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Bureau of Land Management**

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**Environmental Assessment
DOI-BLM-ID-T030-2010-0029-EA
Notch Butte Pipeline Expansion
IDI-009931**

Applicants: Sheep Hook Grazing Associations LLC and
Tunupa Grazing Association LLC

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1.0 PURPOSE & NEED

1.1 Introduction

This Environmental Assessment (EA) has been prepared to disclose and analyze the environmental impacts of installing two pipeline extensions on the existing Notch Butte pipeline. This EA analyzed the direct, indirect, and cumulative environmental impacts that would result from the proposed action and alternatives.

1.2 Background

The BLM Shoshone Field Office has received two individual applications from two livestock grazing permittees requesting range improvement projects in their permitted grazing allotments. The Sheephook Cattle Grazing Association LLC, in care of Skip Owen, and the Tunupa Grazing Association LLC, in care of John Arkoosh, have requested extensions to the existing Notch Butte pipeline. Mr. Owen's and Mr. Arkoosh's purpose for requesting the pipeline extensions are to provide water for their livestock in the North and Lava pastures of the Antelope Allotment and the East and South pastures of the Sand Butte Allotment.

The Notch Butte Pipeline is an extensive network of 21 troughs and miles of pipeline that provide water for many allotments south of Shoshone, Idaho. It was originally built in the 1960s but extensions and improvements have been added since. The grazing allotments that currently utilize the Notch Butte Pipeline are the Antelope, Sand Butte, Notch Butte and Camp I allotments. In the case of most of these allotments, the Notch Butte Pipeline is the sole water source for the allotment. The Gunnery, Goodtime, Poleline and 7-Mile allotments are also connected to the Notch Butte Pipeline but they use the Gunnery Well as a supplemental water source to help recharge the pipeline on the west end.

The Sheephook Cattle Grazing Association LLC is currently permitted to graze livestock in the Antelope Allotment. The financial cost of maintaining and operating the Arkoosh Well, located in Township 6 South, Range 17 East, Section 7, has reached a point in which it is causing an economic hardship for the applicant. They have requested an extension to the Notch Butte pipeline in order to have a more reliable source of water for their livestock.

The Antelope Allotment is located in Lincoln County; approximately ½ mile southwest of Shoshone, Idaho (see figures in Appendix A). Elevations in the allotment range from 3,871 to 4,095 feet. The Antelope allotment consists of 9,569 acres of BLM administered land. The Antelope Allotment does not contain any private or Idaho Department of State lands. The livestock use in the Antelope Allotment includes cattle grazing during the early spring and summer months. Sheep trailing has also occurred in the Antelope Allotment for decades along the Wendell Trail, a historic trailing route used by livestock permittees to access other grazing lands to the north and east of the Antelope Allotment. Table 1 displays the current permitted grazing levels for the Antelope Allotment.

Table 1: Permitted grazing specifications for the Antelope and Sand Butte Allotments.

Allotment	Livestock #	Period of Use	% Federal Land	Active AUMs	Suspended AUMs	Total AUMs
Antelope	482	04/07 to 07/07	94%	1,882	0	1,882
Sand Butte	188	04/07 to 10/15	100%	1,186	374	1,560

*AUMs = Animal Unit Months, the equivalent of forage consumed by one cow and one calf for one month.

Tunupa Grazing Association LLC has also requested an extension of the Notch Butte pipeline in order to supply water to two new troughs, one located in the East Pasture and one in the South Pasture of the Sand Butte Allotment. The proposed trough in the South Pasture is located adjacent to an existing reservoir located within the South Pasture of the Sand Butte Allotment. There is not currently a water source within this pasture. Historically, the reservoir received water from adjacent private agricultural lands when they were flood irrigated; however, the irrigation practices have since changed to a center pivot irrigation system in the early 1990s which has stopped the flow of water to the reservoir.

The lack of water has resulted in reduced use of the South Pasture by livestock and the current permittee, Tunupa Grazing Association, has not used that pasture since they acquired the allotment in 2007. The previous permittee had not grazed the South Pasture since 1989 though due to the lack of available water. The current reservoir, where the trough would be place, would be maintained as an overflow area. Tunupa Grazing Association LLC is also proposing to install a new trough within the East Pasture of the Sand Butte Allotment. This trough would be placed along the pipeline extension to aid in dispersing livestock within the pasture when it is scheduled for use by livestock. The installation of the new troughs and pipeline extensions are being requested to provide water to portions of the allotment which do not currently have a water source which in turn would improve livestock distribution throughout the east and south pastures of the Sand Butte Allotment.

Portions of the Sand Butte Allotment occur in both Jerome and Lincoln Counties. The Allotment is situated approximately 3 miles south of Shoshone, Idaho (see figures in Appendix A) with an elevation that varies from 3,900 to 4,100 feet. No perennial streams or water bodies exist within the allotment. Water for livestock is obtained from the Notch Butte pipeline. Table 1 displays the current permitted grazing levels for the Sand Butte Allotment.

1.3 Purpose(s) and Need for the Proposed Action

The need for the proposed action is to improve livestock distribution in the Sand Butte Allotment by providing a water source to the South Pasture of the Allotment. The Proposed Action would also improve water availability in the Antelope Allotment, by attaching the existing watering troughs to the Notch Butte Pipeline, a reliable water source.

BLM is proposing to authorize installation and operation of range improvements (i.e. extension to the existing Notch Butte pipeline) as requested by the permittees (Sheephook Cattle Grazing Association LLC and Tunupa Grazing Association LLC).

1.4 Conformance to BLM Land Use Plan

The Proposed Action is in conformance with the 1985 Monument Resource Management Plan (RMP). The Monument RMP specifically provides for installation of pipelines and troughs. Under the section *Range Improvements and Treatments* (p. 24) the RMP states “Typical range improvements and treatments and the general procedures to be followed in implementing them are described under *Standard Operating Procedures*. The extent, location and timing of these actions will be based on the allotment-specific management objectives adopted through the resource management planning process, interdisciplinary development and review of proposed actions, permittee contributions, and BLM funding capability.”

Under the section *Pipelines and Troughs* (Appendix D-5, 6), the Final Environmental Impact Statement for the RMP states: “Water pipelines would be buried in a trench excavated by a backhoe, with excavated material used for the backfill. Rigid plastic pipe may be used. Flexible pipe may be installed with a ripper tooth. Valves would be installed at intervals along the pipeline to allow easy drainage to prevent freezing. Troughs would be placed where needed to provide an even distribution of livestock water. Each trough would have a bird ladder to allow wildlife use. Separate wildlife water storage and watering devices may also be constructed in regular intervals. Disturbed areas would be reseeded.”

1.5 Relationship to Statutes, Regulations, or other Plans

Lincoln County would require the acquisition of a Special Use Permit for the installation of each of the pipeline extensions. This would cover the installation of the pipeline under County Line Road. The project area is located within the bounds of Lincoln County so no permit for Jerome County would be required. All Federal, State, and County permits that are applicable would be acquired before any construction activities are implemented.

1.6 Identification of Issues

During the analysis process, the BLM interdisciplinary team considered several resources to determine which would likely be affected by the proposed action or alternatives. A scoping package was sent to all interested publics and adjacent livestock permittees on January 10, 2011 with a deadline for comments being February 7, 2011. No comments were received. The project file contains a complete list of the resources that were considered and supplemental authorities that were consulted, and reasons why some resources will not be analyzed in this EA.

The interdisciplinary team identified five resources which are likely to be affected. These are (1) livestock grazing, (2) soils; (3) vegetation, including BLM sensitive plants, noxious weeds, and invasive plants; (4) wildlife, including BLM sensitive species and migratory birds; and (5) cultural resources.

1.6.1 Livestock Grazing

Installation of the proposed northern pipeline expansion in the Antelope Allotment would not result in any changes to livestock grazing practices other than providing a more reliable water source. Currently permittees who operate in the Antelope Allotment have been able to provide water to livestock through operation of the Arkoosh Well or, when it is not functioning properly, have trucked water to the existing troughs when livestock are present in the North Pasture. Livestock watering has been available in this portion of the allotment since the well was constructed in 1976.

The installation of an additional water trough in the East Pasture of the Sand Butte Allotment would aid in the dispersal of livestock throughout the pasture while in use. This would distribute livestock over a greater area of the pasture relieving use made by livestock at the existing trough. The installation of a trough in the South Pasture would make this pasture usable again to the permittee. Within the current grazing rotation description the South Pasture is proposed to be grazed simultaneously with the East pasture; however, the South Pasture has been voluntarily (by the permittee) unused since 1989 due to the lack of water within the pasture. Providing a water source within the South Pasture may aid in livestock dispersion by allowing the South Pasture to be grazed again with the East Pasture during the rest rotation grazing system associated with the Sand Butte Allotment.

1.6.2 Soils

The installation of the proposed pipeline extensions would result in the disturbance of soils within the proposed routes. Soils along each of the proposed pipeline extensions consist of silt loam, loam, and areas of loamy fine sand derived primarily from mixed alluvium and/or aeolian deposits over bedrock derived from basalt (NRCS 2010). The disruption of these soils may result in impacts such as compaction and exposure to wind and water erosion.

1.6.3 Vegetation, including BLM Sensitive Species, Noxious Weeds & Invasive Plants

Installation of the pipeline extensions would result in the removal and compaction of vegetation within the proposed routes. One BLM sensitive plant – Picabo milkvetch (*Astragalus oniciformis*) – could potentially occur in the proposed pipeline routes. Surveys of the proposed pipeline routes were completed in August 2010 and again in June 2011 to identify any presence of this species. No sensitive plants were observed during the pedestrian survey conducted on either of these dates.

Spotted knapweed (*Centaurea maculosa*), diffuse knapweed (*Centaurea diffusa*), rush skeletonweed (*Chondrilla juncea*), and cheatgrass (*Bromus tectorum*) are present in close proximity to the proposed pipeline extension in the Antelope Allotment. Spotted knapweed, diffuse knapweed, and rush skeleton weed are on the Idaho State Department of Agriculture (ISDA) noxious weed list. Cheatgrass is considered to be an invasive species. No noxious weeds were observed within the Sand Butte Allotment. Soil disturbance may increase the risk of invasion by these noxious and/or invasive weed species.

1.6.4 Wildlife, including BLM Sensitive Species and Migratory Birds

There are three ESA-listed species for Jerome County (i.e., Canada lynx [*Lynx canadensis*], Snake River physa snail [*Physa natricina*] and Bliss Rapids snail [*Talorconcha serpenticola*]) and none listed for Lincoln County. There is no habitat present within the proposed pipeline extension routes for any of these species and so they will not be discussed further in this document. The greater sage-grouse (*Centrocercus urophasianus*) and wolverine (*Gulo gulo*) are listed as a candidate species under the ESA for both counties. The proposed pipeline extension routes contain marginal habitat for the greater sage-grouse, but does not contain the required alpine habitats which are typically preferred by wolverine. The public land in the Antelope Allotment has not been designated as sage-grouse habitat on the current Idaho sage-grouse habitat map nor does it contain any Preliminary Priority Sage-Grouse Habitat (PPH). It is however within the Preliminary General Sage-Grouse Habitat (PGH).

A number of BLM sensitive species occur on federally managed lands within the Shoshone Field Office. The potential impact of the proposed project on these species must also be considered. Species known to occur within the Shoshone Field Office, but lacking suitable habitat in the project area include: Piute ground squirrel (*Spermophilus mollis artemisae*), peregrine falcon (*Falco peregrinus*), common garter snake (*Thamnophis sirtalis*), western toad (*Bufo boreas*), woodhouse toad (*Bufo woodhousii*), and St. Anthony dunes tiger beetle (*Cicindela arenicola*). None of these species have been documented as occurring within three miles of the proposed pipelines. The sage sparrow (*Amphispiza belli*) also has not been documented within three miles of the project area even though potential habitat is present along the pipeline routes. Due those reasons, these species will not be discussed further in this document.

The proposed pipeline extension routes contain potential habitat for several BLM sensitive bird species and one sensitive mammal species. During a field exam conducted in August 2010 and June 2011 by a North Wind biologist, potential nesting and foraging habitat for several BLM special status animals (i.e., prairie falcon [*Falco mexicanus*], ferruginous hawk [*Buteo regalis*], loggerhead shrike [*Lanius ludovicianus*], Brewer's sparrow [*Spizella breweri*], sage thrasher [*Oreoscoptes montanus*], and Townsend's big-eared bat [*Plecotus townsendii*]) was documented as present along the southern pipeline extension route. Foraging habitat is also present along the northern pipeline route. The proposed pipeline installations can alter habitats for BLM sensitive species.

During the August 2010 and June 2011 field surveys, potential habitat was observed along portions of each of the proposed pipelines for Birds of Management Concern, a subset of the species protected by the Migratory Bird Treaty Act (see 50 CFR 10.13). The Migratory Bird Program places priority emphasis on birds that may occur in the project area, which may include: western bluebird (*Sialia mexicana*), lesser goldfinch (*Spinus lawrencei*), Swainson's hawk (*Buteo swainsoni*), western burrowing owl (*Athene cunicularia*), short-eared owl (*Asio flammeus*), long-billed curlew (*Numenius americanus*), green-tailed towhee (*Pipilo chlorurus*), Brewer's blackbird (*Euphagus cyanocephalus*), and grasshopper sparrow (*Ammodramus savannarum*) (USFWS Migratory Bird Program Strategic Plan 2004-2014). No raptor nests or suitable nest sites were observed along either of the proposed pipeline routes. Both of the proposed waterline routes support suitable foraging habitat for raptors which occur in the general geographic area.

Areas associated with the proposed pipelines also support habitats which can be used as winter habitat for two big game species, pronghorn antelope (*Antilocapra americana*) and mule deer (*Odocoileus hemionus*). Neither of the proposed routes are within designated winter habitats identified in the 1984 Monument RMP; however, portions of both of the proposed water lines are within designated pronghorn antelope winter habitat (BLM 1984 Map 7).

1.6.5 Cultural Resources

Both of the proposed pipeline extensions were surveyed to identify the presence of cultural resources. The southern pipeline extension was surveyed in August 2010, and the northern pipeline extension was surveyed prior to reseeded following the 2007 wildfire which occurred in the area. No sites eligible for inclusion on the National Register of Historic Places were identified during these surveys. No other cultural resources were identified along the proposed pipeline routes. The installation of the pipeline extension will not have any impact on cultural resources and therefore this resource will not be further discussed in this document.

2.0 DESCRIPTION OF ALTERNATIVES, INCLUDING PROPOSED ACTION

Alternatives were developed to explore alternative means of meeting the purpose and need for action and to analyze impacts to resources based on issues identified through scoping.

2.1 Proposed Action

The BLM Shoshone Field Office is proposing to authorize construction of two segments of pipeline—one in the Antelope Allotment and one in the Sand Butte Allotment. These segments of pipeline would be extensions to the existing Notch Butte pipeline. The Notch Butte pipeline is located on public lands and is used to service livestock watering troughs in various grazing allotments located on the east side and west side of Highway 93. Members of the Notch Butte Pipeline Association, which maintain and operate the Notch Butte Pipeline, have been made aware of the proposed extensions and have agreed that the extensions would not impact the current operation of the pipeline. The BLM is also proposing to authorize installation of two new troughs along the pipeline extension in the Sand Butte Allotment. A map showing the location of the two pipeline extensions and new trough locations is provided in Appendix A.

Sheephook Cattle Grazing Association LLC requested an authorization to install an extension to the Notch Butte pipeline that would provide water to the North Pasture of the Antelope Allotment; this segment of pipeline will be referred to as the northern pipeline extension. Water within the North Pasture is currently provided by the Arkoosh Well which has become economically difficult to maintain and is often unreliable due to the depth of the water table at the well (personal communication with S. Owen). The installation of the northern pipeline extension would consist of burying approximately 1.6 miles of 1.5-inch diameter high density polyethylene (HDPE) pipe at a depth of 12 to 24 inches (dependent upon soil conditions). The extension would connect the Notch Butte pipeline to existing livestock watering troughs located in the vicinity of the Arkoosh Well. The proposed route for the pipeline follows an existing two-track roadway across the North Pasture of the Antelope Allotment from an existing set of livestock watering troughs east of the Arkoosh Well (see Appendix A).

Installation of the northern pipeline would be accomplished by one of two methods: 1) pulling in the line using a tracked vehicle equipped with a ripper shank opening a seam into which the pipe would be fed, or 2) excavating a trench with a backhoe into which the pipeline would be installed and backfilled. Due to the rocky nature of the soils within the proposed route, a combination of both installation methods may be required. Installation of the northern pipeline by excavating a trench would disturb an area approximately 15-foot wide (trench width plus potential damage from tracked vehicle) by 1.6 miles in length, impacting approximately 2.9 acres of public lands. Due to the cost of excavation the use of a track mounted ripper is the preferred installation method with excavation being limited to areas which are too rocky for the use of the ripper. This method of installation will be analyzed in this assessment because it has the potential to impact the greatest area.

Tunupa Grazing Association LLC requested an authorization to install an extension to the Notch Butte pipeline to provide water to the South Pasture of the Sand Butte Allotment; this segment of pipeline will be referred to as the southern pipeline extension. Tunupa Grazing Association LLC is also requesting authorization to install two new troughs; one in the South Pasture and one in the East Pasture of the Sand Butte Allotment. Installation of the southern pipeline extension would be performed in the same method as described for the northern pipeline extension. The southern pipeline extension would consist of burying approximately 2.5 miles of 1.5-inch diameter HDPE pipe at a depth of 12 to 24 inches. The extension would connect to the existing Notch Butte pipeline and travel south to a dry reservoir located south of County Line Road. A directional boring machine would likely be used to install the southern pipeline extension under County Line Road, which separates the East Pasture from the South Pasture.

Prior to construction of the pipeline extension crossing County Line Road, the permittee would need to receive approval for road bed disturbance from Lincoln and Jerome County. The existing dry reservoir would act as an emergency overflow for the trough in the South Pasture. Both of the new troughs would be equipped with a float device to regulate the flow of water preventing over flow. The troughs would also be equipped with bird escape ladders. Installation of the southern pipeline using the trenching would disturb an area approximately 15-foot wide by 2.5 miles in length, impacting approximately 4.4 acres of public lands.

A Cooperative Range Improvement Agreement (BLM Form 4120-6) has been signed by each permittee prior to construction of the project. Tunupa Grazing Association will be responsible for project costs, future maintenance and/or replacement of the southern pipeline expansion in the Sand Butte Allotment and Sheephook Cattle Grazing Association will be responsible for project costs, future maintenance and/or replacement of the northern pipeline expansion in the Antelope Allotment.

2.1.1 Design Features

To reduce or eliminate the potential for impacts to vegetation, cultural resources, and wildlife a series of design features and/or stipulations have been developed for the implementation of the proposed construction activities. These features include the following:

Vegetation and Weeds

- During construction activities the minimum amount of vegetation necessary shall be removed. If excavation occurs, topsoil shall be conserved and reused as cover on disturbed areas to facilitate regrowth of vegetation.
- All disturbed areas shall be reseeded using a seed mix and planting method suitable for the location as specified by the BLM. Seeding shall be repeated if a satisfactory stand is not obtained as determined by the BLM upon evaluation after the first growing season. Inclusion of sagebrush seeds within the seed mix will reduce the duration of time associated with sagebrush reestablishment following disturbance.
- The permittee shall be responsible for weed control on disturbed areas within the footprint of the project area. A Pesticide Use Proposal (PUP) would also be required to be submitted to the BLM prior to controlling weeds.
- All construction equipment shall be cleaned of all soil and plant material before entering each pipeline extension location to prevent the possible spread of noxious or invasive weed species.

Archeology

- Any cultural and/or paleontological resource (historic or prehistoric site object) discovered by those installing the pipeline or any person working on his behalf on public or Federal land shall be immediately reported to the BLM Shoshone Field Office Archeologist. All operations will be suspended in the immediate area of such discovery until written authorization to proceed is issued by the archeologist. An evaluation of the discovery will be made by the archeologist to determine appropriate actions to prevent the loss of significant cultural or scientific values.

Wildlife

- To avoid impacts to wildlife the installation of the pipeline will not be allowed to occur during seasonal nesting periods of sage-grouse (February 1 through July 31) without approval of the BLM authorized officer.

2.2 Alternative 1

Under this alternative, BLM would authorize construction of the two pipeline extensions and installation of only one new trough. The northern pipeline extension would be 1.6 miles long and the southern pipeline extension would be 2.5 miles long. The new trough would be located in the South Pasture of the Sand Butte Allotment. Alternative 1 would be the same as the Proposed Action except a new water trough would not be placed in the East Pasture of the Sand Butte Allotment. All design features described in the Proposed Action would apply to Alternative 1.

2.3 Alternative 2 – No Action Alternative

Under this alternative, the BLM would deny the application requesting that additional range improvement projects. The BLM would deny the application to construct the northern and southern pipeline extensions and to install two new troughs. Livestock grazing would continue and use of the existing Notch Butte Pipeline under the levels currently authorized. The Arkoosh Well in the Antelope Allotment would continue to be used and, as needed, the permittee would haul water to the existing troughs.

2.4 Alternatives Considered by Eliminated from Detailed Study

During the initial development of the proposed action there were two additional alternatives which were considered but eliminated from detailed study. These include hauling water to the existing troughs in the Antelope Allotment and placing a new trough in the South Pasture of the Sand Butte Allotment and hauling water to that trough. This alternative was eliminated from detailed study due to the economic hardship that would be placed on the two permittees associated with hauling water. The fuel costs associated with trucking water to each of the troughs as well as the time it would require daily to ensure that water was available for livestock while present within the associated pastures was determined to be too high in comparison to those associated with the Proposed Action or No Action Alternatives.

Another alternative associated with the northern pipeline extension included the drilling of a new well to replace the Arkoosh Well within the Antelope Allotment. This alternative was eliminated from detailed study to the extensive cost of drilling a new well resulting in economic hardship to the existing permit holders.

3.0 AFFECTED ENVIRONMENT

This chapter presents the affected environment, by describing the existing condition of physical and biological resources that may be affected by implementing the proposed action or alternatives. North Wind Inc. conducted a field survey of both the northern and southern pipeline extension routes in August 2010 and again in June 2011 to identify resources present and potential impacts. This chapter provides the baseline for comparison of environmental impacts described in Chapter 4.

3.1 General Setting

The project area encompasses two distinct sites within the BLM Shoshone Field Office. The northern pipeline extension is located directly west of the community of Shoshone and includes a linear area approximately 1.6 miles long with a potential impact area 15 feet wide. The general area is comprised of a slightly rolling topography with scattered basalt rock outcrops. There is no surface water present. The area associated with the northern pipeline extension was burned in 2006 and again in 2007, and was reseeded with a BLM approved seed mix.

The southern pipeline extension is located approximately 3.5 miles southwest of the community of Shoshone and includes a linear area approximately 2.5 miles long with a potential impact area 15 feet wide. The southern pipeline extension is located within the East and South Pastures of the Sand Butte Allotment. A new trough location is being proposed along the southern pipeline extension within a naturally occurring bowl or depression. Topography of the proposed southern pipeline extension is gently rolling with scattered basalt rock outcrops. There is no surface water present. Portions of the southern pipeline extension route were burned in the 2007 Red Bridge Fire, and were reseeded using a BLM approved seed mix.

3.2 Livestock Grazing

Both the Antelope and Sand Butte Allotments are permitted for the grazing of cattle. Sheep trailing is also permitted in the Antelope Allotment during the summer use period (06/07 – 07/07). The four pastures with the Antelope Allotment are grazed under a rest rotation system with 1,882 AUMs in Active use (see Table 1). The grazing management prescription authorizes rotating through each pasture twice during a given year, which allows a 30-day grazing period in each pasture but limits the time to two separate 15-day periods. Table 2 shows the rest rotation grazing system for the Antelope Allotment.

Table 2: Current Antelope Allotment Rest Rotation System

Pasture	Year 1	Year 2	Year 3	Year 4
Lava	REST	4/7 – 5/6	5/7 – 6/6	6/7 – 7/7
North	4/7 – 5/6	5/7 – 6/6	6/7 – 7/7	REST
Railroad	5/7 – 6/6	6/7 – 7/7	REST	4/7 – 5/6
Shoshone	6/7 – 7/7	REST	4/7 – 5/6	5/7 – 6/6

The Sand Butte Allotment is grazed from spring through fall under a three pasture rest rotation grazing system. The East and South pastures are grazed together to get the three pasture rotation system. Table 3 shows the current rest rotation grazing system for the Sand Butte Allotment.

Table 3. Current Sand Butte Allotment Rest Rotation System

Pasture	Year 1	Year 2	Year 3	Year 4
East-South	REST	7/16 - 10/15	4/07 – 07/15	REST
Center	04/07 – 07/15	REST	7/16 – 10/15	4/07 – 07/15
West	7/16 – 10/15	4/07 – 07/15	REST	7/16 – 10/15

Water to support livestock grazing in both allotments is provided by the Notch Butte Pipeline. Water supplies in the North Pasture of the Antelope Allotment are supplemented by the Arkoosh Well. The Notch Butte Pipeline also provided water to the Notch Butte, Camp 1, Gunnery, 7-Mile, Goodtime, and Poleline allotments. The permit holders for these allotments have been notified of the proposed pipeline extensions and have agreed to the proposed changes by signing a letter which is on file in the Shoshone BLM Field Office.

3.3 Soils

The soils within the northern pipeline extension area are dominated by Jestrick-Kecko-Rock outcrop complex, with 2 to 12 percent slopes and Sidlake-Rock outcrop-Hoosegow complex, with 2 to 12 percent slopes. The upper extents of these soils (0 to 24 inches in depth) consist of fine sandy loam to loam. These soils are well drained with a low to moderate risk of wind erosion (NRCS 2010).

The soils along the southern pipeline extension are dominated by Hoosegow-McPan-Rock outcrop complex, with 2 to 10 percent slopes. The upper extents (0 to 24 inches in depth) of these soils consist of loam and silty loam. These soils are well drained with a low to moderate risk of erosion caused by wind.

3.4 Vegetation, including BLM Sensitive Species, Noxious Weeds and Invasive Plants

The area associated with the northern pipeline extension has a history of frequent, reoccurring wildfires with the latest occurring in 2006, 2007 and 2011. These wildfires burned the majority of native vegetation in the area. The dominant vegetation at this site includes Sandberg bluegrass (*Poa secunda*), cheatgrass (*Bromus tectorum*), wormseed mustard (*Erysimum cheiranthoides*), common tansy mustard (*Descurainia sophia*), and small quantities of crested wheatgrass (*Agropyron cristatum*). Areas along the pasture fence line are dominated with diffuse knapweed, an ISDA-listed noxious weed. Spotted knapweed and rush skeleton weed, ISDA-listed noxious weeds, also occur in close proximity to the proposed pipeline route. There are few shrub species within the project area due to frequent, reoccurring wildfires. The shrubs that remain within the area are Wyoming big-sagebrush (*Artemisia tridentata wyomingensis*) and gray rabbitbrush (*Chrysothamnus nauseosus*).

The vegetation along the southern pipeline extension is dominated by Wyoming big-sagebrush and scattered gray rabbitbrush. The understory is comprised primarily of cheatgrass with some areas containing Sandberg bluegrass, common tansy mustard, clasping peppergrass (*Lepidium perfoliatum*), and scarlet globemallow (*Sphaeralcea coccinea*). The area within 300 feet on the northern side of County Line Road and the whole of the proposed pipeline location on the south side of County Line Road was burned in the 2007 Red Bridge Fire. This wildfire removed the majority of the native vegetation from the area. Following the 2007 fire the burned areas were reseeded; however, a vole infestation which occurred in the spring and summer of 2010 affected production of every vegetation type (native, seeded, or otherwise) in the area and reduced the productivity of the seeding.

During the 2010 survey, plants in the area included wormseed mustard, common tansy mustard, scarlet globemallow, and clasping peppergrass; these species were not seeded after the Red Bridge Fire. Similar results were found during the June 2011 survey; the site was dominated by common tansy mustard, wormseed mustard, cheatgrass, and clasping peppergrass. The dispersal of these species appears to be related to the vole infestation. Vole activity in the area has also resulted in the loss of sagebrush individuals caused by girdling of the shrubs and burrowing under the root structures and eating the roots during the winter months.

BLM Sensitive Plants

The list of BLM Special Status Species for the Shoshone Field Office and the list of species protected under ESA which occur in Lincoln and Jerome Counties were reviewed to determine if any of these species would likely occur within the proposed pipeline extension routes. There are currently no ESA-listed plants within Lincoln or Jerome County. The information available from the Idaho Department of Fish and Game (IDFG) Idaho Fish & Wildlife Information System (IFWIS) (which contains information provided by the BLM) was reviewed to identify any known occurrences of BLM Special Status Species or other species of concern in the two proposed pipeline locations. The IDFG IFWIS database identified Picabo milkvetch (*Astragalus oniciformis*), a BLM Special Status Species, occurring within 5 miles of each proposed pipeline location. No other BLM Special Status plants are known to occur within the area.

Picabo milkvetch is a wiry perennial forb which occurs in habitats containing sandy loam soils or uniformly, highly calcareous silt loam soils (Mosely and Popovich 1995). This species occurs commonly in basins, bowls, and flats consisting of rolling basalt topography, having deep, stable, well-drained soils. It occurs almost exclusively within the Wyoming big sagebrush/needle and thread (*Hesperostipa comata*) habitat type. Picabo milkvetch is endemic to the north-central portion of the eastern Snake River Plain in Blaine, Lincoln, and Minidoka Counties, Idaho.

Even though the soils and vegetation communities along the proposed route are suitable as Picabo milkvetch habitat, no Picabo milkvetch individuals or populations were observed at either location during the August 2010 survey. A follow up survey was conducted on June 13, 2011, and no individuals were observed along the proposed pipeline routes.

3.5 Wildlife, including BLM Sensitive Species and Migratory Birds

There is no suitable habitat for ESA-listed species within either of the proposed pipeline extension routes. Greater sage-grouse, an ESA candidate species, is a sagebrush obligate species, which utilize herbaceous vegetation in sagebrush habitat for food and cover during the nesting and early brood-rearing seasons (Connelly et al. 2004).

Both the Sand Butte and Antelope allotments are within PGH for sage-grouse but no sagebrush habitat is present along the northern pipeline extension and the sagebrush habitat present within the southern pipeline is fragmented as a result of repeated, frequent wildfires. Additional fragmentation is caused by County Line Road as well as State Highway 75.

Potential nesting habitat for sage-grouse was removed along the northern pipeline extension route because of a 2006 wildfire which burned the area and a second fire in 2007 in the same area. These habitats have not yet become reestablished; however, foraging habitat remains present along the northern pipeline route. Habitats along the southern pipeline extension route have been impacted by a large vole infestation which has altered the plant communities by increasing the presence of wormseed mustard and cheatgrass while reducing the shrub populations. The voles forage on shrub roots and bark during the winter months which can and has killed individual shrubs.

Interim Conservation Policies and Procedures for PGH according to BLM Instruction Memorandum No. 2012-043 state, “The intent of these interim conservation policies and procedures in PGH is to reduce and mitigate adverse effects on greater sage-grouse and its habitat to the extent practical. These policies and procedures differ from those applied to the PPH.” These policies and procedures have been adhered to in the project planning and implementation process. There are no known lekking grounds within 5 miles of the southern pipeline extension (IDFG CDC 2010). During the 2010 field survey, no sign of use by sage-grouse was observed along the route. This project also does not contain any new fence construction which eliminates anticipated fence collision risks. The project construction timelines will be deferred until August – October (either 2012 or 2013) in order to avoid potential conflicts with nesting and early brood-rearing sage-grouse.

All sagebrush habitat was removed from the northern pipeline extension route during the 2006 wildfires and no longer provides suitable nesting habitat conditions for the smaller passerines. However, areas along the northern pipeline extension still provide foraging habitat for the smaller passerines as well as the raptors.

The southern portions of the southern pipeline extension route were burned by a 2007 wildfire which removed suitable sagebrush habitat. The vegetation which has become reestablished within this area provides foraging habitat for small passerine and raptor species. The unburned sagebrush habitat located within the proposed southern pipeline extension route was found to support nesting and foraging habitat for BLM special status animals (i.e., prairie falcon, ferruginous hawk, loggerhead shrike, Brewer’s sparrow, sage thrasher, and Townsend’s big-eared bat). These species are all migratory species, with the exception of the Townsend’s big-eared bat. The migratory species make use of sagebrush habitats in southern Idaho during the late spring, summer, and fall months. Prairie falcon and ferruginous hawk use these habitats primarily for foraging where they hunt for small mammals and other prey. Townsend’s big-eared bat use sagebrush habitat as foraging habitats where they prey on insects. The smaller passerines (i.e. loggerhead shrike, Brewer’s sparrow and sage thrasher) all use sagebrush habitats as nesting habitats. Nesting for these species occurs primarily between mid-March to mid-July (Karl 2000).

Areas associated with the proposed pipelines support habitats which can be used as winter habitat for two big game species, pronghorn antelope and mule deer. Neither of the proposed routes are within designated winter habitats identified in the 1984 Monument RMP; however, portions of both of the proposed water lines are within designated pronghorn antelope winter habitat (BLM 1984 Map 7).

4.0 ENVIRONMENTAL IMPACTS

This chapter presents the environmental impacts that may occur as a result of implementing the proposed action or an alternative. These impacts are assessed based on how they will affect the applicable Standards for Rangeland Health, which are not being met for each allotment.

4.1 Direct/Indirect Impacts of the Proposed Action

4.1.1 Livestock Grazing

Currently both of the allotments associated with the proposed action are meeting the standards associated with stocking rates and grazing practices. Implementation of the northern pipeline extension would not result in any changes to the livestock grazing system for the Antelope Allotment since the water trough is staying at the same location. The only thing changing is the source of the water. There would be no change in stocking rates, AUMs, the number of acres available for grazing, or locations of troughs.

Implementation of the southern pipeline extension and installation of two new troughs would not result in any changes to the stocking rates, AUMs, or the number of acres available for livestock grazing but it would change the utilization pattern by livestock. The actual use reported since 1990 has shown that the permittees have used about 96% of their active preference while only grazing three out of four pastures. Even with the South Pasture being removed from the grazing rotation in 1989, utilization levels in the Sand Butte Allotment have remained at slight, light and moderate use overall with some years of heavy use immediately adjacent to the water sources. Even though the permittee now uses 96% of their active preference with only three pastures in use, an AUM increase, in the form of temporary non-renewable AUMs, will not be permitted and the active preference in the Sand Butte Allotment will remain at 1,186 AUMs.

Installing two new troughs in the East and South pastures would result in a more even distribution of livestock grazing throughout the Sand Butte Allotment as well as allow more flexibility for the permittee when wildfires occur. Currently, when wildfires occur, the permittee loses that pasture for two growing seasons which has the potential to put more grazing pressure on the remaining pastures. The distance and availability of water sources within a grazing system has the ability to increase distribution of individuals or constrain grazing use (Bailey et al. 1996, Senft et al. 1987).

The Proposed Action Alternative is not anticipated to impact the other allotments which receive water from the Notch Butte Pipeline. The current permit holders for each of the 6 additional allotments which receive water from the Notch Butte Pipeline have agreed to the pipeline extensions. The permit holders for the Antelope and Sand Butte Allotments have been paying fees to the Notch Butte Pipeline Association for water volumes which would occur following the installation of the extension. The Notch Butte Pipeline Association has approved of the extensions and the associated water use.

4.1.2 Soils

Both the Antelope and Sand Butte Allotments are meeting Rangeland Health in regards to Standard 1, which is associated with soils. Installation of the pipeline extensions would result in disturbance to soils along the proposed routes. These disturbances include soil compaction associated with the operation of heavy equipment along the route and mixing of soil layers associated with the excavation of soils to a depth of 24 inches. These disturbances would occur on approximately 2.9 acres along the northern pipeline extension route and 4.4 acres along the southern pipeline route. The use of a tracked vehicle equipped with a ripper shank (as opposed to excavating a trench), would reduce the amount of area where soils are disturbed. The crushing and/or removal of vegetation associated with the installation of the pipeline would leave soils exposed increasing the risk of erosion by wind; however, the majority of the soils within both proposed extension locations have low to moderate risks of wind erosion. Reseeding and rehabilitating disturbed areas would reduce the time that soils are susceptible to wind erosion because it would reduce the time it takes for vegetation to become reestablished following disturbance (Thompson et al. 2006).

Installation of the northern pipeline extension would have little impact on soils. The proposed route for the installation is along an existing two-track roadway where the soils have been previously disturbed (i.e. compacted). The installation of the proposed action would not cause the soil to not meet the Rangeland Health Standards associated with soils.

Soils within an approximately 50-foot radius of the proposed new troughs along the southern pipeline extension would be disturbed during periods when the South and East Pastures of the Sand Butte Allotment are in use. Livestock tend to congregate around water sources and disturb soils as a result of increased hoof action. Livestock grazing has been shown to cause increases in bulk density and penetration resistance of rangeland soils (Aksakal 2009). Jones (2000) and Chaichi (2005) found that increased livestock activity in a given area (i.e., trough locations) has the potential to alter soil characteristics such as cryptogamic crust cover, infiltration rates, soil loss to erosion, reduction of litter biomass, as well as vegetation impacts such as reduction of cover, seedling survival, and total vegetation biomass.

Currently, there is only one other water source in the East Pasture of the Sand Butte Allotment and it is located in the northern portion of the pasture. This trough is currently attached to the Notch Butte Pipeline. This area is experiencing reduced infiltration rates, litter biomass, cover, seedling survival, and total vegetation biomass, as discussed by Jones (2000) and Chaichi (2005). Similar impacts are expected to occur at both new trough locations. However, the presence of two new troughs within the South and East pastures would reduce the amount and frequency of disturbance to soils at the existing trough location by increasing livestock distribution, as explained under the livestock grazing section 4.1.1.1. The installation of the south pipeline extension and the two new trough locations would not cause the Sand Butte Allotment to not meet Rangeland Health Standards associated with soils in the future.

4.1.3 Vegetation, including BLM Sensitive Species, Noxious Weeds and Invasive Plants

Currently the Antelope Allotment is meeting Standard 5 of the Standards for Rangeland Health which is associated with seeded vegetation. The Sand Butte Allotment is not meeting Standard 5. Under the Proposed Action, vegetation would be disturbed by removal or crushing associated with the excavation of the trench during the installation of the pipeline and the act of driving vehicles used to haul supply needed during pipeline installation, along the proposed pipeline extension routes. The close proximity of the existing two-track roadway along the northern pipeline extension route increases the risk of spread of noxious weeds and invasive plants. Areas along the proposed northern pipeline extension route were found to have an infestation of knapweed and rush skeletonweed. These areas were primarily located along the fence line which divided the pastures in the allotment. The disturbance of soils associated with installation of the pipeline would increase the risk of spread of these State-listed noxious weeds. To reduce the risk of spread of noxious weeds, disturbed areas would be reseeded using a seed mix approved by the BLM authorized officer.

No BLM sensitive species were observed occurring along either of the two proposed pipeline extension routes. Habitat for Picabo milkvetch occurs along the southern pipeline extension route and would be altered during the installation of the pipeline extension. However, the absence of sensitive plants along the route indicates that the installation of the southern pipeline extension would not directly impact Picabo milkvetch.

Grazing use of vegetation is not anticipated to change in the Antelope Allotment because there would be no changes to trough locations or other activities which would alter livestock distributions in the pasture.

The installation of the southern pipeline extension would result in removing and crushing shrub, forb, and grass plants along the proposed route. This would occur during the excavation of the trench, installation of the pipe, and backfilling excavated material. In areas where a tracked vehicle equipped with a ripper shank is used, fewer plants would be affected.

The installation of two new troughs would result in loss of vegetation within a 50-foot radius of the troughs. The troughs would attract livestock to the area; livestock would trample and consume vegetation resulting in eventual loss of vegetation immediately adjacent to the trough. The trough location within the East Pasture is dominated by cheatgrass and the remnants of sagebrush. The trough location within the South Pasture is dominated by common tansy mustard, clasping peppergrass, and scarlet globemallow. The installation of two troughs would also result in a more even distribution of livestock across the landscape. The more even distribution of cattle is anticipated to reduce the utilization of vegetation in the East Pasture nearly in half from moderate use (41 to 60 percent use) to light use (21 to 40 percent use). The reduction of utilization associated with increased distribution is anticipated to allow the current seedings to be able to recover more quickly from livestock grazing and other impacts (i.e. voles) by allowing the seeded areas to be grazed in a once over fashion, instead of repeatedly being grazed during that scheduled pasture use. This has the potential to aid the allotment in meeting Standard 5 of the Standards for Rangeland Health in the future.

Because of the current lack of water, little livestock utilization in the South Pasture occurs. Installing a trough in the South Pasture is expected to result in greater utilization of vegetation in the South Pasture. Even though utilization would increase, utilization is expected to be light (21 to 40 percent use).

4.1.4 Wildlife, including BLM Sensitive Species and Migratory Birds

Both of the allotments are meeting the Rangeland Health Standard for threatened, endangered, and sensitive animals species and general wildlife species. Wildlife including migratory birds may be temporarily displaced during the installation of both the northern and southern pipeline extensions. Machinery used to excavate trenches, install pipe, and backfill trenches is noisy and may cause wildlife to avoid the area while machinery is operating. To reduce the potential for disturbing nesting birds and raptors, construction activities would not be allowed between February 1 and July 31.

Removal of sagebrush along the southern pipeline extension and new trough locations has the potential to reduce nesting habitat for BLM sensitive bird species and migratory species such as loggerhead shrike, Brewer's sparrow and sage thrasher. In areas where a ripper is used (instead of the excavator) less sagebrush would be removed. Including sagebrush seed in the seed mix used on disturbed areas is identified in the design features and would reduce the time it would take for sagebrush to become re-established.

The sagebrush habitats which surround the southern pipeline extension would continue to provide nesting opportunities for BLM sensitive and migratory bird species. The habitats along the northern pipeline extension route currently do not support nesting habitats due to previous disturbances by wildfires which have removed the sagebrush habitat from the area. The installation of two troughs would provide an additional water source for wildlife when water is available within the trough. The troughs would have bird ladders to enable birds to escape if they become trapped in the trough.

The installation of the northern and southern pipeline extension routes are not expected to result in impacts to the life cycle needs of BLM Special Status Wildlife Species and/or migratory bird species that may occur in or near the project area because of the small areas that would be disturbed. Design features implemented to mitigate any potential impacts during the installation of the pipeline include not allowing construction activities to occur during seasonal nesting periods (February 1 through July 31). Installation of the pipeline extensions may occur before or after this time period based on weather conditions and accessibility to the area. There would be no impact to wintering big game species because installation would occur during the later summer or early fall periods when individuals are not present in the area.

4.2 Direct/Indirect Impacts of Alternative 1

4.2.1 Livestock Grazing

Installation of the northern and southern pipeline extensions associated with Alternative 1 would not cause the Antelope or Sand Butte Allotment to not meet the Standards for Rangeland Health associated with livestock grazing. Installation of the northern pipeline extension would not have any impacts to the stocking rates, AUMs, or the number of acres permitted for livestock grazing in the Antelope Allotment under Alternative 1.

Livestock grazing in the Sand Butte Allotment would be impacted by providing a water source in the South Pasture. Implementation of the southern pipeline extension and installation of a new trough in the South Pasture would not result in any changes to the stocking rates, AUMs, or the number of acres permitted for livestock grazing. However, by providing a water source in the South Pasture it is anticipated that the permittee would begin using this pasture again during the rest rotation grazing system currently in use. Installing a new trough would result in a more even distribution of livestock grazing throughout the South and East Pastures of the Sand Butte Allotment. The distance and availability of water sources within a grazing system has the ability to increase distribution of individuals or constrain grazing use (Bailey et al. 1996, Senft et al. 1987).

Alternative 1 is not anticipated to impact the other allotments which receive water from the Notch Butte Pipeline. The current permit holders for the 6 additional allotments which receive water from the Notch Butte Pipeline have agreed to the pipeline extensions. The permit holders for the Antelope and Sand Butte Allotments have been paying fees to the Notch Butte Pipeline Association for water volumes which they would receive following the installation of the pipeline extensions, which shows the Notch Butte Pipeline Association is aware of the proposed pipeline extension by allocating the volume of water to the permittees based on the available AUMs in the allotments.

4.2.2 Soils

Installation of the northern and southern pipeline extensions would result in disturbance to soils. These disturbances include soil compaction associated with the operation of heavy equipment along the route and mixing of soil layers associated with the excavation of soils to a depth of 24 inches. These disturbances would occur on approximately 2.9 acres along the northern pipeline extension route and 4.4 acres along the southern pipeline route. The use of a tracked vehicle equipped with a ripper shank (as opposed to excavating a trench), would reduce the amount of area where soils are disturbed. The crushing and/or removal of vegetation associated with the installation of the pipeline would leave soils exposed increasing the risk of erosion by wind; however, the majority of the soils within both proposed extension locations have low to moderate risks of wind erosion. Reseeding and rehabilitating disturbed areas would reduce the time that soils are susceptible to wind erosion because it would reduce the time it takes for vegetation to become reestablished following disturbance (Thompson et al. 2006).

The installation of a new trough in the South Pasture would result in the permit holder electing to use this pasture again due to the presence of a water source. The use of the South Pasture of the Sand Butte Allotment would reduce the time that livestock are present within the East Pasture

(due to these two pastures being grazed simultaneously), which would ultimately reduce the amount of soil compaction in the east pasture as a result of hoof action.

Installation of both the northern and southern pipeline extensions would not cause either the Antelope or Sand Butte Allotments to not meet the Standards for Rangeland Health associated with soils.

4.2.3 Vegetation, including BLM Sensitive Species, Noxious Weeds and Invasive Plants

Under Alternative 1, vegetation would be disturbed by removal or crushing associated with the excavation of the trench during the installation of the pipeline and the act of driving vehicles used to haul supply needed during pipeline installation, along both the northern and southern pipeline extension routes.

There were not any BLM sensitive species observed along either of the two proposed pipeline extension routes. Habitat for Picabo milkvetch occurs along the southern pipeline extension route and would be altered during the installation of the pipeline extension. However, the absence of sensitive plants along the route indicates that the installation of the southern pipeline extension would not directly impact Picabo milkvetch.

The close proximity of the existing two-track roadway along the northern pipeline extension route increases the risk of spread of noxious weeds and invasive plants. To reduce the risk of spread of noxious weeds, disturbed areas would be reseeded using a seed mix approved by the BLM authorized officer. Grazing use of vegetation is not anticipated to change in the Antelope Allotment because there would be no changes to trough locations or other activities which would alter livestock distributions in the pasture. The implementation of Alternative 1 would not cause the Antelope Allotment to not meet the Standards of Rangeland Health associated with vegetation and BLM sensitive species.

The installation of the southern pipeline extension would result in removing and crushing shrub, forb, and grass plants along the proposed route. This would occur during the excavation of the trench, installation of the pipe, and backfilling excavated material. In areas where a tracked vehicle equipped with a ripper shank is used, fewer plants would be affected.

The installation of a new trough would result in loss of vegetation within a 50-foot radius of the trough. The trough would attract livestock to the area; livestock would trample and consume vegetation resulting in eventual loss of vegetation immediately adjacent to the trough. The trough location within the South Pasture is dominated by common tansy mustard, clasping peppergrass, and scarlet globemallow. The installation of the trough in the south pasture would result in a more even distribution of livestock across the East and South Pastures. Livestock distribution would increase by providing a water source within the South Pasture which would encourage the permit holder to graze this pasture during the 3 pasture rest rotation grazing system which grazes the East and South Pasture simultaneously. However, when livestock are in the East Pasture some plants would continue to be grazed and have moderate use (41 to 60 percent use).

The increased distribution of livestock would reduce utilization rates within the East Pasture of the Sand Butte Allotment, and is also anticipated to allow the current seedings to be able to recover more quickly from livestock grazing and other impacts by allowing the seeded areas to be grazed in a once over fashion, instead of repeatedly being grazed during that scheduled pasture use. Because of the current lack of water, little livestock utilization in the South Pasture occurs. Installing a trough in the South Pasture is expected to result in greater utilization of vegetation in the South Pasture. Even though utilization would increase in the South Pasture, utilization is expected to be light (21 to 40 percent use).

Implementation of Alternative 1 would cause the allotment to trend toward meeting Standard 5 of the Standards for Rangeland Health, by reducing the utilization of seeded areas in the East Pasture of the Sand Butte Allotment.

4.2.4 Wildlife, including BLM Sensitive Species and Migratory Birds

Impacts to wildlife under Alternative 1 would be similar to those presented under the proposed action. Construction activities would result in increased noise levels which would cause animals to avoid the area while construction activities are occurring. Installation of the pipeline along the southern pipeline extension route would impact up to 4.4 acres of sagebrush habitat which could be used by nesting individuals. The impacts to wildlife habitat are anticipated to be limited to the duration of time until the sagebrush would become reestablished (5-7 years) along the installed pipeline. The addition of sagebrush seed to the seed mix used on disturbed areas would aid in accelerating the reestablishment of sagebrush to the disturbed areas. The installation of the trough within the South Pasture of the Sand Butte Allotment would provide a water source for wildlife while water is present within the trough. Implementation of Alternative 1 would not cause the Antelope or Sand Butte Allotment to not meet the standards associated with wildlife and BLM sensitive species and migratory birds.

4.3 Alternative 2 – No Action Alternative

4.3.1 Livestock Grazing

The No Action Alternative would not alter the current livestock grazing systems implemented in either of the two livestock grazing allotments. The South Pasture of the Sand Butte Allotment would continue to be permitted to be grazed simultaneously with the East Pasture. There would be no changes which would impact the other allotments which receive water from the Notch Butte Pipeline associated with the implementation of the Alternative 2-No Action Alternative.

4.3.2 Soils

Under the No Action Alternative neither the northern or southern pipeline extension would be constructed. Soils within both the Antelope and Sand Butte Allotments would not be impacted by the installation of the pipeline extensions. Soils would continue to be compacted around the existing water troughs in both allotments and would continue to reduce infiltration rates due to the compaction of layers below the soil surface and the loss of vegetation immediately adjacent to the trough. Both of the allotments would continue to meet the Standards of Rangeland Health associated with soils.

4.3.3 Vegetation, including BLM Sensitive Species, Noxious Weeds and Invasive Plants

Vegetation communities along both the northern and southern pipeline extension routes would not be altered under the No Action Alternative. Grazing of vegetation in or near the existing water source would continue because of heavier use of this area by livestock attracted to the water. The continued grazing of individual plants could prevent seed production and remove standing and dead plant material, resulting in more exposed soils. The Sand Butte Allotment would continue to not meet Standard 5 of the Rangeland Health.

4.3.4 Wildlife, including BLM Sensitive Species and Migratory Birds

Implementation of the No Action Alternative would not result in any disturbance to potential bird nesting habitat (i.e., sagebrush habitat). Wildlife use of the area would not be altered from its current state. Wildlife habitat impacts associated with vegetation impacts caused by the current grazing practices would remain at their current level and continue to meet the Standards for Rangeland Health associated with wildlife, BLM sensitive species and migratory birds.

4.4 Cumulative Impacts Analysis

“Cumulative impacts” are those impacts resulting from the incremental impact of an action when added to other past, present, or reasonably foreseeable actions regardless of what agency or person undertakes such other actions.

4.4.1 Past and Present Actions

Livestock grazing has occurred within the area managed by the BLM Shoshone Field Office since the late 1800s. This area was first managed by the General Land Office (GLO) and designated as arid, broken, mountainous, or grazing in character (USDI- BLM 1988). All of these lands had unregulated grazing until implementation of the Taylor Grazing Act of 1934. In 1946, the Department of the Interior formed the Bureau of Land Management and grazing on public lands was formalized and divided into grazing allotments. The lands within both the Antelope Allotment and the Sand Butte Allotment have been made available to livestock grazing in the 1985 Monument RMP.

Both of the areas associated with the pipeline extensions have been impacted by wildfires in the past, most recently in 2006, 2007 and 2011. Suppression and rehabilitation of areas impacted by wildfires will continue in the area, including the areas encompassed by the two pipeline extension routes.

The noxious weeds will continue to be present throughout the Antelope Allotment and along the northern pipeline extension. Noxious weeds are spread through many means including vehicles and livestock grazing. Attempts have been made to eradicate these and other populations throughout the field office through chemical and biological means. The BLM will continue to use approved treatment methods and approved herbicides presented in the current weed management Environmental Impact Statement to treat these populations. The BLM and the permittee work together to treat noxious weed infestations within each of the allotments using approved methodology.

Intermountain Gas Company installed a compressor system within the South Pasture of the Sand Butte Allotment in 2010. The compressor station is within 1,000 feet of the proposed southern pipeline. There is the potential for increased risk of the spread of noxious weeds in the South Pasture of the Sand Butte Allotment with the increased ground disturbance associated with these two projects; however, there is a weed management stipulation associated with the installation and operation of the compressor station which requires the permit holder to monitor and treat any noxious or invasive weed species found present within the facility. Therefore, the impacts associated with this past action would have negligible impacts on the Proposed Action Alternative, Alternative 1 or No Action Alternative.

The installation of the two pipeline extensions has the potential to impact the existing Notch Butte Pipeline. Currently the two organizations which are applying for the pipeline extensions are paying annual fees to the Notch Butte Pipeline Association which cover the volume of water which would be received from the pipeline extension following the implementation of the proposed action. The current branch of the Notch Butte Pipeline which services the Antelope Allotment experiences large pressure fluctuations associated with day and night-time livestock use. The installation of the pipeline would aid in reducing the nighttime pressure build up by providing a greater number of troughs being serviced by this branch of the pipeline when it is connected to the existing troughs in the allotment. It is anticipated that the same would occur within the branch of the pipeline which services the Sand Butte Allotment following the installation of the new single trough under Alternative 1 or the two additional troughs associated with the Proposed Action Alternative.

4.4.2 Reasonably Foreseeable Future Actions

No additional range improvement projects are planned within the Antelope or Sand Butte Allotments at the two proposed pipeline extension areas. In the future, the use of the Arkoosh Well as a viable water source for the Antelope Allotment may be eliminated due to the cost of maintenance and operation of the system. Without the use of the Arkoosh Well for water, permit holders may be required to alter their grazing system to avoid or limit use of those pastures where water is supplied by the Arkoosh Well.

5.0 CONSULTATION AND COORDINATION

The issue identification section of Chapter 1 identifies those issues analyzed in detail in Chapter 4. The checklist containing the rationale for resources that were considered but not analyzed in this EA is on file at the BLM Shoshone Field Office. The issues were identified through consultation with the current grazing permittees and BLM resource specialists.

5.1 Summary of Public Participation

A public scoping notice was posted by the BLM Shoshone Field Office on January 10, 2011 allowing 30 days to provide comments on the proposed action. A notice of this posting was sent to interested parties seeking comments on the proposed action. No comments were received.

5.2 BLM Reviewers

Name	Title	Date Reviewed
Joanna Tjaden	Rangeland Specialist / Team Lead	March 15, 2011, September 7, 2011
Lisa Cresswell	Archeologist / Field Office NEPA Coordinator	February 22, 2012
Gary Wright	Wildlife Biologist	September 16, 2011
Tara Barrier	Wildlife Biologist	February 22, 2012
Danelle Nance	Natural Resource Specialist	March 11, 2011, August 26, 2011
John Garth	Geologist	March 14, 2011

5.3 Non-BLM Preparers

Name	Title	Company
Jace Fahnestock	Natural Resource Specialist	North Wind, Inc.
Scott Webster	Biologist	North Wind, Inc.

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Appendix A - Map and photographs of the two proposed pipeline extensions

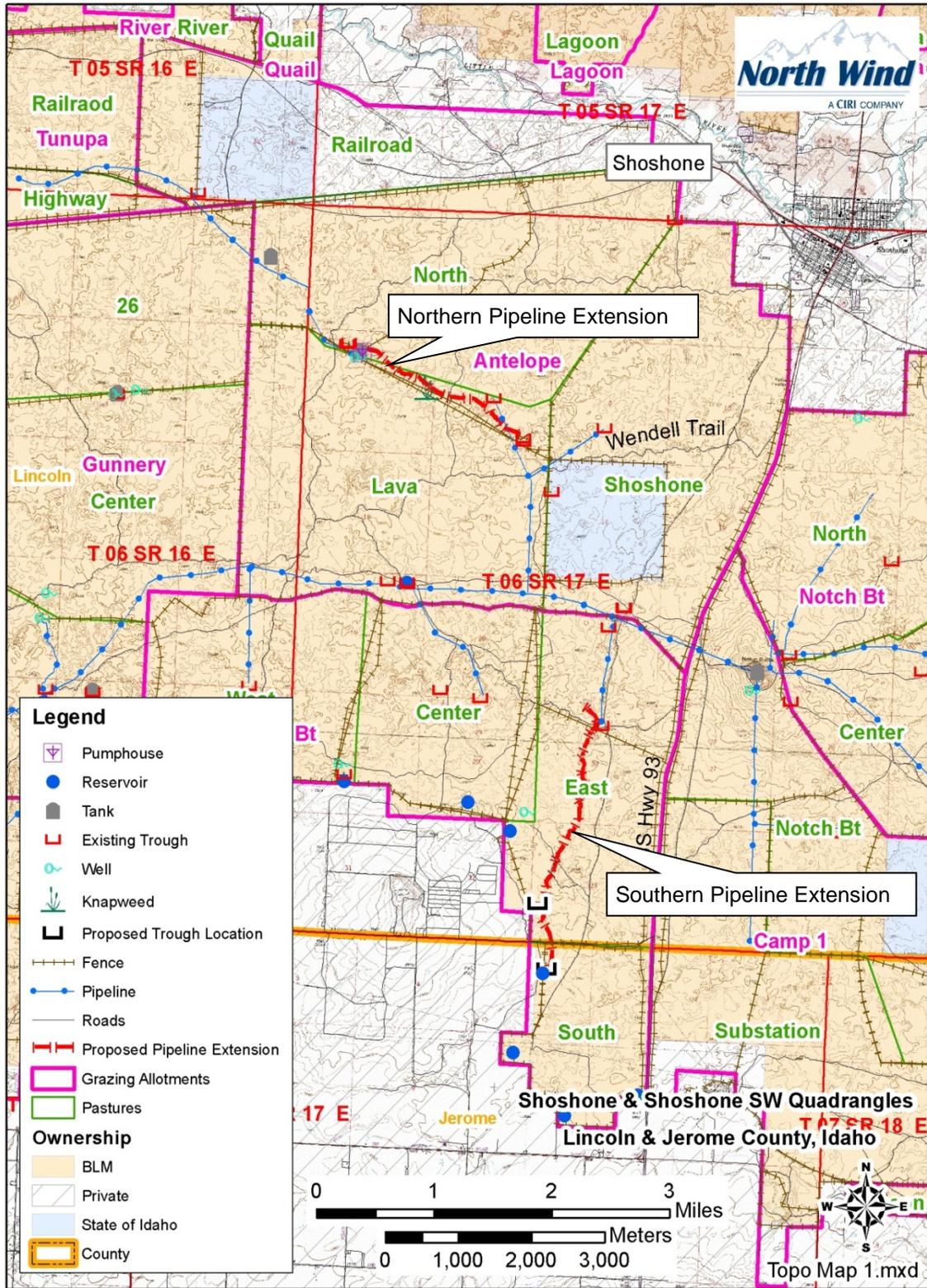




Photo 1
Northern Pipeline Extension general overview facing east.



Photo 2
Northern Pipeline Extension general overview facing west from center of pipeline.

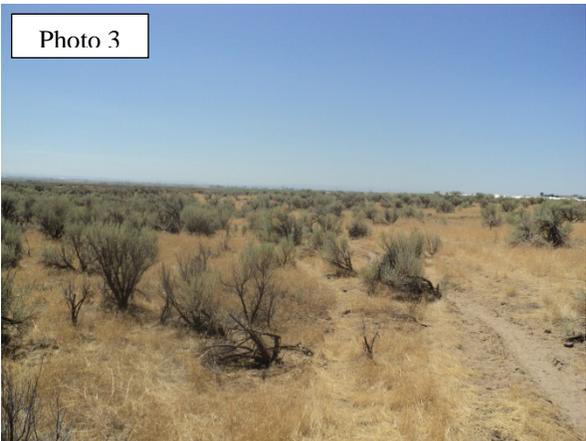


Photo 3
Southern Pipeline Extension general overview facing south from northern portion of pipeline

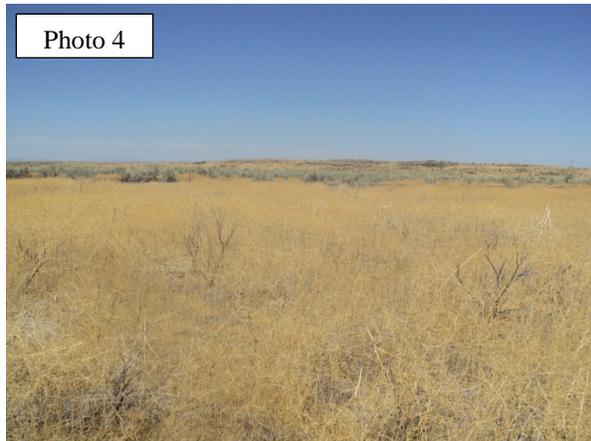


Photo 4
Area south of County Line Road within the South Pasture of the Sand Butte Allotment.

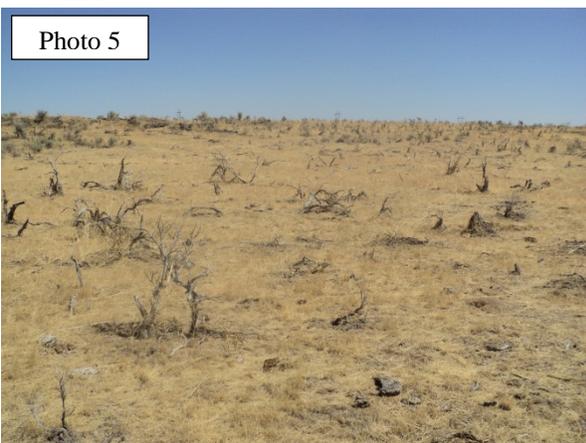


Photo 5
Southern Pipeline Extension proposed additional trough location.