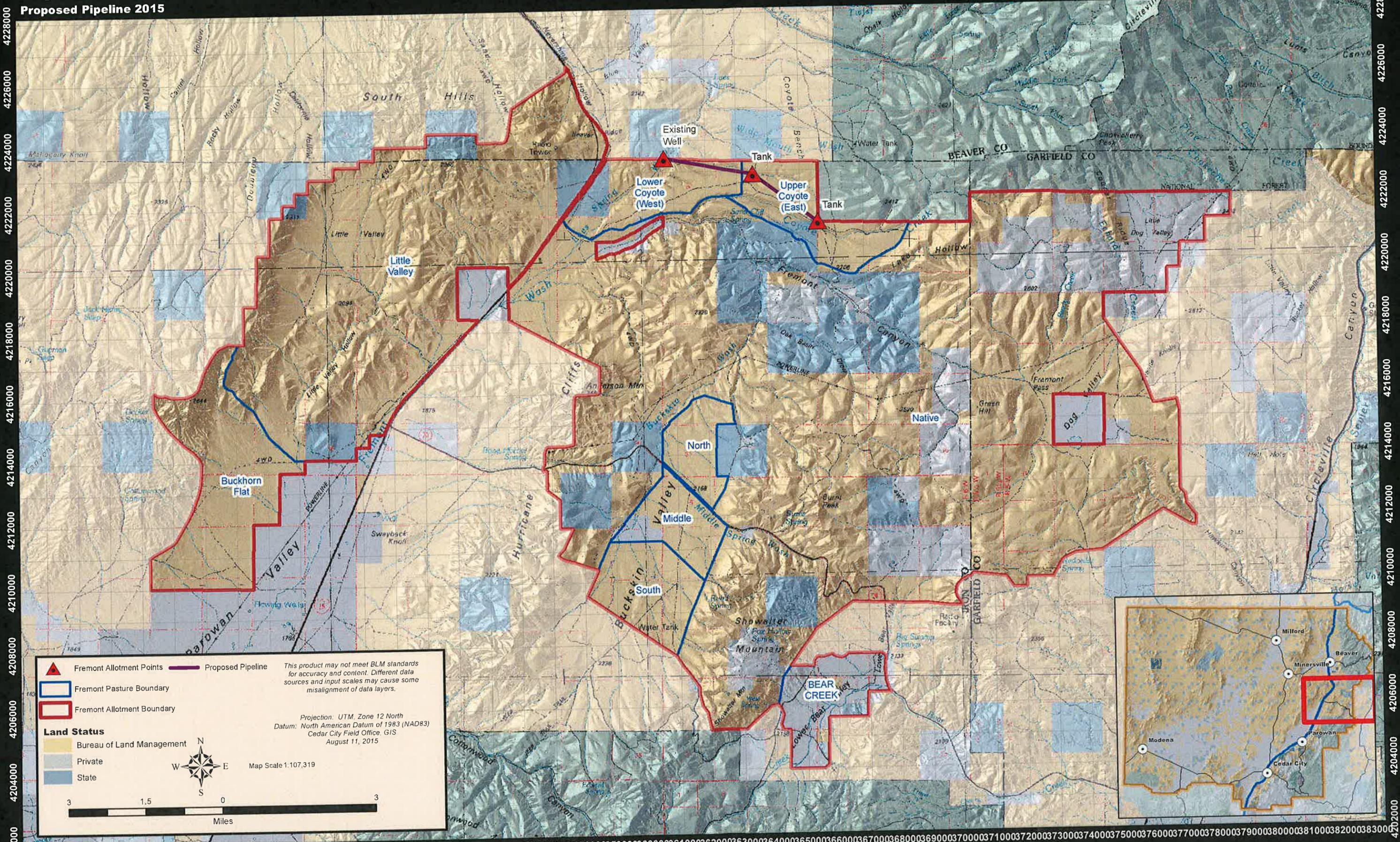
129S

130S

R14W

R13W

R12W



Legend

- Fremont Allotment Points
- Proposed Pipeline
- Fremont Pasture Boundary
- Fremont Allotment Boundary

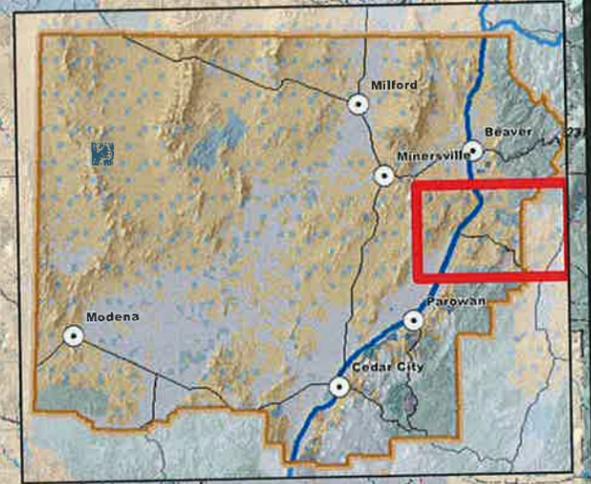
Land Status

- Bureau of Land Management
- Private
- State

This product may not meet BLM standards for accuracy and content. Different data sources and input scales may cause some misalignment of data layers.

Projection: UTM, Zone 12 North
 Datum: North American Datum of 1983 (NAD83)
 Cedar City Field Office, GIS
 August 11, 2015

Map Scale 1:107,319



341000342000343000344000345000346000347000348000349000350003510003520003530003540003550003560003570003580003590003600036100036200036300036400036500036600036700036800036900037000037100037200037300037400037500037600037700037800037900038000381000382000383000

**BLM Cedar City Field Office
Mineral Range (North Use Area) Allotment
Proposed Range Improvement Projects**

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



This product may not meet BLM standards for accuracy and content. Different data sources and input scales may cause some misalignment of data layers.

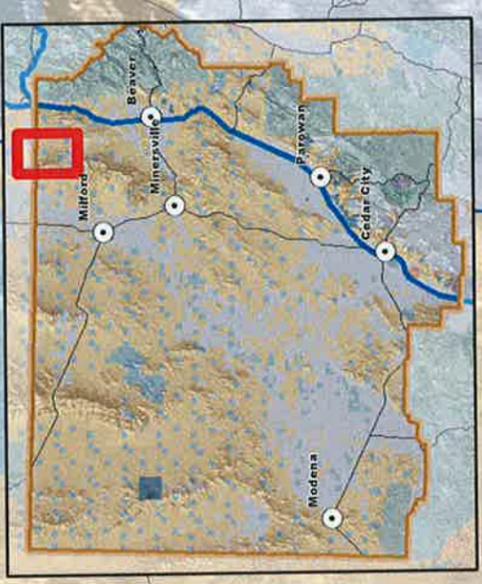
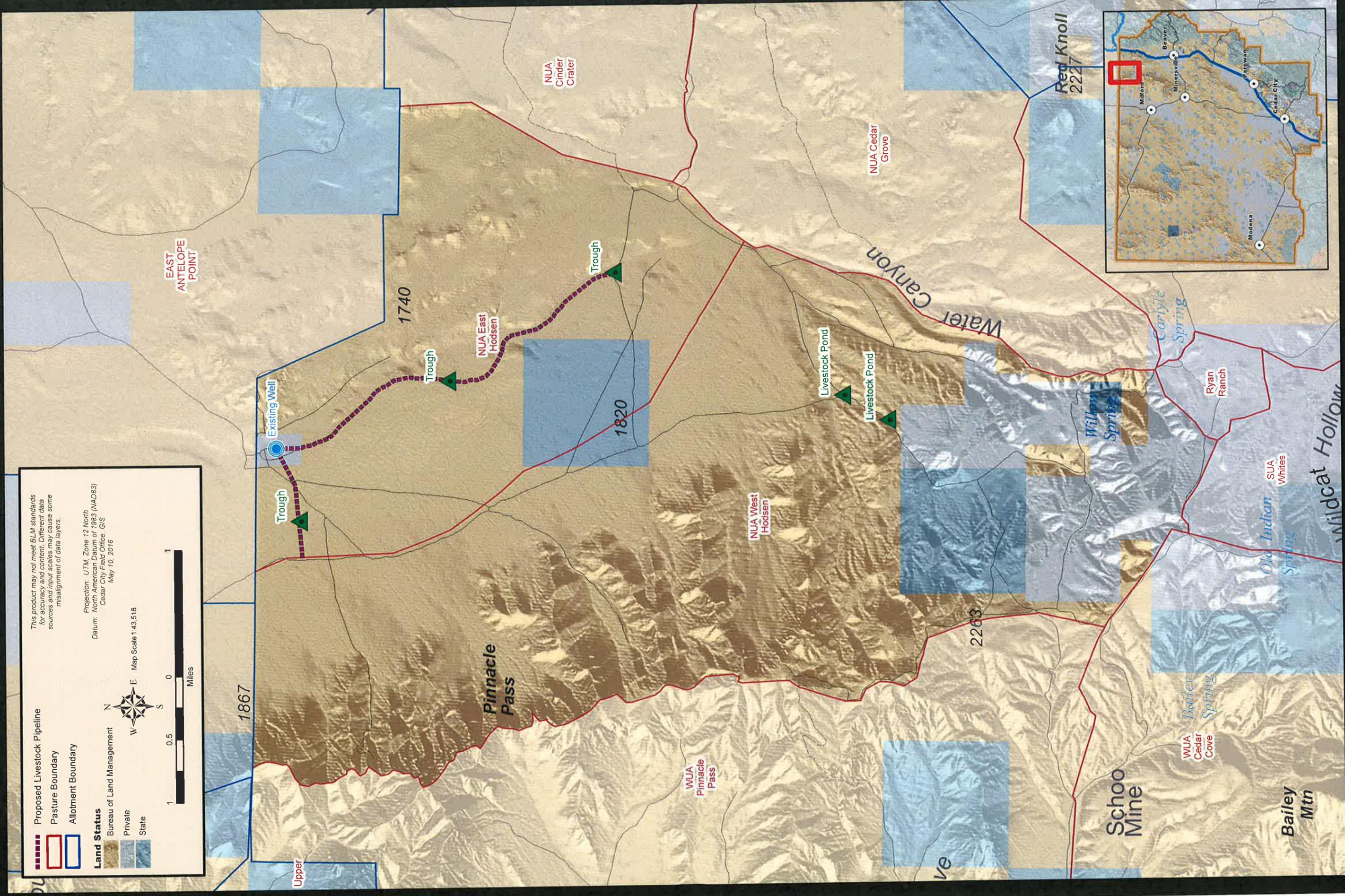
Projection: UTM, Zone 12 North
Datum: North American Datum of 1983 (NAD83)
Cedar City Field Office, GIS
May 10, 2016

Map Scale 1:43,518

1 0.5 0 1 Miles

Proposed Livestock Pipeline
Pasture Boundary
Allotment Boundary

Land Status
Bureau of Land Management
Private
State





This product may not meet BLM standards for accuracy and content. Different data sources and input scales may cause some misalignment of data layers.

Projection: UTM, Zone 12 North
Datum: North American Datum of 1983 (NAD83)
Cedar City Field Office, GIS
May 10, 2016

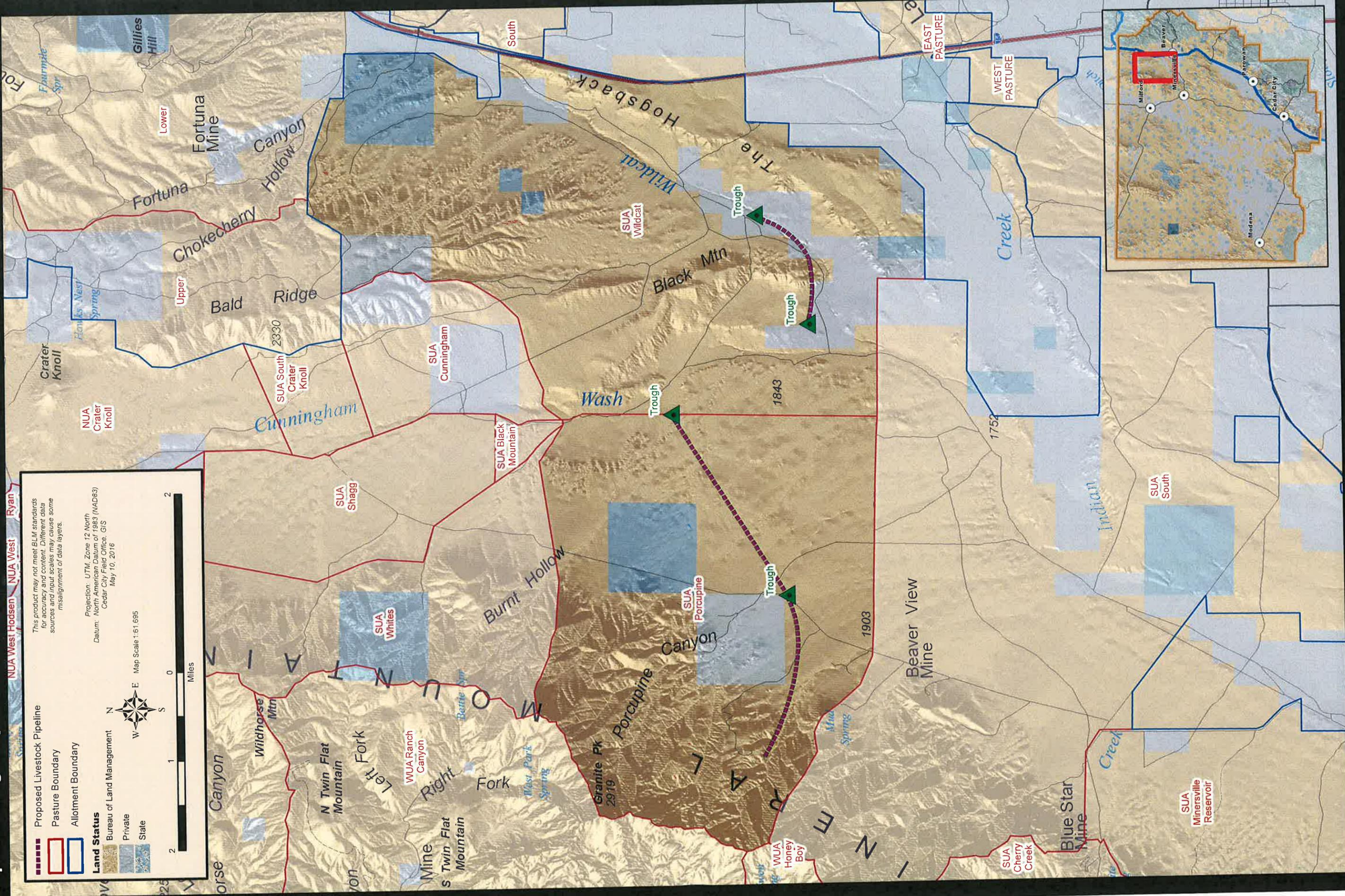
Map Scale 1:61,695

Scale: 0 to 2 Miles

- Proposed Livestock Pipeline
- Pasture Boundary
- Allotment Boundary

Land Status

- Bureau of Land Management
- Private
- State





This product may not meet BLM standards for accuracy and content. Different data sources and input scales may cause some misalignment of data layers.

Projection: UTM, Zone 12 North
Datum: North American Datum of 1983 (NAD83)
Cedar City Field Office, GIS
July 6, 2016

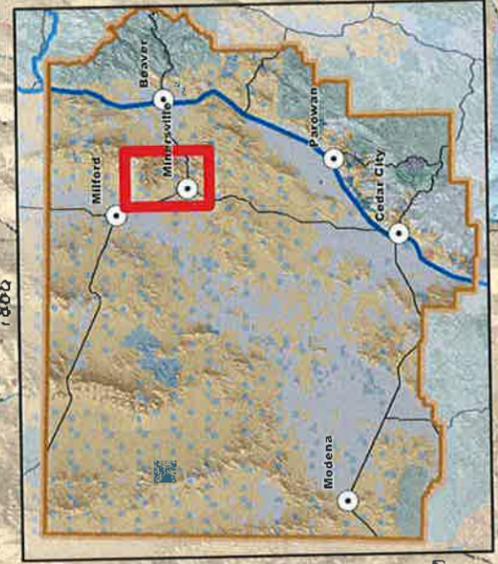
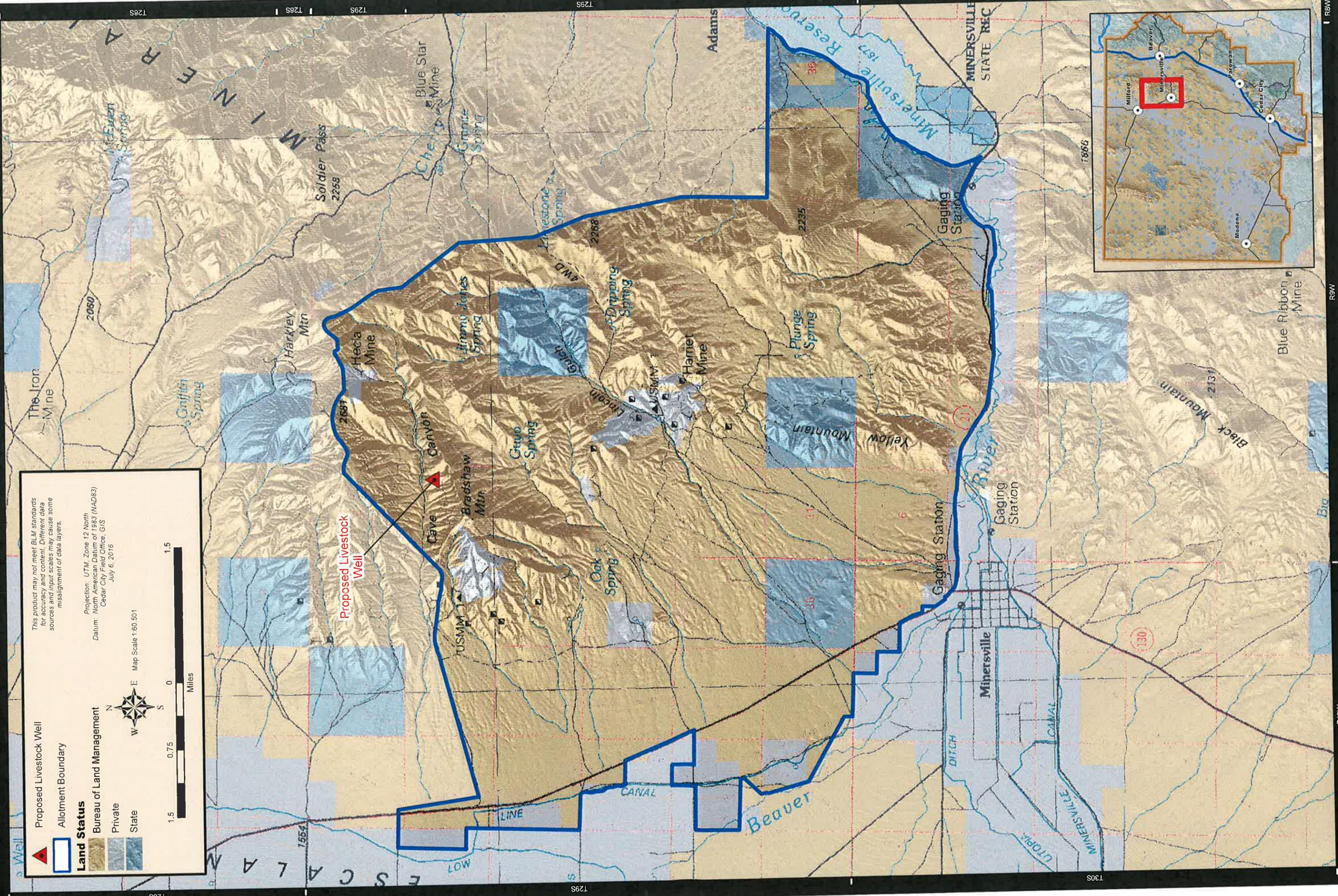
Map Scale 1:60,501

Proposed Livestock Well (Red triangle symbol)

Allotment Boundary (Blue outline symbol)

Land Status

- Bureau of Land Management (Light blue shading)
- Private (Light green shading)
- State (Light purple shading)



BLM Cedar City Field Office North Pine Valley Proposed Well

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



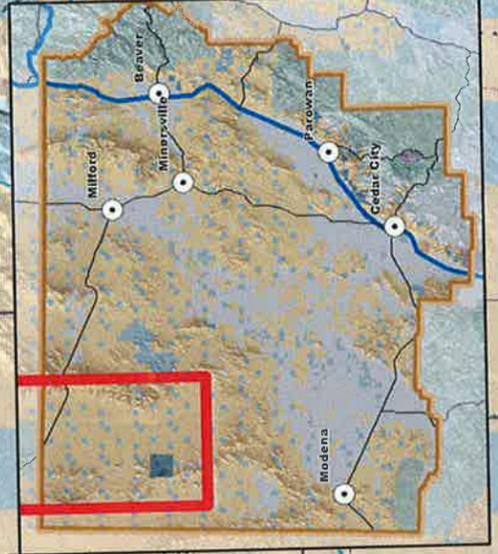
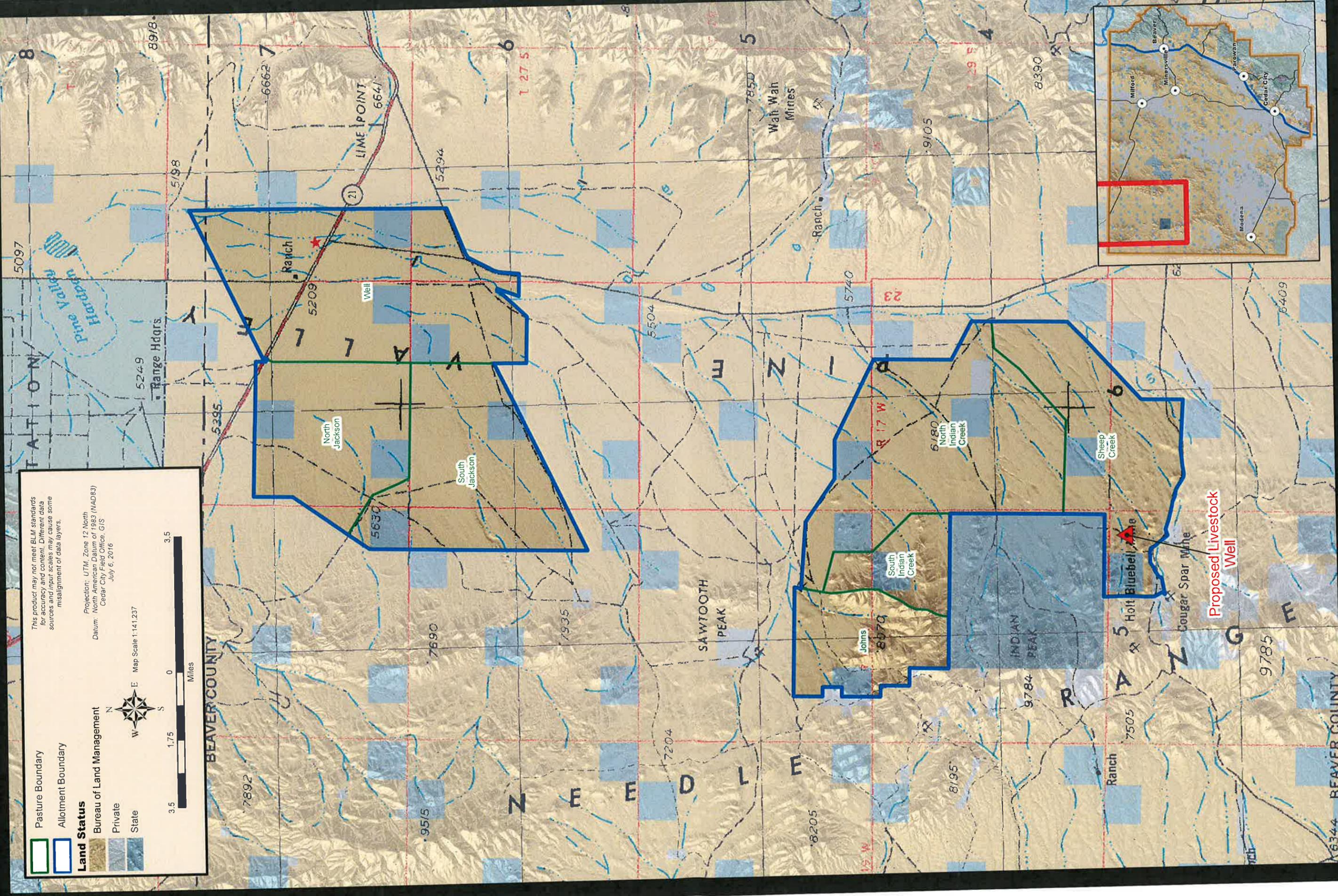
This product may not meet BLM standards for accuracy and content. Different data sources and input scales may cause some misalignment of data layers.

Projection: UTM, Zone 12 North
Datum: North American Datum of 1983 (NAD83)
Cedar City Field Office, GIS
July 6, 2016

Map Scale 1:141,237

Scale: 0 to 3.5 Miles

Land Status	
	Pasture Boundary
	Allotment Boundary
	Bureau of Land Management
	Private
	State





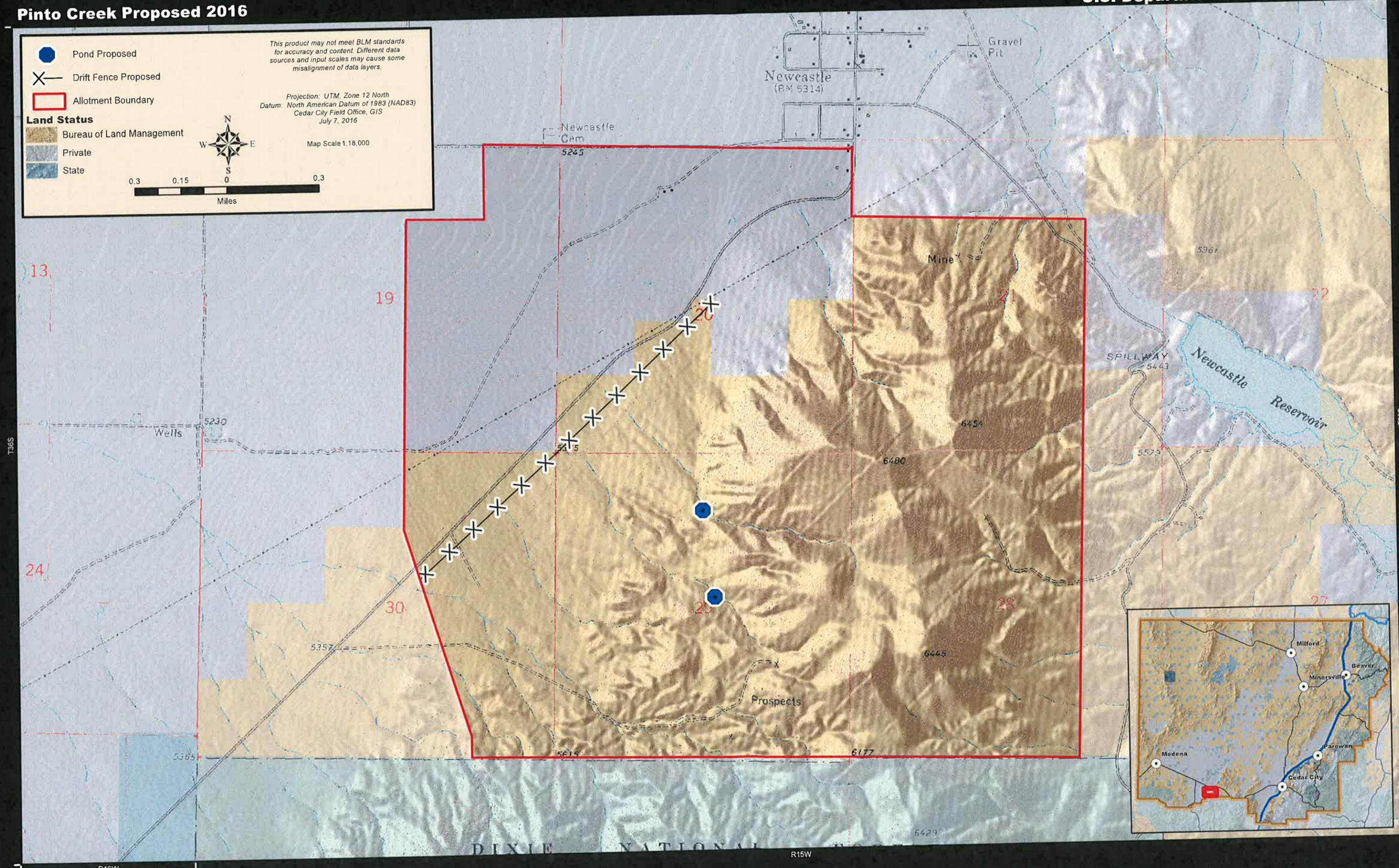
● Pond Proposed
✕ Drift Fence Proposed
 Allotment Boundary

Land Status
 Bureau of Land Management
 Private
 State

This product may not meet BLM standards for accuracy and content. Different data sources and input scales may cause some misalignment of data layers.

Projection: UTM, Zone 12 North
 Datum: North American Datum of 1983 (NAD83)
 Cedar City Field Office, GIS
 July 7, 2016

Map Scale 1:18,000

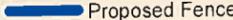


R16W

R15W

DIXIE NATIONAL

**BLM Cedar City Field Office
Range Permit Renewal**

 Proposed Fence

Land Status

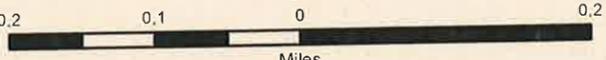
-  Bureau of Land Management
-  Private
-  State

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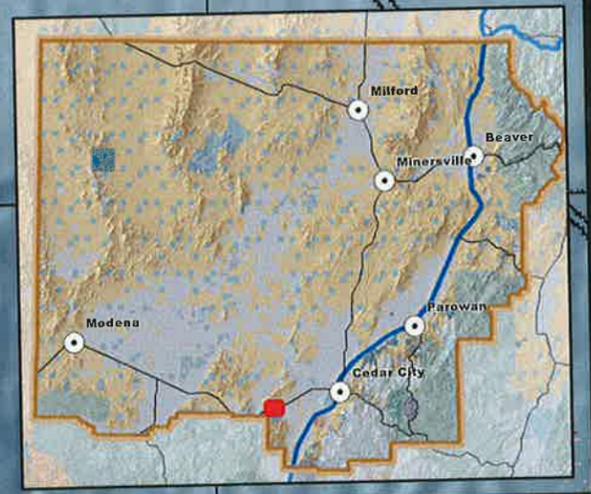
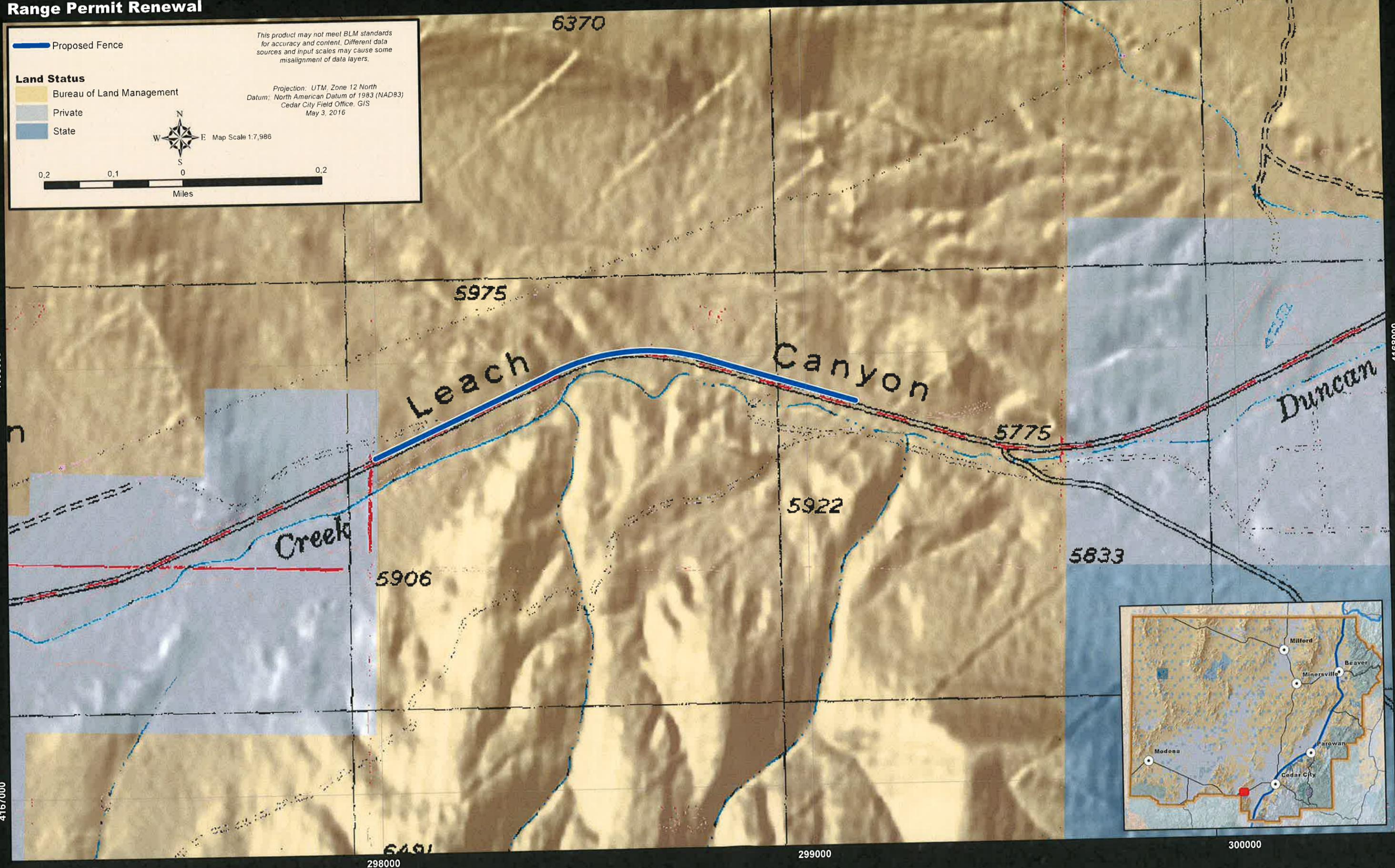
Projection: UTM, Zone 12 North
Datum: North American Datum of 1983 (NAD83)
Cedar City Field Office, GIS
May 3, 2016



Map Scale 1:7,986



Miles



INTERDISCIPLINARY TEAM NEPA CHECKLIST

Project Title: Blue Mountain et. al. Grazing Permit Renewal

NEPA Log Number: DOI-BLM-UT-C010-2015-0052-EA

File/Serial Number:

Project Leader: Mitch Bayles 435-865-3089

DETERMINATION OF STAFF: *(Choose one of the following abbreviated options for the left column)*

NP = not present in the area impacted by the proposed or alternative actions

NI = present, but not affected to a degree that detailed analysis is required

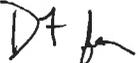
PI = present with potential for relevant impact that need to be analyzed in detail in the EA

NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section D of the DNA form.

The rationale column should include NI and NP discussions.

RESOURCES AND ISSUES CONSIDERED:

Determination	Resource	Rationale for Determination	Signature	Date
NI	Air Quality	Air quality in the area is currently meeting state standards. Nothing in the alternatives, which is essentially continued livestock grazing on this allotment, is expected to alter the ability to meet the standards.	 J. Reese	7/15/15
NP	Areas of Critical Environmental Concern	None within Field Office boundaries.	D. Bayles 	7/15/15
NI	Cultural Resources	The Class I inventory for the Cedar City Field Office identifies cultural resources across the field office and many of which are eligible to the National Register of Historic Places. It is very likely these allotments contain National Register eligible cultural resources that could be adversely affected through these grazing permit renewals. A Section 106 process following BLM-Utah's 2010-026 IM would need to be followed prior to the issuance of these permit renewals. If the Field Manager determines that the permit renewals will have no adverse effects to historic properties after following the IM process, than this PI will be changed to an NI. <u>UPDATE 6/17/2016</u> Cedar City Field Office archaeologist and archaeological technician conducted intensive pedestrian surveys on congregation areas identified by a rangeland health specialist. No historic properties were identified in any of the congregation areas. On June 17, 2016, Utah SHPO concurred with Cedar City Field Office determination of "No Historic Properties Affected" as defined in 36 C.F.R. § 800.4(c)(2)(d)(1).	 Jamie Palmer	6/24/2015 Update 6/17/2016

Determination	Resource	Rationale for Determination	Signature	Date
NI	Greenhouse Gas Emissions	Greenhouse Gas Emissions (GHG's) are created as a byproduct of internal combustion engines and include such things as carbon monoxide and carbon dioxide and other gasses. Such gasses are said to contribute to global warming. The continuation of livestock grazing at various levels as described in the alternatives would have no effect on GHG emissions because the number of trips to the field to check livestock and livestock numbers would remain more or less the same as they are currently.	 J. Reese	7/15/15
NI	Environmental Justice	The alternatives would have no disproportionately high or adverse human health or other environmental effects on minority or low-income segments of the population.	 D. Bayles	7/15/15
NP	Farmlands (Prime or Unique)	There may be soils on these allotments with potential for farmlands if irrigation water were supplied. Since no irrigation water is supplied, no farmlands exist.	 J. Reese	7/15/15
PI	Fish and Wildlife	A portion of the allotments contain yearlong pronghorn, crucial summer and winter range and yearlong elk. 3 guzzlers are located in the Burn Knoll allotment. Lowe Meadow allotment contains mapped band-tailed pigeon and wild turkey habitat. Antelope allotment is mapped as chukar habitat.	 S. Whitfield	06/25/15
NI	Floodplains	There are no Floodplains within the proposed action area according to FEMA floodplain maps.	 J. Reese	7/15/15
NI	Fuels/Fire Management	Fuels / Fire Management would not be impacted by the proposed grazing permit renewal. Livestock grazing could modify the fine fuels (grasses & forbs) within the permit areas, but would not impact overall Fire & Fuels management. Any future fuels/vegetation projects may require permittees to rest areas from livestock grazing until vegetation becomes established.	 S Peterson	06/23/15
NI	Geology / Mineral Resources/Energy Production	The surface and subsurface geology of the allotments is diverse. Portions of the allotments areas are prospectively valuable or valuable for various mineral resources. However, the nature of the surface uses associated with the allotments would not substantially impact the exploration for, or development of, any mineral resources that may be present in the allotment areas.	E. Ginouves 	6-14-15
PI	Hydrologic Conditions	See Soils. These two checklist items would be combined for the EA.	 J. Reese	7/15/15

Determination	Resource	Rationale for Determination	Signature	Date
NI	Invasive Species/Noxious Weeds	<p>NI- As long as noxious weed stipulations are adhered to, there would be no impacts from this proposal. A stipulation that the permittee's are responsible to report noxious weeds and there locations to their Range Con and help in removing them by hand cutting when patches are small and isolated. Noxious weed infestations are spread in part by the movement of animals, including livestock, by the transport of seed through physical contact and ingestion. The small, isolated noxious weed infestations should eventually be reduced in the future with the continuation of the noxious weed program which was implemented by the Cedar City Field Office. The Cedar City Field Office currently has an aggressive noxious weed control program and annually removes large quantities of noxious weeds throughout BLM administered lands in both Iron and Beaver counties. The BLM coordinates with County, State and Federal agencies in order to locate, treat and monitor noxious weed infestations throughout both counties. There are noxious weeds present in the Hamilton fort Allotment, (shurtz canyon pasture). There is 12 acres of scotch thistle present. It is important to apply best range management practices and maintain healthy plant communities with few disturbed areas where these biennial thistles and noxious weeds can establish. All The allotments contain some plant species which are non-native and/or invasive on BLM lands. They are not considered noxious weeds but are generally considered to be undesirable in regards to proper grazing management. Cheatgrass is the most important non-native invader in the allotments and affects all of them to some degree. Its presence leads to increased risk of fire and reburns. Historic livestock grazing practices may or may not have helped with the introduction of cheatgrass to these allotments. With in-place measures to decrease opportunities for introduction and current methods of control, noxious weeds should stay minimal if they become present.</p>	<p>J. Bulloch</p> <p><i>JB</i></p>	7/16/15
NI	Lands/Access	<p>Any pending or authorized lands and realty actions in the permit renewal area would not be substantially affected by the proposed action as long as measures are taken to assure all rights by grant, permit, or lease holders are upheld. Prior to surface disturbance activities related to range improvements are implemented, the Lands and Realty staff should be notified to assist in locating existing or pending lands actions that may be impacted.</p>	<p><i>DF</i></p> <p>M. Campeau</p>	06.16.15
PI	Livestock Grazing	<p>See text of EA for detailed description and analysis</p>	<p>D. Bayles <i>mb</i></p>	7/15/15
PI	Migratory Birds	<p>A variety of migratory bird and raptors occur within the various allotments.</p>	<p><i>DF</i></p> <p>S. Whitfield</p>	06/25/15
NI	Native American Religious Concerns	<p>On July 22, 2015, face-to-face consultation took place between the Paiute Indian Tribe of Utah (PITU) and the BLM-Cedar City Field Office. The PITU have reviewed the project and have no objection to the project moving forward. The PITU would like to be informed of any changes or updates to the project.</p>	<p><i>JP</i></p> <p>Jamie Palmer</p>	7/22/2015

Determination	Resource	Rationale for Determination	Signature	Date
NI	Paleontology	The grazing allotments encompass diverse surficial geology some of which has medium potential (Class 3, using the Bureau's PFYC System) for occurrence of vertebrate fossils or scientifically significant invertebrate fossils. However, the nature of the surface disturbing activities associated with operating the allotments makes it very unlikely that any fossil resources that may be present would be adversely impacted or destroyed.	E. Ginouves 	6/14/15
PI	Rangeland Health Standards	See text of EA for detailed description and analysis	D. Bayles ^{MB}	7/15/15
NI	Recreation	The Blue Mountain allotment is in an area used for dispersed recreation such as camping, hunting and OHV riding. The proposed action would have no impact to these types of recreation opportunities. There are no developed recreation sites within the allotment.	Dave Jacobson 	1-5-2016
PI	Socio-Economics	See text of EA for detailed description and analysis	D. Bayles ^{MB}	7/15/15
PI	Soils	See text of EA for detailed description and analysis	J. Reese ^{DTJ}	7/15/15
NI	Special Status Plant Species	There are no known Special Status Plant Species present in the proposed action area.	J. Reese ^{DTJ}	7/15/15
NI/PI	Special Status Animal Species	NI - No TEC species have been mapped within the allotments. PI - The Burn Knoll and Blue Mountain allotments have document pygmy rabbits. Ferruginous hawk nest occur in the Blue Mountain allotment.	S. Whitfield 	06/25/15
NI	Wastes (hazardous or solid)	There are no HAZMAT concerns or issues related to these grazing allotments. There are no known HAZMAT issues present. Having and maintaining a proactive approach to stabilization of the soil by promoting vegetative ground cover for proper infiltration is recommended. Wastes from cattle will be minimal with an active waste management program in place and appropriate rotation of the land for grazing of the cattle. There are no waterways for runoff of solid wastes BLM would be responsible for. Little Pinto Creek in the Lower Meadow Allotment runs through grazing pasture the state will be responsible for.	Glenn Pepper 	6/22/15

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

NI	Water Resources/Quality (drinking/surface/ground)	No water quality data is available for waters on this allotment. No 303(d) listed waters occur on this allotments or downstream of it. The Division of Water Quality has not assessed water quality nor made any determinations concerning water quality on this allotment. It is suspected water quality, especially fecal colliforms, varies considerably from season to season on this allotment, depending upon where cattle, wild horses and wildlife are affecting them. Continued grazing under any alternative would continue to have the same result. Riparian areas on this allotment are in a variety of conditions ranging from PFC to non-functional. Any improvement in grazing management on riparian systems, such as exclosures or structured rotational grazing, would likely serve to improve water quality.	D7 for J. Reese	7/15/15
NI	Wetlands/Riparian Zones	<p>There is only one riparian resource within the Burn Knoll Allotment. This lentic riparian area is known as Merton's Spring and consists of 0.1 acre of riparian habitat. Merton's Spring was last inventoried in 2005, and was found to be Functioning at Risk with an upward trend at that time. The causal factors for not meeting PFC included upland condition and erosion, including head-cutting at the upper extent of the riparian area, impacting the rest of the riparian area. The uplands around the spring are dominated by thick pinion/juniper woodland with very few understory species present to reduce erosion. There is an exclosure around the riparian area, so livestock grazing would not be expected to impact riparian function for this resource as long as the exclosure remains in good condition.</p> <p>There are no wetlands/riparian zones within the Antelope, Blue Mountain, Hole in the Wall, Lower Meadow, or Windsor Allotments.</p>	D4 for A. Stephens	7/20/2015
NI	Wild and Scenic Rivers	None within Field Office boundaries.	Dave Jacobson	8-18-2015
NI	Wilderness/WSA	There are no wilderness study areas or wilderness areas within the allotments associated with this permit.	Dave Jacobson	8-18-2015
NI	Woodland / Forestry	Woodland species present but proposed action with have little effect.	C. Peterson	7/20/2015
PI	Vegetation	See text of EA for detailed description and analysis	D. Bayles	7/15/15
NI	Visual Resources	Operations associated with grazing will not impact the landscape in a way that will impair or manipulate the scenic quality.	Dave Jacobson	8-18-2015

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

PI	Wild Horses and Burros	<p>PI – Antelope Allotment – The Antelope Allotment comprises 4% of the Chloride HMA. Changes in season of use, AUMs, range improvements, and other livestock management can impact wild horses.</p> <p>NI – Blue Mountain and Burn Knoll - Livestock grazing management within the Blue Mountain and Burn Knoll allotments would not impact wild horses within the Cedar City Field Office. The Blawn Wash and Four Mile HMAs are located near these allotments, but do not share acreage. Wild horses do occasionally travel outside the HMAs and enter into these allotments. In 2014, wild horses that had entered into these allotments were removed. In accordance with 43 CFR 4710.4, the Cedar City Field Office shall manage wild horses in a manner to limit animal disturbance to Herd Areas. Wild horses that do roam outside the designated HMAs and onto these allotments would be removed as soon as possible. If wild horses are confirmed on the allotments, they would be removed when gather operations are occurring on the nearby HMAs.</p> <p>NI – Winsor, and Lower Meadow allotments. These allotments are not in a Herd Area (HA) or Herd Management Area (HMA) nor are wild horses in these allotments.</p>	 C. Hunter	6/22/15
NI	Lands with Wilderness Characteristics	The allotments associated with this permit do not have any areas identified as having wilderness characteristics.	Dave Jacobson 	8-18-2015

FINAL REVIEW:

Reviewer Title	Signature	Date	Comments
Environmental Coordinator	<i>Gina Ginowes</i>	7/8/16	
Authorized Officer	<i>Dan Fletch</i>	7/8/16	

Follow the italicized instructions below and then delete the asterisks "" in the checklist, this sentence, and the instructions.*

**Rationale for Determination is required for all "NIs" and "NPs." Write issue statements for "PIs"*

***Varies by specific location and BLM Field Office*

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

APPENDIX B SUMMARY OF ALL UTAH PRAIRIE DOG CONSERVATION MEASURES FROM THE GRAZING PROGRAMMATIC CONSULTATION OF OCTOBER 2008

Introduction

This consultation covered the entire Cedar City Field Office. Future term grazing permits within Utah prairie dog habitat will include the proposed terms and conditions; and BLM committed mitigation measures that include allotment specific resource management objectives, project stipulations, and conservation measures. Existing permits from previous consultations will be reviewed whenever proposed changes trigger an environmental analysis, or Utah prairie dogs are documented on an allotment.

If Utah prairie dogs establish on an allotment after completion of the grazing permit renewal process, a determination will be made on whether the grazing system for that allotment is consistent with this consultation. If necessary the permit will be amended to include these conservation measures. If the grazing permit cannot be amended to be in compliance with this consultation, BLM will reinitiate consultation on that individual permit. Establishment is defined as five or more Utah prairie dogs documented during spring counts that have naturally expanded, or been translocated, onto the allotment.

Allotment Specific Resource Management Objectives

- Range trend would be static to upward within the allotment
- Utilization on key herbaceous forage species in upland habitats would not exceed 50% utilization, by weight, of the current year's vegetative growth by the end of the authorized grazing season. Key species vary by allotment, but would include these species if they occur as a dominant or subdominant species: bluebunch wheatgrass, western wheatgrass, crested wheatgrass, Indian ricegrass, needle grasses (needle-and-thread, Thurber's), bottlebrush squirreltail, bluegrasses, galleta grass, sand dropseed, and grama grasses.
- If utilization objectives within a pasture reach or exceed specified objectives where measurable standards have been set, the permittee(s) would be required to remove sheep immediately or cattle within 3-5 days, upon notification.
- If utilization objectives within mapped Utah prairie dog habitat reach or exceed specified objectives, this would be considered a trigger for the permittee(s) to remove livestock completely, or to redistribute livestock to outside of the habitat area using salt, herding, water, or fencing. Sheep would be moved immediately and cattle would be moved within 3-5 days, upon notification.
- Monitoring during periods of drought would be completed and as necessary livestock numbers would be adjusted to reduce utilization levels to <33% in Utah prairie dog habitat as conditions warrant. BLM has the authority to adjust livestock use, as needed, based on annual climatic conditions, forage production and plant vigor. For the purposes

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

of this proposal, drought is defined as 75% or less of normal precipitation in an area as measured by the best available information collected during the critical growing season (such as BLM rain gauge data, local data from the Western Regional Climate Center, or National Integrated Drought Information System).

- The BLM would assess resource conditions through field inspections and determine, in consultation with the permittee, whether management changes (e.g., changes in livestock numbers, adjustment of move dates, or other changes of use within the parameters identified under this alternative) may be implemented prior to reaching maximum utilization. Move dates may be adjusted as needed when monitoring indicates maximum utilization has been reached, or due to unusual climatic conditions, fire, flood, or other act of nature. If maximum utilization is reached on key species/areas in the allotment before a scheduled move, the use of salt, herding, or other management options may be used to distribute livestock away from an area where maximum utilization has been reached, or livestock may be moved from the use area or allotment (after consultation with the permittee), as deemed necessary by the BLM.
- All salt/mineral supplements would be located at least ½ mile or further distance from Utah prairie dog habitat. Any variances would need approval of the Authorized Officer.
- New water haul locations would be located outside of Utah prairie dog habitat, or they will be in conformance with Stipulations for New Projects and Supplemental Livestock Management Activities on Grazing Allotments (Appendix C).

Additional Resource Management Objectives for Sheep Operators:

- Sheep bed grounds would be used once during the current year's grazing season where possible. Sheep camps, bedding grounds, shearing locations, and temporary sheep troughs would be placed a minimum of 0.25 mile from permanent water. They would be located outside of Utah prairie dog habitat, or they will be in conformance with Stipulations for New Projects and Supplemental Livestock Management Activities on Grazing Allotments (Appendix C).
- Sheepdogs and herd dogs would be under the control of the operator or herder at all times and would not be allowed to hunt or wander within Utah prairie dog colonies, or harass any wildlife.

Mandatory Terms and Conditions

Grazing management systems would be developed to ensure that the same pastures are not continuously grazed throughout the spring and/or summer two years in a row. A deferred grazing rotation system would be required to meet the needs of perennial vegetation as well as to ensure forage requirements for Utah prairie dogs. Fall and winter livestock grazing may occur yearly without a grazing management system in Utah prairie dog habitat.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

SEASON	DATE
Spring	March 15 th – June 15 th
Summer	June 16 th – September 15 th
Fall	September 16 th – December 14 th
Winter	December 15 th – March 14 th

Standard and Cedar City Field Office Terms and Conditions

Standard and Cedar City Field Office Terms and Conditions are applicable to all grazing permits and are mostly administrative in nature. They are not Utah prairie dog specific.

Allotment Terms and Conditions

Allotment Terms and Conditions are specific to each grazing allotment. The following are BLM committed mitigation measures and will be incorporated into all grazing permits covering allotments with Utah prairie dog habitat, as mapped by either the Utah Division of Wildlife Resources or BLM.

Maintenance of Existing Rangeland Improvements

The term and condition will read: “Maintenance of existing rangeland improvement projects such as fences, ponds, water pipelines, troughs or other projects will be in accordance with the stipulations in Recommended Procedures to Minimize, Monitor, and Mitigate Take Associated with the Maintenance of Existing Facilities on Public Lands (Refer to Appendix D).”

Stipulations for New Projects and Supplemental Livestock Management Activities

The term and condition will read: “All new range projects on BLM lands, including new water locations, salt, mineral and supplemental feed locations will be in accordance with the stipulations in Stipulations for New Projects and Supplemental Livestock Management Activities on Grazing Allotments (Refer to Appendix C).”

These are BLM committed mitigation measures for rangeland improvements in Utah prairie dog habitat. New projects may be proposed within grazing allotments to assist with livestock management and distribution. Examples of new projects include fences, cattle guards, ponds, water pipelines, and troughs. Water, salt, sheep shearing and mineral locations, etc. are also subject to these stipulations because they may have long term impacts on habitat.

As clarification, existing permanent water troughs, or temporary troughs at established water haul locations, may currently occur within Utah prairie dog habitat. Utah prairie dogs may occur at these troughs. Those locations existing at the time of analysis would be exempt from the distance requirements for new water troughs. However, FWS has requested that BLM evaluate existing troughs within active Utah prairie dog habitat and move them if they are causing declines in Utah prairie dogs in the affected colony.

Land Use Plan Conservation Measures

In June 2007, Utah BLM received a Biological Opinion (BO) from FWS in response to the submission of land use plan programmatic BA's (USDI FWS 2007c). A set of conservation

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

measures accompanied the BO. Conservation measures provide species-specific guidance intended to avoid, minimize, or reduce potential adverse impacts from implementation of BLM actions under the authority of current Utah BLM LUPs. These conservation measures are considered part of BLM's committed mitigation measures. The measures for the Utah prairie dog are listed below.

Surveys according to approved protocols and procedures will be required prior to surface disturbance unless species occupancy and distribution information is complete, current, and available. Surveys would be conducted by BLM-approved biologists. In the event species occurrence is verified, the project proponent may be required to modify operational plans, at the discretion of the authorized officer, to include additional, appropriate protection measures or practices for the minimization of impacts to the Utah prairie dog and its habitat.

1. BLM will restrict surface disturbing activities within 0.5 mile of active Utah prairie dog colonies when and where necessary, upon the recommendation of BLM FO staff biologists to BLM management and as necessary in coordination or consultation with USFWS.
2. No permanent surface disturbance or facility will be allowed within 0.5 mile of potentially suitable Utah prairie dog habitat, as identified and mapped by the Utah Division of Wildlife Resources or BLM, since 1976.
3. Unavoidable surface disturbing activities in Utah prairie dog habitat should be conducted between April 1 and September 30 (the period when prairie dogs are most likely to be found above ground). BLM projects will be designed to avoid direct disturbance to Utah prairie dog populations and habitat wherever possible. Designs should consider flow of water, slope, buffers, possible fencing, and pre-activity flagging of critical areas for avoidance.
4. Reclamation and restoration efforts in Utah prairie dog habitat will be conducted using native seed, unless otherwise specified in coordination with USFWS.
5. As funding allows, BLM should complete a comprehensive assessment locating and mapping OHV use areas that interface with Utah prairie dog populations. Comparison of GIS layers for Utah prairie dog populations and OHV use should give BLM personnel another tool to manage and/or minimize impacts from OHV use near known Utah prairie dog populations and habitat. Based on the information that is developed via GIS applications, appropriate actions should be taken to prevent OHV use in occupied territories.
6. BLM will consider emergency OHV closures or additional restrictions to protect, conserve, and recover the species.
7. Where technically and economically feasible, the use of directional drilling or drilling of multiple wells from a single pad will be required to reduce surface disturbance in Utah prairie dog habitat.
8. For existing facilities, BLM and facility operators, will consider if fencing infrastructure on well pads (e.g., drill pads, tank batteries, and compressors) would be needed to protect

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

equipment from burrowing activities. In addition, BLM and project proponents should consider if future surface disturbing activities would be required at the site.

9. BLM will provide educational information for project proponents and the general public pertaining to appropriate vehicle speeds and the associated benefit of reduced vehicle collisions with wildlife, and to improve general ecological awareness of habitat disturbance.
10. Project related vehicle maintenance activities will be conducted in maintenance facilities. Should it become necessary to perform vehicle or equipment maintenance on-site, these activities will avoid identified Utah prairie dog colonies or within a 350-foot distance from colonies. Precautions shall be taken to ensure that contamination of maintenance sites by fuels, motor oils, grease, etc. does not occur and such materials are contained and properly disposed of off-site. Inadvertent spills of petroleum based or other toxic materials shall be cleaned up and removed immediately.
11. BLM will coordinate with interested private and governmental agencies and landowners to identify voluntary opportunities to modify current land stewardship practices that may have detrimental impacts on the Utah prairie dog and its habitat.
12. BLM-authorized equipment and vehicles planned for use within Utah prairie dog habitat will be cleaned to minimize the spread of noxious weeds or other undesirable vegetation types.

Monitoring

Habitat monitoring would occur as described in the Monitoring Plan for Grazing within Utah Prairie Dog Habitat, Appendix E, as updated. This monitoring plan has been developed to be adaptive to changing situations and may be modified through annual reports from BLM to the FWS.

Reasonable and Prudent Measures from Biological Opinion

1. Measures shall be implemented to prevent Utah prairie dogs from being killed or harmed by any project-related activity.
2. Measures shall be implemented to minimize loss, degradation, and fragmentation of Utah prairie dog habitat.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Terms and Conditions from Biological Opinion

BLM must comply with the following Terms and Conditions, which implement the Reasonable and Prudent Measures, above. If BLM or the permittee(s) fail to comply with the Reasonable and Prudent Measures or Terms and Conditions, the BLM shall suspend grazing activities in the affected allotment until such time as the BLM and permittee(s) are in compliance.

1. The BLM Cedar City Field Office will follow guidelines as established in Recommended Procedures to Minimize, Monitor, and Mitigate Take Associated with the Maintenance of Existing Facilities on Public Lands (Refer to Appendix D). These procedures will be reviewed and updated as necessary to incorporate new science to minimize impacts to Utah prairie dogs.
2. The BLM Cedar City Field Office will be in accordance with Stipulations for New Projects and Supplemental Livestock Management Activities on Grazing Allotments (Refer to Appendix C). These stipulations will be reviewed and updated as necessary to incorporate new science to minimize impacts to Utah prairie dogs.
3. The BLM Cedar City Field Office will follow guidelines as established in Utah Standards for Rangeland Health, the Fundamentals of Rangeland Health and Regulations.

Conservation Recommendations from Biological Opinion

- Existing troughs within active Utah prairie dog habitat should be evaluated and moved if causing declines in Utah prairie dogs in the affected colony.
- Change season of use dates on permits if necessary to improve Utah prairie dog habitat conditions.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

APPENDIX C STIPULATIONS FOR NEW PROJECTS AND SUPPLEMENTAL LIVESTOCK MANAGEMENT ACTIVITIES ON GRAZING ALLOTMENTS

The following stipulations have been developed to minimize and mitigate impacts to Utah prairie dogs from new rangeland improvement projects. These stipulations may not be modified without review and approval of BLM's wildlife biologist. The biologist will determine if the proposed modifications result in new impacts and if re-initiation of consultation with the U.S. Fish and Wildlife Service is required. Failure to comply with these stipulations may result in an Endangered Species Act violation.

Process to follow with new proposals

Determine the type and general location of the rangeland improvement project needed. Examples of new projects include fences, cattle guards, ponds, water pipelines, and troughs. Water, salt, sheep shearing and mineral locations, etc. are also subject to these stipulations because they may have long term impacts on habitat.

A qualified Utah prairie dog wildlife biologist will determine if the project area contains any potentially suitable Utah prairie dog habitat prior to any activities, including flagging of proposed fence lines or other project locations. Potentially suitable habitat will require site specific surveys unless species occupancy and distribution information is complete, current, and available.

A qualified Utah prairie dog wildlife biologist will survey the potentially suitable habitat within the project area prior to any activities, including flagging. They will use the most current U.S. Fish and Wildlife Service survey protocol.

The biologist will determine if the project area contains any active, inactive, or abandoned burrows.

BLM will restrict surface disturbing activities within 0.5 mile of active Utah prairie dog colonies when and where necessary (LUP conservation measure). Ideally, all water, salt, mineral, shearing or supplemental feed locations would be located 0.5 mile outside of Utah prairie dog habitat. As necessary, upon the recommendation of BLM FO staff biologists, water or salt may be located within the 0.5 mile buffer, up to within 350 feet of active prairie dog habitat, if no other viable alternatives exist or if the BLM biologist determines that the location would have no or negligible impacts on Utah prairie dogs or their habitat. The rationale for these variances must be documented in the permittee(s) case file and summarized in BLM's annual prairie dog report.

No permanent surface disturbance or facility will be allowed within 0.5 mile of potentially suitable Utah prairie dog habitat, as identified and mapped by the Utah Division of Wildlife Resources or BLM, since 1976 (LUP conservation measure). Exceptions to this can include buried pipelines, water troughs or ponds, and fences; as follows:

- Buried pipelines may be located within Utah prairie dog habitat but must avoid occupied burrows and the surface area should be re-vegetated with suitable forage.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

- Water troughs and ponds may be located within Utah prairie dog habitat but should avoid occupied habitat by 350 feet. There should be no loss of any active, inactive, or abandoned burrows, and the BLM biologist would determine that the location would have either positive or only minor negative habitat impacts and no direct mortality of Utah prairie dogs would occur.
- Fences and cattleguards may be installed within Utah prairie dog habitat as long as the only impact to prairie dogs is minor disturbance, and there is no destruction of any active, inactive, or abandoned burrows, and the BLM biologist determines that the location would have either positive or only minor negative habitat impacts and no direct mortality of Utah prairie dogs would occur.

Project locations and construction activities will be designed to minimize impacts to Utah prairie dogs based upon the survey results. Burrows close to work areas will be flagged to insure that they are visible and easily avoided by construction activities.

Work must comply with the stipulations below. Surface disturbing activities in occupied Utah prairie dog habitat should be conducted between April 1 and September 30. Activities in unoccupied habitat may occur at any time of the year.

- The BLM Authorized Officer shall designate an individual as a contact representative who will be responsible for overseeing compliance with the stipulations contained in this list and providing coordination with the U.S. Fish & Wildlife Service. The representative will have the authority to halt activities which may be in violation of these stipulations.
- All project participants shall be informed of the occurrence of the Utah prairie dog in the general area, and of the threatened status of the species. They shall be advised as to the definition of "take", and the potential penalties (up to \$200,000 in fines and one year in prison) for taking a species listed under the Endangered Species Act, and the stipulations included in the list.

Take: "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct" of a listed (under the Endangered Species Act) species without special exemption. Harm is further defined to include significant habitat modification or degradation that results in death or injury to the listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering.

- Project related personnel shall not be permitted to have firearms or pets in their possession while on the project site. The rules on firearms and pets will be explained to all personnel involved with the project.
- For fences, the proposed ground disturbance will consist of digging post holes only and must be completed by buffering burrows by at least 15 feet.
- All vehicles shall stay on existing roads within Utah prairie dog colonies, except that

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

driving along the fence lines, pipelines or within the project footprint for construction is authorized. No blading of the fence lines is authorized. Storage of equipment and materials shall not occur within 400 feet of colonies. Vehicle maintenance shall not occur within colonies.

- If the situation would require vehicles to travel cross country within Utah prairie dog colonies, burrows must be avoided.
- The use of any herbicide or pesticide is not authorized.
- Workers may not be onsite, continuously, within a colony for more than 8 hours within a 24 hour period.
- Within colonies, precautions shall be taken to ensure that contamination of the site by fuels, motor oils, grease, etc. does not occur and that such materials are contained and properly disposed of off-site. Inadvertent spills of petroleum based or other toxic materials shall be cleaned up and removed immediately.
- Implementing these measures should minimize take of Utah prairie dogs from the construction of the Summit Allotment Holding Pasture fence and removal of the old fence. Any form of take that is not incidental to these activities is not authorized.
- If a dead or injured Utah prairie dog is located, initial notification must be made to the Service's Division of Law Enforcement, Cedar City, Utah at telephone 435-865-0861 or to the Cedar City office of the Utah Division of Wildlife Resources at telephone number 435-865-6100. Instruction for proper handling and disposition of such specimens will be issued by the Division of Law Enforcement. Care must be taken in handling sick or injured animals to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible state.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

APPENDIX D RECOMMENDED PROCEDURES TO MINIMIZE, MONITOR, AND MITIGATE TAKE ASSOCIATED WITH THE MAINTENANCE OF EXISTING FACILITIES ON PUBLIC LANDS

The following procedures have been compiled to inform authorized users/owners/cooperators of the process to follow if their proposed maintenance activity would be in Utah prairie dog habitat. It should be noted that actions which might be denied under these procedures can be reanalyzed to see if the action could be authorized under different mitigation measures. If prairie dogs or their habitat might be impacted, the recommended stipulations to minimize take (attached) should be followed.

<u>If this applies, then</u>	<u>Proceed to this number</u>
1. Authorized user/owner/cooperator determines maintenance is necessary within Utah prairie dog habitat	2
2. Type of maintenance needed is determined:	
Emergency repairs to public utilities (such as gas, power, or telecommunications lines) where there may be harm to human health & safety	3
Maintenance of existing dirt/gravel road within existing disturbed area	4
Non-ground disturbing activity	5
Ground disturbing activity	13
3. Repair work is initiated and BLM is notified within 24 hours	8
4. Work is completed, no further action needed	
5a. Work will occur between November 1 and February 28	4
5b. Work will occur between March 1 and October 31	6
6a. Proposed work can be completed according to the stipulations for Non-ground Disturbing and Non-mechanized Ground Disturbing Activities	4
6b. Proposed work cannot be completed according to the above stipulations	7
7. BLM is notified of proposed noncompliance with justification for request and proposed measures to minimize and mitigate impacts	8

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

8.	Qualified biologist conducts a clearance survey	9
9a.	Survey finding of Absent (no animals or recent activity)	4
9b.	Survey finding of Present (animals present)	10
10a.	BLM makes a no effect determination for proposal	4
10b.	BLM makes a may effect determination for proposal	11
10c.	In emergency situations with a may effect determination, BLM initiates consultation with USFWS	12a
11a.	BLM denies request	15
11b.	BLM initiates consultation with the USFWS	12
12a.	Project is approved by BLM and USFWS, and may require additional stipulations and mitigation	4
12b.	Project is denied	15
13a.	Non-mechanized disturbance (shovel, etc.)	5
13b.	Mechanized disturbance is proposed which incorporates stipulations for Ground Disturbing, Mechanized Activities	14
13c.	Mechanical disturbance is proposed, but cannot be completed according to above stipulations	7
14.	BLM is notified	16
15.	Work is rescheduled	1
16.	Qualified biologist conducts a clearance survey	17
17a.	Survey finding of Absent (no animals or recent activity)	4
17b.	Survey finding of Present (animals present)	18
18a.	BLM concurs that disturbance will be minimal and that stipulations for Ground Disturbing, Mechanized Activities will be sufficient mitigation	4
18b.	BLM estimates that disturbance, after hazing, may result in take of animals, estimated at ≤ 5	19
18c.	BLM estimates that disturbance, after hazing, may result in take of animals, estimated at > 5	11b
19.	Area is lightly bladed for two days before digging to encourage dogs to move out	
20		

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

20.	BLM determines that ≤ 5 dogs would be impacted	21
21.	Projects continues with qualified biologist on site	22
22a.	BLM records any take of animals	23
22b.	Project halted immediately and USFWS notified if permit exceeded	12
23.	Annual take of animals is quantified; summary report provided to USFWS	

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Maintenance of Existing Facilities

Non-ground Disturbing and Non-mechanized Ground Disturbing Activities Stipulations to Minimize Impacts

1. For BLM facilities: The Authorized Officer shall designate an individual as a contact representative who will be responsible for overseeing compliance with the stipulations contained in this list and providing coordination with the U.S. Fish & Wildlife Service. The representative will have the authority to halt activities which may be in violation of these stipulations.

For non-BLM facilities: The authorized user/owner/cooperator shall serve as a contact representative who will be accountable for overseeing compliance with the stipulations contained in this list and providing coordination with the BLM. The representative must halt activities which may be in violation of these stipulations.

2. All project employees shall be informed of the occurrence of the Utah prairie dog in the general area, and of the threatened status of the species. They shall be advised as to the definition of "take", and the potential penalties (up to \$200,000 in fines and one year in prison) for taking a species listed under the Endangered Species Act, and the stipulations included in the list.
3. Project related personnel shall not be permitted to have firearms or pets in their possession while on the project site. The rules on firearms and pets will be explained to all personnel involved with the project.
4. The use of any herbicide or pesticide is not authorized.
5. Workers may not be onsite, continuously, within a colony for more than 8 hours within a 24 hour period.
6. All vehicles shall stay on existing roads within colonies, except as stated in #7. Storage of equipment and materials shall not occur within $\frac{1}{4}$ mile of colonies. Vehicle maintenance shall not occur within these areas.
7. If the situation would require vehicles to travel cross country within Utah prairie dog colonies, burrows must be avoided. Vehicles shall not exceed a speed of 10 miles per hour (cross country) in occupied Utah prairie dog colonies.
8. Within colonies, precautions shall be taken to ensure that contamination of the site by fuels, motor oils, grease, etc. does not occur and that such materials are contained and

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

properly disposed of off-site. Inadvertent spills of petroleum based or other toxic materials shall be cleaned up and removed immediately.

9. Ground disturbing activities by hand methods (such as shovel, post hole digger, etc.) must avoid all burrows by at least 10 feet.
10. Implementing these measures should minimize take of Utah prairie dogs from the maintenance of existing facilities by non-ground disturbing and non-mechanized activities in Iron and Beaver Counties. Any form of take that is not incidental to these activities is not authorized.
11. If a dead or injured Utah prairie dog is located, initial notification must be made to the Service's Division of Law Enforcement, Salt Lake City, Utah at telephone 801-625-5570 or to the Cedar City office of the Utah Division of Wildlife Resources at telephone number 435-865-6100. Instruction for proper handling and disposition of such specimens will be issued by the Division of Law Enforcement. Care must be taken in handling sick or injured animals to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible state.

**Maintenance of Existing Facilities
Ground Disturbing, Mechanized Activities
Stipulations to Minimize Impacts**

1. For BLM facilities: The Authorized Officer shall designate an individual as a contact representative who will be responsible for overseeing compliance with the stipulations contained in this list and providing coordination with the U.S. Fish & Wildlife Service. The representative will have the authority to halt activities which may be in violation of these stipulations.

For non-BLM facilities: The authorized user/owner/cooperator shall serve as a contact representative who will be accountable for overseeing compliance with the stipulations contained in this list and providing coordination with the BLM. The representative must halt activities which may be in violation of these stipulations.

2. All project employees shall be informed of the occurrence of the Utah prairie dog in the general area, and of the threatened status of the species. They shall be advised as to the definition of "take", and the potential penalties (up to \$200,000 in fines and one year in prison) for taking a species listed under the Endangered Species Act, and the stipulations included in the list.
3. Project related personnel shall not be permitted to have firearms or pets in their possession while on the project site. The rules on firearms and pets will be explained to all personnel involved with the project.
4. Proposed ground disturbance is determined to be minimal and can be completed by buffering most burrows by at least 15 feet.
5. All vehicles shall stay on existing roads within colonies, except as stated in #6. Storage of equipment and materials shall not occur within ¼ mile of colonies. Vehicle maintenance shall not occur within these areas.
6. If the situation would require vehicles to travel cross country within Utah prairie dog colonies, burrows must be avoided. Vehicles shall not exceed a speed of 10 miles per hour (cross country) in occupied Utah prairie dog colonies.
7. Within colonies, precautions shall be taken to ensure that contamination of the site by fuels, motor oils, grease, etc. does not occur and that such materials are contained and properly disposed of off-site. Inadvertent spills of petroleum based or other toxic materials shall be cleaned up and removed immediately.
8. A qualified biologist is required to be on-site during all work within the colony. The biologist will have the authority to halt activities which may be in violation of these stipulations.
9. All work must be scheduled for initiation between April 1 and September 30.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

10. Implementing these measures should minimize take of Utah prairie dogs from the maintenance of existing facilities by ground disturbing, mechanized activities in Iron and Beaver Counties. Any form of take that is not incidental to these activities is not authorized.
11. If a dead or injured Utah prairie dog is located, initial notification must be made to the Service's Division of Law Enforcement, Salt Lake City, Utah at telephone 801-625-5570 or to the Cedar City office of the Utah Division of Wildlife Resources at telephone number 435-865-6100. Instruction for proper handling and disposition of such specimens will be issued by the Division of Law Enforcement. Care must be taken in handling sick or injured animals to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible state.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

APPENDIX E MONITORING PLAN FOR GRAZING WITHIN UTAH PRAIRIE DOG HABITAT

Habitat monitoring would occur as described in the Monitoring Plan for Grazing within Utah Prairie Dog Habitat, Appendix E, as updated. This monitoring plan has been developed to be adaptive to changing situations and may be modified through annual reports from BLM to the FWS.

Introduction

Several aspects of grazing are monitored by BLM. Studies may include range trend, utilization, actual use, climate, and functionality assessments. Grazing allotment resource management objectives contain both short and long term monitoring as well as livestock management practices designed to attain the Fundamentals of Rangeland Health (43 CFR 4180). This includes the goal of insuring that habitats are, or are making significant progress toward being, restored or maintained for threatened and endangered species. One of the keys to properly managing grazing in Utah prairie dog habitat is to monitor utilization. Proper utilization levels help to insure that habitat is correctly managed and available for Utah prairie dogs.

Utilization is a short term monitoring tool selected to act as a trigger to guide yearly livestock management actions. Both short and long term monitoring (such as vegetative trend data) would be used to determine if grazing management systems are achieving desired goals. The grazing management systems applied to individual allotments under this programmatic document would incorporate the resource management objectives and terms and conditions from the proposed action and would be anticipated to maintain habitat for Utah prairie dogs. Please see Appendix E-1 for more discussion on short and long term monitoring.

This plan details the utilization monitoring within Utah prairie dog habitat. As noted above, other monitoring will also occur in the area, such as for vegetative trend and Utah prairie dog habitat and populations. These studies are discussed in the individual allotment monitoring plans and in Utah prairie dog habitat management plans.

This plan is based on the Utah Prairie Dog Interim Conservation Strategy (USFWS 1997) which placed Utah prairie dog complexes into one of three management categories with different monitoring intensities or management actions based upon the site's potential importance to the recovery program.

Monitoring Categories

BLM would place allotments into one of three monitoring categories. Mapped Utah prairie dog habitat currently occurs on 40 grazing allotments. The number of allotments involved would be updated as prairie dog distribution changes.

Category 1 sites would consist of complexes considered relatively stable with few issues. These may also be colonies that have been unoccupied for several years.

Category 2 sites would be those where some issues occur, such as habitat management projects, wildfire restoration, or recent changes in grazing season of use.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Category 3 sites would have multiple issues, or have active prairie dog management actions occurring such as translocation, disease outbreaks, or research.

There is also a “not applicable” (NA) category for allotments that would not be monitored. Allotments may be placed in this category for the following reasons.

- The prairie dogs may occur only on private/state lands within the allotment boundary and those lands are not under exchange of use agreement with the BLM. Therefore, BLM has no authority to manage, monitor or for entry on these lands.
- The occupied habitat may be small; usually less than one acre or the maps are based on provisional distribution data. These areas would be unfeasible to incorporate into a monitoring plan.
- The habitat has been unoccupied for greater than five years. This is often due to past events such as population die-offs or changes in habitat condition and it is thought that current grazing is not the factor driving, or changing the system.

The frequency of utilization monitoring per category is shown in Table 1.

Monitoring Category	Frequency of Utilization Monitoring	Trigger for Category Change or Re-Initiation of Consultation
1	4 years out of the 10 year permit cycle. If utilization level is exceeded, allotment must be monitored the next year.	May exceed utilization level once. Upon the second occurrence the allotment is moved to Category 2.
2	6 years out of the 10 year permit cycle. If utilization level is exceeded, allotment must be monitored the next year.	May exceed utilization level once. Upon the second occurrence the allotment is moved to Category 3. Allotment may be moved back to Category 1 if utilization levels are not exceeded for 2 consecutive years and there are not management issues.
3	Yearly	If more than 30% of the grazing allotments being monitored (Categories 1, 2, or 3) with mapped habitat exceed the utilization level for 2 years, then BLM will reinitiate consultation with FWS. Allotment may be moved back to Category 2 if utilization levels are not exceeded for 2 consecutive years and the level of management issues has decreased.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Habitat on private and state lands within grazing allotments would only be monitored if those lands are under exchange of use agreements with BLM (CFR 4130.6-1 and 4130.2).

Appendix E-2 lists the grazing allotments with mapped habitat and the proposed monitoring category, with rationale. Implementation would begin in 2009.

A review of Appendix E-2 shows that 26 of the 40 allotments would be monitored regularly for utilization in Utah prairie dog habitat. The remainder would be placed in the “not applicable” monitoring category. To determine if re-initiation of consultation is necessary, BLM would take 30% of 26, which is 8 allotments. If 9 or more allotments exceed the utilization standards for 2 years, then BLM would reinitiate consultation with the FWS. These do not need to be the same 9 allotments each year. This standard was determined through consultation with the FWS.

Methods

Utilization will be monitored within mapped Utah prairie dog habitat. Locations for transects will be selected by range and wildlife staff. Methods will be in accordance with the most recent BLM technical reference on utilization studies. BLM will conduct studies when appropriate for each specific location. Monitoring will generally occur at the end of the livestock grazing season of use within the pasture. This will be the official study documented in the files. However, pre-livestock turnout studies may occur to determine if there is adequate forage available. Monitoring may also occur during the authorized season of use to determine if objectives are being met. These may be visual observations to determine compliance and documented transects may or may not be collected.

During drought periods, monitoring may need to occur more frequently. Again, BLM may conduct compliance and range readiness checks at any time, documented data is not always collected during these visits. Drought, for purposes of managing Utah prairie dog habitat, is defined as 75% or less of normal precipitation in an area as measured by the best available information collected during the critical growing season (such as BLM rain gauge data, local data from the Western Regional Climate Center, or National Integrated Drought Information System).

Transect data from Utah prairie dog habitat within each pasture will be averaged to determine if short term resource management objectives are being met in that pasture. Data from all mapped habitat within an individual allotment will be averaged to determine if that allotment is meeting objectives.

Appendix E-3 lists allotments needing monitoring, the monitoring category, the grazing management category, and associated Utah prairie dog complex information.

Reports

BLM envisions this to be an adaptive monitoring plan. Monitoring categories for individual allotments may change over time as allotment specific changes occur such as drought, wildfire, habitat projects, etc. Allotments may be added to this list if they become inhabited by Utah prairie dogs. Also, allotments within ½ mile of mapped habitat may be managed as potential Utah prairie dog habitat, as determined through site specific NEPA, and added to this plan.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

BLM would submit utilization monitoring results to the FWS with their Utah prairie dog management reports. Category changes would be proposed based upon results and current conditions. Proposed plans for the next year would be part of the report.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Appendix E-1

Short-term (Within-Season and End-of-Season) and Long-term Monitoring

Within-season and end-of-season (end-point) utilization indicators serve as annual indicators (short-term objectives) for managing livestock movement. These two annual indicators are tools to help ensure that resource conditions are moving towards or are meeting long-term objectives. Within-season utilization indicators are used as a trigger to guide managers to make changes to livestock management (i.e. herding, salting, temporary fencing, etc.) or move livestock so end-point objectives are not exceeded. End-point utilization indicators are guides to assess resource use impacts at the end of the grazing and growing season, whichever comes last. They indicate whether livestock grazing use left resources in an appropriate condition to move towards or meet long-term objectives.

Within-season and end-of-season (end-point) indicators will be utilized when assessing monitoring data within Utah prairie dog habitat. These indicators are included in the grazing management systems that are developed and are identified as Allotment Specific Objectives. The primary indicator that will be identified for Utah prairie dog habitat will be based on a utilization objective. It is expected that the utilization objective (indicator) that is identified as an Allotment Specific Objective in conjunction with a grazing management system (season of use, livestock numbers, livestock AUMs, etc...) that long-term desired vegetative conditions will be achieved. It is important to note that when using within-season and end-point indicators in a monitoring strategy one must not only measure and evaluate whether or not the allowable numeric value was met, but also whether or not the value is correct. For example, crested wheatgrass, with its resilience to grazing pressure and tendency toward woody plants, might have a higher acceptable utilization level than would be suitable for bluebunch wheatgrass, a species more susceptible to damage by livestock grazing. In addition, a pasture might have a higher target utilization level if grazed in a rotation with a short-use period than for the same area if grazed every year for a longer period, especially if that grazing use coincided with the reproductive phase of plant growth.

Assessment of both within-season and end-point indicators are used to determine if livestock grazing has left vegetative resources in an appropriate condition for moving toward long-term objectives. Generally, within-season and end-point indicators cannot by themselves determine whether a particular grazing system is contributing to vegetative recovery or degradation. This is especially true of monitoring data collected in a single year. Often the intention of short-term monitoring (utilization) is to initiate management decisions within the grazing season. For instance, plant phenology may provide evidence that a planned turn-out date is too early or too late. Within-season and end-point indicators may determine changes in livestock behavior such as a shift in use areas or preferred forage or reaching planned seasonal utilization levels of specific vegetation or vegetative groups. In addition, weather influences plant growth and may indicate the time to move livestock in order to provide vegetation with re-growth opportunities. Management changes that are based on multiple years of monitoring data are usually more sound and defensible than changes that are based on just one or two years of monitoring data.

Long-term monitoring measures changes in resource attributes such as vegetation, soils, etc. over time and is used to periodically measure progress toward meeting long-term resource

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

management objectives. Long-term monitoring also aids in determining the applicability/suitability of annual indicators. Long-term monitoring is completed at permanent sampling locations identified as key management areas. Key management areas are relatively small portions of an allotment/pasture that are selected because of its location, use or grazing value as a monitoring point for grazing use. It is assumed that key management areas, if properly selected, will reflect the overall acceptability of current grazing management over the entire allotment/pasture.

If the measure of short-term (Utilization) and long-term (Trend) monitoring indicates that the current grazing management system is not consistent with achieving the desired resource objectives the agency and the livestock permittee would implement corrective actions based on all available monitoring data through adaptive management.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Appendix E-2

Proposed monitoring category for grazing allotments within mapped Utah prairie dog habitat and rationale

ALLOTMENT NAME	PROPOSED MONITORING CATEGORY	RATIONALE
ADAMS WELL	3	High importance to recovery, recent wildfires, recent habitat projects
BEAR CREEK	NA	Dogs on private land/no Exchange of Use
BERGSTROM	1	Small area/provisional data
BLACK POINT	1	need updated distribution information
BONE HOLLOW	2	Recent habitat project
BRAFFITS CREEK	NA	Unoccupied greater than 5 years
FIDDLERS CANYON	1	Small areas
FREMONT	3	High importance to recovery, recent habitat projects
HAMILTON FORT	NA	Dogs on private land/no Exchange of Use
HORSE HOLLOW	NA	Less than 1 acre on BLM/not feasible to monitor
JACKRABBIT	3	High importance to recovery, recent habitat projects
JACKSON WASH	NA	Unoccupied greater than 5 years
JENSON	NA	Unoccupied greater than 5 years/mitigated through Three Peaks project
JOCKEYS	1	Isolated complex
LIZZIES HILL	2	Important to recovery/recent habitat project
LONG HOLLOW CATTLE	3	High importance to recovery/recent population changes
LONG HOLLOW SHEEP	3	High importance to recovery/recent population changes
LOWE CATTLE	3	High importance to recovery/recent population changes/recent habitat projects
LUND	1	Isolated complex/Few issues
MINERSVILLE NO. 1	NA	Unoccupied greater than 5 years
MINERSVILLE NO. 3	3	High importance to recovery/recent population changes/recent habitat projects
MINERSVILLE NO. 5	2	Important to recovery/recent habitat project
MINERSVILLE NO. 6	NA	Less than 1 acre on BLM/not feasible to monitor/provisional data
MORTENSEN-HOLYOAK	NA	Less than 1 acre on BLM/not feasible to monitor/provisional data
NORTE WELL	3	High importance to recovery
NORTH GAP	1	Small area
NORTH PINE VALLEY	NA	Unoccupied greater than 5 years
PARAGONAH CATTLE	NA	Unoccupied greater than 5 years
PAROWAN GAP	1	Small scattered colonies
PERRY WELL	2	Important to recovery/recent habitat project
PINE VALLEY	2	Important to recovery
SOUTH PINE VALLEY	NA	Unoccupied greater than 5 years
STEER HOLLOW	NA	Less than 1 acre on BLM/not feasible to monitor
SUMMIT	1	Small area
SUMMIT HIGHWAY	1	Small area
SWETT HILLS	1	Small areas
UPPER HORSE HOLLOW	2	Important to recovery
WATER HOLLOW	3	High importance to recovery/recent population changes
WEST FORK	NA	Not on BLM lands/unallotted
WOOD WEST	1	Isolated complex/Few issues

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Appendix E-3

Summary of monitoring and management category for grazing allotments within mapped Utah prairie dog habitat

ALLOTMENT NAME	MONITORING CATEGORY	GRAZING MANAGEMENT CATEGORY	UTAH PRAIRIE DOG COMPLEX NAME	UTAH PRAIRIE DOG COMPLEX NUMBER
ADAMS WELL	3	I	Adams Well Horse Valley	124 126
BEAR CREEK	NA	M	Lower Bear Valley	128
BERGSTROM	1	C	Not available	Not available
BLACK POINT	1	I	Cedar City – Enoch Rush Lake	103104
BONE HOLLOW	2	I	Buckhorn Flat	113
BRAFFITS CREEK	NA	C	Cedar City – Enoch	103
FIDDLERS CANYON	1	I	South Summit Steer Hollow	105 133
FREMONT	3	M	Buckskin Buckhorn Flat	110 113
HAMILTON FORT	NA	M	Shurtz Canyon	112
HORSE HOLLOW	NA	M	Horse Hollow	116
JACKRABBIT	3	I	Long Hollow Willow Spr. Wild Pea Hollow	114 115 125
JACKSON WASH	NA	M	Pine Valley	120
JENSON	NA	I	Three Peaks	117
JOCKEYS	1	I	Jockey Spring	118
LIZZIES HILL	2	M	Tebbs Pond	131
LONG HOLLOW CATTLE	3	I	Wild Pea Hollow	125
LONG HOLLOW SHEEP	3	I	Wild Pea Hollow	125
LOWE CATTLE	3	M	Minersville #3	122
LUND	1	M	West Lund	121
MINERSVILLE NO. 1	NA	I	Willow Spring	115
MINERSVILLE NO. 3	3	M	Minersville #3	122
MINERSVILLE NO. 5 East	2	I	Coyote Pond	129
MINERSVILLE NO. 5 West	2	I	Horse Valley	126

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

ALLOTMENT NAME	MONITORING CATEGORY	GRAZING MANAGEMENT CATEGORY	UTAH PRAIRIE DOG COMPLEX NAME	UTAH PRAIRIE DOG COMPLEX NUMBER
MINERSVILLE NO. 6	NA	I	Not available	Not available
MORTENSEN-HOLYOAK	NA	I	Not available	Not available
NORTE WELL	3	M	Adams Well	124
NORTH GAP	1	I	Minersville Highway	132
NORTH PINE VALLEY	NA	I	Pine Valley	120
PARAGONAH CATTLE	NA	I	Willow Spring	115
PAROWAN GAP	1	I	Minersville Highway	132
PERRY WELL	2	M	Horse Hollow Dominguez-Escalante	116 130
PINE VALLEY	2	M	Pine Valley	120
SOUTH PINE VALLEY	NA	I	Pine Valley	120
STEER HOLLOW	NA	I	Minersville Highway	132
SUMMIT	1	C	Mortenson's	107
SUMMIT HIGHWAY	1	C	South Summit Roadside	105 106
SWETT HILLS	1	M	Duncan Creek - Quichpah	102
UPPER HORSE HOLLOW	2	M	West of Rush Lake	123
WATER HOLLOW	3	I	Pine Valley Water Hollow	120 127
WEST FORK	NA	C	South Summit	105
WOOD WEST	1	C	West Lund	121

Grazing Management Categories:

I = Improvement: managed to improve resource conditions

M = Maintenance: maintain current satisfactory resource conditions

C = Custodial: management to prevent resource deterioration

The management category for an allotment may be changed when resource conditions change or new data become available.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

APPENDIX F ALLOTMENT SPECIFIC RESOURCE MANAGEMENT OBJECTIVES

1. Range trend would be static to upward.
2. Utilization of “Key Upland Forage Species” would not exceed 50% utilization, by weight, of the current year’s vegetative growth by the end of the authorized grazing season.
3. Utilization of “Key Shrub Species” would not exceed 40% utilization, by weight, of the current year’s vegetative growth by the end of the authorized grazing season.
4. If utilization objectives reach specified objectives where measurable standards have been established, the permittee would be required to remove livestock from that area. The permittee would have 3-5 days upon notification to remove livestock.
5. The BLM would assess resource conditions through field inspections and determine, in consultation with the permittee, whether management changes (e.g., changes in livestock numbers, adjustment of move dates, or other changes of use within the parameters identified under this alternative) may be implemented prior to reaching maximum utilization. Move dates may be adjusted as needed when monitoring indicates maximum utilization has been reached, or due to unusual climatic conditions, fire, flood, or other act of nature. If maximum utilization is reached on key species/areas in the allotment before a scheduled move, the use of salt, herding, or other management options may be used to distribute livestock away from an area where maximum utilization has been reached, or livestock may be moved from the use area or allotment (after consultation with the permittee), as deemed necessary by the BLM.
6. In order to determine if these Allotment Specific Objectives are being met, monitoring studies would be conducted in accordance with Attachment 1.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

APPENDIX G FUNDAMENTALS OF RANGELAND HEALTH

The Fundamentals of Rangeland Health stated in 43 CFR 4180 are:

- a. Watersheds are in, or are making significant progress toward, properly functioning physical condition, including their upland, riparian-wetland, and aquatic components; soil and plant conditions support infiltration, soil moisture storage and the release of water that are in balance with climate and landform and maintain or improve water quality, water quantity and timing and duration of flow.
- b. Ecological processes, including the hydrologic cycle, nutrient cycle and energy flow, are maintained, or there is significant progress toward their attainment, in order to support healthy biotic populations and communities.
- c. Water quality complies with State water quality standards and achieves, or is making significant progress toward achieving, established Bureau of Land Management objectives such as meeting wildlife needs.
- d. Habitats are, or are making significant progress toward being, restored or maintained for Federal threatened and endangered species, Federal Proposed or candidate threatened and endangered species and other special status species.

The Fundamentals of Rangeland Health combine the basic precepts of physical function and biological health with elements of law relating to water quality, and plant and animal populations and communities. They provide direction in the development and implementation of the Standards and Guidelines for Healthy Rangelands.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

APPENDIX H STANDARDS AND GUIDELINES FOR HEALTHY RANGELANDS (1997)

Standard 1. Upland soils exhibit permeability and infiltration rates that sustain or improve site productivity, considering the soil type, climate, and landform.

As indicated by:

- a) Sufficient cover and litter to protect the soil surface from excessive water and wind erosion, promote infiltration, detain surface flow, and retard soil moisture loss by evaporation.
- b) The absence of indicators of excessive erosion such as rills, soil pedestals, and actively eroding gullies.
- c) The appropriate amount, type, and distribution of vegetation reflecting the presence of (1) the Desired Plant Community [DPC], where identified in a land use plan, or (2) where the DPC is not identified, a community that equally sustains the desired level of productivity and properly functioning ecological conditions.

Standard 2. Riparian and wetland areas are in properly functioning condition. Stream channel morphology and functions are appropriate to soil type, climate and landform.

As indicated by:

- a) Streambank vegetation consisting of, or showing a trend toward, species with root masses capable of withstanding high streamflow events. Vegetative cover adequate to protect stream banks and dissipate streamflow energy associated with high-water flows, protect against accelerated erosion, capture sediment, and provide for groundwater recharge.
- b) Vegetation reflecting: Desired Plant Community, maintenance of riparian and wetland soil moisture characteristics, diverse age structure and composition, high vigor, large woody debris when site potential allows, and providing food, cover and other habitat needs for dependent animal species.
- c) Revegetating point bars; lateral stream movement associated with natural sinuosity; channel width, depth, pool frequency and roughness appropriate to landscape position.
- d) Active floodplain.

Standard 3. Desired species, including native, threatened, endangered, and special-status species, are maintained at a level appropriate for the site and species involved.

As indicated by:

- a) Frequency, diversity, density, age classes, and productivity of desired native species necessary to ensure reproductive capability and survival.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

- b) Habitats connected at a level to enhance species survival.
- c) Native species reoccupy habitat niches and voids caused by disturbances unless management objectives call for introduction or maintenance of nonnative species.
- d) Appropriate amount, type, and distribution of vegetation reflecting the presence of (1) the Desired Plant Community [DPC], where identified in a land use plan conforming to these Standards, or (2) where the DPC is identified a community that equally sustains the desired level of productivity and properly functioning ecological processes.

Standard 4. BLM would apply and comply with water quality standards established by the State of Utah (R.317-2) and the Federal Clean Water and Safe Drinking Water Acts. Activities on BLM Lands would support the designated beneficial uses described in the Utah Water Quality Standards (R.317-2) for surface and groundwater. ¹

As indicated by:

- a) Measurement of nutrient loads, total dissolved solids, chemical constituents, fecal coliform, water temperature and other water quality parameters.
- b) Macro-invertebrate communities that indicate water quality meets aquatic objectives.

BLM would continue to coordinate monitoring water quality activities with other Federal, State and technical agencies.

Guidelines for Grazing Management (1997)

1. Grazing management practices would be implemented that:

- (a) Maintain sufficient residual vegetation and litter on both upland and riparian sites to protect the soil from wind and water erosion and support ecological functions;
- (b) Promote attainment or maintenance of proper functioning condition riparian/wetland areas, appropriate stream channel morphology, desired soil permeability and infiltration, and appropriate soil conditions and kinds and amounts of plants and animals to support the hydrologic cycle, nutrient cycle and energy flow;
- (c) Meet the physiological requirements of desired plants and facilitate reproduction and maintenance of desired plants to the extent natural conditions allow;
- (d) Maintain viable and diverse populations of plants and animals appropriate for the site;
- (e) Provide or improve, within the limits of site potentials, habitat for Threatened or Endangered Species;

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

(f) Avoid grazing management conflicts with other species that have the potential of becoming protected or special status species;

(g) Encourage innovation, experimentation and the ultimate development of alternatives to improve rangeland management practices;

(h) Give priority to rangeland improvement projects and land treatments that offer the best opportunity for achieving the Standards.

2. Any spring or seep developments would be designed and constructed to protect ecological process and functions and improve livestock, wild horse and wildlife distribution.

3. New rangeland projects for grazing would be constructed in a manner consistent with the Standards. Considering economic circumstances and site limitations, existing rangeland projects and facilities that conflict with the achievement or maintenance of the Standards would be relocated and/or modified.

4. Livestock salt blocks and other nutritional supplements would be located away from riparian/wetland areas or other permanently located, or other natural water sources. It is recommended that the locations of these supplements be moved every year.

5. The use and perpetuation of native species would be emphasized. However, when restoring or rehabilitating disturbed or degraded rangelands non-intrusive, non-native plant species are appropriate for use where native species (a) are not available, (b) are not economically feasible, cannot achieve ecological objectives as well as nonnative species, and/or (d) cannot compete with already established native species.

6. When rangeland manipulations are necessary, the best management practices, including biological processes, fire and intensive grazing, would be utilized prior to the use of chemical or mechanical manipulations.

7. When establishing grazing practices and rangeland improvements, the quality of the outdoor recreation experience is to be considered. Aesthetic and scenic values, water, campsites and opportunities for solitude are among those considerations.

8. Feeding of hay and other harvested forage (which does not refer to miscellaneous salt, protein and other supplements) for the purpose of substituting for inadequate natural forage would not be conducted on BLM lands other than in (a) emergency situations where no other resource exists and animal survival is in jeopardy, or (b) situations where the Authorized Officer determines such a practice would assist in meeting a Standard or attaining a management objective.

9. In order to eliminate, minimize or limit the spread of noxious weeds, (a) only hay cubes, hay pellets or certified weed-free hay would be fed on BLM lands, and (b) reasonable adjustments in grazing methods, methods of transport and animal husbandry practices would be applied.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

10. To avoid contamination of water sources and inadvertent damage to non-target species, aerial application of pesticides would not be allowed within 100 feet of a riparian/wetland area unless the product is registered for such use by the EPA.

11. On rangelands where a standard is not being met, and conditions are moving toward meeting the standard, grazing may be allowed to continue. On lands where a standard is not being met, conditions are not improving toward meeting the standard or other management objectives, and livestock grazing is deemed responsible, administrative action with regard to livestock would be taken by the Authorized Officer pursuant to CFR 4180.2(c).

12. Where it can be determined that more than one kind of grazing animal is responsible for failure to achieve a Standard, and adjustments in management are required, those adjustments would be made to each kind of animal, based on interagency cooperation as needed, in proportion to their degree of responsibility.

13. Rangelands that have been burned, seeded or otherwise treated to alter vegetative composition would be closed to livestock grazing as follows: (1) burned rangelands, whether by wildfire or prescribed burning, would not be grazed for a minimum of one complete growing season following the burn; and (2) rangelands that have been seeded or otherwise chemically or mechanically treated would not be grazed for a minimum of two complete growing seasons.

14. Conversions in kind of livestock (such as from sheep to cattle) would be analyzed in light of Rangeland Health Standards. Where such conversions are not averse to achieving a Standard, or they are not in conflict with BLM land use plans, the conversion would be allowed.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

APPENDIX I BIRDS OF CONSERVATION CONCERN, PARTNER'S IN FLIGHT BIRD CONSERVATION PLANS, AND STATE WILDLIFE ACTION PLANS (STATE HABITAT CONSERVATION PLANS)

Avian Species	Utah /BLM Sensitive Species (Species of Concern)	Birds of Conservation Concern - Bird Conservation Region 9 (Great Basin)	Utah Partner's in Flight-Priority Species	Habitat Types (PIF)			GAP Analysis
				Primary Breeding Habitat	Secondary Breeding Habitat	Winter Habitat	
Abert's towhee			X	Lowland Riparian	Lowland Riparian	Lowland Riparian	
American Avocet		X	X	Wetland	Playa	Migrant	
American golden plover		X					
American white pelican	X		X	Water	Wetland	Migrant	
Bald eagle	X			Lowland Riparian	Agriculture	Lowland Riparian	
Bell's vireo			X	Lowland Riparian	Lowland Riparian	Migrant	
Black rosy finch			X	Alpine	Alpine	Grassland	S
Black swift	X	X	X	Lowland Riparian	Cliff	Migrant	
Black-necked stilt			X	Wetland	Playa	Migrant	
Black-throated gray warbler			X	Pinyon-Juniper	Mountain Shrub	Migrant	C,H
Bobolink	X		X	Wet Meadow	Agriculture	Migrant	
Brewer's sparrow		X	X	Shrubsteppe	High Desert Scrub	Migrant	C,H
Broad-tailed hummingbird			X	Lowland Riparian	Mountain Riparian	Migrant	C,H,S
Burrowing owl	X	X		High Desert Scrub	Grassland	Migrant	H, S
Ferruginous hawk	X	X	X	Pinyon-Juniper	Shrubsteppe	Grassland	C,H
Flammulated owl		X		Ponderosa Pine	Sub-Alpine Conifer	Migrant	
Gambel's quail			X	Low Desert Scrub	Lowland Riparian	Low Desert Scrub	H
Golden eagle		X		Cliff	High Desert Scrub	High Desert Scrub	C,H
Grasshopper sparrow	X			Grassland	Grassland	Migrant	
Gray vireo		X	X	Pinyon-Juniper	Northern Oak	Migrant	C,H
Lewis's woodpecker	X	X	X	Ponderosa Pine	Lowland Riparian	Northern Oak	S
Loggerhead shrike		X		High Desert Scrub	Pinyon-Juniper	High Desert Scrub	C, H
Long-billed curlew	X	X	X	Grassland	Agriculture	Migrant	C
Lucy's warbler			X	Lowland Riparian	Low Desert Scrub	Migrant	

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Avian Species	Utah /BLM Sensitive Species (Species of Concern)	Birds of Conservation Concern - Bird Conservation Region 9 (Great Basin)	Utah Partner's in Flight-Priority Species	Habitat Types (PIF)			GAP Analysis
				Primary Breeding Habitat	Secondary Breeding Habitat	Winter Habitat	
Marbled godwit		X					
Mountain plover	X		X	High Desert Scrub	High Desert Scrub	Migrant	H
Peregrine falcon		X		Cliff	Lowland Riparian	Wetland	H
Prairie falcon		X		Cliff	High Desert Scrub	Agriculture	C,H
Sage grouse	X	X	X	Shrubsteppe	Shrubsteppe	Shrubsteppe	
Sage sparrow		X	X	Shrubsteppe	High Desert Scrub	Low Desert Scrub	C
Sanderling		X					
Sharp-tailed grouse	X		X	Shrubsteppe	Grassland	Shrubsteppe	
Short-eared owl	X			Wetland	Grassland	Agriculture	
Snowy plover		X		Playa	Playa	Migrant	C
Solitary sandpiper		X					
Swainson's hawk		X		Agriculture	Aspen	Migrant	H
Three-toed woodpecker	X		X	Sub-Alpine Conifer	Lodgepole Pine	Sub-Alpine Conifer	
Tri-colored blackbird		X					
Virginia's warbler		X	X	Northern Oak	Pinyon-Juniper	Migrant	C,H
Whimbrel		X					
White-headed woodpecker		X					
Williamson's sapsucker		X		Sub-Alpine Conifer	Aspen	Migrant	
Wilson's phalarope		X		Wetland	Water	Migrant	
Yellow rail		X					
Yellow-billed cuckoo	X	X	X	Lowland Riparian	Mountain Riparian	Migrant	

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

ATTACHMENT 1 ALLOTMENT SPECIFIC OBJECTIVES

Establish the following allotment specific objectives and monitoring plan for the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor Allotments.

a. Antelope Allotment

Habitat Management Considerations: Livestock, mule deer, Antelope and non-game wildlife species.

Key Species*: Indian ricegrass, Needle and Thread, Crested wheatgrass and Wyoming big sagebrush

Annual Monitoring Standards:

- Utilization of key perennial grasses would not exceed 50% and key shrubs would not exceed 40% by the end of the grazing season.

Long-term Objectives:

- Achieve a statistically significant increase in the frequency of perennial grasses.
- Maintain/Improve current perennial grass and shrub composition to ensure quality forage for wildlife and Livestock within the allotments.

b. Blue Mountain Allotment

Habitat Management Considerations: Livestock, mule deer, Antelope, elk and non-game wildlife species.

Key Species*: Indian ricegrass, Winterfat, Needle-and-Thread, Crested wheatgrass and Wyoming big sagebrush

Annual Monitoring Standards:

- Utilization of key perennial grass species would not exceed 50% and key shrubs would not exceed 40% by the end of the grazing season.

Long-term objectives:

- Achieve a statistically significant increase in the frequency of perennial grasses.
- Maintain/Improve current perennial grass and shrub composition to ensure quality forage for wildlife and livestock within the allotments.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

c. Burn Knoll Allotment

Habitat Management Considerations: Livestock, mule deer, Elk, Antelope and non-game wildlife species.

Key Species*: Indian ricegrass, Winterfat, Needle and Thread and Wyoming big sagebrush

Annual Monitoring Standards:

- Utilization of key perennial grass species would not exceed 50% and key shrubs would not exceed 40% by the end of the grazing season.

Long-term objectives:

- Achieve a statistically significant increase in the frequency of perennial grasses.
- Maintain/Improve current perennial grass and shrub composition to ensure quality forage for wildlife within the allotments.

d. Hamilton Fort Allotment

Habitat Management Considerations: Livestock, mule deer and non-game wildlife species.

Key Species*: Crested wheatgrass and antelope bitterbrush

Annual Monitoring Standards:

- Utilization of key perennial grass species would not exceed 50% and key shrubs would not exceed 40% by the end of the grazing season.

Long-term objectives:

- Achieve a statistically significant increase in the frequency of perennial grasses.
- Maintain/Improve current perennial grass and shrub composition to ensure quality forage for wildlife within the allotments

e. Hole-In-The-Wall Allotment

Habitat Management Considerations: Livestock, mule deer, Antelope and non-game wildlife species.

Key Species*: Indian ricegrass, Galletta grass, Crested Wheatgrass and Wyoming big sagebrush

Annual Monitoring Standards:

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

- Utilization of key perennial grass species would not exceed 50% and key shrubs would not exceed 40% by the end of the grazing season.

Long-term objectives:

- Achieve a statistically significant increase in the frequency of perennial grasses.
- Maintain/Improve current perennial grass and shrub composition to ensure quality forage for wildlife within the allotments.

f. Lower Meadow Allotment

Habitat Management Considerations: Livestock, mule deer, elk and non-game wildlife species.

Key Species*: Bottlebrush squirrel tail and Wyoming big sagebrush

Annual Monitoring Standards:

- Utilization of key perennial grass species would not exceed 50% and key shrubs would not exceed 40% by the end of the grazing season.

Long-term objectives:

- Achieve a statistically significant increase in the frequency of perennial grasses.
- Maintain/Improve current perennial grass and shrub composition to ensure quality forage for wildlife within the allotments.

g. Winsor Allotment

Habitat Management Considerations: Livestock, mule deer and non-game wildlife species.

Key Species*: Bottlebrush squirrel tail and Wyoming big sagebrush

Annual Monitoring Standards:

- Utilization of key perennial grass species would not exceed 50% and key shrubs would not exceed 40% by the end of the grazing season.

Long-term objectives:

- Achieve a statistically significant increase in the frequency of perennial grasses.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

- Maintain/Improve current perennial grass and shrub composition to ensure quality forage for wildlife within the allotments.

Rationale:

The utilization objectives are consistent with the Cedar Beaver Garfield Antimony Resource Management and the Pinyon Framework Management Plan. This objective is appropriate to increase vigor, allow plants to set seed and ensure that plants are able to store carbohydrates and replenish root reserves.

The attainment of the frequency objective would increase the occurrence of key species indicating that these plants have increased in the plant community. The increase in occurrence of these species would indicate that livestock management actions are sufficient to improve the vegetative condition of the site relative to its capability and/or potential.

The Cedar City Field Office (CCFO) has reviewed these objectives for conformance with the Cedar Beaver Garfield Antimony Resource Management Plan (CBGA RMP) and Pinyon Management Framework Plan (PMFP). It has been determined that these objectives are consistent with the land use plan objectives that are included in the CBGA RMP and Record of Decision and the PMFP and Record of Decision.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

ATTACHMENT 2 MONITORING STANDARDS

1. Antelope, Blue Mountain, Burn Knoll, Hamilton Fort, Hole-In-The-Wall, Lower Meadow and Winsor Allotment Monitoring Plan

Conduct the necessary monitoring periodically to evaluate the effects of livestock grazing and determine if progress is being made in the attainment of allotment specific objectives and the Standards and Guidelines for Healthy Rangelands. Monitoring would be in accordance with BLM policy.

BLM would continue to collect monitoring data within the allotments in order to determine the effectiveness of the management actions being proposed. The monitoring plan for the allotment may include, but not be limited to, the following studies in upland and riparian areas.

Conduct the necessary monitoring periodically to evaluate the effects of livestock grazing and determine if progress is being made in the attainment of Allotment Specific Objectives and the Standards and Guidelines for Healthy Rangelands. Monitoring would be in accordance with BLM policy.

BLM would continue to collect monitoring data within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor Allotments in order to determine the effectiveness of the management actions being proposed. Progress would be attained through meeting the short term objectives. The monitoring plan for the allotments may include, but not be limited to, the following studies in upland areas.

2. Hamilton Fort Allotment – Category “I” (Intensive Management Allotment) Monitoring Standards

Upland Monitoring Studies: Key Management Area Utilization (Key Forage Plant Method), Trend/Frequency (Nested Frequency Method), Use Pattern Mapping (Key Forage Plant Method), Interpreting Indicators of Rangeland Health Assessments and actual livestock use data.

Wildlife Habitat Monitoring Studies: Utilization, condition, cover, condition and trend (BLM 1630).

Riparian Monitoring Studies: Proper Functioning Condition (PFC), Riparian-Wetland Utilization Monitoring and Water Quality.

Climate/Precipitation Monitoring Studies: Rain gauge data, weather station data, NOAA data, etc....

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

3. Blue Mountain and Burn Knoll Allotment – Category “M” (Maintain Management Allotment) Monitoring Standards

Upland Monitoring Studies: Key Management Area Utilization (Key Forage Plant Method), Trend/Frequency (Nested Frequency Method), Use Pattern Mapping (Key Forage Plant Method), Interpreting Indicators of Rangeland Health Assessments and actual livestock use data.

Wildlife Habitat Monitoring Studies: Utilization, condition, cover, condition and trend (BLM 1630).

Climate/Precipitation Monitoring Studies: Rain gauge data, weather station data, NOAA data, etc....

Rationale: Monitoring and analysis would be required to determine whether objectives are being met and determine if changes in grazing management are necessary. The monitoring studies identified above would be adequate to measure the effects of the management actions and the levels of use being proposed. These studies would serve as the basis for making any future changes in management as required to meet the Standards and Guidelines for Healthy Rangelands. The livestock permittees, interested public and other resource specialists from the BLM and other State and Federal agencies would be invited to participate and provide input and interpretation to all monitoring studies within the Blue Mountain and Burn Knoll Allotments.

4. Antelope, Hole-In-The-Wall, Lower Meadow and Winsor Allotment – Category “C” (Custodial Management Allotment) Monitoring Standards

Upland Monitoring Studies: Key Management Area utilization (Key Forage Plant Method), Trend/Frequency (Nested Frequency Method), Use Pattern Mapping (Key Forage Plant Method), Production (Double-Weight Sampling Method), ecological condition, Ecological Site Inventory, Line-Intercept, cover and actual livestock use data.

Wildlife Habitat Monitoring Studies: Utilization, condition, cover and big game habitat condition and trend (BLM 1630).

Climate/Precipitation Monitoring Studies: Rain gauge data, weather station data, NOAA data, etc....

Rationale: Monitoring and analysis would be required to determine whether objectives are being met and determine if changes in grazing management are necessary. The monitoring studies identified above would be adequate to measure the effects of the management actions and the levels of use being proposed. These studies would serve as the basis for making any future changes in management as required to meet the Standards and Guidelines for Healthy Rangelands. The livestock permittees, interested public and other resource specialists from the BLM and other State and Federal agencies would be invited to participate and provide input and

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

interpretation to all monitoring studies within the Antelope, Hole-In-The-Wall, Lower Meadow and Winsor Allotments.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

ATTACHMENT 3 SOILS/VEGETATION

The following tables illustrate the dominant vegetation/soils associated with each ecological site and the total acres within the Antelope, Blue Mountain, Burn Knoll, Hamilton Fort (Shurtz Canyon Pasture), Hole-In-The-Wall, Lower Meadow and Winsor Allotments.

1. Antelope

ECOLOGICAL SITE	SITE NAME	PERCENT PERENNIAL GRASSES	PERCENT PERENNIAL FORBS	PERCENT SHRUBS	PERCENT TREES	DOMINANT ASPECT OF PLANT COMMUNITY	ANTELOPE ALLOTMENT ACRES	PERCENTAGE OF ALLOTMENT
R028AY119UT	Desert Flat	5	5	40	----	Shadscale	166.55	8.19
R028AY214UT	Semi Desert Gravelly Loam South	30	10	35	----	Wyoming Big Sagebrush	453.59	22.32
R028AY220UT	Semi Desert Loam	40	5	20	----	Wyoming Big Sagebrush	92.42	4.55
R028AY224UT	Semi Desert Sandy Loam	----	----	----	----	Winterfat	260.10	12.80
R028AY334UT	Upland Stony Loam	----	----	----	----	Wyoming Big Sagebrush	866.90	42.65
R047XB224UT	Upland Stony Loam	----	----	----	----	Pinyon-Utah Juniper	69.51	3.42

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

2. Blue Mountain

ECOLOGICAL SITE	SITE NAME	PERCENT PERENNIAL GRASSES	PERCENT PERENNIAL FORBS	PERCENT SHRUBS	PERCENT TREES	DOMINANT ASPECT OF PLANT COMMUNITY	BLUE MOUNTAIN ALLOTMENT ACRES	PERCENTAGE OF ALLOTMENT
NA	Desert Alkali Flats	****	****	****	****	NA	751.70	4.59
NA	Desert Flats	****	****	****	****	NA	0.10	0.006
NA	Desert Silt Flats	****	****	****	****	NA	1630.16	9.96
NA	Semi Desert Loam (ARTRW-ORHY)	****	****	****	****	Wyoming Big Sagebrush and Indian ricegrass	1906.67	11.65
NA	Semi Desert Loam (EULAS-ORHY)	****	****	****	****	Winter fat and Indian ricegrass	6526.85	39.89
NA	Semi Desert Sand	****	****	****	****	NA	371.25	2.27
NA	Semi Desert Shallow Hardpan (D28)	****	****	****	****	NA	0.51	0.003
NA	Semi Desert Shallow Hardpan (JP)	****	****	****	****	NA	6.74	0.041
NA	Semi Desert Shallow Loam (JP)(D28)	****	****	****	****	NA	2958.70	18.08
NA	Semi Desert Stony Loam (D28)	****	****	****	****	NA	2206.57	13.48
NA	Semi Desert Stony Loam (JP)(D34)	****	****	****	****	NA	1.38	0.008
NA	Upland Loam (JP)	****	****	****	****	NA	2.04	0.012
R028AY004UT	Alkali Flat (Black Greasewood)	15	5	40	****	Black Greasewood	0.87	0.005

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

3. Burn Knoll

ECOLOGICAL SITE	SITE NAME	PERCENT PERENNIAL GRASSES	PERCENT PERENNIAL FORBS	PERCENT SHRUBS	PERCENT TREES	DOMINANT ASPECT OF PLANT COMMUNITY	BURN KNOLL ALLOTMENT ACRES	PERCENTAGE OF ALLOTMENT
NA	Desert silt flats	*****	*****	*****	*****	NA	94.65	0.43
NA	Semi Desert Loam (ARIRW-ORHY)	*****	*****	*****	*****	Wyoming Big Sagebrush and Indian ricegrass	6140.41	27.60
NA	Semi Desert Loam (EULAS-ORHY)	*****	*****	*****	*****	Winterfat and Indian ricegrass	1198.76	5.39
NA	Semi desert shallow hardpan (D28)	*****	*****	*****	*****	NA	2678.68	12.04
NA	Semi desert shallow hardpan (JP)	*****	*****	*****	*****	NA	688.97	3.10
NA	Semi dessert shallow loam (D28)	*****	*****	*****	*****	NA	5036.46	22.64
NA	Semi desert shallow loam (JP) (D28)	*****	*****	*****	*****	NA	4205.58	18.90
NA	Semi desert silt loam (D28)	*****	*****	*****	*****	NA	241.83	1.09
NA	Semi desert stony hills	*****	*****	*****	*****	NA	1738.59	7.81
NA	Upland loam (D28)	*****	*****	*****	*****	NA	225.38	1.01

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

4. Hamilton Fort (Shurtz Canyon Pasture)

ECOLOGICAL SITE	SITE NAME	PERCENT PERENNIAL GRASSES	PERCENT PERENNIAL FORBS	PERCENT SHRUBS	PERCENT TREES	DOMINANT ASPECT OF PLANT COMMUNITY	HAMILTON FORT (SHURTS CANYON PASTURE) ACRES	PERCENTAGE OF ALLOTMENT
RO28AY220UT	Semidesert Loam	40	5	20	----	Wyoming Big Sagebrush	279.44	7.76
RO47XB333UT	Upland Stony Loam	----	----	----	----	Pinyon-Utah Juniper	2193.47	60.21
RO28AY221UT	Semidesert Loam	----	----	----	----	Basin Big Sagebrush	330.16	9.06
RO35XY325UT	Upland Very Deep Shallow Loam	----	----	----	----	Pinyon-Utah Juniper	522.95	14.38
RO47XB518UT	High Mountain Loam	----	----	----	----	White Fir	231.65	6.36

5. Hole-In-The-Wall

ECOLOGICAL SITE	SITE NAME	PERCENT PERENNIAL GRASSES	PERCENT PERENNIAL FORBS	PERCENT SHRUBS	PERCENT TREES	DOMINANT ASPECT OF PLANT COMMUNITY	HOLE-IN-THE-WALL ALLOTMENT ACRES	PERCENTAGE OF ALLOTMENT
RO28AY214UT	Semi Desert Gravelly Loam South	30	10	35	----	Wyoming Big Sagebrush	2540.30	48.17
RO28AY220UT	Semi Desert Loam	40	5	20	----	Wyoming Big Sagebrush	1026.78	19.47
RO28AY230UT	Semi Desert Shallow Hardpan (10-14 Ppt)	----	----	----	----	NA	514.08	9.75
RO28AY236UT	Semi Desert Shallow Loam	30	3	30	----	Black Sagebrush	1192.00	22.60

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

6. Lower Meadow

ECOLOGICAL SITE	SITE NAME	PERCENT PERENNIAL GRASSES	PERCENT PERENNIAL FORBS	PERCENT SHRUBS	PERCENT TREES	DOMINANT ASPECT OF PLANT COMMUNITY	LOWER MEADOW ALLOTMENT ACRES	PERCENTAGE OF ALLOTMENT
F028AY238UT	Semidesert Shallow Loam	15	5	15	20	Utah Juniper-Bluebunch Wheatgrass	55.73	2.83
R028AY006UT	Loamy Bottom	----	----	----	----	Great Basin Wildrye	166.71	8.46
R028AY220UT	Semidesert loam	40	5	20	----	Wyoming Big Sagebrush	110.76	5.62
R028AY232UT	Semidesert Shallow Hardpan	30	5	25	10	Utah Juniper	81.52	4.14
R028AY243UT	Semidesert shallow loam	----	----	----	----	Wyoming Big Sagebrush	77.62	3.94
R028AY310UT	Upland Loam	----	----	----	----	Mountain Big Sagebrush	1429.37	72.53

7. Winsor

ECOLOGICAL SITE	SITE NAME	PERCENT PERENNIAL GRASSES	PERCENT PERENNIAL FORBS	PERCENT SHRUBS	PERCENT TREES	DOMINANT ASPECT OF PLANT COMMUNITY	WINSOR ALLOTMENT ACRES	PERCENTAGE OF ALLOTMENT
R028AY220UT	Semidesert Loam	40	5	20	----	Wyoming Big Sagebrush	91.93	44.22
R028AY243UT	Semidesert Shallow Loam	----	----	----	----	Wyoming Big Sagebrush	116.02	55.80

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

ATTACHMENT 4 GRAZING AGREEMENT FOR THE HOLE-IN-THE-WALL ALLOTMENT
RANGELAND GRAZING AGREEMENT FOR THE
MANAGEMENT OF THE HOLE-IN-THE-WALL ALLOTMENT

This agreement affects the grazing use on the Hole-In-The-Wall Allotment --
 Grant Ellsworth & Fern Living Trust (Base Property Owner)

and

Brett Whittier (Livestock Lessee)

The Term Grazing Permits for the Hole-In-The-Wall Allotment will be fully processed in 2015 through Environmental Assessment # UT-C010-2015-0052 and Decision Record. The Hole-In-The-Wall Monitoring Report concluded that the Standards and Guidelines for Healthy Rangelands were not being fully met throughout portions of the Hole-In-The-Wall Allotment. The Proposed Action of EA # UT-C010-2015-0052 identifies the livestock grazing management system for the Hole-In-The-Wall Allotment. A Rangeland Grazing Agreement was developed as part of the 2015 grazing permit renewal. The agreement will include the following:

The permittee agrees not to run more than 70 head of livestock in the Hole-In-The-Wall Allotment without prior authorization from BLM. Further adjustments (increases/decreases) may be warranted in the future, but will not be implemented without further monitoring data to support such actions.

Through this Grazing Agreement the Hole-In-The-Wall Allotment permittee will apply for livestock use on an annual basis as follows:

ALLOTMENT	PERMITTEE	NUMBER OF LIVESTOCK	KIND OF LIVESTOCK	SEASON OF USE	PERCENT PUBLIC LAND	AUMS
Hole-In-The-Wall	Grant Ellsworth & Fern Living Trust	70	Cattle	03/01 - 06/01	36	77
		70	Cattle	10/15 - 02/28	36	114

ALLOTMENT	YEAR	NUMBER OF LIVESTOCK	KIND OF LIVESTOCK	PASTURE/SEASON OF USE	ACTIVE GRAZING PREFERENCE (AUMS)
Hole In The Wall	Year 1	70	Cattle	West 10/15 - 3/31	140
		70	Cattle	East 04/01 - 05/31	51

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Year 2	70	Cattle	East 10/15 – 3/31	140
	70	Cattle	West 04/01 – 05/31	51

Allotment Specific Objectives for the Hole-In-The-Wall Allotment

- h. Range trend would be static to upward.
- i. Utilization of “Key Upland Forage Species” would not exceed 50% utilization, by weight, of the current year’s vegetative growth by the end of the authorized grazing season.
- j. Utilization of “Key Shrub Species” would not exceed 40% utilization, by weight, of the current year’s vegetative growth by the end of the authorized grazing season.
- k. If utilization objectives reach specified objectives where measurable standards have been established, the permittee would be required to remove livestock from that area. The permittee would have 3-5 days upon notification to remove livestock.
- l. The BLM would assess resource conditions through field inspections and determine, in consultation with the permittee, whether management changes (e.g., changes in livestock numbers, adjustment of move dates, or other changes of use within the parameters identified under this alternative) may be implemented prior to reaching maximum utilization. Move dates may be adjusted as needed when monitoring indicates maximum utilization has been reached, or due to unusual climatic conditions, fire, flood, or other act of nature. If maximum utilization is reached on key species/areas in the allotment before a scheduled move, the use of salt, herding, or other management options may be used to distribute livestock away from an area where maximum utilization has been reached, or livestock may be moved from the use area or allotment (after consultation with the permittee), as deemed necessary by the BLM.
- m. In order to determine if these Allotment Specific Objectives are being met, monitoring studies would be conducted in accordance with Attachment 1 of UT-C010-2015-0052.

Terms and Conditions for the Hole-In-The-Wall Allotment

- 21. Livestock grazing use would be in accordance with the Livestock Decision and Environmental Assessment (UT-C010-2015-0052) for the Hole-In-The-Wall Allotments dated August 28, 2015.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

22. Livestock grazing use would also be in accordance with the Rangeland Grazing Agreement for the Hole-in-the-Wall Allotment dated August 21, 2015.
23. Grazing fees must be paid in full prior to livestock turnout. Actual use information must be reported within 15 days following the completion of the grazing season.
24. Failure to pay the grazing bill within 15 days of the due date specified on the bill shall result in a late fee assessment of \$25 or 10 percent of the bill, whichever is greater, not to exceed \$250. Payment made later than 15 days after the due date, shall include the appropriate late fee assessment [Title 43 CFR 4130.8-1(f)]. Actual use information must be reported within 15 days following completion of the grazing season. Your paid bill is your authorization to turn out livestock on public lands. Livestock present on public lands without a paid bill are unauthorized and a trespass action would be initiated
25. Maintenance of all structural range projects are a responsibility of the permittees. Maintenance will be in accordance with the approved cooperative agreements for range improvements (Form 4120-6) or range improvement permit (Form 4120-7). Failure to maintain assigned projects in satisfactory condition constitutes a violation in accordance with Title 43 CFR 4140.1 (a) (4) and may result in the suspension of your license until maintenance is completed.
26. All salt/mineral supplements would be located at least ¼ mile or further distance from any riparian area, wet meadow or watering facility (either permanent or temporary) unless stipulated through a written agreement or decision.
27. The permittee would be allowed 3-5 days flexibility following the scheduled use dates to move livestock.
28. All exclosures on public land throughout the allotment(s) would be closed to livestock grazing unless grazing use is applied for by the permittee and is authorized in writing by the authorized officer.
29. Livestock are to be managed (herding, salting, water hauling or removal) to ensure that the allotment specific objectives are met.
30. Permits and leases would be subject to cancellation, suspension or modification for any violation of these regulations or of any term or condition of the permit.
31. Utilization on key herbaceous forage species in upland habitats should not exceed 50% utilization of the current year's vegetative growth.
32. Range trend would be static to upward for the allotment.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

33. If annual monitoring standards reach specified objectives where measurable standards have been set, the permittee would be required to remove livestock from that area. The permittee would have 3-5 days upon notification to remove livestock.
34. Supplemental feeding of roughage is prohibited on public lands unless emergency conditions exist, then only by written permission from the authorized officer [Title 43 CFR 4140.1 (a) (3)].
35. The season of use in the allotments may be temporarily modified from the proposed grazing management system at the discretion of the authorized officer on an annual basis if monitoring data indicates that changes are necessary to meet multiple use objectives and the Standards for Rangeland Health. Any use in excess of the total permitted use for the permittee within any of the allotments would constitute temporary non-renewable use.
36. Grazing would, by regulation, conform to the Fundamentals of Rangeland Health as well as Utah BLM's Standards and Guidelines for Grazing Management. Grazing would also be subject to standard terms and conditions for grazing on public lands. This permit, including the terms and conditions, may be modified or withheld if additional information indicates that such actions are necessary in order to conform with the Utah Standards for Rangeland Health, the Fundamentals of Rangeland Health, regulations at Title 43 CFR 4100 and allotment specific objectives.
37. Grazing use would be in accordance with the Hole-In-The-Wall Allotment Grazing Permit Environmental Assessment (UT-C010-2015-0052).
38. If utilization objectives reach or exceed specified objectives where measurable standards have been set, the permittee would be required to remove livestock from that area. If it is determined that utilization levels have been reached or exceeded the permittee would have 5 days upon notification to remove livestock.
39. Actual use information for each pasture within the allotments would be submitted to the authorized officer within 15 days of completing grazing use as specified on the grazing permit and/or grazing licenses.
40. All permits and leases shall be subject to cancellation, suspension or modification for any violation of these regulations or of any term and conditions of the permit or lease. The terms and conditions of this permit may be modified if additional information indicates that revision is necessary to conform with 43 CFR 4180.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

41. In accordance with 43 CFR 4130.3-3: The authorized officer may modify terms and conditions of the permit or lease when the active use or related management practices are not meeting the land use plan, allotment management plan or other activity plans, or management objectives, or is not in conformance with the provision of subpart 4180 RAC Standards and Guidelines.
42. In order to improve livestock and rangeland management on public lands, all salt and/or mineral supplements would not be placed with ¼ mile of any riparian areas, wet meadow, or watering facility (either permanent or temporary) unless stipulated through a written agreement or decision.
43. An increase in livestock grazing preference may be authorized in the future through a re-evaluation if it is determined through further monitoring that additional forage has become available and CBGA RMP objectives, Standards and Guidelines for Healthy Rangelands, and multiple use objectives are being met. Any change in grazing preference must be supported by monitoring, field observations, production, or other data acceptable to the authorized officer. The authorization of a grazing increase would be dependent upon further monitoring, NEPA analysis and the issuance of a Decision or Agreement.
44. The Permittees would provide access across their private or leased lands for the orderly management and protection of the public land. The BLM will contact the permittee and coordinate the necessary access.

Rationale:

Minimal monitoring data exists for the Hole-In-The-Wall Allotment at this time to support a permanent reduction or increase in permitted use. Average actual use in the allotment has been approximately 50% of permitted use for the past 5 years due to drought recovery and operator preference; therefore, it is unknown whether or not the allotment can support full numbers at this time. The Standards and Guidelines for Healthy Rangelands were not being fully met within the Hole-In-The-Wall Allotment. The Hole-In-The-Wall Allotment failed to meet Standard 1 – Upland Soils and Standard 3 – Habitat. Significant progress towards meeting these standards is either unknown due to insufficient monitoring data or not occurring. This agreement is intended to provide for the health of the range while allowing for further collection of range monitoring data. During consultation with the Hole-In-The-Wall permittees it was determined that the identified reduction in livestock numbers will serve as a temporary stocking level until further monitoring data is collected.

The Hole in the Wall Allotment would continue to be used in a two pasture deferred system. The pastures would be flip-flopped with the pasture being scheduled for spring use being used for 2 months to allow for growing season rest. The permittee has been employing a similar grazing system since it was initiated in 1989 and it meets vegetation/watershed needs and the permittees operational requirements.

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

Current utilization levels in the allotment are slight to light with a moderate recorded in 2010, which is still well within acceptable use levels. However, rangeland health data collected shows that forage availability will not be able to withstand repeated grazing of at the maximum amount of cattle shown on the grazing permit (122). The current permittee has a livestock lease agreement to run livestock on the allotment. The permittee has run 70 head of cattle for the last 5 years due to his recognition that the allotment would not support full numbers as identified on the grazing permit. This has allowed for the Allotment to maintain current conditions or may move toward meeting Standards and Guidelines with implementation of the Allotment Specific Objectives listed as part of the Proposed Action. To continue this management for future situations a Livestock Grazing Agreement has been completed that will continue to allow only 70 head of livestock permitted. This will allow the allotment proper rest and distribution of livestock to improve the overall plant community and key species within the allotment. With the Livestock Grazing Agreement in place the allotment would likely maintain current conditions or may move toward meeting Standards and Guidelines with implementation of the Allotment Specific Objectives listed as part of the Proposed Action.

The elimination of repeated critical growing period livestock use is expected to maintain/ improve the vegetative community by allowing for sufficient key herbaceous plant seedling and young plant recruitment. This would allow for maintenance/improvement in the plant communities by enhancing key perennial species productivity, which would in turn provide plants an opportunity to produce seed and increase in the vegetative communities. The expected maintenance/improvement in the vegetative community would enhance soil site stability, which would limit the redistribution of and loss of soil resources by wind and water. Hydrologic function would also be enhanced with maintenance/improvement in the vegetative community. This would allow the site to adequately capture, store and release water from rainfall or snowmelt events. Furthermore, maintenance/improvement in the plant community would improve the integrity of the biotic community, which would permit the allotments to resist loss of function and structure following disturbance allowing for recovery.

The permittee will be required to meet with a CCFO Rangeland Management Specialist multiple times during the grazing year, to discuss a grazing management system including livestock numbers and pasture rotation. Authorized use will be adjusted, as needed, based on annual climatic conditions, forage production and plant vigor. Following the grazing season the CCFO will collect monitoring data (use pattern mapping, key area utilization, etc...) and actual use information to determine whether livestock management changes (livestock numbers, adjustments to season of use or other changes) will need to be implemented prior to livestock turnout in the next grazing year. Billing will also change from After-the-Fact to Before-the-Fact. All other Terms and Conditions will apply under this agreement.

The Proposed Action of EA # UT-C010-2015-0052 will authorize use patterns similar to how the permittee has already been using the allotments, but will better provide for the physiological needs of the plants by incorporating utilization objectives and the formal

Blue Mountain et al. Grazing Permit Renewal

DOI-BLM-UT-C010-2016-0014

livestock grazing management system. The utilization objectives and deferred rotation system should ensure that vegetation is not over utilized, while providing periodic spring rest in each pasture. This action will authorize the pasture boundaries and livestock grazing management system, which will allow for more orderly administration of public lands. The livestock operators are designated to assume livestock management responsibility and obligated to exercise initiative with the intent of preventing deterioration of current resource conditions.

In order to evaluate if objectives are being met, rangeland monitoring studies will continue to be conducted. The studies will include, but are not limited to, range trend, utilization, actual use and climate. The permittee will be required to submit accurate actual use information by pasture annually within 15 days of the completion of livestock grazing use. Temporary adjustments may be made to allow for loss of forage due to drought or wildfire. Monitoring data will continue to be collected within the allotment and if it is determined that the Standards for Rangeland Health and Allotment Specific objectives are not being achieved the grazing permit will be modified at that time. This may be in the form of changes in season of use, livestock numbers, AUMs, etc.

This Notice of Agreement is effective upon signature by all parties.

Staci Shaha/Fern Living Trust
Permittee

Date

Bret Whittier
Lessee

Date

Elizabeth R. Burghard
Field Office Manager, Cedar City Field Office

Date

Blue Mountain et. Al. Grazing Permit Renewal Interested Public List

KENT W. ADAMS
355 WEST 3000 NORTH
CEDAR CITY, UT 84721-5432

KAY R. OR IRVIN J. ENCE
80 WEST 100 SOUTH
IVINS, UT 84738

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PO BOX 772
CEDAR CITY, UT 84720

FENTON J. TERRY
PO BOX 519
ENTERPRISE, UT 84725

GILBERT YARDLEY
PO BOX 288
BEAVER, UT 84713

STACI SHAHA
GRANT AND FERN ELLSWORTH LIVING TRUST
1227 EAST MANFIELD WAY
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RON TORGERSON
STATE INSTITUIONAL TRUST LANDS ADMINISTRATION
130 NORTH MAIN STREET
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