USDI, Bureau of Land Management
Andrews Resource Area, Burns District

Finding of No Significant Impact for

GRASSY HILL PIPELINE EXTENSION
Environmental Assessment
OR-01-026-024

INTRODUCTION

The Andrews Resource Area, Burns District, Bureau of Land Management (BLM) is addressing a landowner request to extend an existing pipeline in Grassy Basin Allotment. Grassy Hill Pipeline was completed in1986, and is comprised of approximately eight miles of pipeline that provide drinking water for livestock and wildlife in five pastures within two allotments (Grassy Basin # 6017 and Sandhills #6016). The pipeline receives water from a spring on private land in the Crow Creek drainage (T41S, R 37E, Sec. 19) and distributes to nine troughs along its course. The origin of the pipeline is located at an elevation of approximately 5,700 feet. The lowest point on the pipeline is at 4,500 feet. The requested pipeline extension would be in Lower Grassy Basin Pasture, one of seven pastures within the allotment.

Grassy Basin Allotment is located in the Andrews Management Unit (AMU) of the Burns District in the southern portion of Harney County, Oregon and in northern Humboldt County, Nevada approximately 160 miles southeast of Burns. Grassy Basin Allotment borders on the Bilk Creek Mountains to the south, Pueblo Valley to the west, Cottonwood Creek to the north, and Trout Creek Mountains to the east. One term permit is currently authorized for 941 Animal Unit Months (AUMs) for Grassy Basin Allotment from April through September. All authorized livestock grazing is by cattle. Other forage allocations include 18 AUMs for mule deer and 2 AUMs for pronghorn.

The Andrews Management Unit Resource Management Plan (AMU RMP, Appendix J-21) includes two general resource management objectives for Lower Grassy Basin Pasture; Improve the ecological condition of upland vegetation communities, and maintain the ecological condition of upland vegetation communities. Appendix J-21 also identifies greater sage-grouse (habitat) as a resource concern in Grassy Basin Allotment. Additional pipeline was identified as a potential range improvement project for Grassy Basin Allotment in the AMU RMP, Appendix J-21.

SUMMARY OF THE PROPOSED ACTION

The proposed action is to create a new pipeline spur that originates at Al's Canyon Trough along Grassy Hill Pipeline, and ends at a new trough that would be placed approximately 1.5 miles due north. The new pipeline would be within T. 41 S., R. 36 E.; It would originate in section 13, and terminate the new trough in section 1. The pipeline would be buried (using a backhoe) 18 inches under an existing road, except for short lengths where rock or other underground features require

an alternate route adjacent to the road. The trough would be placed approximately 1/8 mile off the road, on a broad topographic saddle. The trough would be equipped with a float valve to prevent overflow, and would include ramps to facilitate safe use by small mammals and birds.

Livestock grazing would occur annually in Lower Grassy Basin Pasture with the same number (941 AUMs), kind, and authorized season of use after the project has been completed. The project would be implemented when funding becomes available. All work would be conducted by BLM staff or contractors. Maintenance would be the responsibility of the permittee.

FINDING OF NO SIGNIFICANT IMPACT

Consideration of the Council on Environmental Quality (CEQ) criteria for significance (40 CFR 1508.27), both with regard to context and intensity of impacts, is described below:

Context

The Proposed Action would occur in one pasture of Grassy Basin Allotment and would have local impacts on affected interests, lands, and resources similar to and within the scope of those described and considered in the CMPA RMP/ROD. There would be no substantial broad societal or regional impacts not previously considered in the RMP/ROD. The actions described represent anticipated program adjustments complying with the RMP/ROD and the Steens Act, and implementing ongoing range management programs within the scope and context of those documents.

Intensity

The CEQ's ten considerations for evaluating intensity (severity of effect):

1. *Impacts that may be both beneficial and adverse.* The EA considered potential beneficial and adverse effects. Project Design Features were incorporated to reduce impacts. None of the effects are beyond the range of effects analyzed in the Andrews Management Unit/CMPA Proposed RMP/Final Environmental Impact Statement (FEIS), to which the EA is tiered.

2. *Degree to which the Proposed Action affects public health and safety.* No aspect of the Proposed Action or alternatives would have an effect on public health and safety.

3. *Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.* None of these unique characteristics are present in the project area.

4. *The degree to which effects on the quality of the human environment are likely to be highly controversial.* Controversy in this context means disagreement about the nature of the effects, not expressions of opposition to the proposed action or preference among the alternatives. No unique or appreciable scientific controversy has been identified regarding the effects of the Proposed Action or alternatives.

5. *Degree to which possible effects on the human environment are highly uncertain or involve unique or unknown risks.* The analysis has not shown there would be any unique or unknown risks to the human environment nor were any identified in the Andrews Management Unit/CMPA PRMP/FEIS to which this proposal is tiered.

6. *Degree to which the action may establish a precedent for future actions with significant impacts or represents a decision in principle about a future consideration.* This project neither establishes a precedent nor represents a decision in principle about future actions. No long-term commitment of resources causing significant impacts was noted in the EA or RMP.

7. W*hether the action is related to other actions with individually insignificant but cumulatively significant impacts.* The environmental analysis did not reveal any cumulative effects beyond those already analyzed in the Andrews/Steens PRMP/FEIS.

8. *Degree to which the action may adversely affect districts, sites, highways, structures or objects listed in or eligible for listing in the National Register of Historic Places.* There are no features within the project area listed or eligible for listing in the National Register of Historic Places.

9. *The degree to which the action may adversely affect an endangered or threatened species or its habitat.* There are no known threatened or endangered species or their habitat affected by the Proposed Action or alternatives.

10. *Whether an action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.* The Proposed Action and alternatives do not threaten to violate any law. The Proposed Action is in compliance with the AMU RMP, which provides direction for the protection of the environment on public lands.

On the basis of the information contained in the EA and all other information available to me, it is my determination that: 1) the implementation of the Proposed Action will not have significant environmental impacts beyond those already addressed in the Record of Decision (ROD) for the CMPA RMP (August 2005) or the North Steens Ecosystem Restoration Project (September 2007); 2) the Proposed Action and alternatives are in conformance with the CMPA RMP; 3) there would be no adverse societal or regional impacts and no adverse impacts to affected interests; and 4) the environmental effects, together with the proposed Project Design Features, against the tests of significance found at 40 CFR 1508.27 do not constitute a major federal action having a significant effect on the human environment. Therefore, an environmental impact statement is not necessary and will not be prepared.

_____ _____

Joan Suther, Andrews Field Manager Date

GRASSY HILL
PIPELINE EXTENSION

ENVIRONMENTAL ASSESSMENT
OR-01-026-024

Bureau of Land Management
Burns District Office
28910 Hwy 20 West
Hines, Oregon 97738

May 2008

TABLE OF CONTENTS

Chapter I: Purpose and Need for Action....1

A. Introduction....1

1. Authorized Grazing on Public Lands....1
2. Lower Grassy Basin Pasture in Grassy Basin Allotment....1
3. Allotment Management Objectives and Rangeland Health Assessment....2

B. Purpose and Need for Action....3

1. Project Goals and Objectives....3
2. Decision Framework....4
3. Decision Factors....4
4. Conformance with Land Use Plans, Laws, Regulations, and Policy....4

Chapter II: Alternatives, Including the Proposed Action....5

A. Alternatives Considered but not Fully Analyzed....5
B. No Action Alternative....5
C. Proposed Action....5

Chapter III: Affected Environment and Environmental Consequences....6

A. Identification of Affected Elements of the Human Environment....6
B. Critical Elements....9

1. Noxious Weeds....9

C. Noncritical Elements....10

1. Upland Soils, Vegetation, and Biological Soil Crusts....10

D. Cumulative Effects Analysis....13
E. Consultation and Coordination....13

1. List of Preparers....13
2. Persons, Groups, or Agencies Consulted....14

F. References Cited....14

GRASSY HILL
PIPELINE EXTENSION

ENVIRONMENTAL ASSESSMENT
OR-01-026-024

CHAPTER I: PURPOSE AND NEED FOR ACTION

A. Introduction

1. Authorized Grazing on Public lands

The Taylor Grazing Act of 1934 (43 U.S.C 315) provides the basic legislative authority for livestock grazing on public lands, with provisions for protection of the lands from degradation and for orderly use and improvement of public rangelands. The Act established a system for the allotment of grazing privileges to livestock operators based on grazing capacity and use priority, and for the delineation of allotment boundaries. It also established standards for rangeland improvements and implemented grazing fees.

Approximately 142 million acres of land in the western United States were placed under the jurisdiction of the Grazing Service, which became the Bureau of Land Management (BLM) in 1946. The Federal Land Policy and Management Act (43 U.S.C. 1701, 1976) and the Public Rangelands Improvement Act of 1978 (43 U.S.C. 1901) mandate the management of public land for multiple-use and sustained yield. Specifically, the regulations implementing these acts call for rangeland management strategies that provide forage for economic use as well as for the maintenance or restoration of watershed function, nutrient cycling, water quality, and habitat quality for Special Status Species (SSS) and native plants and animals. These management strategies have been supported and implemented by the development of national policies and the Standards for Rangeland Health and Guidelines for Livestock Management (S&Gs, 1997).

2. Lower Grassy Basin Pasture in Grassy Basin Allotment

Grassy Basin Allotment is located in the Andrews Management Unit (AMU) of the Burns District in the southern portion of Harney County, Oregon, and in northern Humboldt County, Nevada, approximately 160 miles southeast of Burns. The allotment borders on the Bilk Creek Mountains to the south, Pueblo Valley to the west, Cottonwood Creek to the north, and Trout Creek Mountains to the east. One term permit is currently authorized for 941 Animal Unit Months (AUMs) for Grassy Basin Allotment from April through September. All authorized livestock grazing is by cattle. Other forage allocations include 18 AUMs for mule deer and 2 AUMs for pronghorn.

The permittee is authorized for up to 260 AUMs annually in Lower Grassy Basin Pasture, one of seven pastures in the allotment. Lower Grassy Basin Pasture consists of approximately 2,365 acres of BLM-managed land, and 95 acres of privately-owned land (Map 1). Season of use is normally the month of April. Grassy Basin Allotment is a Management Category "M" (Maintain) allotment. This category identifies allotments with low or no management and resource concerns. These allotments are targeted for effectiveness and performance monitoring, unless monitoring data indicate need for a change to management strategy, as described in the AMU Resource Management Plan (AMU RMP) p.55.

Grassy Hill Pipeline was completed in1986, and is comprised of approximately 8 miles of pipeline that provide drinking water for livestock and wildlife in five pastures within two allotments (Grassy Basin #6017 and Sandhills #6016). The pipeline receives water from a spring on private land in the Crow Creek drainage (T. 41 S., R. 37 E., Section 19) and distributes to nine troughs along its course. The origin of the pipeline is located at an elevation of approximately 5,700 feet. The lowest point on the pipeline is at 4,500 feet.

3. Allotment Management Objectives and Rangeland Health Assessment

The AMU RMP (Appendix J-21) includes two general resource management objectives for Lower Grassy Basin Pasture; improve the ecological condition of upland vegetation communities, and maintain the ecological condition of upland vegetation communities. Appendix J-21 also identifies greater sage-grouse (habitat) as a resource concern in Grassy Basin Allotment. Additional pipeline was identified as a potential range improvement project for Grassy Basin Allotment in the AMU RMP, Appendix J-21. The BLM formed an Interdisciplinary Team (IDT) who worked together to complete an assessment of rangeland health standards on Lower Grassy Basin Pasture in 2006. The IDT consisted of a wildlife biologist, a riparian/fisheries specialist, a natural resource specialist (botany), and a rangeland management specialist. The BLM IDT's rangeland health assessment for Lower Grassy Basin Pasture determined:

- Rangeland Health Standard #1 (Watershed Function – Uplands) is being achieved. Current livestock management is maintaining soil surface stability, and diversity and vigor of plant cover is adequate to protect the site from excessive erosion.
- Rangeland Health Standard #2 (Watershed Function – Riparian/Wetland Areas) is not present. All streams in the pasture are ephemeral, and no indicators were observed that zero or first order streams are capable of supporting a riparian community.
- Rangeland Health Standard #3 (Ecological Processes) is being achieved, based on the plant community present and its influence on site processes.

- Rangeland Health Standard #4 (Water Quality) is not present. For this standard to be achieved, actions taken by BLM must contribute to meeting State water quality standards during the period water crosses agency administered holdings (S&Gs, p. 13). Streams within Lower Grassy Basin Pasture are ephemeral, and no excessive erosion from uplands is reaching ephemeral stream channels.
- Rangeland Health Standard #5 (Native, Threatened and Endangered and Locally Important Species) is being achieved. The native vegetative community is appropriate for the site and capable of supporting species in these categories.

Based on monitoring from nine years between 1993 and 2007, utilization of vegetation in lower Grassy Basin Pasture has ranged from "light" (21 to 40 percent of aboveground growth utilized) during 4 years, to "moderate" (41 to 60 percent of aboveground growth utilized) during 5 years.

B. Purpose and Need for Action

The purpose of the proposed action is to enhance distribution of livestock within Lower Grassy Basin Pasture. The project was requested by the permitee for this specific purpose. Much of the pasture interior is not well-utilized during the authorized grazing period. Livestock tend to remain near Cottonwood Creek, rather than disperse through steep terrain to the interior of the pasture, or near one of two troughs at the southern edge of the pasture. Availability of reliable water in the interior of Lower Grassy Basin Pasture would allow the permitee greater flexibility in providing or denying livestock access to Cottonwood Creek (on his own land) while cattle are present in spring. The project would not result in an increase in AUMs during the authorized period of use, nor would it alter the season of use as specified in the Allotment Management Plan.

1. Project Goals and Objectives

The objective of this project is to facilitate utilization of forage by livestock more evenly throughout the interior of the pasture by changing access to water. Action alternatives must meet the project objectives listed below, which translates pertinent RMP direction.

- Provide for sustainable livestock grazing that meets allotment management (natural resource) objectives and the S&Gs (Social and Economic Values, AMU RMP p. 45).
- Implement administrative solutions and rangeland projects to provide proper management for livestock grazing while meeting resource objectives and requirements for S&Gs (Grazing Management, AMU RMP p. 54-56).
- Maintain, restore, or improve [fish and wildlife] habitat (Fish and Wildlife, AMU RMP p. 33).

2. Decision Framework

The Andrews Resource Area Field Manager is the responsible official who will decide which alternative analyzed in this document best meets the purpose and need for action based on the interdisciplinary analysis presented in the Environmental Assessment (EA). Any decision will specify construction specifications of range improvements, and measures (terms and conditions) intended to mitigate any environmental effects.

3. Decision Factors

Decision factors are additional questions or statements used by the decision maker to choose between alternatives that best meet project goals and resource objectives. These factors generally do not include satisfying legal mandates, which must occur under all alternatives. Rather, decision factors assess, for example, the comparative cost, applicability, or adaptability of the alternatives considered. The following decision factors will be relied upon by the Authorized Officer in selecting a course of action from the range of alternatives fully analyzed that best achieves the goals and objectives of the project:

a. Would the alternative balance RMP Wildlife objectives with management direction for Social and Economic, Vegetation, Grazing Management?
b. Would the alternative be effective in achieving project objectives?
c. Would the alternative have unreasonable management cost to the public in achieving the project objectives?
d. Would the alternative result in maximum utility of existing infrastructure?

4. Conformance with Land Use Plans, Laws, Regulations, and Policy

The proposed action has been designed to conform to the following documents, which direct and provide the legal framework and official guidance for management of BLM lands within the Burns District:

- Taylor Grazing Act (43 U.S.C 315 - 1934)
- National Environmental Policy Act (42 U.S.C. 4321-4347)1970
- Federal Land Policy and Management Act (43 U.S.C. 1701, 1976)
- Public Rangelands Improvement Act (43 U.S.C. 1901. 1978)
- Grassy Basin Allotment Management Plan (1985)
- Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the States of Oregon and Washington (1997)
- Greater Sage-grouse and Sagebrush-steppe Ecosystems Management Guidelines (BLM - 2000)
- Bureau of Land Management National Sage-grouse Habitat Conservation Strategy (2004)

- Local Integrated Noxious Weed Control Plan (2004)
- Andrews Management Unit Resource Management Plan/Record of Decision (August 2005)
- Greater Sage-grouse Conservation Assessment and Strategy for Oregon (ODFW - August 2005)

CHAPTER II: ALTERNATIVES, INCLUDING THE PROPOSED ACTION

A. Alternatives Considered but not Fully Analyzed

The IDT considered constructing one or more reservoirs in the pasture. This alternative was not fully analyzed because snow accumulation is unreliable and generally light during most years, and topography limits the size of any tributary areas, especially for an area of scant and unreliable precipitation. Since the objective of the project is to provide reliable water for livestock use, the alternative was not fully analyzed.

B. No Action Alternative

Distribution of water for livestock use in Lower Grassy Basin Pasture would not be enhanced. The existing spur of the Grassy Hill Pipeline would not be extended. This alternative provides a baseline from which to compare the effects of the proposed action.

C. Proposed Action

The proposed action is to create a new pipeline spur that originates at Al's Canyon Trough along Grassy Hill Pipeline, and ends at a new trough that would be placed approximately 1.5 miles due north. The new pipeline would be within T. 41 S., R. 36 E.; it would originate in Section 13, and terminate the new trough in Section 1. The pipeline would be buried (using a backhoe) 18 inches under an existing road, except for short lengths where rock or other underground features require an alternate route adjacent to the road. The trough would be placed approximately one-eighth mile off the road, on a broad topographic saddle. The trough would be equipped with a float valve to prevent overflow, and would include ramps to facilitate safe use by small mammals and birds.

Livestock grazing would occur annually in Lower Grassy Basin Pasture with the same number (941 AUMs), kind, and authorized season of use after the project has been completed. The project would be implemented when funding becomes available. All work would be conducted by BLM staff or contractors. Maintenance would be the responsibility of the permittee.

Project Design Features

1. Construction would occur in early spring or in late summer or early fall to avoid adverse effects to nesting birds.
2. The trough would be equipped with a float-valve to prevent overflow and waste of unused water.
3. Soil disturbed during pipe placement and trough installation would be hand-seeded with a mixture of native and nonnative perennial grass species.
4. If possible, the trough would be partially buried and coarse rock would be placed to reduce soil compaction by livestock and assist in blending the site with the surrounding area.
5. Vehicles and equipment would be cleaned prior to entry to the site for project work to alleviate spread of noxious weeds.
6. The BLM would inventory the project site for noxious weeds. Any weeds found would be treated, and the site would be monitored for new weed introductions.
7. Prior to final inspection, all construction trash and excess debris would be removed from the public lands and disposed of at a site approved by the BLM Contracting Officer.

CHAPTER III: AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

A. Identification of Affected Elements of the Human Environment

The IDT reviewed the elements of the human environment, as required by law, regulation, Executive Order and policy, to determine if they would be affected by the proposed action or any of the alternatives. The following table summarizes the results of that review. Affected elements are in bold.

Critical Elements of the Human Environment	**Status**	**Project contributes to cumulative effects?**	**If Not Affected, why? If Affected, Reference Applicable EA Section**
Air Quality (Clean Air Act)	Not Affected	No	Dust would be produced briefly during pipeline construction.
American Indian Traditional Practices	Not Present	No	No concerns have been disclosed.
Areas of Critical Environmental Concern (ACECs)	Not Present	No	The closest ACEC is East Fork Trout Creek Research Natural Area/ACEC, approximately 9 miles east of the project area.
Cultural Resources	Not Present	No	Surveys were conducted in fall, 2007. No cultural items or sites were discovered.
Environmental Justice (Executive Order 12898)	Not Affected	No	The proposed action is not expected to have disproportionately high and adverse human health or environmental effects on minority populations and low-income populations.

Critical Elements of the Human Environment		Status	Project contributes to cumulative effects?	If Not Affected, why? If Affected, Reference Applicable EA Section
Flood Plains (Executive Order 13112)		Not Present	No	The proposed action does not involve occupancy and modification of flood plains, and would not increase the risk of flood loss.
Hazardous or Solid Waste		Not Present	No	
Noxious Weeds (Executive Order 13112)		**Affected**	No	See Chapter III, Section B.1.
Paleontological Resources		Not Present	No	
Prime or Unique Farmlands		Not Present	No	
Migratory Birds (Executive Order 13186)		Not Affected	No	The project would be constructed before most migratory species arrive. Season of livestock use is prior to nesting for most species, and would not change.
Wildlife/ Threatened or Endangered (T/E) Species or Habitat	Fish	Not Present	No	No perennial or fish-bearing streams flow through the pasture.
	Wildlife	Not Present	No	No Federal T/E animal species are known or suspected to occur in the project area.
	Plants	Not Present		No Federal T/E plant species are known or suspected to occur in the project area.
Wildlife/BLM SSS and Habitat	Fish	Not Present	No	No perennial or fish-bearing streams flow through the pasture.
	Wildlife	Not Affected/ Not Present	No	*greater sage-grouse* – Not Affected. Utilization of bunchgrass species would continue to be light to moderate, achieving rangeland health standards for upland watershed condition. The proposed action does not include installation of any new fences, or potential new raptor perches, and would not decrease sagebrush cover within Lower Grassy Basin Pasture. *pygmy rabbit* – Not Present. There are no historical sightings within Lower Grassy Basin Pasture or Grassy Basin Allotment. The project area and the allotment do not contain the following combination of habitat features that would make it suitable pygmy rabbit habitat: > 23 percent big sagebrush cover; > 40-inch deep soil with sandy loam or loamy sand surface texture; <40-inch deep soil with loamy subsoil, and; historical plant community had big sagebrush and basin wildrye (Bartels 2003).
	Plants	Not Present	No	Botanical surveys were conducted in 2000. No BLM Special Status plant species were detected, nor are any suspected to occur based on known habitat associations.
Water Quality (Surface and Ground)		Not Present/ Not Affected	No	No surface water is present in the pasture. The project would have no influence on groundwater resources.

Critical Elements of the Human Environment	Status	Project contributes to cumulative effects?	If Not Affected, why? If Affected, Reference Applicable EA Section
Wetlands/Riparian Zones (Executive Order 11990)	Affected	No	Although no riparian areas are present in Lower Grassy Basin Pasture, the proposed action would have a very slight (nonmeasurable) beneficial effect on riparian health of Cottonwood Creek (on private land outside of the pasture) after livestock use of the water gap on private land is closed or further restricted.
Wild and Scenic Rivers	Not Present	No	
Wilderness/Wilderness Study Areas	Not Present	No	

Noncritical elements of the Human Environment present	Status (Affected/ Not Affected)	Project contributes to cumulative effects?	If Not Affected, why? If Affected, Reference Applicable EA Section
Grazing Management	Not Affected	No	The authorized number and kind of livestock and season of use would not change.
Recreation	Not Affected	No	No changes to general recreational setting or access routes would occur.
Soils/Biological Crusts	**Affected**	No	See Chapter III, Section C.1.
Upland Vegetation	**Affected**	No	See Chapter III, Section C.1.
Visual Resources	Not Affected	No	The Project Area is Visual Resource Management (VRM) Class III. The proposed action would result in a slight change in to landscape character, but would not dominate the view of the casual observer, as consistent with VRM III objectives.
Social and Economic Values	Not Affected	No	No changes to customary social or economic values would occur.
Wildlife	Not Affected	No	The proposed action would not create any barriers to wildlife movement, encourage or discourage the presence of any new species, or change measurably the pattern and distribution of wildlife habitat within the pasture.

B. Critical Elements

1. Noxious Weeds

Affected Environment

Current discussion and analysis of potential effects to noxious weeds are tiered to the AMU/Steens Mountain Cooperative Management and Protection Area Proposed RMP/Final Environmental Impact Statement (CMPA PRMP/FEIS) (August 2004), and relevant information contained in the following sections is incorporated by reference: Sections 3.5.5, p. 3-17 and 4.5.6, p. 4-60.

There are no known noxious weed sites within Lower Grassy Basin Pasture or Grassy Basin Allotment. The closest seed sources for noxious weeds along transportation routes that access the pasture are a small (.3-acre) patch of Scotch thistle (*Onopordum acanthium*) along Crow Creek Road on the western approach to Grassy Basin, approximately 2 miles to the west; and two patches (each less than .001-acre) of Russian knapweed along Cottonwood Creek (County) Road approximately 2 miles to the northwest. No new noxious weed sites have been found along the original Grassy Hill Pipeline route (constructed in 1986), indicating that best management practices were successful in preventing new sites from becoming established. The permitee has been proactive and cooperative with Harney County and BLM in weed management efforts on his allotment and private lands in the past decade.

Environmental Consequences

No Action Alternative

In general, noxious weeds could invade even healthy sites such as the Lower Grassy Basin project area. Seeds can and will germinate wherever disturbance occurs. Natural disturbances from rodents, ungulates, droughts, and fires can provide opportunities for noxious weed establishment. If new weed sites are found, they would be treated using the most appropriate methods as outlined in the Burns District Weed Management EA #OR-020-98-05.

Proposed Action

Soil-disturbing activities resulting from pipeline and trough placement could facilitate spread to new sites of any weed species that arrive on construction equipment. However, project design features (Chapter II, Section C.) are intended to reduce the risk of new introductions and document any new or existing weed sites. If weeds are found, they would be treated using the most appropriate methods as outlined in the Burns District Weed Management EA #OR-020-98-05.

The proposed action would likely not contribute to the cumulative expansion of noxious weeds within Grassy Basin Allotment (should any seeds arrive and germinate) because the disturbance area is small, easily surveyed, and easily treated. Also, the permitee has demonstrated due vigilance in recognizing and treating noxious weeds when found.

C. Noncritical Elements

1. Upland Soils, Vegetation, and Biological Soil Crusts

Affected Environment

Current discussion and analysis of potential effects to soils, vegetation and biological crusts are tiered to the AMU/CMPA PRMP/FEIS (August 2004), and relevant information contained in the following sections is incorporated by reference: Sections 3.4, p. 3-7, 4.4, p. 4-21, 3.5.4, p. 3-14, and 4.5.5, p. 4-52. These resources, considered together, are key elements in determining achievement of the Standard for Rangeland Health #1, Watershed Function – Uplands, and Standard for Rangeland Health #3, Ecological Processes. Based on an assessment of indicators of upland rangeland health conducted in 2006, an IDT determined uplands in Lower Grassy Basin Pasture have achieved BLM's Standards for Rangeland Health #1 and #3.

Upland soils in the project area consist primarily of the Raz-Brace-Anawalt association (BLM Geographic Information System data from Natural Resource Conservation Service soil survey reports). These cool soils are characterized as shallow to moderately deep and well-drained, with cobbly clay-loam texture. Uplands or foothills sites for this soil type (which is most typical) have rock fragments (primarily cobbles and stones) ranging from 15 to 60 percent. Erosion potential is low for wind and water. Field observations indicate these soils are generally light in texture, and relatively resistant to compaction, especially from hoof impact. No excessive erosion (in the form of developing rills or gullies) has been noted during rangeland health assessments of the pasture.

Based on a botanical inventory conducted in 2000, the dominant shrub in the project area is Wyoming big sagebrush (*Artemisia tridentata ssp. wyomingensis*), and the dominant grass is bluebunch wheatgrass (*Pseudoroegneria spicata*). Other common grasses include Thurber's needlegrass (*Acnetherum thurberianum*), Idaho fescue (*Festuca idahoensis*), and bottlebrush squirreltail (*Elymus elymoides*). Cheatgrass is present, but is not a major influence on the plant community or ecological site processes, since deep-rooted shrubs and native bunchgrasses are vigorous, productive, and represented by plants of various ages.

Other shrubs present include green rabbitbrush (*Ericameria viscidiflorus*), purple sage (*Salvia dorrii*), bitterbrush (*Purshia tridentata*), threetip sagebrush (*Artemisia tripartita*), and horsebrush (*Tetradymia glabrata*). The herbaceous plant community along the project route is diverse, and includes at least 22 species. No BLM Special Status Plant Species are known or suspected to occur in the pasture.

General observations from the rangeland health standards assessment in 2006 indicate the vegetative community is productive and vigorous, and stable or in an upward trend. Based on utilization study data since 1998, livestock utilization of key forage species in the pasture ranges from "light" (3 years) to "moderate" (4 years). Data was not collected during three of these years. Light use is considered 21 to 40 percent of foliage, with 60 to 80 percent of the current year's seed stalks intact. Moderate use is considered 41 to 60 percent of foliage, with 15 to 25 percent of the current year's seed stalks intact. This use of native key species is consistent with Management Direction for Grazing Management in the AMU RMP Record of Decision (p. 54).

Biotic soil crusts (BSCs) are highly specialized organisms that occupy nutrient-poor zones between vegetation clumps in many types of upland arid land vegetation communities, and function as living mulch by retaining soil moisture, discouraging annual weed growth, reducing wind and water erosion, fixing atmospheric nitrogen, and contributing organic material to soil fertility (U.S.D.I. TR 1730-2, 2001, p. 2). BSCs include such organisms as mosses, lichens, green algae, microfungi, and cyanobacteria (U.S.D.I. TR 1730-2, 2001, p. 1). Presence and general health of BSCs is reflected in a site's soil surface stability and biological productivity, which in turn is a reflection of BSC contribution to ecological processes that support these elements.

Rangeland health assessments consider the presence of BSCs as a contributor to soil surface stability and ecological process where appropriate. In the case of Lower Grassy Basin Pasture, presence of BSCs (almost entirely consisting of short mosses) throughout the pasture is limited to higher elevations, and generally on north facing slopes regardless of the presence or amount of use by livestock. When field assessment determines, as in the case with Lower Grassy Basin Pasture, that no excessive erosion is occurring, a combination of soil surface characteristics, including the presence of healthy BSCs, is presumed to be acting in concert to maintain soil surface stability.

Where livestock concentrate at the two troughs at the southern boundary of the pasture, soil compaction occurs annually for approximately 1-month, after which soil decompaction can occur during the remaining 11 months of the grazing year (mostly due to freeze-thaw cycles).

Environmental Consequences

No Action Alternative

Grazing management would continue to maintain ecological processes in the current functional condition, which supports diverse, productive vegetative communities in a stable or upward trend. Soil surface stability and the condition of BSCs would remain in the current condition. Livestock would continue to concentrate on upland soils around the two existing troughs, and at the water gap outside of Lower Grassy Basin Pasture on private land.

Proposed Action

Since the number, kind, and season of livestock grazing within Lower Grassy Basin Pasture would not change, it is unlikely, for the pasture as a whole, vigor and productivity of vegetation, soil surface stability or cover and condition of BSCs would change as a result of the proposed action. Light to moderate grazing would occur where light use or no use occurred before, most likely in the northwest portion of the pasture. Grazing in the northeast portion of the pasture would likely decrease from moderate to light, especially on the hillsides facing Cottonwood Creek. Since season of use and number and kind of authorized livestock would not change, average grazing utilization of key forage plant species within the pasture would not likely change.

Upland soils would be compacted in localized areas from one-time entry by mechanized equipment used for excavation and placement of pipeline and troughs. However, this type of disturbance would be limited to the existing road corridor and up to an additional one-eighth mile of previously undisturbed ground. Effects to soil surface condition (amount of bare ground) and plant productivity or recruitment would gradually become less obvious, and would be difficult to detect by the end of the following decade.

Livestock may create new trails to and from the new trough, which has the potential to create additional localized upland soil compaction. However, soil surface characteristics, cover by rocks, and the amount and distribution of live vegetation and litter in Lower Grassy Basin Pasture are likely to buffer these effects. No accelerated erosion associated with livestock trails has been observed elsewhere in the pasture, and none is expected to result from the proposed action.

The proposed action, when considered with other reasonably foreseeable similar future actions, would not contribute to cumulative effects to upland soils, vegetation, and BSCs because effects would be local in nature, and would not measurably change the distribution or arrangement of vegetation or BSCs in the pasture, or contribute measurably to accelerated soil surface erosion in the Alvord Basin.

D. Cumulative Effects Analysis

As the Council on Environmental Quality (CEQ), in guidance issued on June 24, 2005, points out, the "environmental analysis required under NEPA is forward-looking," and review of past actions is required only "to the extent this review informs agency decision-making regarding the proposed action." Use of information on the effects on past action may be useful in two ways according to the CEQ guidance. One is for consideration of the proposed action's cumulative effects, and secondly as a basis for identifying the proposed action's effects.

The CEQ stated in this guidance that "[g]enerally, agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions." This is because a description of the current state of the environment inherently includes the effects of past actions. The CEQ guidance specifies that the "CEQ regulations do not require the consideration of the individual effects of all past actions to determine the present effects of past actions." Our information on the current environmental condition is more comprehensive and more accurate for establishing a useful starting point for a cumulative effects analysis, than attempting to establish such a starting point by adding up the described effects of individual past actions to some environmental baseline condition in the past that, unlike current conditions, can no longer be verified by direct examination.

The second area in which the CEQ guidance states that information on past actions may be useful is in "illuminating or predicting the direct and indirect effects of a proposed action." The usefulness of such information is limited by the fact that it is anecdotal only, and extrapolation of data from such singular experiences is not generally accepted as a reliable predictor of effects.

In this analysis, cumulative effects are incorporated into the effects analysis for each relevant resource.

E. Consultation and Coordination

1. List of Preparers

Steve Dowlan, Natural Resource Specialist (Project Team Lead, Botany, Vegetation, Soils and Riparian/Wetlands and Water Quality)
Rhonda Karges, Environmental Planning Coordinator (NEPA Review)
Fred McDonald, Supervisory Natural Resource Specialist
Matt Obradovich, Wildlife Biologist
Rob Perrin, Outdoor Recreation Planner
Lesley Richman, Natural Resource Specialist (Weed Coordinator)
Scott Thomas, Archaeologist

2. Persons, Groups, or Agencies Consulted

Grassy Basin Allotment Permittee
Oregon Natural Desert Association

F. References Cited

Bartels, P. 2003. Pygmy Rabbit (*Brachylagus idahoensis*) Survey Report. Bureau of Land Management, Burns District

Bureau of Land Management, 1988. National Environmental Policy Act – BLM Handbook H-1790-1, 1988

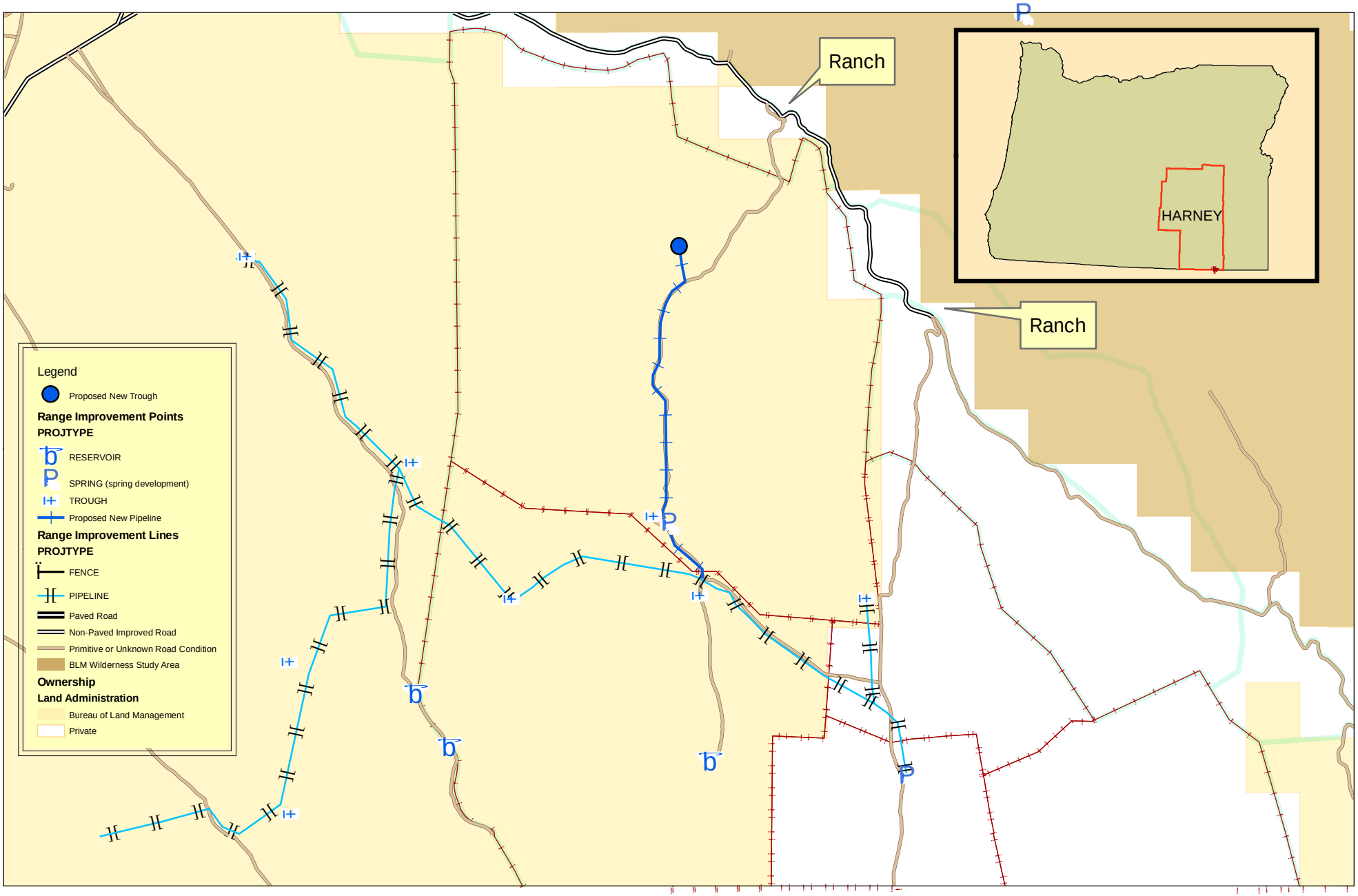
Bureau of Land Management, 1997. Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the States of Oregon and Washington

Bureau of Land Management, 2004. National Sage-grouse Habitat Conservation Strategy 1.4.1 Guidance for the Management of Sagebrush Plant Communities for Sage-grouse Conservation U.S. Department of the Interior

Bureau of Land Management, 2005. Andrews Management Unit Record of Decision and Resource Management Plan

Evans, R.D. and J.R. Johansen. 1999. Microbiotic Crusts and Ecosystem Processes. Critical Reviews in Plant Science. 18(2):183-225

Oregon Department of Fish and Wildlife, 2005. Greater Sage-grouse Conservation Assessment and Strategy for Oregon: A Plan to Maintain and Enhance Populations and Habitat. Oregon Department of Fish and Wildlife, Salem, USA



Miles
0 0.25 0.5 1 1.5

Grassy Hill Pipeline Extension

OREGON

Created by S. Dowlan, 10/03/2008

Note: No warranty is made by the Bureau of Land Management as to the accuracy, reliability or completeness of these data for individual or aggregate use with other data. Original data was compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.
US DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Burns District, Oregon

/workarea/yourname/nameofmxd.mxd
date