BLM

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

Environmental Assessment

Egan Basin Well and Pipeline

February, 2012

DOI-BLM-NV-L010-2012-0016-EA

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Environmental Assessment: Egan Basin Well and Pipeline

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Chapter 1. Introduction

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1.1. Identifying Information:

1.1.1. Title, EA number, and type of project:

Egan Basin Well and Pipeline

Range Improvement Project

DOI-BLM-NV-L010-2012-0016-EA

1.1.2. Location of Proposed Action:

This project is located in Egan Basin which is approximately 5 miles southwest of Cherry Creek, NV and 45 miles north of Ely, NV.

Legal Description

T23N, R62E, sections 9, 15, 16, 22, 27.

Mount Diablo Meridian

1.1.3. Name and Location of Preparing Office:

Egan Field Office

Ely, NV

1.2. Purpose and Need for Action:

BLM's purpose and need for the project is to authorize an existing well and temporary pipeline in the Egan Basin portion of the Cherry Creek grazing allotment and to improve livestock distribution and management throughout the North and South Egan Basin Seedings and to progress towards achieving the rangeland health standards and guidelines established by the Northeastern Nevada's Resource Advisory Councils (RAC).

1.3. Scoping, Public Involvement and Issues:

Internal scoping was conducted by a BLM interdisciplinary (ID) team on February 13, 2012 to identify any resource concerns or issues associated with the proposed action. The following concerns were brought forward: what would be the effects of the project on sage grouse priority habitat, vegetation and soil.

A letter was sent to the interested publics and identified an external scoping period from February 24, 2012 through March 25, 2012 allowed those publics interested in range improvements to comment on the proposed action. In addition, a summary of the project was posted on the eGov for Planning and NEPA (ePlanning Front Office) website on February 21, 2012. No comments were received.

A Tribal Coordination letter was sent to those interested tribes notifying them of the proposed action and to solicit comments on March 13, 2012 to April 6, 2012. The Duckwater Shoshone Tribe requested and attended a field visit to the project area and did not identify any concerns or issues.

Coordination with Nevada Department of Wildlife occurred on March 19, 2012. Comments and project suggestions were received and considered for the authoring and analysis of this EA.

Chapter 2. Proposed Action and Alternatives

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2.1. Description of the Proposed Action

2.1.1. Proposed Action

The proposed action is to authorize an existing well (Egan Basin Well) and storage tank and an existing temporary above ground pipeline, which runs from Egan Basin Well to an existing trough site approximately 0.3 mile away from the well inside the North Egan Basin Seeding. One additional low profile storage tank, similar to that which is currently present, would be installed next to the existing storage tank. The existing pipeline would be buried within an existing two-track road and the existing trough site and well would continue to be utilized as watering sites. The pipeline would be extended approximately 2.5 miles to the south from the existing trough site inside the seeding to the boundary fence between the North and South Egan Basin Seedings. There would be two additional trough sites established on the new pipeline extension, one would be located near the middle of the pipeline, approximately 1.35 miles from the existing trough site (T23N, R62E, section 15), and another at the south boundary fence of the North Egan Basin Seeding, approximately another 1.85 miles from the other new trough site (T23N, R62E, section 27) (see Figure 2 (p. 40) in Appendix A (p. 39)). The south trough site would extend across the boundary fence to serve the south portion of the North Seeding and the north portion of the South Seeding. Each trough would be equipped with escape ramps and a floating shut-off valve which would stop water flow to that trough when the trough is full to conserve water and prevent overflow. In addition to the floating shut-off valve, each watering site would be equipped with a manual shut-off valve in order to stop the flow of water to each watering site independently and to facilitate livestock movement and distribution to different portions of the seedings and thus increase the flexibility of use of these areas. The well, tanks and the troughs and any other structures associated with the project would be painted to match the surrounding vegetation and landscape to minimize visual impacts. A ground level water structure would also be installed to provide water for smaller wildlife. In addition to the wildlife drinker, a four strand barbed-wire fence (approx. 50 ft x 50 ft) would be built around the drinker to exclude livestock use. The fence would be built to BLM specifications and standard operating procedures as outlined in the District Fenceline Environmental Assessment No. EA-NV-040-5-27. The fence would be built with steel T-posts and steel braces to reduce the risk of providing perches for raptors. Permanent markers would also be attached to the fence to alert wildlife.

The installation of the pipeline would require digging and replacing a trench approximately 8-12 inches wide and 3 feet deep with a backhoe or similar equipment for the length of the pipeline (approximately 2.8 miles). The trenching for the pipeline would also involve off-road overland travel by the trenching equipment and would disturb a strip approximately 10 feet wide (5 feet on either side of the trench) for the length of the pipeline. The pipeline trench would result in approximately 0.3 acre (2.8 miles x 1 ft) of ripped and replaced soil disturbance within the overall disturbance foot print of off-road overland travel associated with pipeline construction which would result in approximately 3.4 acres (2.8 miles x 10 ft) of total disturbance. Construction would likely take place in late summer or fall. A permanent two-track road would not be maintained for the pipeline as there are other existing two-track roads that would be utilized to access the troughs for maintenance purposes.

Occasional maintenance of the pipelines may be required to repair split or broken portions of the pipeline or troughs. Maintenance of the pipeline would require excavating the portions of the pipeline to be repaired with hand tools or heavy equipment (backhoe or similar equipment) which would then be re-buried. This would also require the use of existing two-tracks and

possibly off-road travel to access and repair the portion of the pipeline to be repaired. These activities would require prior authorization from the Bureau's authorized officer (see pipeline maintenance below).

A cooperative agreement has been entered into for construction and maintenance of the pipelines and troughs. The BLM would supply approximately 2.8 miles of pipeline. The Bureau of Land Management has agreed to install the storage tank, pipeline, water troughs, wildlife drinker and fence and would be completed in accordance with specifications and best management practices (Ely RMP, 2008). The grazing permittees would supply the additional storage tank and troughs. The permittee would be responsible for the maintenance of the well, pipeline and troughs. Maintenance of this project would include, in addition to the items listed below, maintaining the paint of the structures and if a structure needs to be replaced, the new structure would be painted to match or be very similar to the existing structures and landscape.

Normal maintenance for the well and troughs is defined as:

1. Maintaining adequate oil level in mill motor.
2. Draining and cleaning stock trough yearly or as needed.
3. Drain System: Repair all leaks, breaks, or clogs in drain pipe.
4. Ensure proper attachment of bird ladders in stock trough.
5. Repair leaks in stock trough.
6. Repair or replace trough braces as needed
7. Replacing dirt, or gravel, or rock fill around trough, when necessary.
8. Replacing those items above ground which require replacement due to normal use.
9. Replacement of parts and/or repairing of the well and associated developments. This includes below ground maintenance.
10. All replacement parts will be equivalent to the original parts, as determined by Bureau personnel and original specifications.
11. Allow animals (wildlife, wild horses) to use the water along with authorized livestock.

Normal maintenance for the pipelines, troughs and storage tank is defined as:

The labor and materials required annually to keep a pipeline in a condition adequate to satisfy the proper distribution and maintenance of livestock. This includes but is not limited to the following:

1. Repair of broken or split pipe that can be accomplished with hand tools.
2. Ensure proper attachment of bird ladder in stock trough.
3. Repair leaks in stock trough.
4. Repair or replace trough braces.

5. Replacing dirt, gravel or rock fill around trough(s).
6. Replacing those items above ground which will require replacement due to normal use.
7. Maintaining the improvement according to original Bureau Standards.
8. Repair requiring motorized or heavy equipment and ground disturbing activities will require prior Bureau authorization.

2.1.2. Migratory Birds

Fence construction and/or pipeline construction is not anticipated during the migratory bird nesting period, from April 15 to July 15. If any construction is necessary during that period, a survey of the areas to be disturbed would be completed prior to construction by a wildlife biologist to identify active nests so that they may be avoided.

2.1.3. Noxious and Invasive Weeds

A Weed Risk Assessment was conducted in conjunction with this project. The stipulations listed in the Weed Risk Assessment (See Appendix C) would be followed during construction of the fence and pipeline.

2.1.4. Monitoring

Monitoring would be conducted in the form of compliance checks during and after construction of the project. Rangeland monitoring data would continue to be collected in accordance with the Ely District Approved Resource Management Plan (August 2008).

2.2. Description of Alternatives Analyzed in Detail:

2.2.1. No Action

The No Action Alternative would maintain the status quo. The Egan Basin Well as well as the existing above ground pipeline which leads to an existing trough site would remain with no changes and no additional pipeline or trough sites would be installed.

2.3. Alternatives Considered but not Analyzed in Detail

Removing the existing well, pipeline and trough was considered but was eliminated from further consideration because the impacts from this alternative would be essentially the same as those identified in the No Action alternative. In addition, removing the well would impede the current water right holder(s) from using the water from the well.

2.4. Conformance

Proposed Action

The proposed action is in conformance with the Ely District Record of Decision and Approved Resource Management Plan (RMP) (August 20, 2008). The following are resource goals and/or objectives that apply:

Livestock Grazing: "Manage livestock grazing on public lands to provide for a level of livestock grazing consistent with multiple use, sustained yield, and watershed function and health." (pg. 85).

Water Resources:

WR-4: Maintain or improve watershed conditions by controlling or restricting land uses and utilizing tools, where appropriate, to promote desired vegetation conditions.

Soil Resources: "Maintain or improve long-term soil quality". "To ensure that soils throughout the planning area exhibit infiltration and permeability appropriate to the soil type, with erosion and compaction having minimal effect on soil quality" (pg. 23).

SR-1: Restore and maintain desired range of conditions to increase infiltration, conserve soil moisture, promote groundwater recharge, and ground cover composition (including litter and biotic crusts) to increase or maintain surface soil stability and nutrient cycling.

Vegetative Resources: "To manage for resistant and resilient ecological conditions including healthy, productive, and diverse populations of native or desirable nonnative plant species appropriate to the site characteristics" (pg.26).

Fish and Wildlife: "Provide habitat for wildlife (i.e., forage, water, cover, and space) and fisheries that is of sufficient quality and quantity to support productive and diverse wildlife and fish populations, in a manner consistent with the principles of multi-use management, and to sustain the ecological, economic, and social values necessary for all species" (pg. 34).

Special Status Species: "To manage suitable habitat for special status species in a manner that will benefit these species directly or indirectly and minimize loss of individuals or habitat from permitted activities" (pg. 38).

Watershed: "To manage watersheds that display physical and biological conditions or functions required for necessary ecological components to achieve state water quality criteria, maintain ecological processes, and sustain appropriate uses" (pg. 105).

No Action

The no action alternative is also in conformance with the Ely District Record of Decision and Approved Resource Management Plan (RMP) (August 20, 2008). The current management plan for the area is designed to achieve the Ely District management goals.

2.4.1. Relationship to Statutes, Regulations, or other Plans:

The proposed action is in compliance with the following laws, regulations, Executive Orders, county public land plans, and other plans:

- Northeastern Great Basin Resource Advisory Council (RAC) Standards and Guidelines (1997).

- The White Pine County Public Lands Policy Plan (2007)
- The White Pine County Elk Management Plan (Elk Management Review Team 2007).
- The Nevada and Eastern California Sage-Grouse Conservation Plan (White Pine County Portion) (April, 2004)
- The National Environmental Policy Act of 1969 (42 U.S.C. §§ 4321-4347, January 1, 1970, as amended 1975 and 1994)
- The Federal Land Policy and Management Act of 1976 (43 U.S.C. §§ 1701-1782, October 21, 1976, as amended 1978, 1984, 1986, 1988, 1990-1992, 1994 and 1996)
- State Protocol Agreement between the Bureau of Land Management (BLM), Nevada and the Nevada State Historic Preservation Office (January 2012)
- National Historic Preservation Act (Public Law 89-665; 16 U.S.C. 470 as amended through 2000)
- Migratory Bird Treaty Act (16 U.S.C. §§ 703-712, July 3, 1918, as amended 1936, 1960, 1968, 1969, 1974, 1978, 1986 and 1989)
- The Endangered Species Act of 1973 (16 U.S.C. §§ 1531-1544, December 28, 1973, as amended 1976-1982, 1984, and 1988)
- Executive Order 13186: Responsibilities of Federal Agencies to Protect Migratory Birds (2001)

2.4.2. Tiering

This document is tiered to the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (RMP/EIS) released in November 2007.

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Chapter 3. Affected Environment:

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3.1. Project Area Description

The project area is defined as a small portion of the Cherry Creek allotment within the Egan Basin use area, the North and South Egan Basin Seedings

The North Egan Basin Seeding encompasses approximately 1,400 public land acres and the South Egan Seeding encompasses approximately 2,200 public land acres. The total project area encompasses approximately 3,600 acres. The project area occurs within White Pine County, and is situated approximately 5 miles southwest of Cherry Creek, Nevada and approximately 45 miles north of Ely, Nevada (Figure 1 (p. 39)). The Egan Basin is within the Triple B Wild Horse Herd Management Area (HMA), although the seedings are excluded from the HMA. There is one permittee with permitted use on the North Egan Seeding and two permittees with permitted use on the South Egan Seeding within the Cherry Creek Allotment (Table 1).

Table 1. Permitted grazing use on the North and South Egan Seedings in the Cherry Creek Allotment in White Pine County, Nevada.

Operator Number	Allotment Name/Pasture	Period of Use	Livestock Kind	AUMs
2703360	Cherry Creek/North Egan Seeding	3/1 to 2/28	Cattle	396
2703367	Cherry Creek/South Egan Seeding	5/1 to 2/28	Cattle	147
2704455	Cherry Creek/South Egan Seeding	5/1 to 2/28	Cattle	480

3.2. Resources/Concerns Considered for Analysis

The following items have been evaluated for the potential for significant impacts to occur, either directly, indirectly, or cumulatively, due to implementation of the proposed action. Consideration of some of these items is to ensure compliance with laws, statutes or Executive Orders that impose certain requirements upon all Federal actions. Other items are relevant to the management of public lands in general and to the Ely BLM in particular.

Resource/Concern Considered	Issue(s) Analyzed	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
Air Quality	No	White Pine County, Nevada is designated as attaining Air Quality standards for lead and attainment/unclassifiable for the other six criteria pollutants monitored in Nevada (sulphur dioxide, carbon monoxide, ozone, particulate matter <2.5 micrometers, particulate matter <10 micrometers, and nitrogen dioxide). The Proposed Action and No Action Alternative would not affect the designation of air quality standards in White Pine County. Detailed analysis is not necessary.
Areas of Critical Environmental Concern (ACEC)	No	No ACEC's occur within or adjacent to project area.

Resource/Concern Considered	Issue(s) Analyzed	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
Cultural Resources	No	A Class III cultural resource inventory occurred for the proposed project. Any eligible sites to the National Register of Historic Places will be avoided by project design, thereby there will be no adverse effect to cultural resources. The project is less than one mile from the Pony Express Trail but is completely outside the area of project effect. The Trail was considered for visual resource management as directed by BLM: National Scenic and Historic Trails Instruction Memorandum (NV-2004–006).
Environmental Justice	No	No minority or low-income groups would be disproportionately affected by health or environmental effects. Concern is not present.
Fish and Wildlife	No	The project would provide an additional source of water to many species of wildlife in the vicinity. The small amount of disturbance would tend to displace some individuals temporarily and some may be unable to avoid the equipment installing the pipelines. This should have no impacts on the populations of common wildlife species. Design features of the proposed action including attaching permanent markers to fence wires between posts to alert wildlife to the presence of the fence to help reduce impacts. Crucial elk *(Cervus canadensis)* and deer*(Odocoileus hemionus)* winter habitat is present. Construction will not take place during the period November 1 through March 31.
Floodplains	No	Resource not present.
Forest Health	No	Resource is not present within project area.
Lands and Realty	No	There are no conflicting Right-of-Ways within project area.
Migratory Birds	No	Fence construction and/or pipeline construction is not anticipated during the migratory bird nesting period, from April 15 to July 15. If either construction is necessary during that period, a survey of the areas to be disturbed would be completed prior to construction by a wildlife biologist in order to identify active nests so that they may be avoided. A list of bird species that may be present in the area is included in Appendix B.
Mineral Resources	No	No mineral operations occur within the project area.
Native American Religious Concerns and other concerns	No	No traditional religious or cultural sites have been identified within or adjacent to the proposed project area.
Noxious and Invasive Weed Management	No	A Weed Risk Assessment has been completed for this project. The design features of the proposed action and weed stipulations would help minimize the spread of weeds. No further analysis is necessary.
Paleontological Resources	No	Currently there are no identified resources within this APE.
Prime and Unique Farmlands	No	No Prime or Unique Farmland occurs within or adjacent to the project area. No detailed analysis is necessary.
Rangeland Health	Yes	The proposed action may have direct or indirect impacts to rangeland health due to the change in livestock use, a detailed analysis is provided in chapters 3, 4 of this document.
Recreation Uses	No	The project would not affect Recreation in the area.
Special Status Animal Species, other than those listed or proposed by the FWS as Threatened or Endangered	Yes	Special status bird species such as the golden eagle (*Aquila chrysaetos*), ferruginous hawk (*Buteo regalis*), and loggerhead shrike (*Lanius ludovicianus*) may be present within or near the project area. Adherence to the minimization measure in the Migratory Bird section of the proposed action, would avoid impacts to most Special Status avian species. The proposed action may have direct and indirect impacts to sage grouse and pygmy rabbits due to the construction activities and the change in livestock use, impacts are analyzed in the EA.

Resource/Concern Considered	Issue(s) Analyzed	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
Special Status Plant Species, other than those listed or proposed by the FWS as Threatened or Endangered	No	Resource not known to be present.
Soil Resources	Yes	Direct impacts to soils during construction and indirect impacts due to changes in livestock use are expected. Analyzed in EA.
Threatened or Endangered Species or critical habitat.	No	There are no Threatened or Endangered species listed or proposed for listing known to occur within the project area.
Vegetative Resources	Yes	Direct impacts to vegetation during construction and indirect impacts due to changes in livestock use are expected. Analyzed in EA.
Visual Resource Management (VRM)	No	The proposed action is adjacent to the Pony Express Trail. The design features of the proposed action would allow the project to be consistent with the VRM II classification for the area, therefore no direct, indirect or cumulative impacts to visual resources would occur.
Wastes, Hazardous or Solid	No	The proposed action or alternatives would not produce hazardous or solid waste.
Water Resources	No	The proposed action is not expected to lead to a measurable change in the surface and subsurface water sources, water rights, and quantity of water that occurs in the analysis area.
Wilderness	No	No Wilderness occurs within or adjacent to the project area. No further analysis is necessary.
Lands with Wilderness Characteristics	No	The 1979/1980 Initial Wilderness Inventory for the project area found the unit to be lacking wilderness character. In the event an update to the inventory is completed, this project would not eliminate wilderness character.
Wetlands/Riparian Zones	No	No riparian areas and/or wetland zones are present or be affected in the proposed project area.
Wild Horses	No	Egan Basin is within the Triple B Herd Management Area (HMA) although the project would occur within the seedings which are excluded from the HMA. Wild horses should not be affected by the proposed action.
Wild and Scenic Rivers	No	No Wild and Scenic Rivers occur within or adjacent to the project area.

3.3. Affected Environment

3.3.1. Rangeland Health

Currently, this portion of the Cherry Creek allotment is meeting the Upland Sites and the Wildlife Habitat rangeland health standard. There are not any riparian or wetland sites within the project area. Both the North and South Egan Seedings exhibit very good ground cover, including a mix of herbaceous and shrub vegetation, litter and rock. The soils are stable with no signs of excessive erosion. The North Seeding does exhibit heavier use in a small area surrounding the existing watering site (north end) and very little to no use in the remainder of the seeding. The South Seeding does exhibit moderate to heavy use in the southern portion of the seeding around the current watering site as well as heavy use in the low laying areas of the seeding and very little to no use on the northern and western portions of the seeding.

3.3.2. Vegetative Resources

The vegetation within the project area consists mainly of Crested Wheatgrass (*Agropyron cristatum*) and Wyoming Big Sagebrush (*Artemisia tridentata wyomingensis*) and exhibits adequate vegetative canopy cover to protect the soil from excessive erosion. The very small portion of the project outside the seedings consists of a mix of native perennial grasses and forbs as well as sagebrush.

3.3.3. Special Status Animal Species

Sage Grouse

The greater sage-grouse (*Centrocercus urophasianus*) is a high-profile Sensitive Species that has been determined to be warranted for listing but which is precluded by other species of higher priority (Fish and Wildlife Service, 2010). It has been identified as an "umbrella" species by the Ely District BLM, and chosen to represent the habitat needs of the sagebrush (Artemisia spp.) obligate or sagebrush/woodland dependent guild (BLM- Ely RMP/FEIS, 2007; p. 4.7-10).

One known active lek and 1 lek in which the activity status is currently unknown occur within Egan Basin within 3 miles south of the project area.

The project area occurs within nesting, brood rearing and winter sage grouse habitat and has been identified as priority habitat for sage grouse. A telemetry study in 2007 indicated that sage grouse use the habitat in the vicinity of the project year round.

Pygmy Rabbit

The pygmy rabbit (*Brachylagus idahoensis*) is a sagebrush obligate species. The pygmy rabbit is currently designated as a Federal species of concern but has not been warranted for listing as endangered or threatened under the Endangered Species Act of 1973, as amended (Fish and Wildlife Service, 2010). The pygmy rabbit prefers areas of tall, dense sagebrush growing in deep soils which are friable and suitable for digging burrows and is often found along washes or drainages where soils are deep and sagebrush is tall (Fish and Wildlife Service, 2010).

The sagebrush vegetation and soil characteristics within the project area does not exhibit the preferred habitat for the pygmy rabbit but may contain isolated locations of suitable habitat. Pygmy rabbits were surveyed throughout their historic range in Nevada between 2003 and 2006 (Fish and Wildlife Service, 2010). Larrucea and Brussard (2008) found current populations of pygmy rabbits throughout all of the species' historic range in Nevada and that the current distribution of active sites in Nevada is similar to the historical distribution (Larrucea and Brussard, 2008; Fish and Wildlife Service, 2010). One individual or population was observed in 2005 at a location outside the proposed project area.

3.3.4. Soil Resources

The soils are stable, productive and healthy with no signs of excessive erosion or compaction.

Chapter 4. Environmental Effects:

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4.1. Direct and Indirect Effects

4.1.1. Rangeland Health

Proposed Action

The proposed action would continue to meet the Upland and Habitat rangeland health standards. The proposed action would distribute livestock use throughout the North and South Egan Seedings and allow for more dispersed grazing use. This would alleviate the grazing pressures around the current water sources that receive constant or repeated use throughout a grazing season. Livestock are often reluctant to travel long distances (1-2 miles, depending on terrain) to water. Development of new water sources in areas that are further than 1 km from existing water sources usually increases forage use nearby and improves the overall uniformity of grazing (Bailey, 2004). The proposed action would spread livestock use into areas of the seedings that currently receives very little to no use. This could create more uniform, patchy use and structural diversity overall within the seedings (Bailey, 2004; Vavra, 2005). Additional water sources would also increase livestock management and flexibility of the pattern of use on the seedings by providing water sources, that have the ability to be turned on or off independently, spread throughout the seedings. This would maintain the overall vegetative and soil resource health within these use areas.

The maintenance activities for the pipeline would remove and replace very small, isolated areas of soil and vegetation and would be temporary and negligible due to the very small amount of isolated disturbance, compared to the overall use area, that would occur on an as-need basis. Maintenance activities would not affect rangeland health.

No Action

The current conditions would continue. This action would continue to limit distribution and management within the use areas. Although the current management plans for these grazing use areas have been designed to continue to progress towards the achievement or achieve the rangeland health standards and maintain healthy and productive rangelands and wildlife habitat, this action does not employ the available tools or provide the opportunities that the proposed action does to improve soil and vegetative conditions throughout the North and South Seedings.

4.1.2. Special Status Animal Species

<u>Sage Grouse</u>

Proposed Action

The proposed action would crush a strip of grass and sagebrush vegetation approximately 10 feet wide and 2.5 miles long (approx. 3 acres) and remove a strip of vegetation approximately 1 foot wide and 2.8 miles in length (approx. 0.3 acre) within the 3,600 acres of grass and sagebrush vegetation surrounding the project area and within the 10,000 acres of total priority habitat surrounding the project area within Egan Basin. This would reduce or eliminate cover for sage grouse within the strip of disturbance. These impacts would be temporary and would recover (see section 4.1.4 Vegetative Resources). The new water sites may provide a new source of free

water for sage grouse during parts of the year, when livestock are present. The installation of escape ladders in the troughs would prevent individual birds from drowning. The ground level wildlife drinker would also provide an additional water source for sage grouse and other small animals. The fence would pose a threat of collisions and/or mortality for sage grouse as well as provide perch sites for raptors (Fish and Wildlife Service, 2010). Marking the fence with permanent reflective markers may help to prevent collisions by alerting the birds to the presence of the fence (Wyoming Game and Fish Department, 2009). In addition, the fence would be constructed with steel T-posts and steel braces which may reduce the risk of providing perches for raptors due to the size and shape of the posts.

Indirect impacts would include increased grazing and trampling near the new water sources. These impacts would be based on how the use of the water sources is rotated, and could be increased or decreased based on the duration of use. The proposed action would also allow for better distribution and dispersed use by livestock within the seedings. The proposed action would likely spread livestock use into areas of the seedings that currently receives very little to no use. This could create more uniform, patchy use and structural diversity overall within the seedings (Bailey, 2004; Vavra, 2005). This could also reduce cover for the sage grouse in the areas that receive more use. In addition, spreading livestock use into areas of the seedings that currently receives very little to no use could also introduce a small amount of disturbance to sage grouse while livestock are in these previously unused areas.

The West Nile Virus, which is transmitted by infected mosquitoes, can affect sage grouse. Although West Nile Virus has been identified to occur in White Pine County, there have not been any confirmed cases of infection in humans or animals at the present time. The probability of the proposed water troughs increasing mosquito populations and the West Nile Virus in the area would be very low due to the dry conditions, the lack of infected hosts and the cooler climate and dry conditions that the area exhibits. In addition, the water troughs in the project would receive frequent use from livestock and wildlife and would be susceptible to frequent wind. This use and wind may agitate the water enough to discourage mosquitoes from laying their eggs and/or kill mosquito larvae. The trampled area and around the trough sites may provide breeding areas for mosquitoes if there is water on the ground, but the frequent use by livestock and wildlife stepping in the small puddles that may be present would likely eliminate most of the mosquito larvae. The floating shut-off valves would help prevent water from overflowing onto the ground and creating puddles. Individual troughs would only be in use for a limited time period which may also reduce the risk of supporting breeding mosquitoes.

The impacts from the future maintenance of the pipeline and troughs could consist of driving over upland vegetation to access the broken portion of pipe and removing and replacing very small, isolated portions of the upland soil and vegetation. The effects of maintenance activities would be temporary and would be expected to recover at normal rates and would not affect sage grouse that may be present. In addition, these areas would be surveyed for the presence of sage grouse by a wildlife biologist prior to any ground disturbing activities.

Pygmy Rabbit

The impacts from construction activities would be temporary and would recover (see section 4.1.4 Vegetative Resources). Although no pygmy rabbits are known to occupy the project area, construction activities of the pipeline and the fence may disturb individual rabbits or destroy individual burrows that may be present. Any possible pygmy rabbit habitat which could be affected by the fence and pipeline installation would be surveyed by a wildlife biologist prior

to work commencing so that any burrows would be avoided. The ground level wildlife drinker would provide a water source for the pygmy rabbit, as well as for other smaller wildlife.

Indirect impacts from the fence and dispersed livestock grazing are similar to those described above in the Sage Grouse portion of this section.

The impacts from the future maintenance of the pipeline and troughs could consist of driving over upland vegetation to access the broken portion of pipe and removing and replacing very small, isolated portions of the upland soil and vegetation. The effects of maintenance activities would be temporary and would be expected to recover at normal rates and would not affect individual pygmy rabbits or any populations that may be present. In addition, these areas would be surveyed by a wildlife biologist for the presence of burrows prior to any ground disturbing activities.

In conclusion, the Fish and Wildlife Service has concluded that developments such as those described in this project are not a major threat to pygmy rabbits now or in the foreseeable future (Fish and Wildlife Service, 2010).

No Action

The current habitat conditions for sage grouse and pygmy rabbit would continue. There would not be ground disturbance from construction activities and no additional water sources would be installed.

4.1.3. Soil Resources

Proposed Action

Direct effects would include the disturbance and/or compaction of approximately 3.4 acres of soil from equipment traveling off-road and approximately 0.3 acre of soil displacement from excavation activities associated with the pipeline burial within the 3,600 acres of the project area. The effects of soil compaction from the equipment would be temporary and may be reduced by conducting the off-road travel on dry soils. The displacement of soil and the resultant mixing of soil physical characteristics would not be expected to lead to a loss of soil productivity due to the relative shallowness of the pipeline trenches and the small degree of overall soil disturbance.

Indirect effects to soil could include compaction and disturbance at the new water sources from increased livestock use around these sites. Short-term effects may include an increased susceptibility to wind or water erosion due to the removal of vegetation along the proposed pipeline course. The width of the proposed pipeline trench and the extent of potential vegetative resource disturbance greatly reduces the possibility of any increased risk to erosion.

The maintenance activities for the pipeline would be temporary and negligible due to the very small amount of isolated disturbance, compared to the overall use area, that would occur on an as-need basis.

No Action

No new ground disturbing activity would occur. Current conditions would continue.

4.1.4. Vegetative Reources

Proposed Action

Direct impacts from the construction activities of the proposed action would be temporary and would include removing approximately 0.3 acre and crushing approximately 3.4 acres of crested wheatgrass and sagebrush vegetation within the 3,600 acres of grass and sagebrush vegetation surrounding the project. Desert vegetation can take many years to recover, with grasses reestablishing first, followed by forbs and shrubs. Recovery of vegetation is primarily dependent on precipitation following construction. Considering the current vegetation within the project area (crested wheatgrass), the recovery of the grass component may be faster than with other native grass sites due to the quick establishment and recovery rate of crested wheatgrass.

Indirect impacts would include increased grazing and trampling near the new water sources. These impacts would be based on how the use of the water sources is rotated, and could be increased or decreased based on the duration of use. Livestock grazing use would also be more dispersed throughout the seedings, creating more uniform, patchy use of the vegetation and structural diversity overall (Bailey, 2004; Vavra, 2005).

The maintenance activities for the pipeline would be temporary and negligible due to the very small amount of isolated disturbance, compared to the overall use area, that would occur on an as-need basis.

No Action

The current vegetative conditions would continue and vegetation would not be disturbed by construction. Other impacts are described in Rangeland Health.

4.2. Cumulative Effects

4.2.1. Introduction

As required under NEPA and the regulations implementing NEPA, this section analyzes potential cumulative impacts from past, present, and reasonably foreseeable future actions combined with the Proposed Action within the area analyzed for impacts in Chapter 3 specific to the resources for which cumulative impacts may be anticipated. A cumulative impact is defined as “the impact which results from the incremental impact of the action, decision, or project when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time” (40 Code of Federal Regulations 1508.7).

The Cumulative Effects Study Area (CESA) is defined as the Egan Basin.

4.2.2. Past, Present and Reasonable Foreseeable Future Actions

Past Activities

Livestock and wild horse grazing has a long history in the region dating back to the late 1800's. Throughout its history, livestock grazing has been characterized by localized areas of intense use. In many areas in which this intense grazing occurred there is a lack of herbaceous cover and they are primarily shrub dominate. The North and South Egan Basin Seedings were converted to crested wheatgrass seedings in 1960 to enhance livestock grazing in the area. The South Egan Basin Seeding was treated with prescribed fire in the late 1990's or early 2000's. Hunting, trapping, wildlife viewing, and other recreational activities have occurred within the project area for many years. OHV use has occurred on the roads and two-tracks within the area. Range improvement projects have been installed in the area to improve grazing management and include fencing and spring/stock water developments. The Egan Basin Well was installed in the late 1960's.

Present Activities

The project area is currently being grazed by livestock, wild horses and wildlife. Current livestock grazing management can be characterized as light to moderate use of the available forage. Hunting, trapping, wildlife viewing, and other recreational activities occur within the area occasionally throughout the year. This includes the use of the several existing two-track and developed roads in the area as well as cross-country hiking. OHV use currently occurs on the roads and two-tracks within the area. Maintenance of range improvements is ongoing and generally includes repairing fences and stock water toughs. These maintenance activities generally require the use of existing two-track and developed roads.

Reasonably Foreseeable Future Actions

No other projects have been proposed or are anticipated at this time within the CESA. It is anticipated that hunting, trapping, wildlife viewing, and other recreational activities would continue to occur within the project area year round. OHV use is likely to occur on the roads and two-tracks within the area. Maintenance of range improvements would likely continue and may include repairing fences, troughs and excavating small portions of the pipeline to repair the broken portions of pipeline. New range improvement projects are considered on an annual basis and analyzed on a site-specific basis. Livestock and wild horse grazing would likely continue at current levels under the current management plans.

4.3. Cumulative Effects Analysis

4.3.1. Rangeland Health

Proposed Action

It is anticipated that the proposed action, in combination with the past, present and reasonably foreseeable future actions, would continue to achieve or progress towards achieving the rangeland health standards and guidelines within the CESA and could provide for the desired habitat and rangeland health conditions over the long term.

The proposed action would improve livestock management and increase distribution and create more uniform use throughout the North and South Egan Basin Seedings. In addition, it would also increase the flexibility in the use on both seedings. The impacts from occasional maintenance

activities on range improvements would be negligible compared to the overall area of the CESA and the overall functionality of the structures to maintain livestock control and adequate, reliable water sources for the overall achievement of the rangeland health standards.

No Action

It is anticipated that the no action alternative in combination with the past, present and reasonably foreseeable future actions, would not affect the rangeland health. The current conditions would continue to occur. Current livestock management plans are designed to continue to achieve or progress towards achieving the rangeland health standards with the current infrastructure. It can be assumed that the no action alternative would also continue to achieve or progress towards achieving the rangeland health standards.

4.3.2. Special Status Animal Species

Proposed Action

Sage Grouse

The proposed action, in combination with other past present and foreseeable future actions, would continue to provide quality habitat for sage grouse. The current management plan for the project area is designed to leave sufficient residual vegetation throughout the CESA and maintain or improve habitat conditions. The effects from maintenance activities, as described in future actions, would not affect sage grouse due to the very small, isolated and infrequent occurrences of these activities.

Pygmy Rabbit

The proposed action, in combination with other past present and foreseeable future actions, would not affect pygmy rabbits or habitat that may be in the area for the long term. The proposed action, in conjunction with the current management plan, would continue to provide habitat for pygmy rabbits. The effects from maintenance activities, as described in future actions, would not affect the pygmy rabbit due to the very small, isolated and infrequent occurrences of these activities.

No Action

The no action alternative, in combination with the other actions, would likely not affect sage grouse and sage grouse habitat and continue the current habitat condition in the area. The current management plans are designed to continue to achieve or progress towards achieving the rangeland health standards which would also continue to provide quality habitat for sage grouse.

4.3.3. Soil Resources

Proposed Action

It is anticipated that the proposed action, in combination with the past, present and reasonably foreseeable future actions, would maintain soil conditions and health throughout the CESA.

No Action

It is anticipated that the no action alternative in combination with the past, present and reasonably foreseeable future actions, would continue to maintain the current soil conditions throughout the CESA.

4.3.4. Vegetative Resources

Proposed Action

The proposed action in combination with the past, present and future actions would reduce impacts to vegetation and create more uniform use of the vegetation and structural diversity throughout the seeding as a whole which would also increase plant community resistance and resilience.

No Action

It is anticipated that with the no action alternative in combination with the past, present and reasonably foreseeable future actions, the current conditions would continue to occur. Higher intensity grazing in particular portions of the seedings could reduce plant vigor in those particular areas, thus making these areas more susceptible to weed infestations when other disturbances occur.

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Chapter 5. Tribes, Individuals, Organizations, or Agencies Consulted:

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Table 5.1. List of Persons, Agencies and Organizations Consulted

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
Alan Jenne, Nevada Department of Wildlife	Wildlife/Sage Grouse Coordination and Consultation	NDOW supported the project and requested that a ground level drinker be added to the pipeline.
Shivwits Band of Paiutes	Tribal Consultation and Coordination	No comments received.
Duckwater Shoshone Tribe	Tribal Consultation and Coordination	Requested and went on a field visit and did not have any objections.
Skull Valley Band of Goshute Indians of Utah	Tribal Consultation and Coordination	No comments received.
Elko Band Council	Tribal Consultation and Coordination	No comments received.
Kaibab Band of Paiutes	Tribal Consultation and Coordination	No comments received.
Yomba Shoshone Tribe	Tribal Consultation and Coordination	No comments received.
Moapa Band of Paiutes	Tribal Consultation and Coordination	No comments received.
Cedar City Band of Paiutes	Tribal Consultation and Coordination	No comments received.
South Fork Band Council	Tribal Consultation and Coordination	No comments received.
Wells Band Council	Tribal Consultation and Coordination	No comments received.
Indian Peaks Band	Tribal Consultation and Coordination	No comments received.
Te-Moak Tribes of the Western Shoshone Indian of Nevada	Tribal Consultation and Coordination	No comments received.
Paiute Indian Tribe of Utah	Tribal Consultation and Coordination	No objections to the project
Battle Mountain Band Council	Tribal Consultation and Coordination	No comments received.
Confederated Tribes of the Goshute Reservation, Nevada-Utah	Tribal Consultation and Coordination	No comments received.
Las Vegas Paiute Tribe of the Las Vegas Indian Colony	Tribal Consultation and Coordination	No comments received.
Ely Shoshone Tribe of Nevada	Tribal Consultation and Coordination	No comments received.

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Chapter 6. List of Preparers

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Table 6.1. List of Preparers

Name	Title	Responsible for the Following Section(s) of this Document
TJ Mabey	Natural Resource Specialist	Project Lead/Rangeland Health, Vegetation, Noxious and Invasive Weeds
Marian Lichtler	Wildlife Biologist	Wildlife, Migratory Birds, Special Status Species
Lisa Gilbert	Archeologist Technician	Cultural and Paleontological Resources
Mindy Seal	Natural Resource Specialist	NEPA, Environmental Justice
Mark D'Aversa	Hydrologist	Air Quality, Soil Resources, Water Resources, Wetland/Riparian Zones, Flood Plains, Prime and Unique Farmland
Stephanie Trujillo	Realty Specialist	Lands and Realty
Erin Rajala	Outdoor Recreation Planner	Visual Resources, Recreation
Miles Kriedler	Geologist	Mineral Resources
Emily Simpson	Wilderness Planner	Wilderness, Lands with Wilderness Characteristics, Wild and Scenic Rivers
Elvis Wall	Native American Coordinator	Native American Religious and other Concerns
Melanie Peterson	Environmental Protection Specialist	Hazardous and Solid Waste

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Chapter 7. References

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Appendix A. Maps

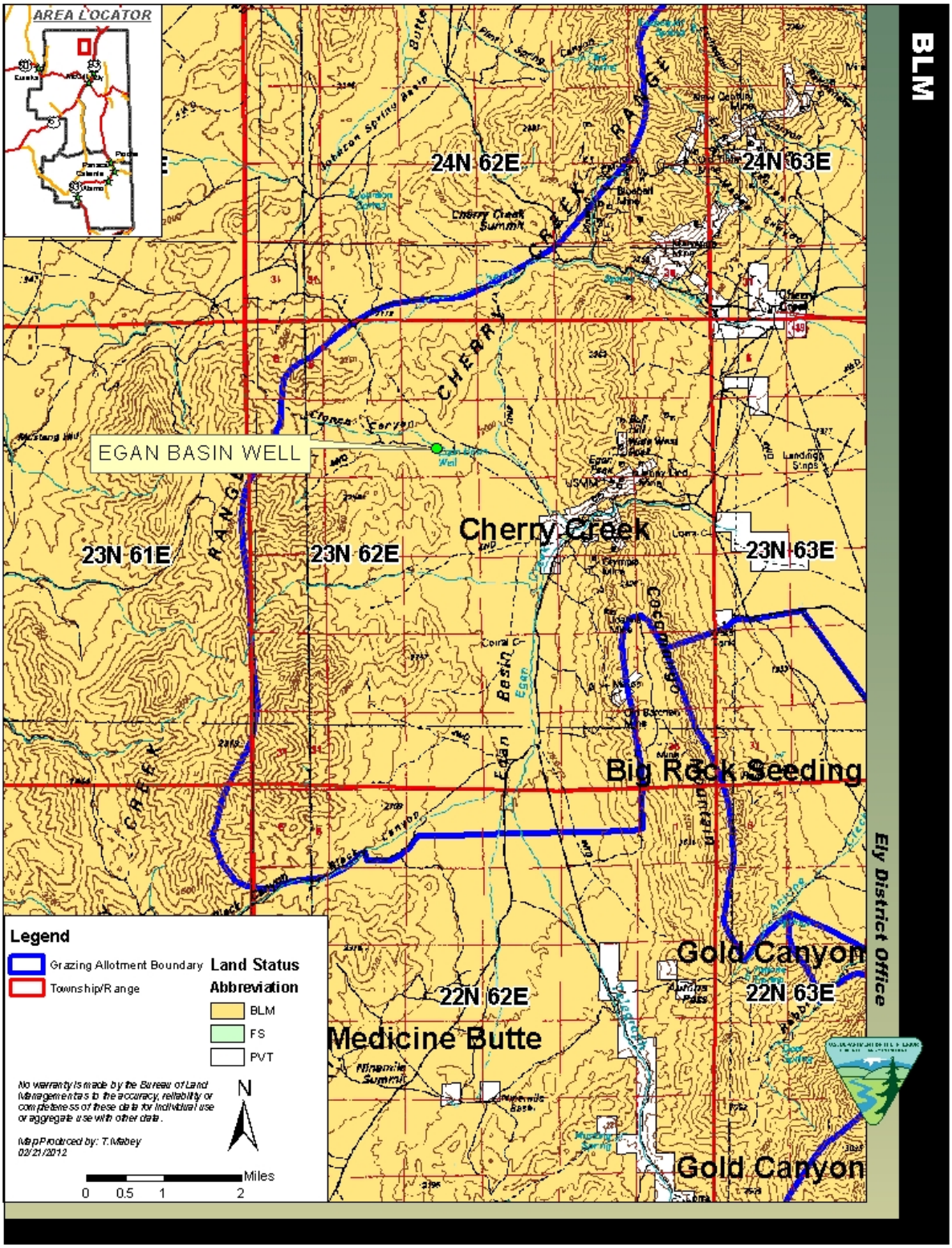

Figure 1. Project Location Map

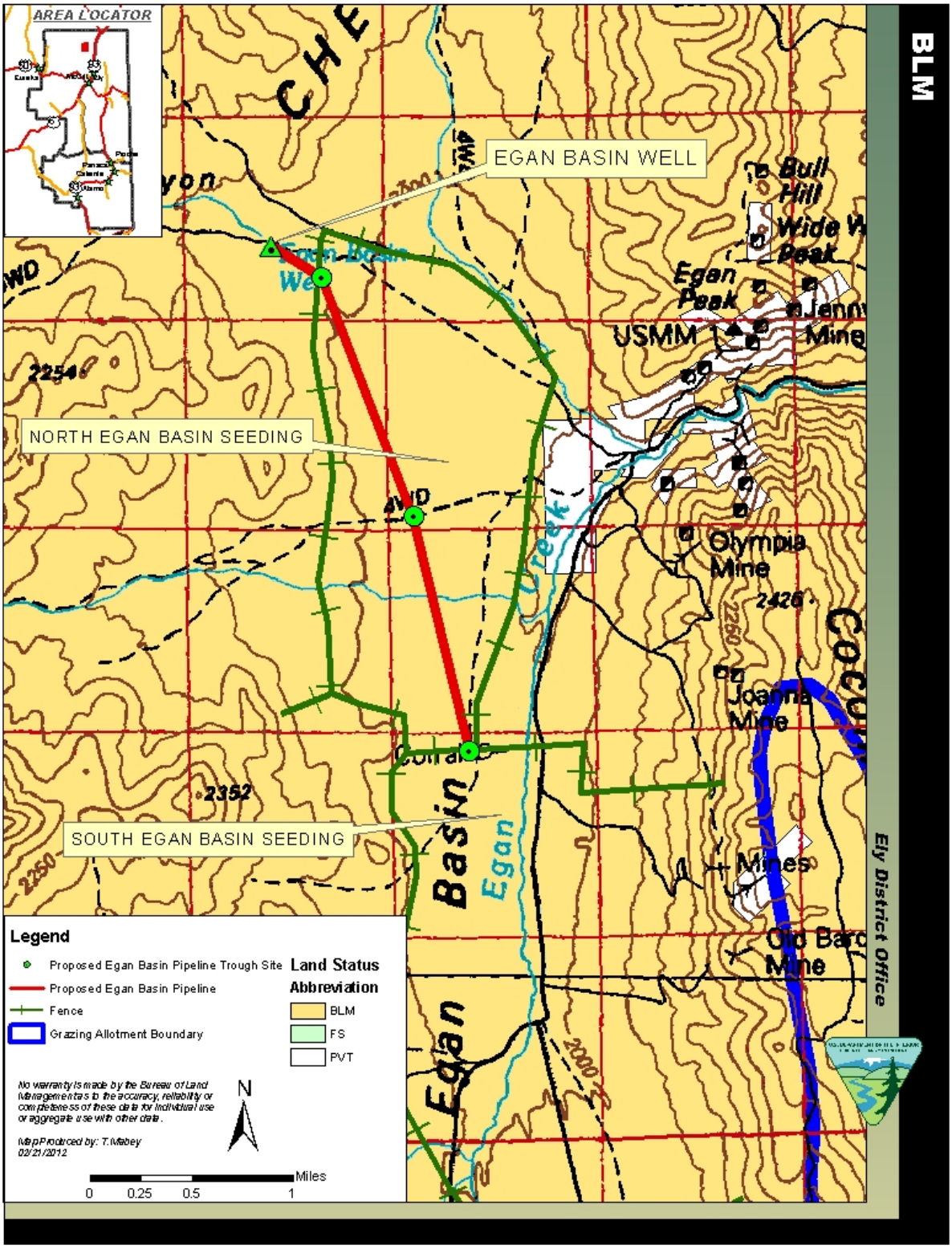

Figure 2. Project Layout Map

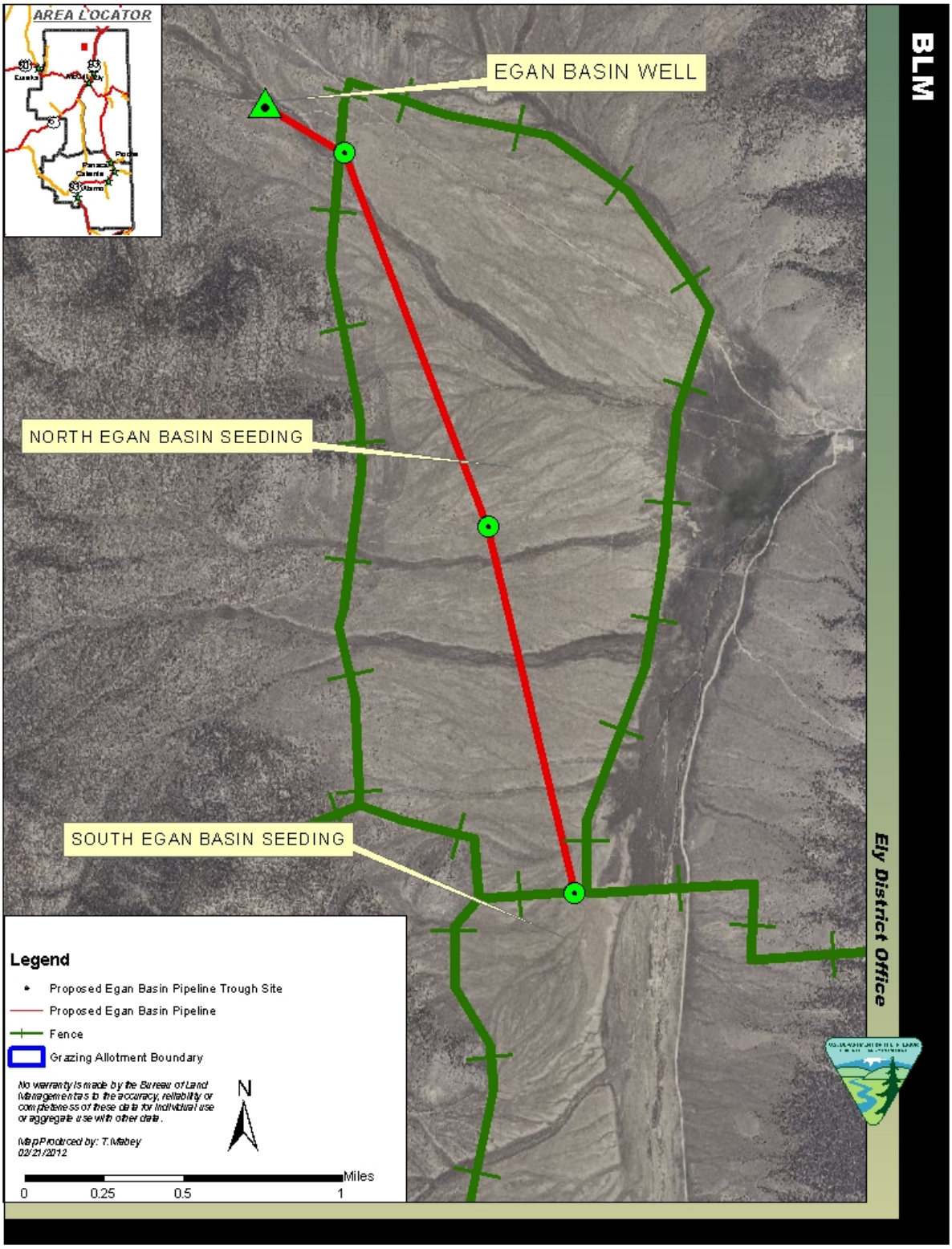

Figure 3. Project Map

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Appendix B. Migratory Birds

The following data reflect survey blocks and/or incidental sightings of bird species within the Cherry Creek allotment boundaries from the Atlas of the Breeding Birds of Nevada (Floyd et al. 2007). These data represent birds that were confirmed, probably, or possibly breeding within the allotment boundaries. These data are not comprehensive, and additional species not listed here may be present within the allotment boundary.

• **COMMON NAME**	• **SCIENTIFIC NAME**
• American kestrel	• *Falco sparverius*
• American robin	• *Turdus migratorius*
• Audubon's warbler	• *Setophaga coronata auduboni*
• black-billed magpie	• *Pica hudsonia*
• blue-gray gnatcatcher	• *Polioptila caerulea*
• brown-headed cowbird	• *Molothrus ater*
• black-headed grosbeak	• *Pheucticus melanocephalus*
• brown creeper	• *Certhia americana*
• *Brewer's sparrow	• *Spizella breweri*
• black-throated gray warbler	• *Setophaga nigrescens*
• broad-tailed hummingbird	• *Selasphorus platycercus*
• bushtit	• *Psaltriparus minimus*
• Cassin's finch	• *Carpodacus cassinii*
• chipping sparrow	• *Spizella passerina*
• Clark's nutcracker	• *Nucifraga columbiana*
• common nighthawk	• *Chordeiles minor*
• common poorwill	• *Phalaenoptilus nuttallii*
• common raven	• *Corvus corax*
• gray-headed junco	• *Junco h. caniceps*
• great horned owl	• *Bubo virginianus*
• gray flycatcher	• *Empidonax wrightii*
• green-tailed towhee	• *Pipilo chlorurus*
• hermit thrush	• *Catharus guttatus*
• house finch	• *Carpodacus mexicanus*
• lark sparrow	• *Chondestes grammacus*
• lazuli bunting	• *Passerina amoena*
• mountain bluebird	• *Sialia currucoides*
• mountain chickadee	• *Poecile gambeli*
• mourning dove	• *Zenaida macroura*
• northern flicker	• *Colaptes auratus*
• *pinyon jay	• *Gymnorhinus cyanocephalus*
• red-breasted nuthatch	• *Sitta canadensis*
• red-naped sapsucker	• *Sphyrapicus nuchalis*
• red-tailed hawk	• *Buteo jamaicensis*
• spotted towhee	• *Pipilo maculatus*
• Steller's jay	• *Cyanocitta stelleri*
• Townsend's solitaire	• *Myadestes townsendi*
• white-breasted nuthatch	• *Sitta carolinensis*
• western scrubjay	• *Aphelocoma californica*
• western tanager	• *Piranga ludoviciana*

* = Sensitive or species of concern

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Appendix C. Weed Risk Assessment

RISK ASSESSMENT FOR NOXIOUS & INVASIVE WEEDS

Egan Basin Well and Pipeline

Proposed Action

BLM proposes to authorize and existing well (Egan Basin Well) and bury the existing pipeline from the Egan Basin Well to an existing trough within the North Egan Seeding (approx. 0.3 mile) as well as extend the pipeline to the south boundary fence between the North and South Egan Seedings (approx. 2.5 miles) for a total of approx. 2.8 miles of pipeline and two additional trough sites. The additional trough sites would be placed in previously disturbed area if available. The trenching for the pipeline would be done by a backhoe or similar equipment and would involve off-road overland travel and would disturb a strip approx. 10 feet wide (5 feet on either side of the trench) for the length of the pipeline as well as dig a trench approx. 8-12 inches wide and 3 feet deep which would then replace the ripped soil and bury the installed pipeline for the length of the pipeline. This results in a disturbance area of approx. 0.3 acre (2.8 miles x 1 ft) of ripped and replaced soil within the total disturbance of 3.4 acres (2.8 miles x 10 ft). Construct would likely take place in late summer or fall.

A field survey was completed for this project. No noxious weeds were found within or adjacent to the proposed pipeline project. The following species are found along roads or drainages leading to the projects:

Onopordum acanthum	Scotch thistle
Lepidium draba	Whitetop/hoary cress
Carduus nutans	Musk thistle
Cirsium vulgare	Bull thistle

The following weeds do occur in or around the existing well and trough site within the project area: cheatgrass (*Bromus tectorum*), bur buttercup (*Ceratocephala testiculata*) and tumble mustard (*Thelypodiopsis spp.*). This area was last inventoried for noxious weeds in 2009.

Factor 1 assesses the likelihood of noxious/invasive weed species spreading to the project area.

None (0)	Noxious/invasive weed species are not located within or adjacent to the project area. Project activity is not likely to result in the establishment of noxious/invasive weed species in the project area.
Low (1-3)	Noxious/invasive weed species are present in the areas adjacent to but not within the project area. Project activities can be implemented and prevent the spread of noxious/invasive weeds into the project area.
Moderate (4-7)	Noxious/invasive weed species located immediately adjacent to or within the project area. Project activities are likely to result in some areas becoming infested with noxious/invasive weed species even when preventative management actions are followed. Control measures are essential to prevent the spread of noxious/invasive weeds within the project area.
High (8-10)	Heavy infestations of noxious/invasive weeds are located within or immediately adjacent to the project area. Project activities, even with preventative management actions, are likely to result in the establishment and spread of noxious/invasive weeds on disturbed sites throughout much of the project area.

For the proposed action, the factor rates as Low (3) at the present time. The ground disturbance to install the pipeline with the use of heavy machinery and the increased livestock use around the new water sites could open new sites to the introduction of new weed infestations in the project area. However, the project would occur within a thick and healthy Crested Wheatgrass seeding which would reduce the chance of new infestations in the project area becoming established due to the competitive nature and re-establishment rate of Crested Wheatgrass. In addition, the areas that do have weeds present are not severely infested and the majority of the project area is weed free.

Factor 2 assesses the consequences of noxious/invasive weed establishment in the project area.

Low to Nonexistent (1-3)	None. No cumulative effects expected.
Moderate (4-7)	Possible adverse effects on site and possible expansion of infestation within the project area. Cumulative effects on native plant communities are likely but limited.
High (8-10)	Obvious adverse effects within the project area and probable expansion of noxious/invasive weed infestations to areas outside the project area. Adverse cumulative effects on native plant communities are probable.

The proposed action rates as Moderate (6) at the present time. If new weed infestations establish within the project area this could have an adverse impact on the plant communities since the area is currently considered to be weed-free and this area has been identified to be very important wildlife habitat for several species. The project would occur within a Crested Wheatgrass seeding which would reduce the chance of new infestations in the project area due to the competitive nature and re-establishment rate of Crested Wheatgrass. Any increase of cheatgrass could alter the fire regime and degrade wildlife habitat in the area.

The Risk Rating is obtained by multiplying Factor 1 by Factor 2.

None (0)	Proceed as planned.
Low (1-10)	Proceed as planned. Initiate control treatment on noxious/invasive weed populations that get established in the area.
Moderate (11-49)	Develop preventative management measures for the proposed project to reduce the risk of introduction of spread of noxious/invasive weeds into the area. Preventative management measures should include modifying the project to include seeding the area to occupy disturbed sites with desirable species. Monitor the area for at least 3 consecutive years and provide for control of newly established populations of noxious/invasive weeds and follow-up treatment for previously treated infestations.
High (50-100)	Project must be modified to reduce risk level through preventative management measures, including seeding with desirable species to occupy disturbed site and controlling existing infestations of noxious/invasive weeds prior to project activity. Project must provide at least 5 consecutive years of monitoring. Projects must also provide for control of newly established populations of noxious/invasive weeds and follow-up treatment for previously treated infestations.

For the proposed action, the Risk Rating is Moderate (18). This indicates that the project can proceed as planned as long as the following measures are followed:

- Prior to the entry of vehicles and equipment to a planned disturbance area, a weed scientist or qualified biologist will identify and flag areas of concern. The flagging will alert personnel or participants to avoid areas of concern.

- Prior to entering public lands, the contractor, operator, or permit holder will provide information and training regarding noxious weed management and identification to all personnel who will be affiliated with the implementation and maintenance phases of the

project. The importance of preventing the spread of weeds to uninfested areas and importance of controlling existing populations of weeds will be explained.

- To eliminate the transport of vehicle-borne weed seeds, roots, or rhizomes all vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities; or for authorized off-road driving will be free of soil and debris capable of transporting weed propagules. All such vehicles and equipment will be cleaned with power or high pressure equipment prior to entering or leaving the work site or project area. Cleaning efforts will concentrate on tracks, feet and tires, and on the undercarriage. Special emphasis will be applied to axels, frames, cross members, motor mounts, on and underneath steps, running boards, and front bumper/brush guard assemblies. Vehicle cabs will be swept out and refuse will be disposed of in waste receptacles. Cleaning sites will be recorded using global positioning systems or other mutually acceptable equipment and provided to the District Office Weed Coordinator or designated contact person.

- To eliminate the introduction of noxious weed seeds, roots, or rhizomes all interim and final seed mixes, hay, straw, hay/straw, or other organic products used for reclamation or stabilization activities, feed, bedding will be certified free of plant species listed on the Nevada noxious weed list or specifically identified by the BLM Ely District Office.

- Removal and disturbance of vegetation would be kept to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.)

- Include noxious and invasive weed detection in all monitoring activities. If the spread of noxious or invasive weeds is noted, appropriated weed control procedures will be determined in consultation with BLM personnel and will be in compliance with the appropriate BLM handbook sections and applicable laws and regulations.

Reviewed by:	*/s/TJ Mabey*	3/1/2012
	TJ Mabey Natural Resource Specialist	Date

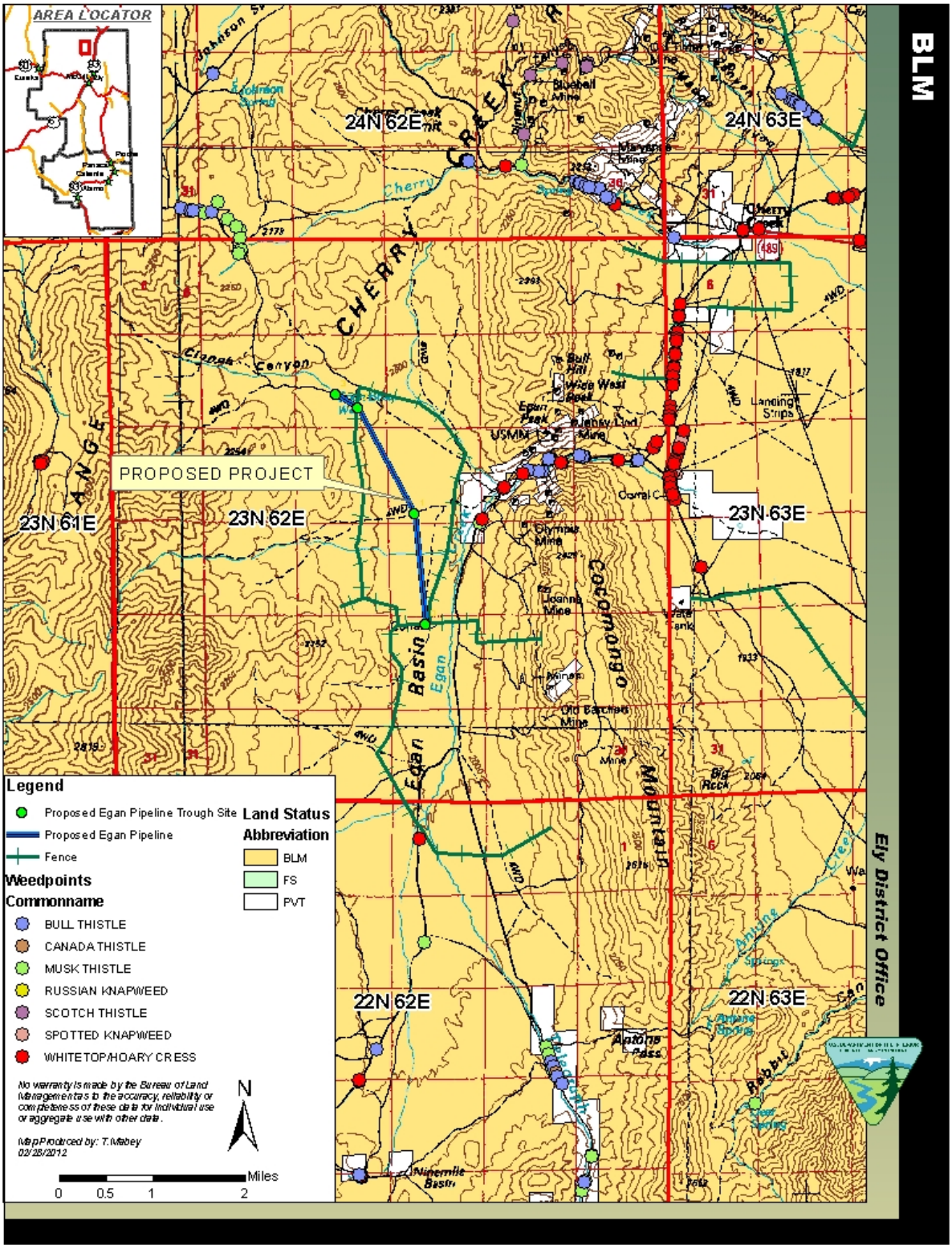

Figure C.1. Map of Noxious and Non Native Invasive Weeds near or leading to the Egan Basin Well and Pipeline Project, White Pine County, Nevada.

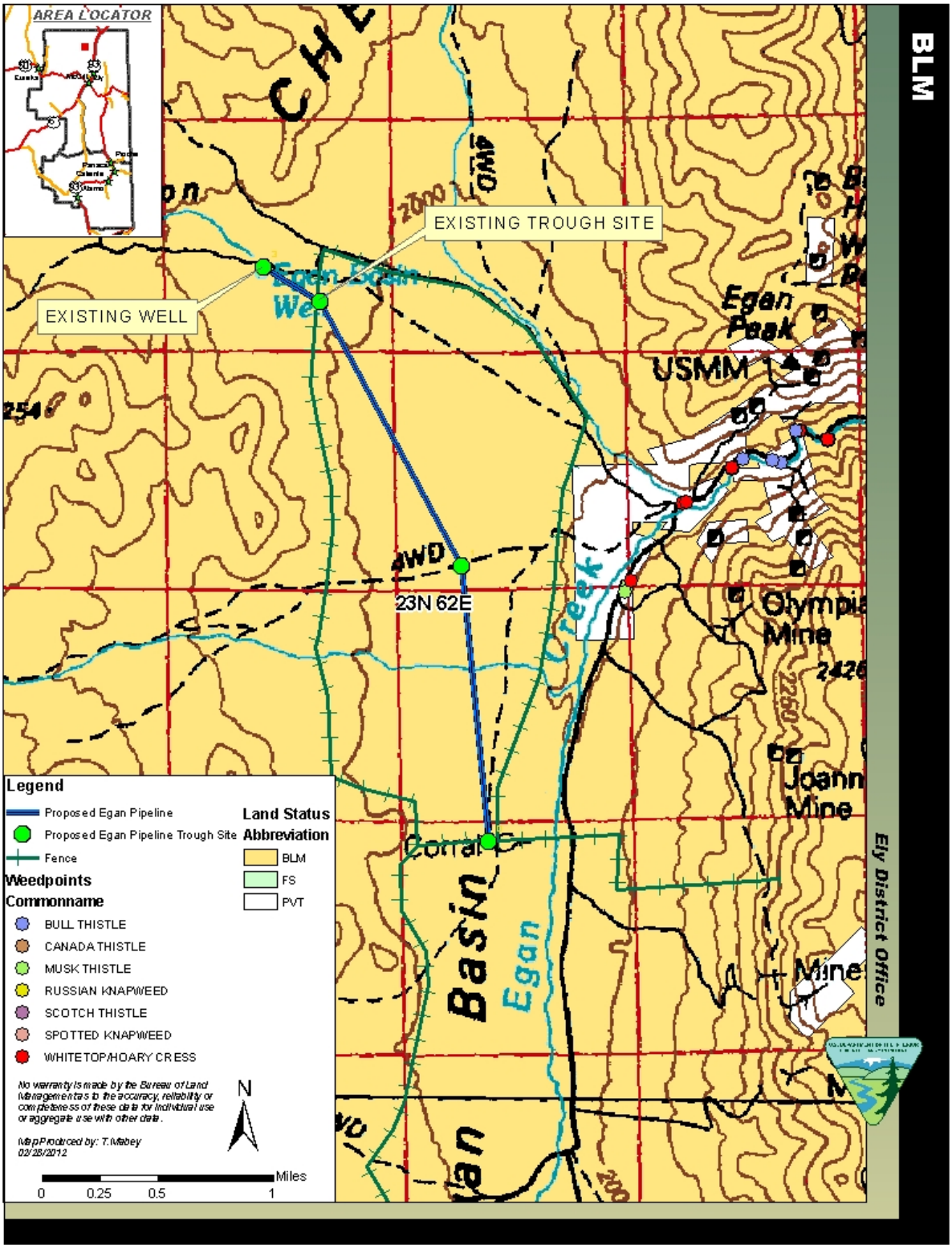

Figure C.2. Map of Noxious and Non Native Invasive Weeds at the Egan Basin Well and Pipeline Project Site, White Pine County, Nevada.