

# **Deer Creek Mine Closure Water Pipeline**

## **Biological Resources Report**

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Manti-La Sal National Forest

8/12/2016

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## Introduction

The purpose of the project is to provide conveyance of mine water from the mine portal to treatment facilities at the Huntington Power Plant. The need is to provide a reliable means of transporting the water to prevent an unapproved discharge of groundwater from occurring at the Rilda Canyon portals. The Mine Safety and Health Administration (MSHA) has determined that water may not be retained within the mine; if the pipeline were not constructed, the water would discharge from the mine portal in violation of water quality standards. Remaining options to deal with the pending post-mine gravity discharge at the Rilda Canyon portals are limited. The proposed pipeline would ensure that PacifiCorp maintains water quality standards and protects water quality downstream from the mine.

**Wildlife Resources:** Wildlife species selected for this analysis are composed of the following four groups:

1. Species that are listed as threatened, endangered, or proposed under the Endangered Species Act. A biological assessment (BA) was prepared separately; the BA determined that the proposed project would not affect listed species or critical habitat. A “No Effect” determination is made for listed species. They will not be analyzed further in this report.
2. Species listed as sensitive on the Regional Forester’s Sensitive Species List for the Intermountain Region (Region 4). A biological evaluation (BE) was prepared separately; the species carried forward for further analysis include:
  - a. Bald eagle
  - b. Flammulated owl
  - c. Northern goshawk
  - d. Peregrine falcon
  - e. Spotted bat
  - f. Townsend’s big-eared bat
3. Management indicator species (MIS) as designated by the Manti-La Sal National Forest Land and Resource Management Plan (USDA 1986, as amended):
  - a. Mule deer
  - b. Rocky Mountain elk
  - c. Golden eagle
  - d. Macroinvertebrates
  - e. Abert squirrel
  - f. Northern goshawk
4. Other Species of Concern. For this analysis, additional migratory bird species were not selected because effects to all other impacted habitat types were analyzed for other species in this analysis.

## Project Description

### Project Location

The project area is located in Rilda and Huntington Canyons, about 10 miles west of Huntington in Emery County (see Map 1 in Appendix A). The project area is within sections 22, 23, 26, 27, 28, 29, 25, 35, and 36 of T16 S, R 7 E.

## Proposed Project

The proposed project includes construction of 5.6 miles of an 8-inch HDPE gravity flow water pipeline from the Deer Creek Mine 1st Right Portals to water treatment facilities at Huntington Power Plant; only 1.8 miles would cross National Forest lands. The pipeline would be constructed within the rights-of-way for Emery County Road #306 and State Route 31 (SR-31). The proposed permanent right-of-way width is 12 feet centered on the pipeline; an additional 20 feet of temporary right-of-way on the outer edge of the permanent right-of-way (away from the roadway) would allow for construction of the pipeline. The total acreage of disturbance on National Forest is estimated to be 6.98 acres.

The pipeline will include two shut-off valves; one at the mine entrance to prevent leaks on National Forest land, and one after the first SR-31 crossing, on private land just north of National Forest land.

The trench for the pipeline would be excavated with a trenching machine or track hoe excavator. Topsoil and subsoil would be segregated and stockpiled separately adjacent to the trench. After the pipeline is installed, the stockpiled subsoil would be used to backfill the trench, and the topsoil would be replaced on the surface and graded to pre-disturbance contours.

The pipeline would be buried with at least 5 feet of cover, except at the crossings of Huntington Creek; the pipeline would be attached to an existing bridge and diversion structure at each crossing. The pipeline would not be buried at these locations. Air vents and Carsonite posts would be installed approximately every 1,000 feet along the alignment; these features would be about 4 feet high, but would be colored to be visually unobtrusive from the roadway. A tracer wire and a fiber optic conduit would also be buried with the pipeline. The conduit would allow for installation of a telecommunications cable in the future without requiring excavation of the entire length of line.

Directional drilling would be applied to install the pipeline under Emery County Road #306, SR-31, and Bear Canyon Road; these drilling locations are on private or Bureau of Land Management (BLM)-administered land. A stormwater pollution prevention plan (SWPPP) and spill prevention and response plan (SPRP) would be prepared and implemented to ensure compliance with the Clean Water Act during construction.

Construction is anticipated to take 2 to 3 months in the summer or fall of 2016. Disturbed areas will be reclaimed upon project completion. After construction, PacifiCorp would maintain the right-of-way and allow the pipeline to operate continuously. If the power plant were to shut down, continuing water treatment would be required at the plant if compliance with water quality standards could not be met. The pipeline would be intended to be permanent; if the pipeline were decommissioned, it would be left in the ground to avoid further ground disturbance.

## Methodology

Impacts were assessed based on assumed presence or absence of species within the project area. The indicator for impacts to all present species is change in habitat effectiveness; this is evaluated on a qualitative basis. Where possible, direct impacts to suitable habitats were quantified.

## Affected Environment

### Existing Condition

The existing environment within the project action area includes riparian vegetation adjacent to Huntington Creek, cliff habitat through both canyons, and mature conifers within Rilda Canyon. Most areas of direct disturbance have been previously disturbed by roadways or utilities.

## Species

### **Bald eagle (*Haliaeetus leucocephalus*)**

No bald eagles are known to nest on the Ferron-Price Ranger District. Open habitats with available carrion could exist within the project area. Bald eagles may fly over the area and roost or perch incidentally, mainly from November through March.

### **Flammulated owl (*Otus flammeolus*)**

Flammulated owls may nest in the mature forest at the bottom of Rilda Canyon, and could forage within the project area.

### **Northern goshawk (*Accipiter gentilis*)**

Goshawks may nest in the mature forest at the bottom of Rilda Canyon, and could forage within the project area.

### **Peregrine falcon (*Falco peregrinus anatum*)**

Potentially suitable cliff nesting habitat occurs in both Rilda and Huntington Canyons. The project area includes riparian habitat, which may provide prey for foraging falcons.

### **Spotted bat (*Euderma maculatum*)**

Potential cliff roosting habitat occurs in both Rilda and Huntington Canyons. Foraging may occur throughout the riparian area.

### **Townsend's big-eared bat (*Corynorhinus townsendii pallescens*)**

Potential cavern roosting habitat is not known within the project area. Foraging may occur throughout the riparian project area.

### **Mule deer (*Odocoileus hemionus*)**

The proposed project is within Utah Division of Wildlife Resources (UDWR)-mapped crucial winter habitat.

### **Rocky Mountain elk (*Cervus elaphus*)**

The proposed project is within UDWR-mapped crucial winter and summer habitats.

### **Golden eagle (*Aquila chrysaetos*)**

Potentially suitable cliff nesting habitat occurs in both Rilda and Huntington Canyons. Golden eagles may forage throughout the project area.

### **Macroinvertebrates:**

Macroinvertebrates occur in Huntington Creek; however, the proposed project will not impact the creek or aquatic habitats. Macroinvertebrates will not be analyzed further in this report.

### **Abert squirrel (*Sciurus aberti*):**

Abert squirrel is only found on the Monticello District of the Forest; therefore, the species will not be analyzed further in this report.

## Management Direction

### Desired Condition

Forest Service Manual (FSM) 2670 establishes the following management direction and objectives for sensitive species:

- Maintain viable populations of all native and desired non-native wildlife, fish, and plant species in habitats distributed throughout their geographic range on National Forest System lands.
- Review programs and activities are part of the National Environmental Policy Act of 1969 process, through a biological evaluation, to determine their potential effect on sensitive species.
- Analyze, if impacts cannot be avoided, the significance of potential adverse effects on the population or its habitat within the area of concern and on the species as a whole.

Species selected as management indicator species (MIS) are used to monitor a particular habitat type. This is accomplished by assessing the habitat conditions and population changes of the MIS that occupy each habitat, as required in the National Forest Management Act of 1976 (published at 36 CFR parts 200 to 299, July 1, 2000 edition).

On August 1, 2007, the National Forests in Utah formalized an updated state-wide strategy for addressing migratory birds in Forest Service planning and project documents (USDA 2007). Species selected for this analysis were chosen based on the process identified in this strategy. Bird species selected for this analysis were derived from a compilation of species included in the Utah Partners in Flight Conservation Strategy (UPFCS) (Parrish et al. 2002), the Utah Comprehensive Wildlife Conservation Strategy (Gorrell et al. 2005), and the Fish and Wildlife Service Birds of Conservation Concern bird lists (USFWS 2008). Birds included in these publications include those at higher risk due to habitat loss or degradation, with highest-risk species given priority status in the UPFCS listing (Parrish et al. 2002). Additional migratory bird species were not selected because effects to all other habitat types were analyzed for other bird species in this analysis.

## Environmental Consequences

### Alternative 1 – No Action

The No Action alternative would have no impact on wildlife species. Habitat effectiveness in the area would continue to be impacted by proximity to the existing road and associated disturbance, but no other changes would be anticipated.

### Alternative 2 – Proposed Action

Up to 6.98 acres of potentially suitable habitat could be disturbed by implementation of the proposed project; actual impacts would likely be much less because the minimal amount of right-of-way would be cleared. In addition, a portion of the proposed right-of-way overlaps with existing roadway disturbance, which is unvegetated and does not provide habitat value. Direct impacts to wildlife species could occur with the removal of up to 6.98 acres of vegetation on National Forest System lands that may provide suitable habitat for foraging or nesting. Habitat effectiveness in the area is likely decreased due to the existing road and associated disturbance. Disturbance to wildlife due to noise or the presence of equipment and personnel could occur, but is unlikely as most animals would likely be habituated to some level of disturbance from the existing road. Potential disturbance from construction would be short-term,

and most animals would likely avoid areas where project activities were occurring. Temporary displacement would be short-term and during construction (2-3 months).

## **Project Design Features and Mitigation Measures**

Project design features include routing the proposed pipeline within or directly adjacent to existing roadway areas to minimize new ground disturbance. Impacts to Huntington Creek would be avoided by attaching the pipeline to existing crossing infrastructure. The project is scheduled to occur outside of breeding and crucial seasons. Pollution control measures will be applied to prevent impacts to aquatic habitats.

## **Direct and Indirect Effects**

Direct effects include the loss of up to 6.98 acres of potentially suitable habitat within the project area, and disturbance due to noise and presence of project activities during implementation. The loss of habitat would be permanent, while the disturbance would only occur during construction. Indirect effects are not anticipated with the proposed action.

### **Bald eagle, Peregrine falcon, and Golden eagle**

Disturbance from the proposed activities could impact falcons or golden eagles if they happened to be nesting nearby, but would not cause nest abandonment as all young should be fledged and highly mobile by the time project activities begin in September. The project area is within a forested landscape, which provides little adequate open terrain for foraging eagles or falcons. Individual birds may fly over the project area, but would likely not remain in areas with disturbance from project activities. Birds in the area would likely be habituated to noise and human presence from the existing roadway. Habitat effectiveness would be decreased, but only slightly when considering the existing disturbance and habitat modification.

### **Flammulated owl and Northern goshawk**

These species could occur in the project area, although suitable habitat is marginal due to proximity with the roadway and limited mature forest stands within the canyons. Up to 6.98 acres of vegetation may be removed directly adjacent to the roadway; however, the linear nature of the project next to an existing roadway will result in minimal loss of suitable habitat for nesting.

Disturbance from the proposed activities could impact owls or goshawks if they happened to be nesting nearby, but would not cause nest abandonment as all young should be fledged and highly mobile by the time the project begins in September. Individual birds may fly over the project area, but would likely not remain in areas with disturbance from project activities. Birds in the area would likely be habituated to noise and human presence from the existing roadway. Habitat effectiveness would be decreased, but only slightly when considering the existing disturbance and habitat modification.

### **Spotted bat and Townsend's big-eared bat**

Bats may forage within the project area, as suitable foraging habitat exists along the extent of the project area. Up to 6.98 acres of vegetation may be removed directly adjacent to the roadway; however, the linear nature of the project will result in similar edge habitat, which will continue to provide foraging opportunities for bats. There is little risk of disturbance from the proposed activities because these bats are nocturnal, and the proposed activities would occur during the day. If bats were to pass through the area at night, they would likely not be disturbed by project activities.

## **Mule deer and Rocky Mountain elk**

The UDWR has delineated crucial winter mule deer habitat and crucial winter and summer elk habitat within the project area. Up to 6.98 acres of vegetation may be removed directly adjacent to the roadway; however, the linear nature of the project will result in similar edge habitat, which will continue to provide foraging opportunities for big game and result in minimal loss of cover. Project activities will occur in the fall of 2016, after calving season; therefore, crucial elk summer habitat use will not be impacted. Project activities may extend into December, when crucial winter habitat are used by both deer and elk. Deer and elk may be temporarily displaced by disturbance associated with the proposed action, but would be expected to return to the area shortly after implementation.

## **Cumulative Effects**

### **Spatial and Temporal Context for Effects Analysis**

The Cumulative Effects Area (CEA) represents a landscape surrounding the project area where past, present, and reasonably foreseeable future management actions have occurred or will occur. Due to the scope of this project, a larger area outside the Forest Service boundary was considered for the CEA. The species included in this analysis will likely use all or part of this CEA during some portion of their life cycle. Lands identified outside of the National Forest boundary primarily consist of private, School and Institutional Trust Lands Administration (SITLA), and BLM-administered lands. Actions occurring outside of the Forest boundary are similar to those described on the Forest.

The geographic scope of the CEA is specific for individual species depending on relevant life history characteristics. The temporal scope is 5 years for direct and indirect impacts associated with implementation of the project; this scope assumes that reclamation would be achieved within the rights-of-way within 5 years. Permanent or long-term impacts are not anticipated because the pipeline will be buried and require minimal maintenance.

### ***Past, Present, and Reasonably Foreseeable Activities Relevant to Cumulative Effects Analysis***

Management actions in the area include vegetation management (e.g., timber harvest, timber stand improvement, prescribed burning), utility installation and maintenance, oil and gas development, livestock grazing, recreation use (e.g., OHV use, camping, and hunting), special uses (e.g., firewood collection, outfitters, and guides), and motorized access.

## **Raptors**

The CEA for bald eagle and peregrine falcon includes the project area and a 2-mile buffer beyond the project boundary (see Map 2 in Appendix A). The CEA for golden eagle and northern goshawk includes the project area and a 1-mile buffer beyond the project boundary (see Map 3 in Appendix A). The CEA for flammulated owl includes the project area and a 0.5-mile buffer beyond the project boundary (see Map 4 in Appendix A). These distances were selected based on the spatial buffers in the *Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances* (Romin and Muck 2002). The recommended distance was doubled to account for potential impacts from the other side of the buffer; the CEA encompasses the project area and respective buffer as listed in Table 1.

**Table 1. Cumulative effects area (CEA) dimensions for raptor species**

Species	Recommended Buffer (miles)	CEA Buffer (miles)	Total Area (Acres)
Bald eagle Peregrine falcon	1.0	2.0	20,224
Golden eagle Northern goshawk	0.5	1.0	8,389
Flammulated owl	0.25	0.5	3,829

Birds nesting or foraging in the area could be disturbed by other human activities; however, much of the habitat is isolated in steep, inaccessible canyons. Birds who avoided nesting or foraging within the immediate area of the project disturbance would have abundant available alternate habitat within the CEA. Habitat effectiveness within the larger CEA will not be noticeably impacted by the proposed project. Raptors are unlikely to be cumulatively affected by the project due to abundant alternate habitat.

### **Spotted bat and Townsend's big-eared bat**

Spotted bats appear to maintain exclusive foraging areas 3 to 6 miles from their day roost sites (Wackenhut and McGraw 1996). Because Townsend's bats also forage in riparian areas, a 3-mile buffer beyond the project area was included in the CEA for these bats. The CEA encompasses an area of 35,978 acres (see Map 5 in Appendix A).

Bats roosting or foraging in the CEA could be disturbed by other human activities; however, much of the habitat is isolated in steep, inaccessible canyons. Bats who avoided roosting or foraging within the immediate area of the project disturbance would have abundant available habitat within the CEA. Habitat effectiveness within the larger CEA will not be noticeably impacted by the proposed project. Bats are unlikely to be cumulatively affected by the project due to abundant alternate habitat.

### **Mule deer and Rocky Mountain elk**

The CEA for mule deer includes all mapped crucial winter habitat within the impacted watersheds; the CEA encompasses an area of 48,806 acres (see Map 6 in Appendix A). The CEA for elk includes all mapped crucial winter and summer habitat within the impacted watersheds; the CEA encompasses an area of 62,003 acres (see Map 7 in Appendix A).

Big game habitat within the CEA has been impacted by oil and gas development, competitive livestock grazing, and recreational use. Possible effects of these actions include displacement into less suitable habitats, behavioral disruption and stress due to construction noise and activity, and modification of forage and water resources.

Such impacts would likely result in a decrease of the local big game population due to reduced reproduction or survival; however, trend counts conducted by the Utah Division of Wildlife Resources (UDWR) indicate that the mule deer population trend in Utah has been increasing (UDWR 2014) and elk populations in the area are at or above the population objective (UDWR 2015).

Disturbance to big game could occur as a result of project activities, but is unlikely as the animals may avoid areas where project disturbance is occurring, and abundant isolated habitat is accessible within the CEA. Habitat effectiveness would not noticeably decrease when considering the existing disturbance within the CEA. Mule deer and Rocky Mountain elk would not be adversely affected by implementation of the proposed action.

## Regulatory Framework

### Land and Resource Management Plan

The Manti La-Sal National Forest Land and Resource Management Plan (LRMP) provides standards and guidelines for management of wildlife resources. Relevant standards and guidelines include:

- Manage key deer and elk habitat so as to minimize disturbance during the period of use.
- Avoid activities that could cause abandonment of active nests (golden eagle).
- Provide habitat needs, as appropriate, for Management Indicator Species.

### Management Area

The proposed project crosses management areas GWR (general big game winter range), MMA (leasable minerals area), and RNG (range forage production). Relevant direction for each management area is as follows:

- GWR: As appropriate, permit special uses if they do not conflict with big-game wintering.

### Federal Law

#### Endangered Species Act

Federal agencies – in consultation with and with the assistance of the U.S. Fish and Wildlife Service (USFWS), must ensure that any action authorized, funded, or carried out by the federal agency is not likely to jeopardize the continued existence of an endangered, threatened, or proposed listed species, nor result in destruction or adverse modification of a species' critical habitat. Implementation of the proposed action would not result in adverse impacts to any listed species. No critical habitat for any listed species would be adversely affected.

### Executive Orders

#### EO 13186

Executive Order 13186, signed January 10, 2001, directs federal agencies to protect migratory birds by integrating bird conservation principles, measures, and practices into agency activities and by avoiding or minimizing, to the extent practical, adverse impacts on migratory birds' resources when conducting agency actions. This Order directs agencies to further comply with the Migratory Bird Treaty Act (MBTA), the Bald and Golden Eagle Protection Act, and other pertinent statutes. This analysis is compliant with the National Memorandum of Understanding between the USDA Forest Service and the USFWS to promote the conservation of migratory birds (USDA 2008).

### Other Relevant Mandatory Disclosures

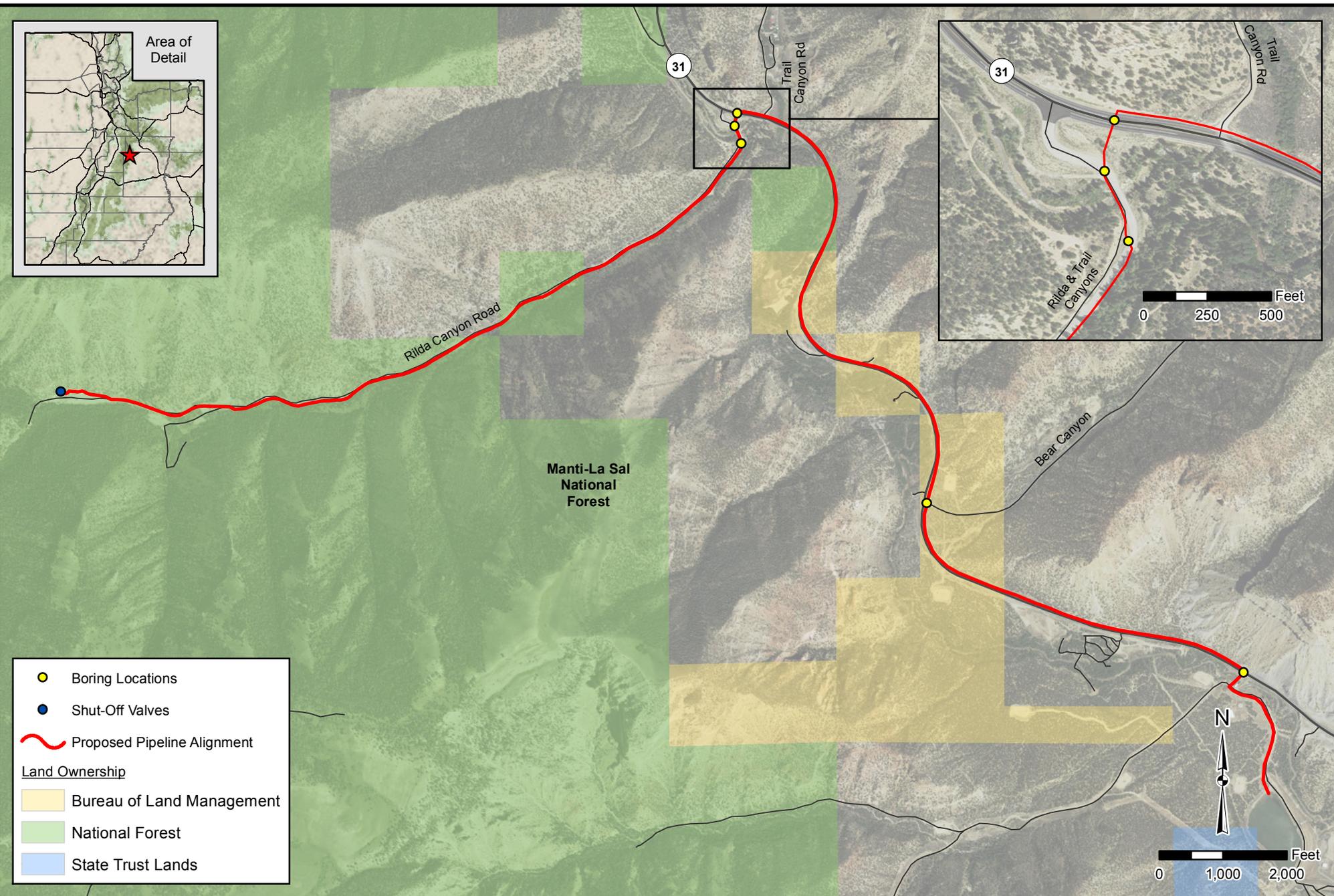
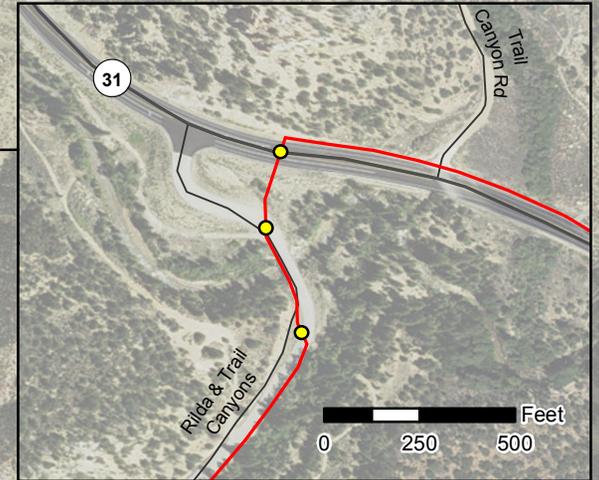
#### Compliance with LRMP and Other Relevant Laws, Regulations, Policies and Plans

Based on the analysis presented in this report, the construction, operation, and maintenance of the proposed pipeline would be consistent with the LRMP.

## References Cited

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- UDWR. 2014. Utah Mule Deer Statewide Management Plan. Utah Division of Wildlife Resources, Department of Natural Resources. December 1, 2014.
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- USDA. 2008. Memorandum of Understanding between the U.S. Department of Agriculture Forest Service and the U.S. Fish and Wildlife Service to promote the conservation of migratory birds. Abigail Kimball (Chief USDA Forest Service) and H. Dale Hall (Director US Fish and Wildlife Service). December 8.
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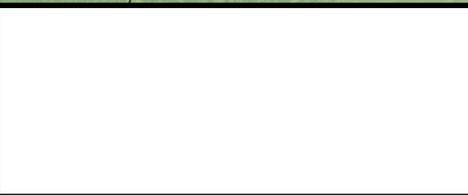
## Appendix A. Maps



- Boring Locations
- Shut-Off Valves
- ~ Proposed Pipeline Alignment

**Land Ownership**

- Bureau of Land Management
- National Forest
- State Trust Lands



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**PacifiCorp**

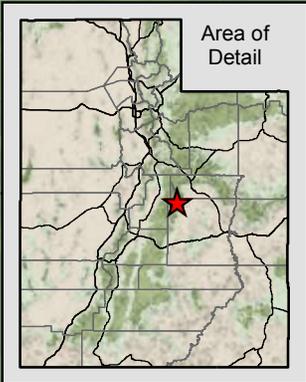
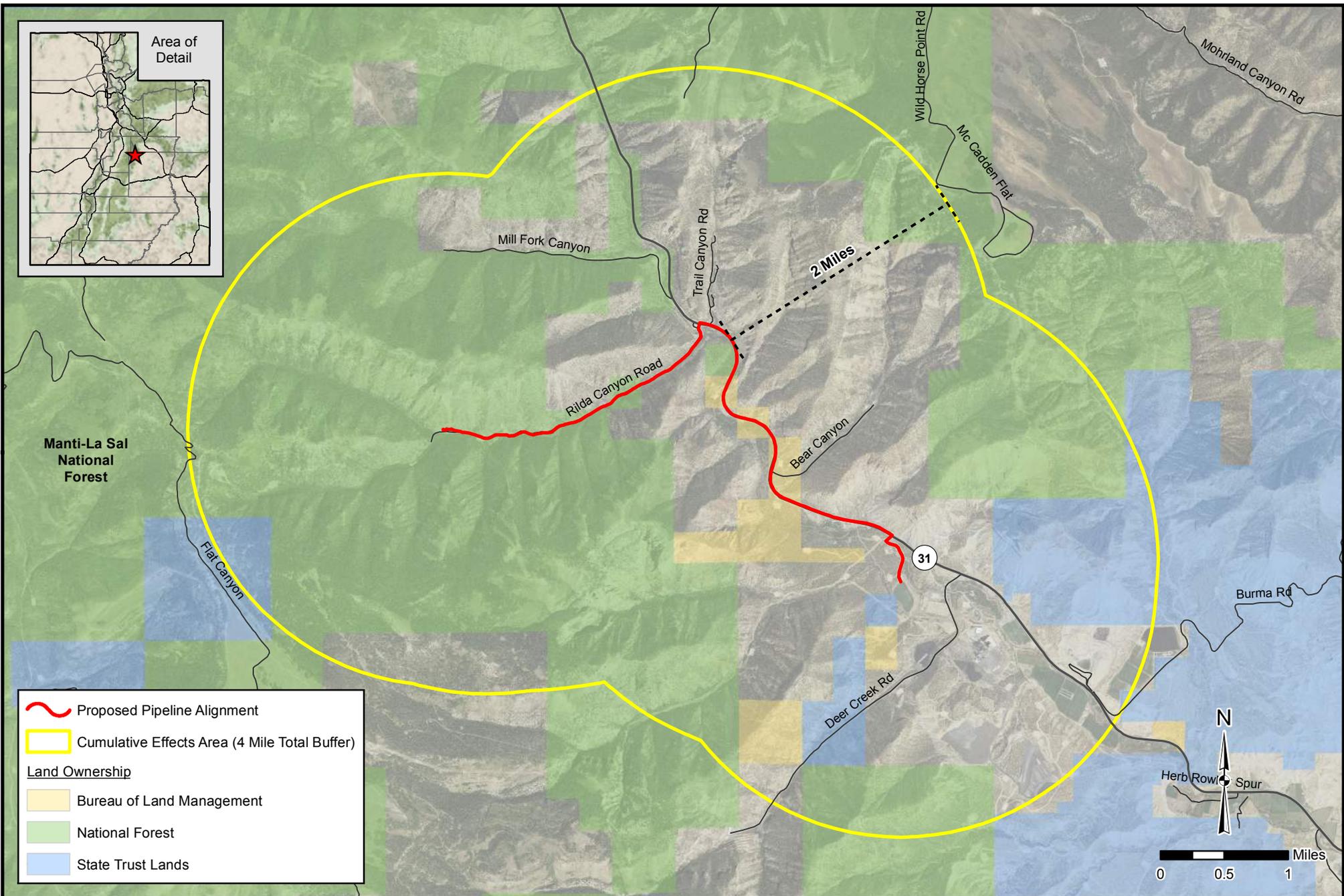
**Deer Creek Mine - Proposed Live Water Relief Pipeline  
Overview**

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Project Number: 1506-121 Drawn by: JWW 09-16 Last Edit: 09/19/2016

EMERY COUNTY

SCALE: 1" = 2,000'

**1**



 Proposed Pipeline Alignment  
 Cumulative Effects Area (4 Mile Total Buffer)  
**Land Ownership**  
 Bureau of Land Management  
 National Forest  
 State Trust Lands

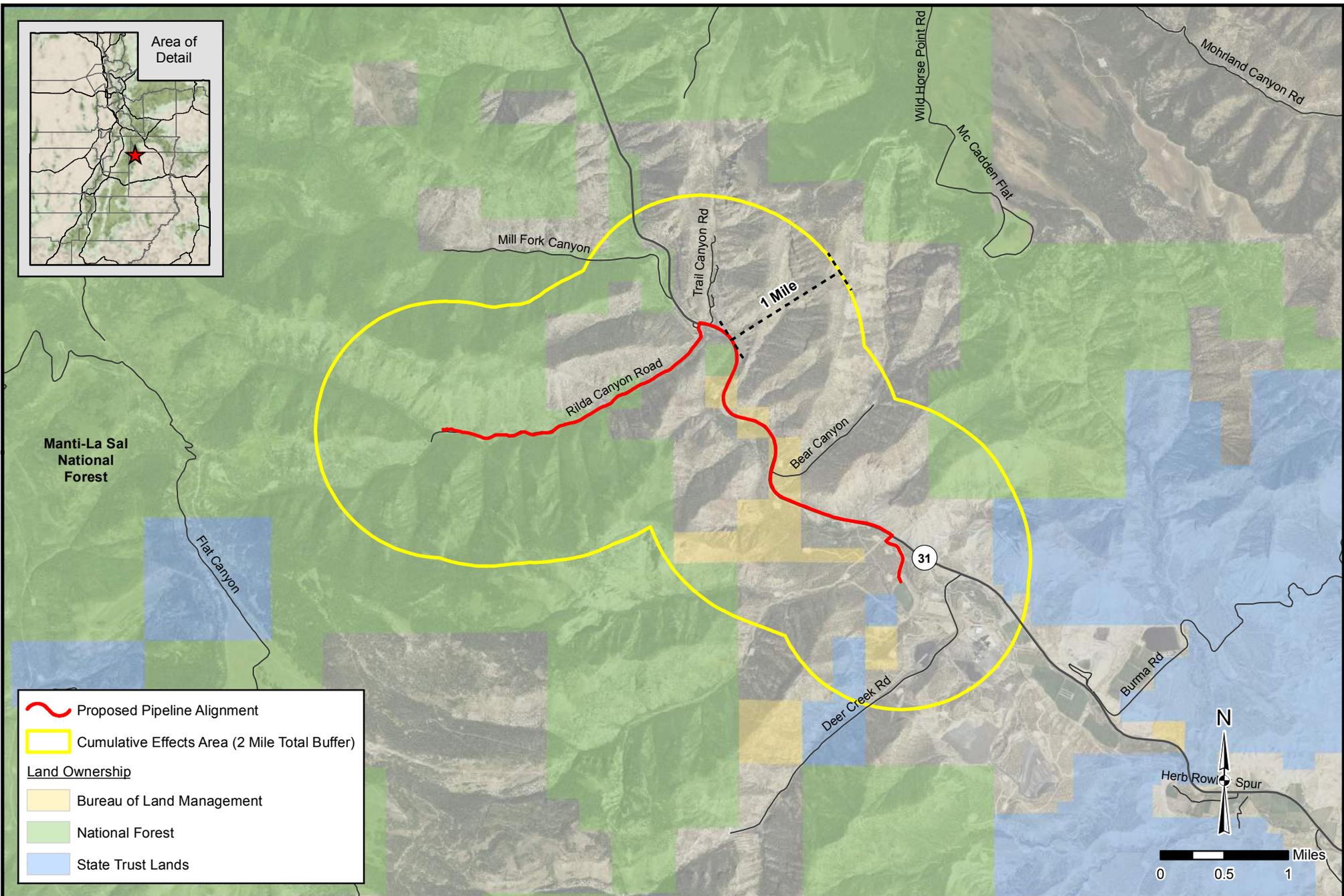




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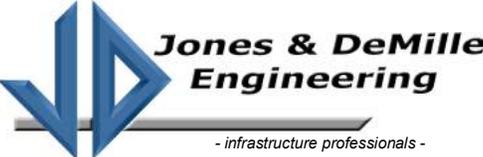
**Interwest Mining Company**  
**Deer Creek Mine - Proposed Live Water Relief Pipeline  
Bald Eagle & Peregrine Falcon Cumulative Effects Area**  
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**EMERY COUNTY**  
 SCALE: 1" = 1 Miles  
**2**



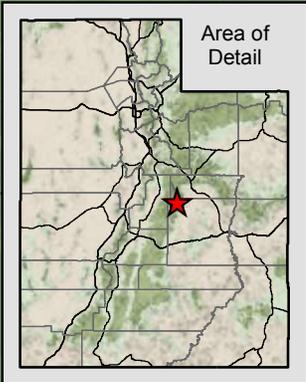
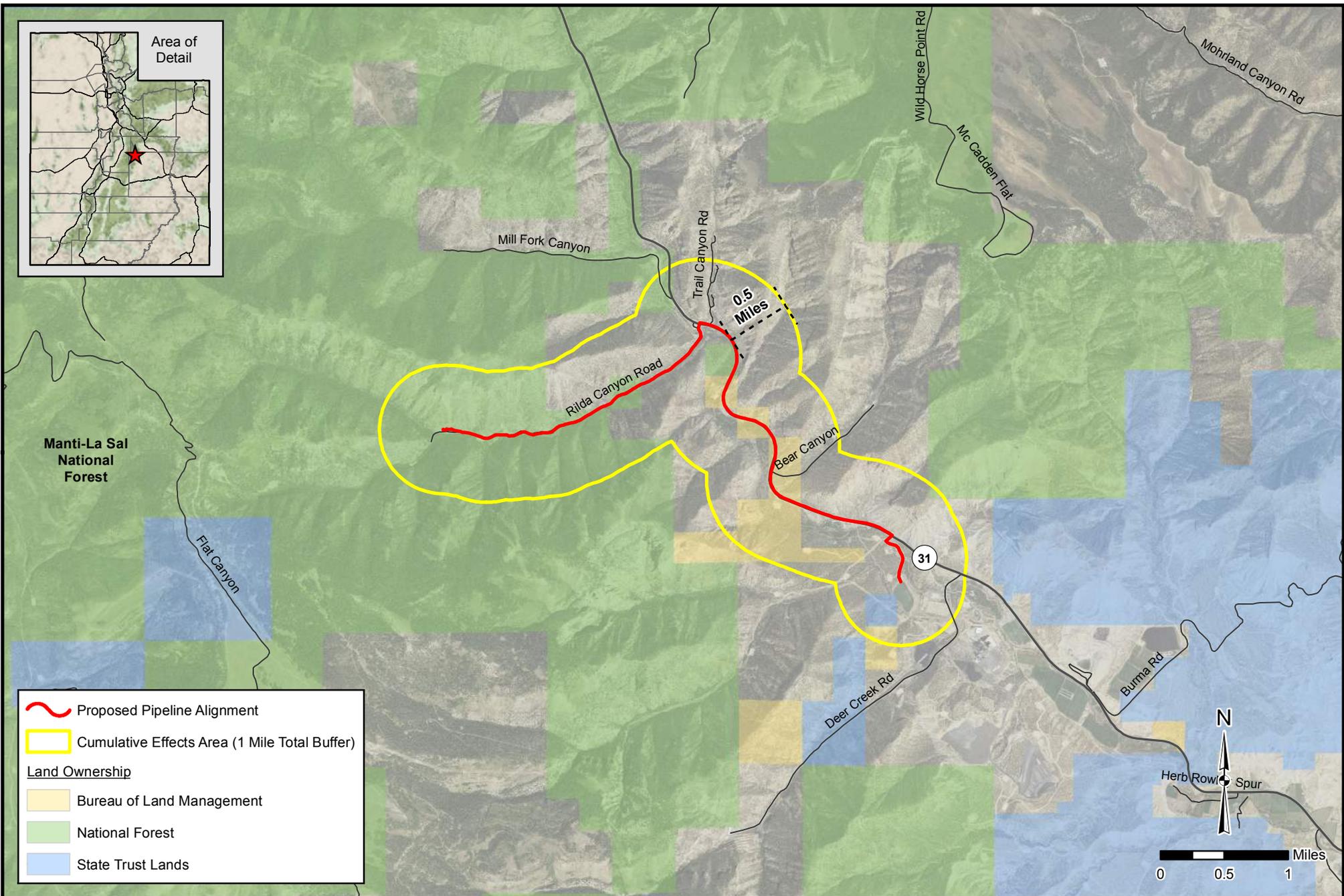
 Proposed Pipeline Alignment  
 Cumulative Effects Area (2 Mile Total Buffer)  
**Land Ownership**  
 Bureau of Land Management  
 National Forest  
 State Trust Lands





  
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**Deer Creek Mine - Proposed Live Water Relief Pipeline**  
**Goshawk and Golden Eagle Cumulative Effects Area**  
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**EMERY COUNTY**  
 SCALE: 1" = 1 Miles  
**3**



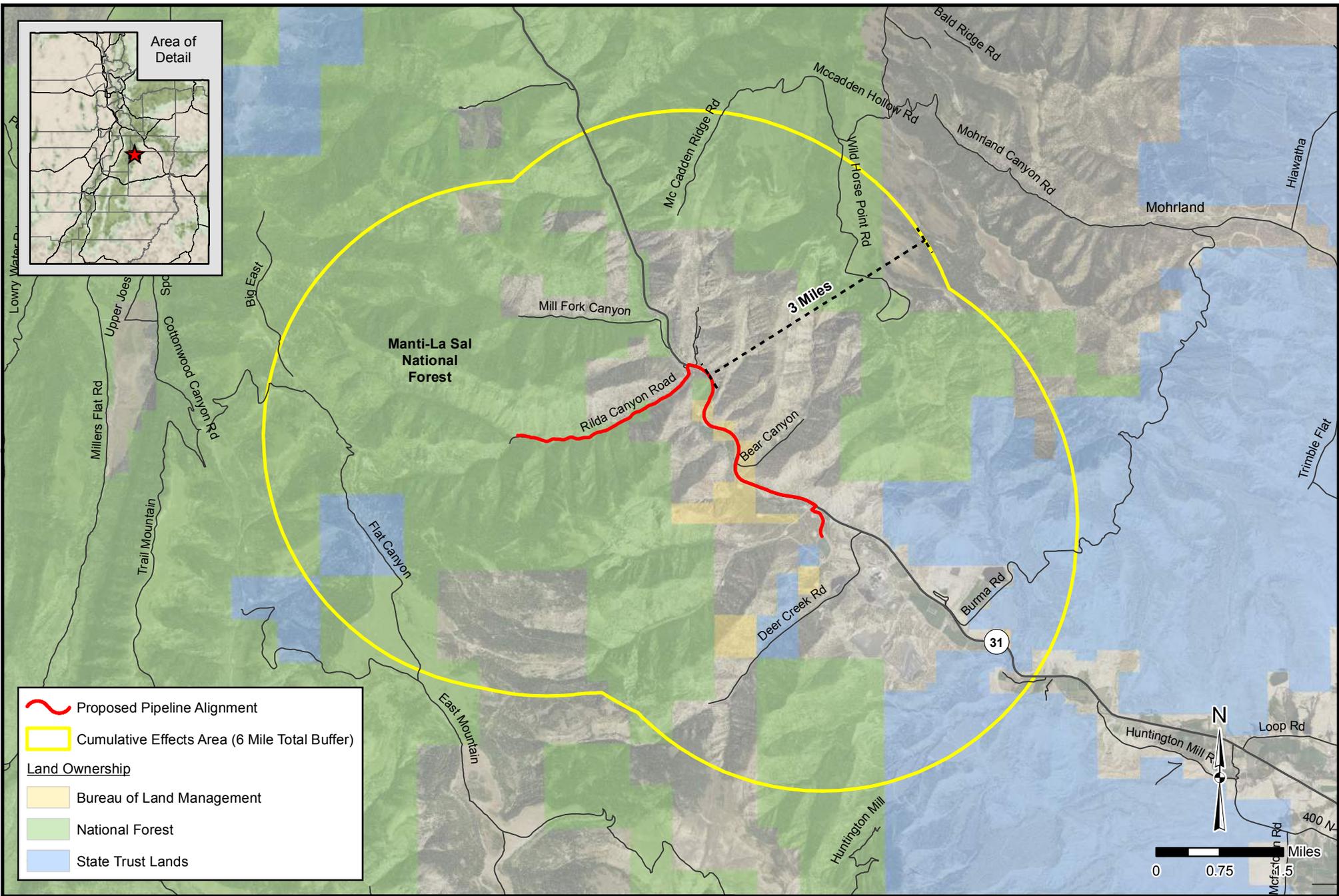
 Proposed Pipeline Alignment  
 Cumulative Effects Area (1 Mile Total Buffer)  
**Land Ownership**  
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**Deer Creek Mine - Proposed Live Water Relief Pipeline  
Flammulated Owl Cumulative Effects Area**  
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 Project Number: 1506-121      Drawn by: JWW 06-16      Last Edit: 06/20/2016

**EMERY COUNTY**  
 SCALE: 1" = 1 Miles  
**4**



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**Deer Creek Mine - Proposed Live Water Relief Pipeline**

**Spotted Bat and Townsend's Big-Eared Bat Cumulative Effects Area**

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Project Number: 1506-121

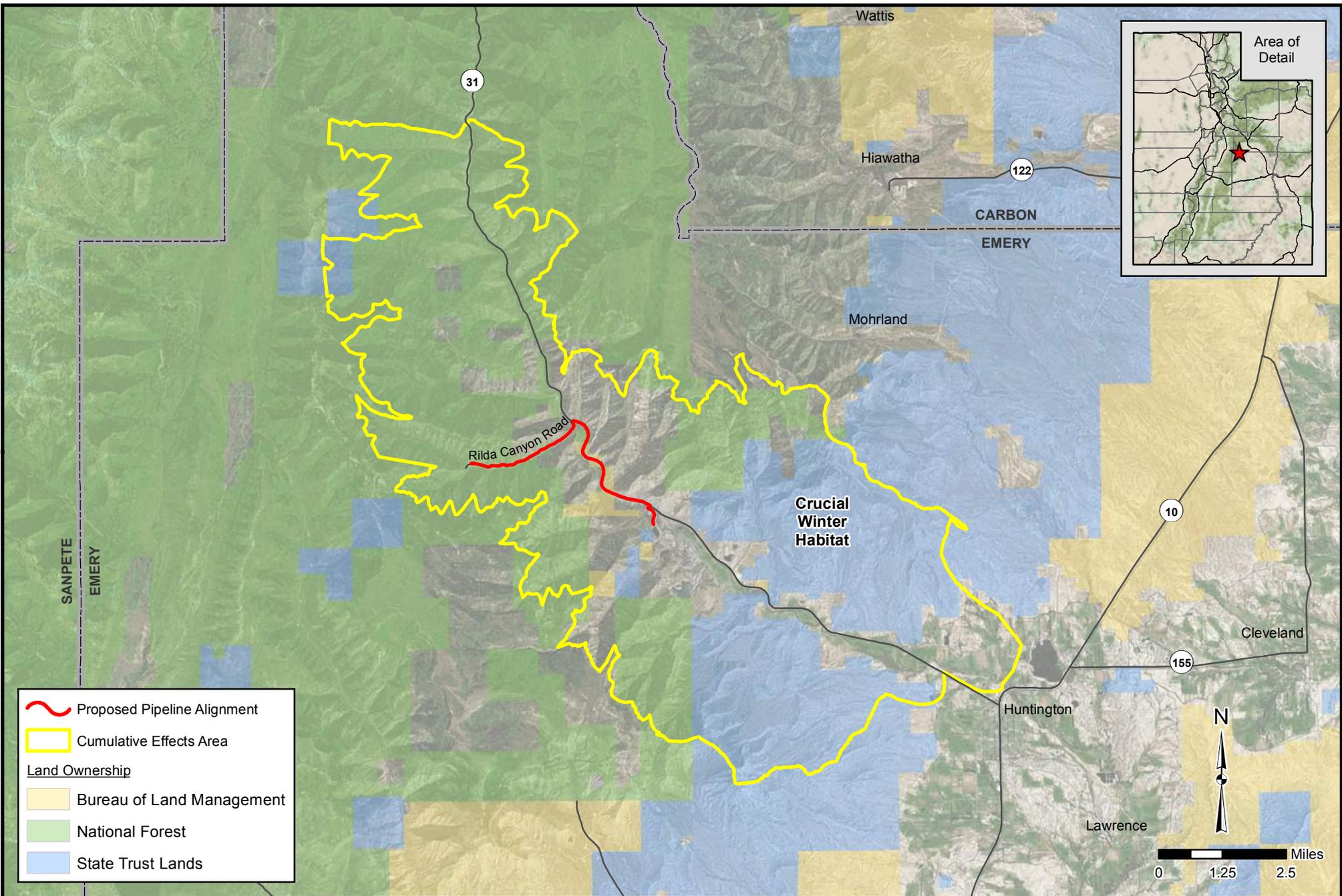
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Last Edit: 06/20/2016

**EMERY COUNTY**

SCALE: 1" = 1.5 Miles

**5**



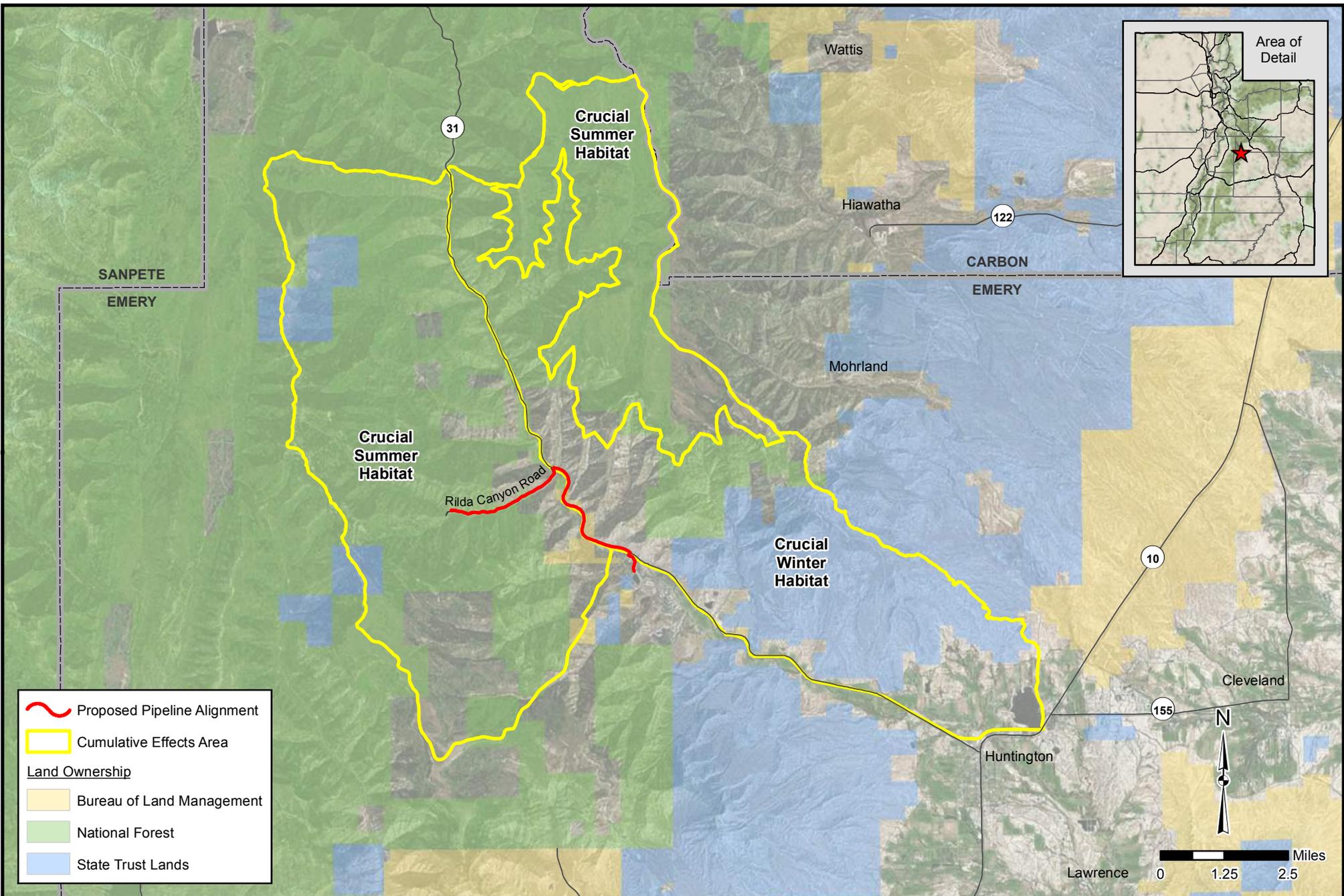
 Proposed Pipeline Alignment  
 Cumulative Effects Area  
**Land Ownership**  
 Bureau of Land Management  
 National Forest  
 State Trust Lands



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**Deer Creek Mine - Proposed Live Water Relief Pipeline**  
**Mule Deer Cumulative Effects Area**  
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Project Number: 1506-121    Drawn by: JWW 06-16    Last Edit: 06/20/2016

**EMERY COUNTY**  
 SCALE: 1" = 2.5 Miles  
**6**



 Proposed Pipeline Alignment  
 Cumulative Effects Area  
**Land Ownership**  
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 State Trust Lands



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**Interwest Mining Company**  
**Deer Creek Mine - Proposed Live Water Relief Pipeline Rocky Mountain Elk Cumulative Effects Area**  
 Map Name: H:\JD\Proj\1506-121\Design\GIS\Maps\POD\BABI7\_CEA\_EIK.mxd  
 Project Number: 1506-121 Drawn by: JWW 06-16 Last Edit: 06/20/2016

**EMERY COUNTY**  
 SCALE: 1" = 2.5 Miles  
**7**