

RECLAMATION

Managing Water in the West

ENVIRONMENTAL ASSESSMENT

LA PLATA WEST WATER AUTHORITY

RAW WATER PROJECT

Environmental Assessment Number: WCAO-DUR-XX-2015

Technical Services Division
Environmental and Planning Group
Western Colorado Area Office

November 2015

MISSION STATEMENT

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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Proposed Action:

La Plata West Water Authority (LPWWA) has a license agreement with the Bureau of Reclamation (Reclamation) for phased construction, operation and maintenance of a rural domestic water system (RDWS). The first phase of the water system included construction of the water intake structure and associated facilities, and was completed prior to reservoir filling, which began in 2009. The Proposed Action is for the next phase of the water system, which includes a 4.6-mile-long pipeline and associated facilities to transport raw water from Lake Nighthorse to Lake Durango in La Plata County, Colorado (Project). The Project would cross land owned by the United States under the jurisdiction of Reclamation, as well as private land. Reclamation is the lead federal agency under the National Environmental Policy Act (NEPA) because of the location of the Project. Reclamation's Western Colorado Area Office (WCAO) is the approval agency for issuing the license agreement and NEPA compliance. Upon approval of this Environmental Assessment (EA), Reclamation will work with LPWWA to amend the license agreement for any necessary changes.

Location of Proposed Action:

The Project would be located between the northwest shoreline of Lake Nighthorse to the south shoreline of Lake Durango (see legal locations, Table 1.1 below). The proposed pipeline corridor, including the associated facilities, encompasses 17.3 acres of Reclamation land and 8.7 acres of private land (see Table 2.1). Figure 1.1 is an overview map of the Proposed Action.

Applicant:

LPWWA began as a task force group formed by the Animas-La Plata Water Conservancy District and La Plata County in the early 2000s to study the options for developing a RDWS for western La Plata County. LPWWA exists for the purpose of designing, constructing, and operating a RDWS in the western portion of La Plata County. Accordingly, LPWWA has the authority to develop water resources, systems, or facilities in whole or in part for the benefit of the members or others at the discretion of its board of directors. LPWWA actions may include, but are not limited to, constructing, managing, maintaining, or operating water systems, facilities, works, or improvements, or any interest therein (LPWWA 2008:3).

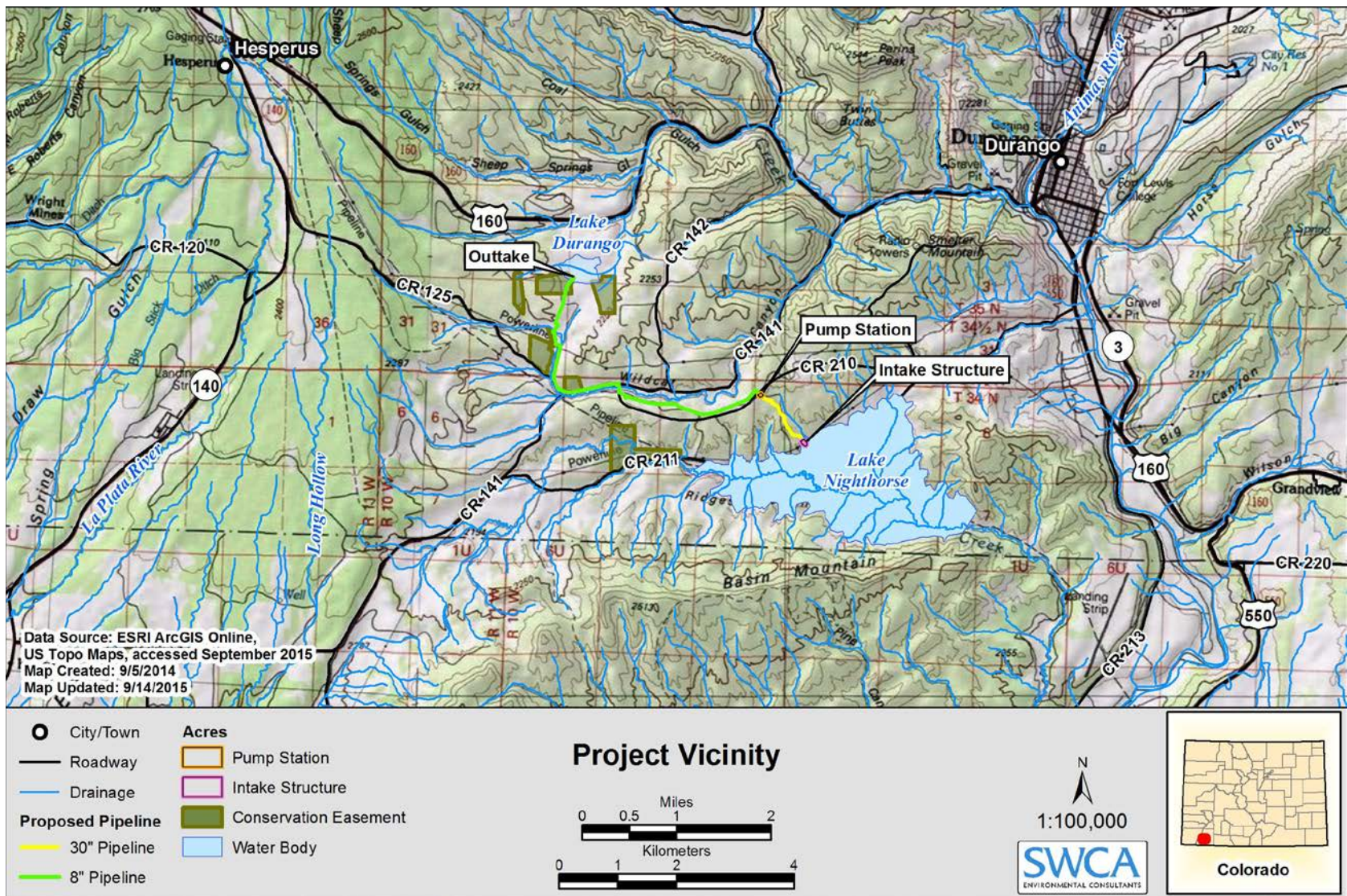


Figure 1.1. Project vicinity map showing Project location and surrounding area.

1 Introduction

This EA has been prepared to enable Reclamation decision makers to determine if the Proposed Action represents a significant impact on the human environment. This document reviews only the effects of the Proposed Action as currently defined. Any subsequent development by LPWWA towards an RDWS would be evaluated in the future under appropriate county, state, and federal regulations. Reclamation's decision and determination for approval of this EA and any corresponding amendment of the license agreement would only apply to the portion of the Project on Reclamation land. LPWWA is responsible for acquiring easements from each private landowner whose property would be crossed by the pipeline and associated facilities. The easements with each landowner would define the terms and conditions for the easement, including but not limited to access, use, reclamation and compensation.

Lake Nighthorse is a feature of the Animas-La Plata (ALP) Project, constructed and operated by Reclamation. ALP Project lands have been studied within the Final Supplemental Environmental Impact Statement for the Animas-La Plata Project (FSEIS) (Reclamation 2000a). This EA analysis tiers to the FSEIS where appropriate (Reclamation 2000a). Tiering to another broader NEPA analysis is discussed in the Reclamation NEPA Handbook (Reclamation 2012:7-4). The FSEIS and Record of Decision (ROD) (Reclamation 2000b) were developed to meet tribal water rights settlement requirements and supply future municipal and industrial water needs in Colorado and New Mexico.

This Proposed Action to construct and operate the raw water pipeline is related to the existing license agreement governing use of Reclamation lands for the phased construction, operation, and maintenance of a RDWS, including the existing intake on Lake Nighthorse. The existing license agreement for the intake (Phase 1) was analyzed in EA No. WCAO-DUR-02-2008 signed on September 12, 2008 (Reclamation 2008). The currently defined Proposed Action is considered Phase II. Phase III includes a distribution line proposed by La Plata Electric Association (LPEA) to power the intake and booster pumps in the future (see Section 4.2 for additional information on the distribution line).

Phases IV and V include plans for additional facilities and pipelines, some of which are not located on Reclamation lands and as a result are not subject to the license agreement. Reclamation would require a NEPA review of the components of these additional phases that Reclamation has jurisdiction over, once the design is mature enough to allow for site-specific analysis. Analysis of potential future RDWS components is not included in this EA because the scope, design, and funding for these components are not well developed at the time of writing in order to allow for site-specific analysis and resource survey. Potential future RDWS components are also temporally removed from the Proposed Action and would be subjected to future NEPA review and analysis. As stated above, any future phases of development proposed by LPWWA would be evaluated under appropriate county, state, and federal regulations. Future RDWS components are considered in this EA under cumulative impacts (see Section 4.2).

The legal location of the Proposed Action is provided in Table 1.1.

Table 1.1 Legal Description of Proposed Action.

| Township | Range | Section | QuarterQuarter | Ownership |
|----------|-------|---------|--|-------------|
| 34N | 10WA | 2 | NWSE, NESW, SENW, SWNW, Lot 4 (NWNW), Lot 3 (NENW) | Reclamation |
| | | 3 | Lot 1, Lot 2, Lot 7, Lot 8, SWNE, SENW, SWNW | Reclamation |
| | | 4 | SENE, Lot 1, Lot 2* | Reclamation |
| | | | Lot 2, Lot 3, Lot 4 | Private |
| | | 5 | NENE | Private |
| 35N | 10W | 32 | SESE, NESE, SENE, NESE | Private |
| | | 33 | NWNW | Private |
| | | 28 | SWSW | Private |

* Portions of the project area within Lot 2 are on both Reclamation and private land.

1.1 Purpose and Need

Reclamation’s purpose is to respond to the Proposed Action and the need is established by the ALP ROD signed in 2000 (Reclamation 2000b). The Proposed Action for the Project is directly related to the 1988 Colorado Ute Indian Water Rights Settlement Act, as amended (Settlement Act), and the ALP Project. In the Settlement Act, Congress agreed that resolution of the Colorado Ute Tribes’ water rights claims would be accomplished by building a large water project to supply water to the Colorado Ute Tribes, which then became the ALP Project. Hence, the purpose of the ALP Project was to implement the Settlement Act by providing the Colorado Ute Tribes an assured long-term water supply and water acquisition fund in order to satisfy the Colorado Ute Tribes’ senior water rights claims as quantified in the Settlement Act, as well as to provide for identified municipal and industrial water needs in the Project area. Currently, there are no means for pumping water out of Lake Nighthorse. The LPWWA raw water pipeline and associated facilities would provide an alternate means to access ALP Project water and deliver it to potential users.

The applicant’s objective is described in the La Plata West Water Authority Establishment Agreement (LPWWA 2008). The establishment agreement creates LPWWA as the authority to pursue the development and operation of an RDWS. The Proposed Action is an additional step in the process to achieve that objective. The demand for a reliable potable water supply in southwest La Plata County has long been recognized, and several studies have been conducted to analyze the need and feasibility of bringing an RDWS to southwestern Colorado (see Chapter 4 for a listing of past studies and consultation activities). The proposed pipeline would provide an alternate means to access ALP Project water and deliver it to water-poor regions, including areas to the south and west of the reservoir that are not in the Animas River basin.

1.2 Relevant Statutes, Regulations, Compliance Actions, Permits, Agreements, and Plans

The ALP Project included extensive evaluation and NEPA analysis. The conclusions, recommendations, environmental commitments, conservation measures, and mitigation requirements pertaining to construction and operation have been integrated, as appropriate, in the design guidelines for the proposed LPWWA raw water pipeline and are referenced within this EA. Other pertinent laws and regulations that have been complied with in the development of this Project are:

- NEPA,
- Endangered Species Act (ESA),
- Bald and Golden Eagle Protection Act,
- Migratory Bird Treaty Act (MBTA),
- Clean Water Act, and
- National Historic Preservation Act (NHPA).

2 Description of Proposed Action and Alternatives

This chapter describes the Proposed Action, the No Action Alternative, and alternative alignments that were considered but dismissed from detailed analysis.

2.1 No Action Alternative

Under the No Action Alternative there would be no ground-disturbing impacts because the pipeline and associated facilities would not be constructed. There are currently no other proposals to meet the growing municipal and industrial water needs in southwest La Plata County. Hence, if the No Action Alternative is selected and the pipeline and associated facilities are not built, service area residents would continue to depend on limited groundwater wells and hauling water. Water use conflicts and limits on development would persist and increase in the area, and the ALP Project purpose to develop a municipal and industrial water supply to serve southwest La Plata County in Colorado, northern San Juan County in New Mexico, the Southern Ute Indian Tribe, and the Ute Mountain Ute Indian Tribe would not be achieved.

2.2 Proposed Action

LPWWA is requesting a 50-foot-wide corridor to construct a 4.6-mile-long raw water pipeline from Lake Nighthorse to Lake Durango. The Proposed Action would also include construction of the access road to the intake structure; a new 40 × 40-foot building around the existing intake caisson (a large water chamber); a parking area; and a new booster pump station near the intersection of the access road and County Road 210 (CR 210). The proposed pipeline route crosses land administered by Reclamation and private land. From the intake building, the pipeline would climb Wildcat Ridge to the proposed booster pump station. After crossing under CR 210, the pipeline would then run in a westerly direction along the ridge and an existing pipeline corridor parallel to CR 210, before turning north to cross CR 141 (Wildcat Canyon Road) and terminating at Lake Durango. The portion of the pipeline from the intake structure to the booster pump station would comprise a 30-inch-diameter pipe. An 8- to 16-inch-diameter pipe is proposed between the booster station and the outlet at Lake Durango. The Proposed Action would affect approximately 8.7 acres of private land and 17.3 acres of Reclamation land (Table 2.1, Figure 2.1).

Table 2.1. Land Ownership for the Proposed Project Area

| Project Component | Ownership | Acres Disturbed Short Term | Acres Disturbed Long Term |
|--|-------------|----------------------------|---------------------------|
| 8-16 inch water pipeline ROW and Outlet at Lake Durango | Private | 8.7 | 0.4 |
| | Reclamation | 10.3 | 0 |
| 30-inch pipeline and Access Road ROW | Reclamation | 4.8 | 4.8 |
| Intake building and parking area | Reclamation | 1.5 | 1.5 |
| Booster pump station | Reclamation | 0.7 | 0.7 |
| TOTAL RECLAMATION ACRES | | 17.3 | 7.0 |
| TOTAL PRIVATE ACRES | | 8.7 | 0.4 |
| TOTAL | | 26.0 | 7.4 |

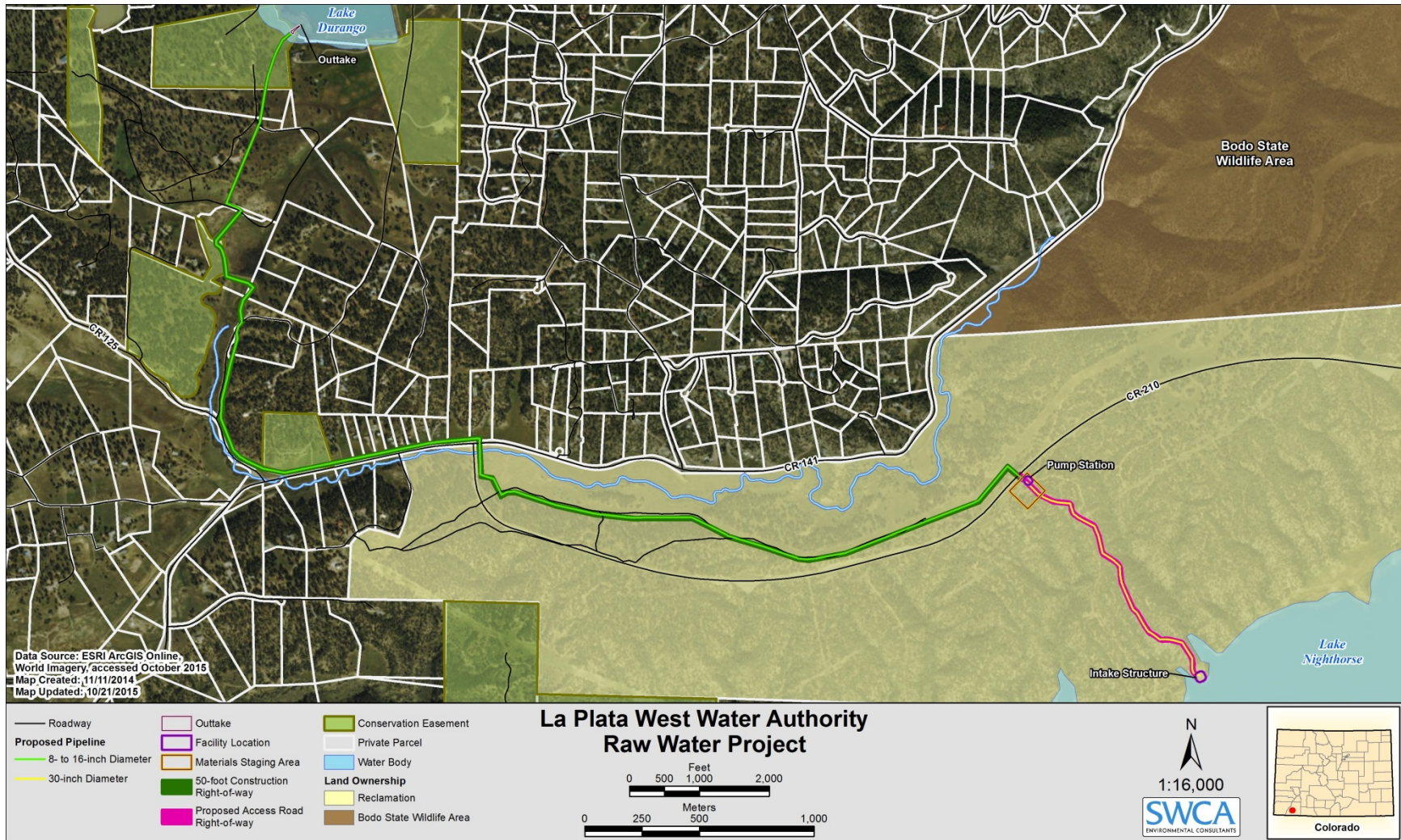


Figure 2.1. Project location detail map.

The Proposed Action includes three phases: Phase 1 – Construction, Phase 2 – Operations and Maintenance, and Phase 3 – Relinquishment. For purposes of this analysis, the short-term impacts are anticipated to encompass a 2-year period, including 1 year for constructing the pipeline and associated facilities and conducting initial reseeded of disturbed areas, and 1 year for disturbed areas to achieve regrowth of vegetation, which would take place during the first year of operation. The anticipated life of the Project and long-term period for analysis is 40 years.

Disturbance from the 50-foot-wide pipeline corridor would be short term because the corridor would be restored to previous conditions by recontouring to pre-disturbance topography and reseeded the disturbed area to initiate regrowth. The intake structure, parking area and road, as well as the booster pump station and protective structure, are new proposed facilities that would be used throughout the operations and maintenance phase and their permanent footprints would constitute the area of long-term disturbance.

2.2.1 Phase 1: Construction

The construction phase including initial reseeded of disturbed areas is anticipated to last approximately 1 year, beginning in the fall of 2015 and completed by fall 2016, weather permitting. There are four distinct construction components included in the proposed Project: 1) the pipeline; 2) the intake building, access road, parking lot and installation of fish screens; 3) the booster pump station; and 4) the outlet at Lake Durango, all of which are described in detail below.

Proposed Water Pipeline

Approximately 4.6 miles of pipeline would be constructed to transport raw water from Lake Nighthorse to Lake Durango. A 50-foot-wide construction corridor would be used for all activities associated with constructing the pipeline. The pipeline would be 30 inches in diameter from the intake to the pump station and 8 to 16 inches in diameter from the pump station to the outlet at Lake Durango. Bartlett & West, the engineering firm for the proposed Project, has submitted the Civil Sheet Specification and Design Plans (Bartlett & West 2015) for the proposed Project to Reclamation.

The proposed pipeline alignment includes two road crossings – one at CR 210 and another at CR 141. The proposed corridor for the pipeline would parallel an existing gas pipeline easement along the portion of the route between CR 210 and CR 141. Both of the road crossings would be bored underneath to minimize impacts to road infrastructure and traffic patterns. Additionally, the proposed alignment has the potential to affect five wetland areas (see Section 2.2.4 and Section 3.2.2 below for mitigation and impacts analysis, respectively). LPWWA is currently coordinating with the U.S. Army Corps of Engineers with regard to wetland and waters of the U.S. (WUS).

With the exception of highway and wetland areas that would be bored, the general sequence for constructing the pipeline includes surveying and staking, clearing and grading the corridor, trenching, assembling the pipe and lowering it into the trench, backfilling and returning the surface to original contours, and reclaiming disturbed areas. Typical equipment used during

pipeline construction includes skid loaders, wood chippers, backhoes, trenching machinery, dump trucks, pick-ups and flatbed trucks, cranes, and other minor associated equipment. Some drill or blast techniques may be used where excavation of rock is necessary along portions of Wildcat Ridge. LPWWA's contractor would use percussive hammering or low-blast techniques if possible, and any high-pressure blasting would be cleared through Reclamation in writing prior to implementation.

The construction sequence would be implemented as follows:

- **Survey and staking:** Before the start of construction, LPWWA would need to receive written approval and notice to proceed from Reclamation and completed easement acquisitions with private property owners. LPWWA would then mark the limits of the approved work area, including the construction boundary, pipeline centerline, and a temporary access road which is within the pipeline corridor and would be used to transport equipment and construction materials. Additionally, environmentally sensitive areas (i.e., cultural resource avoidance areas) would be marked or fenced for protection per Reclamation requirements. Affected landowners would be notified prior to surveying and staking activities. Prior to construction, "811-Call before Dig" would be contacted to verify and mark all underground utilities (i.e., cables, conduits, and pipelines) to prevent accidental damage during construction.
- **Clearing and grading:** The construction work area would be cleared and graded where necessary to provide a smooth and even work area to facilitate the safe movement of equipment and personnel. Stumps, brush, and tree limbs smaller than 3 inches in diameter would be grubbed and mulched. Larger limbs would be removed to approved disposal locations or made available to landowners upon request. Approximately 6 inches of topsoil would be stripped from the trench and subsoil storage area. Topsoil would be stockpiled separately from the trench spoils along the edge of the construction area for redistribution during initial reclamation.
- **Trenching:** The trench would be excavated with a backhoe or trenching machine to a minimum depth of 5 feet to allow for at least 3 feet of cover. In areas with consolidated rock, the minimum cover would be at least 18 inches. In certain areas with less stable soils, deeper burial would be required, resulting in an increased trench depth. The proposed pipeline trench would be bedded with existing material from within the pipeline corridor area to a depth up to approximately 1 foot.
- **Pipe assembly and lowering into trench:** Twenty-foot sections of pipe would be connected to each other within the trench. The portion of the pipeline from the intake structure to the booster pump station, referred to as the 210 Pipeline, would be composed of 30-inch-diameter pipe. For the remaining portion of the pipeline from the booster station to the outlet at Lake Durango (referred to as the 125 Pipeline), an 8-inch-diameter pipe would be used. The entire length of the proposed Project area would consist of pipe composed of polyvinyl chloride (PVC), high-density polyethylene (HDPE), and ductile-iron.

- **Backfilling and recontouring:** The proposed pipeline trench would be filled and compacted with existing fill material removed during trenching. The proposed Project area would be graded in order to return the surface to original contours.
- **Material and equipment storage areas:** Materials and equipment would be stored within the area surveyed for the booster pump station. Piping would be laid within the pipeline corridor during construction.
- **Revegetation of disturbed areas:** The disturbed areas not needed for operations and maintenance would be restored and revegetated according to the following general procedures:
 - ROW preparation. Vegetation removed during construction, including trees that measure less than 3 inches in diameter at ground level and slash/brush, would be chipped or mulched and spread across the disturbed area.
 - Soil stockpiling. Following the removal of vegetation, the top 6 inches of topsoil would be stripped from the pipeline corridor where necessary. The topsoil would be free of brush and tree limbs, trunks, and root balls. The topsoil would be stockpiled separately from subsoil or other excavated material and stored along the pipeline corridor. Topsoil would be labeled as such and protected from erosion and inadvertent use as fill.
 - Recontouring. Within areas that require recontouring, the surface would be recontoured to match pre-disturbance conditions or to blend with the surrounding landform as closely as possible. Excess subsoil from excavated or graded areas (around structure bases) would be evenly spread over disturbed areas and moistened and compacted to a relative average density comparable to undisturbed adjacent material before respreading topsoil. Subsoils would not be spread outside the approved construction areas.
 - Soil and seedbed preparation. Where any compaction exists, the surface would be ripped or scarified to a depth of 6 inches as appropriate (e.g., not applicable to rock faces, severe slopes, or cliff areas), and would retain a 12-inch buffer from existing vegetation or plants designated as preserve in place. Depth and area of compaction relief would depend on site-specific conditions.
 - Topsoil replacement. Topsoil would be replaced without mixing with subsoil to prevent mixing fertile, shallow soils with deeper soils that may be less productive because of rock, gravel, sand, calcareous layers, salinity, or other chemical characteristics that would adversely affect growth of desired vegetation. Stockpiled topsoil would be evenly redistributed prior to final seedbed preparation. Topsoil would not be redistributed when the ground or topsoil is frozen or wet.
 - Seeding. During seeding of the reclamation area, a disc-type drill with two boxes for various seed sizes would be used. The drill rows would be 8 to 10 inches apart. Where practicable with the seeding equipment being used, planting depths for small seeds would be 0.25 inch, for intermediate seeds would be 0.50 inch, and for large seeds would be 1 to 2 inches. Where these seed depths are impracticable with the seeding equipment being used, planting depths would be no more than 0.25 inch. A drag, packer, or roller would follow the seeder to

ensure uniform seed coverage and adequate compaction. Seeding would run perpendicular to slopes in order to minimize runoff and erosion. In areas where the slope is too steep for a seed drill, hand- or broadcast-seeding methods would be used, and the seeds would be covered to the depths described above. Reclamation or landowner prescribed seed mixes would be used.

- Weed control. LPWWA's contractor would identify target areas for treatment to prevent the spread of noxious weeds and invasive species.
- Inspection. LPWWA's contractor bid package includes a warranty bond clause that would only be lifted upon final inspection of the revegetated areas approximately 12 months after revegetation occurs. If the revegetation effort is deemed unsuccessful at that time (vegetation is not healthy or well established), an additional year would be granted to allow for regrowth until the inspection is successful.

The pipeline and components at the intake (where pressures would be highest) would have a rated maximum working pressure of 250 pounds per square inch (psi). The actual maximum working pressure in the line would be approximately 170 psi; however, 250 psi working pressure components would be used at the intake as a safety measure to release pressure and allow for occasional surges if the line becomes over pressurized. The pressure rating of all the components would always be higher than the actual working pressure to ensure safety and durability of the Project.

Intake Building and Parking Area

An intake and pump was installed at the intake facility on the north side of Lake Nighthorse prior to filling of the reservoir in 2009. This action was disclosed under a prior supplemental NEPA analysis (Reclamation 2008). The proposed pumps are sized to accommodate the current proposal of approximately 800 gallons per minute. If the full capacity was needed in the future, additional or larger pumps would be necessary. Currently the intake area is fenced and equipment is visible on the surface. The Proposed Action would include construction of a 40 × 40-foot building (1,600 square feet) that would be located atop and around the existing intake equipment to shelter associated pumping and pipeline components for operations (Figure 2.2). The building would be constructed of insulated precast panels with steel bar joists and insulated metal deck with metal roof panels. The building would be 34 feet tall with a slanted flat roof and sided with non-reflective painted material to blend with the landscape and approved by Reclamation. An air receiver tank and meter vault, also painted to match the building and blend with the landscape, would be located outside the building.

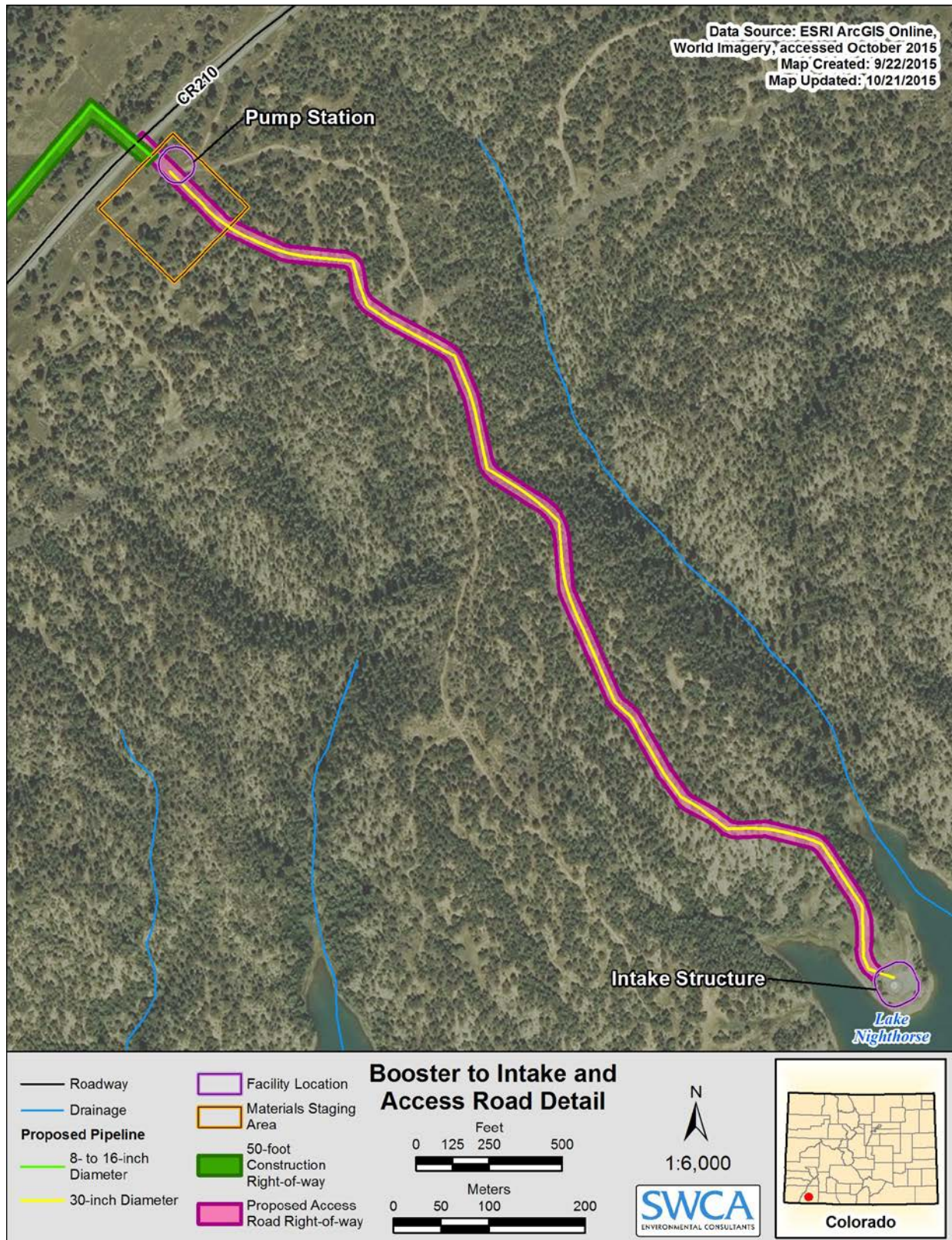


Figure 2.3. Proposed access road detail.

Booster Pump Station

A booster pump station would be located approximately 100 feet south of CR 210 along the pipeline route. The proposed booster station would include a 3-acre fenced area with a concrete pad and a booster pump with pump house. The pump house would be a 15-foot-tall metal and wood building around the booster pump. The pump house would be painted with non-reflective paint in a color that best blends with the landscape and approved by Reclamation.

Outlet Structure at Lake Durango

The outlet at Lake Durango would consist of a 3- to 4-foot-tall concrete retaining wall with wing-walls. The discharge pipe would Project out of the wall and terminate with a rodent-resistant flap gate or rubber duckbill check valve. This structure would consist of a riprap-lined channel constructed between the outlet structure and typical average water line of Lake Durango. The riprap-lined channel is to prevent erosion from outlet water flows.

2.2.2 Phase 2: Operations and Maintenance

The proposed pipeline is expected to be in operation for 40 to 50 years or more. Initial operating plans include pumping water for approximately 3 weeks every spring, when runoff flows are at their highest. During the first year of operation, the water would be pumped using two diesel generators. One generator would be located at the intake with an estimated 28 kilovolt-amps (KVA) and another located at the booster pump station with an estimated 83 KVAs; both generators would be located on Reclamation land. The specifications for the diesel generators that would be used equate to approximately 75 A-weighted decibels (dBA), measured at 23 feet. Seventy-five dBA is about the equivalent to the noise of a vacuum cleaner or food processor. Generally speaking, the generators would be audible within approximately a 0.25-mile radius. However, year-round pumping may occur in the future depending on need, availability, and other logistical considerations. The Project has been designed to pump 800 gallons of water per minute from Lake Nighthorse to Lake Durango. In year two of operations and beyond, the pumps would potentially be operated by means of electricity provided by LPEA via a distribution line. Plans for the distribution line are preliminary and are further discussed in Section 4.2 of this EA. If the distribution line is not built, the pumps would continue to be run using the generators. If the distribution line is built, the generators would be removed from the site.

Maintenance activities would occur, as needed, throughout the life of the proposed pipeline. LPWWA would be responsible for maintenance of the proposed pipeline and facilities. The maintenance activities may include, but are not limited, to accessing the pipeline corridor and associated facilities for reconnaissance, trenching, replacement, repair, re-boring, and installation of community service taps.

2.2.3 Phase 3: Relinquishment

At such time as the Project is deemed to be no longer viable in the future, LPWWA would apply to Reclamation for termination of the license agreement. The pipeline would be capped and left in place. All aboveground facilities would be disassembled, removed, and properly disposed of, and the disturbed area would be revegetated and reclaimed according to Reclamation requirements.

2.2.4 Environmental Commitments

The following applicant-committed environmental protection measures (environmental commitments) have been incorporated into the Project design of the Proposed Action to avoid or minimize resource impacts. These environmental commitments are measures designed to mitigate impacts to resources and are described below under the resource they are designed to protect, although some of these measures are designed to protect or mitigate impacts to multiple resources. Some measures are considered best management practices (BMPs), which are industry- or agency-recommended methods that are routinely implemented to minimize impacts to resources. These environmental commitments would be implemented on Reclamation land and are encouraged to be applied on private land as well, according to the easement agreements with private landowners.

Soils and Water

- Per the ALP Project ROD environmental commitments, development of Lake Nighthorse uses would avoid or minimize construction impacts to wetland and riparian vegetation.
- In accordance with U.S. Army Corps of Engineers (USACE) Nationwide Permit (NWP) No. 12, care would be taken to minimize disturbance to wetland areas and restore these areas to pre-construction conditions as quickly as possible. Erosion and sediment controls would be used and all temporary fill, including sediment, mats, etc., would be removed once construction is complete and prior to reclamation activities. For more information on wetlands within the Project area see Section 3.2 and the Wetlands Report (SWCA 2015a).
- In accordance with USACE NWP 13, the rip-rap lined channel would be installed below the proposed outlet structure at Lake Durango, to prevent soil erosion from pumping events.
- LPWWA would prepare and implement stormwater BMPs in accordance with USACE, Colorado Department of Public Health and Environment (CDPHE), and Reclamation guidance before construction begins. Erosion control devices used for stormwater management would be weed free and used as additional protection to prevent the spread of invasive species to the undisturbed buffer areas.
- The top 6 inches of topsoil excavated from the proposed pipeline trench would be stockpiled on-site for redistribution during reclamation.
- Culverts would be installed along the access road to the intake station where needed to provide direct drainage and minimize erosion, and at the easternmost location where the pipeline crosses a lateral of the Pine Ridge Ditch.
- Silt traps would be installed to reduce erosion where needed and as directed by Reclamation.
- Construction would only be performed when soil is dry enough to adequately support construction equipment and vehicles. When the soil is too wet (ruts more than 6 inches deep), construction would be postponed until conditions improve.

- Construction activities and the storage of construction materials and equipment would be restricted to the established construction areas on private lands and within the pipeline corridor and associated facility areas.

Vegetation and Noxious Weeds

- All disturbed sites associated with the construction area would be restored to previous conditions by bedding the area with natural soil and seeding with native vegetation.
- The construction area would be delineated and clearly marked to prevent accidental disturbance of any unnecessary acreage. Any grading or earth disturbance in the Project area would be done in a manner to minimize the spread of weed seeds or propagative parts to uninfested locations.
- All noxious weed species within the proposed Project area would be identified and clearly flagged prior to the clearing of vegetation. All herbicide spraying would be completed by a state-approved and licensed applicator. LPWWA would be responsible for weed control for the life of the proposed pipeline.
- LPWAA's contractor would conduct pre-construction noxious weed control by herbicide spraying to kill and weaken weeds, and prevent seed formation. All herbicide spraying would be completed by a state-approved and licensed applicator.
- Weed-free straw or hay bales would be required to be used on the site for erosion control, including any mulch obtained off-site. Seed applied in reclamation would be required to be weed free. Only clean fill materials would be imported onto the site for use during construction.
- Post-construction areas of the site that would be graveled, paved, or built upon would remain vegetation free through the use of herbicides. In those areas where vegetation would be allowed, revegetation efforts using weed free seed mixes would begin at the earliest practical planting season to re-establish a ground cover on exposed soils that would help prevent the encroachment, establishment, and/or spread of invasive species.

Wildlife, Migratory Birds, and Fish

- If feasible, vegetation removal would occur outside the migratory bird breeding season (March 1–August 31). Any vegetation removal during the breeding bird season would be preceded by pre-removal nesting surveys to identify any occupied nests and establish avoidance buffers until the young have fledged.
- Temporary wooden escape ramps would be placed in any trenches that are left open overnight to reduce the potential hazard to wildlife of being trapped in the trench overnight.
- Before the proposed pipe trench is closed, it would be inspected for wildlife. Any trapped wildlife would be promptly removed and released.
- The ends of exposed pipe would be plugged to prevent wildlife from crawling into the pipe.
- Construction personnel would be instructed to avoid intentionally harassing wildlife.

- Should any known sensitive species be observed within the proposed Project area prior to or during construction, construction would cease immediately and Reclamation would be contacted.
- To prevent fish from entering the water pipeline, screens would be placed over the two existing intake openings at Lake Nighthorse, located below the water surface. The screens would have 1/8-inch slot spacing between the wire wrapping to prevent fish passage.
- Project construction should occur outside the bald eagle (*Haliaeetus leucocephalus*) breeding season (February–May). If such timing is not feasible, construction should be preceded by nest surveys to eliminate the possibility of bald eagles nesting in the Project area.
- Project construction and reclamation activities should be avoided during December 1 to April 15 to minimize displacing wintering mule deer (*Odocoileus hemionus*) and elk (*Cervus canadensis*) in the Project area.

Air Quality

- Air quality impacts associated with constructing the pipeline would primarily arise from fugitive dust generated from construction vehicles and equipment. Reasonable precautions would be used to prevent fugitive dust from becoming airborne, including 1) using water or chemicals to control dust where possible, 2) covering open-bodied trucks at all times while transporting materials likely to produce airborne dust, 3) promptly removing earth or material from paved streets, and 4) re-establishing vegetation in temporary work areas as quickly as possible.

Cultural Resources

- The historic Pine Ridge Ditch Lateral (5LP6656.1) would be restored to its original contours following pipeline construction; the existing culvert at the easternmost crossing would be replaced.
- Archaeological monitoring of blading, trenching, and other excavation work would be conducted during any ground-disturbing Project activities within 50 feet of known archaeological sites due to the potential for previously unknown subsurface archaeological deposits. Archaeological monitoring is not recommended for the two historic built environment resources within 50 feet of the construction area (5LP6656.1 and 5LP10658) or for backfilling of previously excavated soils, recontouring, or directional boring.
- In the event of an unanticipated discovery of cultural material during construction, all work at that location would be stopped immediately, the area fenced off, and Reclamation immediately notified. Reclamation would then evaluate the site. Should a discovery be evaluated as significant under the National Historic Preservation Act (NHPA), Native American Graves Protection and Repatriation Act, or Archaeological Resources Protection Act), it would be protected in place until mitigating measures can be developed and implemented according to guidelines set by Reclamation.

Visual Resources

- All disturbed areas, with the exception of the access road to the intake station and aboveground permanent facilities (i.e., intake building, parking area and booster pump station) would be revegetated as described above under Vegetation and Noxious Weeds.
- All aboveground operational components and facilities would be low profile and painted with non-reflective paint to blend with the landscape.
- The access road to the intake facility would be visible from the lake. The design and location of the road would include contouring to minimize visual and environmental impacts.
- LPWWA has coordinated with and would continue to coordinate with Reclamation on methods to minimize aesthetic impacts of the Proposed Action. The final design would address aesthetics of the facilities, including plans for planting and maintenance of vegetation for visual screening, and would need to be reviewed by Reclamation prior to construction.

Noise

- In order to minimize noise impacts to residents, use of heavy equipment during construction would be restricted to daylight hours between 7:00 a.m. and 7:00 p.m. in areas within 0.25 mile of residences.
- All construction across private lands would be coordinated in advance with landowners to minimize inconveniences.

Transportation

- The CR 210 roadway, shoulder, drainage, and roadside would be maintained to standards adequate to avoid degradation.

Health and Safety

- The proposed Project has been designed and would be built in accordance with all applicable state and federal codes and regulations, many of which have been developed over the years by numerous organizations, such as the American National Standards Institute, American Water Works Association, American Society of Mechanical Engineers, U.S. Department of Transportation, Occupational Safety and Health Association (OSHA), U.S. Environmental Protection Agency (EPA), and American Society for Testing Materials. While this pipeline is not considered a potable system, the *Design Criteria for Potable Water Systems* developed by the CDPHE have been incorporated into the pipeline design (CDPHE 2013).
- Appropriate federal and Colorado authorities would be immediately notified in the event of any contaminant spill. Any spills on Reclamation land or private property would be reported to Reclamation and the landowner promptly. Any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 Code of Federal Regulations (CFR) 117 would be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, Section 102b. A copy of any report required or requested by any federal agency or state government as a

result of a reportable release or spill of any toxic substances would be furnished to Reclamation concurrent with the filing of the reports to the involved federal agency or state government.

- The guidelines set forth in the aforementioned regulations, standards, and practices would be issued to all LPWWA's employees and contractors engaged in the planning, construction, operation, and maintenance of the Project. LPWWA maintains a rigorous inspection program that monitors all aspects of construction.
- The construction contractor would transport, handle, and store any fuels, lubricants, or other hazardous substances involved with the Proposed Action in an appropriate manner that prevents them from contaminating air, soil and water resources.
- Portable secondary containment would be provided for any fuel or lubricant containers staged on Reclamation land within the Project area. Any staging of fuel or lubricants, or fueling or maintenance of vehicles or equipment, would not be conducted within 100 feet of any live water or drainage.
- A spill response plan would be prepared for areas of work where spilled contaminants could flow into water bodies. All employee and workers, including those under separate contract, would be briefed and made familiar with this plan. The plan would be developed prior to initiation of construction.
- A spill response kit, which includes appropriate-sized spill blankets, would be easily accessible and on-site at all times.
- All spills, regardless of size, would be cleaned up promptly and contaminated soil would be disposed of at an approved facility.

2.3 Alternatives Considered but Dismissed from Detailed Analysis

Alternatives to the Proposed Action are developed to explore different ways to accomplish the purpose and need while minimizing environmental impacts and resource conflicts. Consistent with Reclamation's NEPA Handbook (Reclamation 2012), it is "reasonable for the federal agency to limit the range of alternatives to those '...which are considered feasible, given the applicant's stated goals'" (Reclamation 2012:4-18). Those with greater adverse resource impacts or those that are not feasible because of existing physical constraints or infrastructure are not brought forward for detailed analysis in this EA.

2.3.1 Pipeline Diameter Alternatives Considered

During initial Project planning, a range of design factors were considered, including possible pipeline diameter sizes. The existing intake on Lake Nighthorse can accommodate 10,000 gallons per minute, which is greater than the amount of water planned to be pumped to Lake Durango, which only requires an 8-inch pipeline. The max capacity of the intake, 10,000 gallons, would be accommodated with a 30-inch pipeline. In order that the pipeline between the intake and booster would not have to be expanded at some unknown point in the future to reach full capacity and to serve potential future build-out, LPWWA chose to propose a 30-inch-diameter pipeline from the intake to the booster station. Proceeding with an 8-inch pipeline, or any diameter in between, was dismissed from further consideration as a feasible alternative, as it would not meet the long-term purpose and need of the license agreement.

2.3.2 Pipeline Corridor Routing Alternatives Considered

Prior to siting the preliminary routes for the pipeline system, a desktop analysis was conducted by the proponent to identify sensitive areas to avoid, attempt to collocate the pipeline along existing corridors, and use existing disturbed areas as much as possible. Once the preliminary route was identified, cultural resource and biological resource surveys were conducted. The route was then adjusted or realigned in several segments in order to avoid impacts to cultural or biological resources where possible.

The proposed pipeline route and design would meet the applicant's objectives while minimizing environmental impacts to the greatest extent possible. The route was ultimately planned to minimize or avoid impacts to wildlife habitat, wetlands, and cultural resources. Any other proposed alignment would likely result in greater ground disturbance impacts. Reclamation and LPWWA did not identify any additional action alternatives that would further reduce or minimize impacts to resources while still meeting the purpose and need for the Project; therefore, those alternatives were considered and described above but do not warrant detailed analysis in this EA. This EA then only analyzes in detail the No Action and Proposed Action alternatives.

3 Affected Environment and Environmental Consequences

This section describes the existing conditions for the elements of the human environment that occur in the Project area. The analysis includes the expected impacts from implementation of the No Action Alternative or the Proposed Action. The level of detail presented for each resource area is designed to be sufficient to enable Reclamation to determine if the impacts would be considered significant. The impacts analysis assumes the mitigation measures or environmental commitments presented in Chapter 2 as part of the Proposed Action would be implemented to minimize or mitigate those impacts.

3.1 Soils and Geology

3.1.1 Existing Conditions

The Project area is located on the eastern edge of the Colorado Plateau. The Colorado Plateau is characterized by generally flat-lying sedimentary deposits divided by faults and monoclines that form cliffs and individual plateaus. Steep-sided mesas and buttes capped by erosion-resistant rock layers are common. Five soil types have been mapped within the Project area (Table 3.1).

Table 3.1 Soil Types in the Project Area

| Soil Types | Acres | Percent of Project Area | Erosion Hazard Rating* |
|---|-------|-------------------------|------------------------|
| Archuleta-Sanchez complex | 6.19 | 23.80% | Severe |
| Hesperus loam | 0.44 | 1.71% | Slight |
| Nutrioso loam | 5.24 | 20.13% | Slight |
| Plome fine sandy loam | 13.87 | 53.33% | Slight |
| Ustic Torriorthents-Ustollic Haplargids complex | 0.26 | 0.99% | Severe |
| Total | 26.00 | | |

*(Erosion Hazard (off-road, off-trail). Source: Natural Resources Conservation Service (NRCS) 2015a.

3.1.2 Environmental Consequences

No Action

There would be no impact to soils as a result of the No Action Alternative, as the pipeline and associated facilities would not be built or operated, and no ground disturbance would occur.

Proposed Action

Construction activities (e.g., clearing vegetation, grading, excavating, etc.) related to the construction of the proposed 40 × 40-foot new intake building, booster station, outlet structure and rip-rap lined channel, and trenching of the pipeline would directly impact approximately 26 acres of soils. Direct impacts to soils include increased erosion from the removal of vegetative cover, damage to biological soil crusts, compaction of soil from heavy equipment usage resulting in a loss of soil structure and porosity, and potential contamination from accidental spills or leaks. These impacts can lead to increased runoff. Environmental commitments designed to minimize the potential for increased erosion are described in Section 2.2.4.

3.2 Water, Wetlands, and Riparian Areas

3.2.1 Existing Conditions

Defining elements of potential waters of the U.S. include ordinary high water marks (OHWMs), defined bed and banks, or the three mandatory wetland criteria: hydrophytic vegetation, hydric soils, and wetland hydrology. In addition to Lake Nighthorse and Lake Durango, a desktop review of the National Hydrography Dataset (NHD) and National Wetland Inventory (NWI) datasets revealed three drainages and two wetlands in the Project area.

During the 2014 and 2015 waters of the U.S. survey, one drainage (S-1) and five wetlands (four palustrine emergent [PEM] wetlands [WL-1A, WL-2, WL-3, and WL-4] and one palustrine scrub-shrub [PSS] wetland (WL-1B) were identified in the Project area. In addition, four erosional features (i.e., ephemeral drainages) were encountered. In addition, a lateral of the Pine Ridge Ditch crosses the Project area several times. This irrigation ditch does not exhibit the necessary defining elements of a potential water of the U.S. The ditch is considered a historic property (see Section 3.6).

The ephemeral features drain the north slope of Ridges Basin and cut through Archuleta-Sanchez complex soils on 12% to 65% slopes and Plome fine sandy loam on 3% to 12% slopes (U.S. Department of Agriculture 2014). The features do not exhibit OHWMs and the channels are sandy with pockets of sandstone outcrop. Prior to the construction of Lake Nighthorse, the drainages would likely have terminated in alluvial fans. The erosional features do not connect with known waters of the U.S. (SWCA Environmental Consultants [SWCA] 2015a). The irrigation ditch section on the south side of CR 210 connects to the largest of these erosion features. North of CR 210, the irrigation ditch does not connect with any nearby waters. Although only the USACE has final and/or legal authority in determining the presence of waters of the U.S. and the extent of their boundaries, it is SWCA's opinion that these features are unlikely to be considered waters of the U.S. by the USACE (SWCA 2015a).

The drainage within the Project area (S-1) is an ephemeral stream that is located southeast of the intersection of CR 210 and CR 141. Within the Project area, S-1 travels under CR 210 through two 36-inch concrete culverts (see photographs in the biological evaluation prepared for the Project [SWCA 2015b]). No OHWM was present immediately upstream of the culverts. However, a PEM wetland (WL-4) has formed in this location. Immediately east of WL-4, an OHWM is present and WL-4 extends along both sides of the OHWM as a 1-foot-wide wetland fringe. Within the Project area, the average bank and OHWM widths of S-1 are 2 feet, the average OHWM depth of S-1 is 6 inches, and the average bank depth of S-1 is 2 feet. The approximate sizes of S-1 and WL-4 within the Project area are provided in Table 3.2. The dominant vegetation along the OHWM is associated with WL-4, which consists of common spikerush (*Eleocharis palustris*), quackgrass (*Elymus repens*), and Kentucky bluegrass (*Poa pratensis*). The dominant vegetation along the stream bank consists of mountain rush (*Juncus arcticus littoralis*) and musk thistle (*Carduus nutans*). West of the Project area, S-1 continues to follow Wildcat Canyon before entering Lightner Creek at the intersection of CR 141 and U.S. Highway 160.

Two of the wetlands (WL-1 and WL-2) are located south of a dam and small reservoir west of S. Lakeside Drive, approximately 0.7 mile south of Lake Durango. One of the wetlands (WL-3) is located along what appears to be the historic high water line for the northwestern portion of this reservoir. The approximate sizes of these wetlands within the Project area are provided in Table 3.2. The dominant vegetation within the PEM wetlands (WL-1A, WL-2, WL-3, and WL-4) consists of mountain rush, Kentucky bluegrass, American speedwell (*Veronica americana*), softstem bulrush (*Schoenoplectus tabernaemontani*), and water sedge (*Carex aquatilis*). The dominant vegetation with the PSS wetland (WL-1B) consists of sandbar willow (*Salix interior*). Photographs and additional details regarding the stream and wetlands are provided in the wetland delineation report (SWCA 2015a).

Table 3.2 Potential Waters of the U.S. within the Project Area

| Unique ID | Type of Water of the U.S. | Size within the Project Area (acres) |
|-----------|---------------------------|--------------------------------------|
| S-1 | Ephemeral stream | <0.01 |
| WL-1A | PEM wetland | 0.13 |
| WL-1B | PSS wetland | 0.02 |
| WL-2 | PEM wetland | 0.02 |
| WL-3 | PEM wetland | 0.02 |
| WL-4 | PEM wetland | <0.01 |

3.2.2 Environmental Consequences

No Action

There would be no impacts to waters of the U.S. or wetlands if the Project is not approved, as no ground disturbance would occur.

Proposed Action

Impact criteria for assessing water resources impacts are based on applicable laws, statutes, standards, or implementation plans. Significant direct and indirect impacts from the Proposed Action can be assessed by the following:

- number of potential waters of the U.S. to be crossed by the Project area, and
- acres of disturbance within potential waters of the U.S. in comparison to regulatory thresholds.

In addition to Lake Durango and Lake Nighthorse, five potential waters of the U.S. were identified during the 2015 survey of the Project area (SWCA 2015a). Inlet construction activities associated with the Proposed Action would take place above the originally engineered OHWM elevation for Lake Nighthorse (6,882 feet). Appropriate permitting (NWP 13) with the USACE is pending for the installation of a proposed erosion mitigation feature; a rip-rap lined channel would be placed on the bank of Lake Durango, between the typical average water line and the outlet structure. S-1 and WL-4 would be avoided with the use of boring construction methods to bore beneath these potential waters of the U.S. Although WL-1B and WL-3 are located within the mapped construction area for the Proposed Action, these wetlands would be avoided, and silt fencing and/or construction fencing would be placed between the wetland

boundary and active construction activities. As a result, WL-1A and WL-2 would be the only potential waters of the U.S. directly impacted by the Proposed Action. All impacts to these wetlands would be temporary; no impacts would be permanent. Surface impacts associated with these two wetlands are provided in Table 3.3.

Table 3.3. Impacts to Potential Waters of the U.S.

| Unique ID | Type of Impact | Temporary Impacts (acres) |
|--------------|--|---------------------------|
| S-1 | No impact; avoid by boring | 0.00 |
| WL-1A | Surface impact during construction | 0.13* |
| WL-1B | No impact; avoid by narrowing proposed ROW width | 0.00 |
| WL-2 | Surface impact during construction | 0.02* |
| WL-3 | No impact; avoid by narrowing proposed ROW width | 0.00 |
| WL-4 | No impact; avoid by boring | 0.00 |
| Total | | 0.15 |

*Potential acreage of impact is subject to change pending consultation with USACE

NWP 12 authorizes the construction of utility lines, such as water pipelines, that do not result in the loss of greater than 0.5 acre of waters of the U.S. Since WL-1A and WL-2 would be temporarily impacted by open-cut trenching during construction, these surface impacts would be covered under NWP 12. A pre-construction notification under NWP 12 is being submitted to the USACE for the Proposed Action. These two wetlands would be restored to existing conditions following the NWP 12 conditions and any USACE- and/or Reclamation-provided guidance.

Indirect impacts to water resources could also result from stormwater runoff from construction activities. While indirect impacts from stormwater movement of contaminants or sediment due to ground disturbance are a possibility, the stabilization and rehabilitation procedures described in Section 2.2.4, including established BMPs, are likely to limit the movement of contaminants or sediment and minimize indirect impacts.

3.3 Vegetation and Noxious Weeds

3.3.1 Existing Conditions

The Project area consists of four vegetation communities with gradients between them, including piñon-juniper woodland, open grassland, ponderosa pine woodland, and wetland vegetation species. The location and abundance of these vegetation communities are detailed in the biological evaluation (SWCA 2015b).

SWCA performed a pedestrian survey of the Project area for biological resources on September 2, 2014, and observed several List B and List C noxious weed species, as defined by the State of Colorado Department of Agriculture. The department has plans in place for management or eradication of List B species, administered on a county-by-county basis. The List B species observed were bull thistle (*Cirsium vulgare*), Canada thistle (*Cirsium arvense*), houndstongue (*Cynoglossum officinale*), musk thistle (*Carduus nutans*), Russian knapweed (*Acroptilon repens*), saltcedar (*Tamarix* sp.), Scotch thistle (*Onopordum acanthium*), spotted knapweed (*Centaurea maculosa*), and yellow toadflax (*Linaria vulgaris*) (State of Colorado 2014). The

most extensive of these were spotted knapweed and yellow toadflax, which were found in most of the previously disturbed sites along the pipeline corridor. Bull thistle was found at the intake adjacent to Lake Nighthorse. Musk thistle was present at the intake and along the existing pipeline in the central portion of the Project area, as well as scattered in a few other locations. Houndstongue and Canada thistle were in the potential wetland area. Canada thistle was also found at the intake and along the existing pipeline section. Saltcedar was found only at the edge of Lake Durango.

List C species are not slated for control, but the state would provide educational support to any entities wishing to establish a control plan for these species (State of Colorado 2014). The List C species observed were common mullein (*Verbascum thapsus*), downy brome (or cheatgrass, *Bromus tectorum*), field bindweed (*Convolvulus arvensis*), and redstem filaree (*Erodium cicutarium*) (State of Colorado 2014). These species were found in most of the previously disturbed areas, particularly the intake, the adjacent pipeline and power line corridors, the small dams/reservoirs, and along fences and roadways.

3.3.2 Environmental Consequences

No Action

There would be no impacts to vegetation if the Project is not approved, as no ground disturbance would occur.

Proposed Action

Direct impacts to plant communities from the Proposed Action would result in approximately 26 acres of habitat removal or exclusion. Short-term impacts to species composition, abundance and distribution would be incurred during initial site preparation, including construction of temporary access roads, and would continue until successful revegetation of the pipeline corridor and access roads is achieved. Depending on type of vegetation impacted in different parts of the Project area, species composition is also affected in the long-term. Long-term impacts associated with the construction of the proposed intake building and booster station would occur on approximately 3.0 acres of habitat, as vegetation would be permanently cleared. Also, indirect impacts to vegetation may occur as a result of the deposition of fugitive dust generated during clearing and grading activities, the use of the temporary access roads, or from wind erosion of exposed soils. This could result in reduced productivity and increased water loss in those plants near the Project area. Plant community composition could subsequently be altered, resulting in habitat degradation. Localized impacts on plant populations and communities could occur if seed production in some plant species is reduced.

The establishment of new populations of invasive, non-native species can occur in newly disturbed areas, such as those associated with construction activities. The construction of the Proposed Action may contribute to the spread of several List B species, including those with already established populations along the existing corridor and intake station site and listed above. Environmental commitments designed to minimize the impacts to vegetation and the spread of noxious weeds are described in Section 2.2.4.

3.4 Wildlife, Threatened and Endangered Species, Migratory Birds, and Fish

3.4.1 Existing Conditions

General Wildlife

During the SWCA biological resources survey of the Project area, a variety of birds, mammals, reptiles, and insects was observed either directly or through sign, such as scat or burrows. Two raptor species were observed, red-tailed hawk (*Buteo jamaicensis*) and bald eagle. An inactive bald eagle nest is located approximately 394 feet away from the Project area, and the vicinity of Lake Durango is a known foraging area for this species. Pinyon jays (*Gymnorhinus cyanocephalus*) were heard in the vicinity of the existing pipeline corridor. One dead bird was found on the south-facing slope of Wildcat Ridge, a Lincoln's sparrow (*Melospiza lincolnii*), but no obvious cause of mortality was noted. Prairie dog (*Cynomys* sp.) burrows were observed along the west side of the nearly depleted reservoir to the south of Lake Durango. No prairie dogs were observed, but fresh scat was found. No burrowing owl (*Athene cunicularia*) sign was observed in the area. A gray fox (*Urocyon cinereoargenteus*) was seen on the wooded slope of Wildcat Ridge. Two ground nests with large numbers of yellow-jacket wasps (Family: Vespidae) were found in the Project area, both located between the small reservoir and Lake Durango.

Threatened and Endangered Species

The threatened and endangered species evaluated in this EA are listed in Table 3.4 and Table 3.5 below and include those listed by the U.S. Fish and Wildlife Service (USFWS) and the State of Colorado. Threatened and endangered species are plants and animals that are legally protected under the ESA. The requirements of this act are aimed at avoiding and not jeopardizing the existence of threatened and endangered species or their critical habitat.

Four federally endangered species and two federally threatened species have been described as having the potential to occur in La Plata County, Colorado (USFWS 2015) (see Table 3.4); however; none of these federally listed species are likely to occur in the Project area based on their current distribution and habitat requirements.

Thirteen other special-status species are possible in La Plata County (see Table 3.5). Several of these do occur or have the potential to occur in the Project area based on current distribution and habitat requirements. The five species that could potentially occur are northern leopard frog (*Rana pipiens*), bald eagle, Botta's pocket gopher (*Thomomys bottae*), northern pocket gopher (*Thomomys talpoides*), and Townsend's big-eared bat (*Plecotus townsendii*). Potential impacts to these species are detailed below.

Table 3.4. List of Species Federally Listed as Endangered, Threatened, or Proposed Threatened in La Plata County, Colorado

| Common Name (Scientific Name) | Status* | Range or Habitat Requirements | Potential for Occurrence in Project Area | Determination of Effect |
|--|------------------|--|---|-------------------------|
| New Mexico meadow jumping mouse (<i>Zapus hudsonius luteus</i>) | USFWS E | Occurs in New Mexico, Arizona, and a small portion of southern Colorado. Utilizes two known wetland/riparian habitat associations: 1) beaked sedge (<i>Carex rostrata</i>) and reed canarygrass (<i>Phalaris arundinacea</i>), permanent emergent wetland, and 2) willow-alder scrub-shrub along perennial streams | Unlikely to occur in the Project area due to lack of riparian vegetation and lack of perennial streams | No effect |
| Mexican spotted owl (<i>Strix occidentalis lucida</i>) | USFWS T CO T | Occurs primarily in Arizona and New Mexico. Typically found in mature, complex mixed-conifer, ponderosa pine (<i>Pinus ponderosa</i>) and riparian forests that have closed canopy. Frequently in canyons with rock ledges. | Unlikely to occur in the Project area due to the lack of canyon, mixed conifer, and riparian habitats. Existing ponderosa pine forest is open canopy. | No effect |
| Southwestern willow flycatcher (<i>Empidonax traillii extimus</i>) | USFWS E CO E | Occurs in dense riparian woody vegetation with suitable microclimate based on local conditions, typically below 8,500 feet in elevation. | Unlikely to occur in the Project area due to the lack of dense riparian woody vegetation. | No effect |
| Yellow-billed cuckoo (<i>Coccyzus americanus</i>) Western population | USFWS T CO SC | Occurs in Colorado in lowland riparian habitat and urban areas with tall trees. | Unlikely to occur in the Project area due to the lack of suitable riparian habitat. | No effect |
| Colorado pikeminnow (<i>Ptychocheilus lucius</i>) | USFWS E CO T | Occurs in tributary drainages of the Colorado River system and in the Colorado River. | Unlikely to occur in the Project area due to the lack of riverine habitat. | No effect |
| Razorback sucker (<i>Xyrauchen texanus</i>) | USFWS E CO E | Occurs in tributary drainages of the Colorado River system and in the Colorado River. | Unlikely to occur in the Project area due to the lack of riverine habitat. | No effect |
| <p>* Federal (USFWS) status definitions: E = Endangered. Any species considered by the USFWS as being in danger of extinction throughout all or a significant portion of its range. The ESA specifically prohibits the take of a species listed as endangered. <i>Take</i> is defined by the ESA as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to engage in any such conduct. T = Threatened. Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. The ESA specifically prohibits the take (see definition above) of a species listed as threatened. C = Candidate. Any species (taxon) for which the USFWS has sufficient information to propose that it be added to the list of endangered and threatened species, but the listing action has been precluded by other, higher priority listing activities. PT = Proposed Threatened. Any species of animal or plant that is proposed as threatened in the <i>Federal Register</i> to be listed under Section 4 of the ESA. * State (CPW) status definitions: E = Endangered. Any species that is considered by the State of Colorado (CPW) as being in jeopardy of extinction or extirpation from the state. T = Threatened. Any species that, in the view of the State of Colorado (CPW) is likely to become endangered within the foreseeable future throughout all or a significant portion of its range within the state that it is listed. SC = Special Concern. Any species or subspecies of native wildlife that 1) has been removed from the state threatened or endangered list within the last 5 years, 2) is a federal candidate or is federally proposed for listing and is not already state listed, 3) the best available data indicate a 5-year or more downward trend in numbers or distribution and this decline may lead to a threatened or endangered status, or 4) is otherwise determined to be vulnerable in Colorado. <i>Note: A no effect determination is defined based on recommendations by the USFWS.</i> Except where otherwise noted, range or habitat information for wildlife species is taken from CPW (2015a, 2015b), USFWS (2015).</p> | | | | |

Table 3.5. State-listed Species in La Plata County, Colorado

| Common Name (<i>Scientific Name</i>) | Status* | Range or Habitat Requirements | Potential for Occurrence in Project Area | Determination of Effect |
|--|---------|---|---|---|
| Boreal toad (<i>Bufo boreas</i>) | E | Occurs in damp conditions in the vicinity of marshes, wet meadows, streams, beaver ponds, glacial kettle ponds, and lakes interspersed in subalpine forest. | Unlikely to occur in the Project area due to the lack of subalpine forest habitat. | No impact |
| Northern leopard frog (<i>Rana pipiens</i>) | SC | Occurs in wet meadows and the banks and shallows of marshes, ponds, glacial kettle ponds, beaver ponds, lakes, reservoirs, streams, and irrigation ditches. | May occur in Project area in the shallows of Lake Nighthorse by the intake, in the intermittent stream bed and possible wetland area during spring runoff and monsoon season. | May impact individuals or habitat, but is not likely to result in a trend toward federal listing or loss of viability |
| American peregrine falcon (<i>Falco peregrinus anatum</i>) | SC | Occurs statewide. Nests in cliffs and forages in nearby riparian areas. Winter and migrant populations use reservoirs, rivers, grasslands, and agricultural areas for foraging. | Unlikely to occur in the Project area due to the lack of suitable cliffs and minimal wetlands, agricultural areas and grasslands for foraging. | No impact |
| Bald eagle (<i>Haliaeetus leucocephalus</i>) | SC | Nests and forages near rivers and reservoirs. Also forages in semi-deserts and grasslands in winter, particularly near prairie dog towns. Bald eagles can rely extensively on prairie dogs as part of their diet. | Known to occur and observed in the Project area. A nest (unoccupied) exists in a ponderosa pine 394 feet from the Project area. A prairie dog town also exists within the Project area. | May impact individuals or habitat, but is not likely to result in a trend toward federal listing or loss of viability |
| Ferruginous hawk (<i>Buteo regalis</i>) | SC | Occurs statewide, but primarily on the eastern plains. Typical habitat is grassland or semi-desert shrubland. Preys on prairie dogs and populations are tied to availability of prey. | Unlikely to occur in the Project area due to the lack of large open grassland or semi-desert shrubland used for foraging. | No impact |
| Greater sandhill crane (<i>Grus canadensis tabida</i>) | SC | Occurs primarily in the San Luis Valley, but is a sporadic spring and fall migrant in western valleys of the state. Found in mud flats around water bodies, moist meadows, and in agricultural areas. | Unlikely to occur in the Project area due to the lack of mudflats, moist meadows, and agricultural fields. | No impact |
| Gunnison sage grouse (<i>Centrocercus minimus</i>) | SC | Occurs in the southwest part of the state in sagebrush habitat. | Unlikely to occur in the Project area due to the lack of sagebrush habitat. | No impact |
| Long-billed curlew (<i>Numenius americanus</i>) | SC | Occurs in the southeastern plains in summer and as a spring and fall migrant in other parts of the state. Can be found on shorelines and in meadows and fields. | Unlikely to occur in the Project area due to the lack of shoreline within the Project area. May occur in areas adjacent to the Project area. | No impact |
| Western snowy plover (<i>Charadrius alexandrinus nivosus</i>) | SC | Occurs generally in the short-grass prairies of eastern Colorado on the shores of reservoirs. Seen only occasionally in other parts of the state during migration (Colorado Partners in Flight 2014). | Unlikely to occur in the Project area due to the lack of short-grass prairie. | No impact |
| Botta's pocket gopher (<i>Thomomys bottae</i>) | SC | Common. Occurs in southern Colorado in a wide variety of habitats, including grasslands, roadsides, agricultural lands, open montane forest, piñon-juniper woodlands, and montane or semi-desert shrublands. | May occur in the Project area due to the known presence of gopher mounds. | May impact individuals or habitat, but is not likely to result in a trend toward federal listing or loss of viability |

| Common Name (Scientific Name) | Status* | Range or Habitat Requirements | Potential for Occurrence in Project Area | Determination of Effect |
|---|---------|--|--|---|
| Northern pocket gopher (<i>Thomomys talpoides</i>) | SC | Common. Occurs in a variety of habitats above 5,000 feet in elevation, including agricultural and pasture land and semi-desert shrubland. | May occur in the Project area due to the known presence of gopher mounds and open pasture. | May impact individuals or habitat, but is not likely to result in a trend toward federal listing or loss of viability |
| Townsend's big-eared bat (<i>Plecotus townsendii</i>) | SC | Occurs throughout western and southern Colorado up to elevations of 9,500 feet in open montane forests, piñon-juniper woodlands, and semi-desert shrubland. Feeds primarily on caddis-flies, moths, flies, and other insects, gleaned from leaves. | May occur in the Project area due to the presence of suitable habitat for foraging, though a lack of caves and mines precludes roosting and hibernation. | No impact |
| Midget faded rattlesnake (<i>Crotalus viridis concolor</i>) | SC | Occurs only on the Colorado Plateau in eastern Utah, southwestern Wyoming, and western Colorado, primarily in arid areas with rock outcrops. | Unlikely to occur in the Project area due to the lack of rock outcrops. | No impact |
| <p>* State (CPW) status definitions: E = Endangered. Any species that is considered by the State of Colorado (CPW) as being in jeopardy of extinction or extirpation from the state. T = Threatened. Any species that, in the view of the State of Colorado (CPW) is likely to become endangered within the foreseeable future throughout all or a significant portion of its range within the state that it is listed. SC = Special Concern. Any species or subspecies of native wildlife that 1) has been removed from the state threatened or endangered list within the last 5 years, 2) is a federal candidate or is federally proposed for listing and is not already state listed, 3) the best available data indicate a 5-year or more downward trend in numbers or distribution and this decline may lead to a threatened or endangered status, or 4) is otherwise determined to be vulnerable in Colorado. Except where otherwise noted, range or habitat information for wildlife species is taken from the CPW (2015a, 2015b), USFWS (2015).</p> | | | | |

Migratory Birds and Bald and Golden Eagles

The MBTA provides federal protection to all migratory birds, as well as their nests and eggs. The USFWS Migratory Birds of Conservation Concern are black swift (*Cypseloides niger*), Brewer's sparrow (*Spizella breweri*), brown-capped rosy-finch (*Leucosticte australis*), Grace's warbler (*Dendroica graciae*), pinyon jay, prairie falcon (*Falco mexicanus*), and willow flycatcher (*Empidonax traillii*). Of these, only the pinyon jay was observed in the Project area.

Bald eagles and golden eagles (*Aquila chrysaetos*) are protected under the Bald and Golden Eagle Protection Act and the MBTA. The golden eagle nests primarily on rock ledges or cliffs, less often in large trees, at elevations ranging from 4,000 to 10,000 feet and is typically found in mountainous regions of open country, prairies, arctic and alpine tundra, open wooded areas, and barren areas. The bald eagle is typically found in various wetland habitats such as seacoasts, rivers, lakes, and marshes. They require old-growth and mature stands of coniferous or hardwood trees for perching, roosting, and nesting. Tree species reportedly is less important to the eagle pair than the tree's height, location, and the composition of the surrounding forest (Suring 2013). Both golden and bald eagles are carnivores. Bald eagles prey on fish but also on mammals, especially prairie dogs. Golden eagles feed mainly on small mammals, as well as invertebrates, carrion, and other wildlife. Bald eagles are known to occur and were observed in the Project area. An unoccupied nest was located in a ponderosa pine tree within 394 feet of the Project area. Prairie dogs also occur in the Project area, providing suitable prey for eagles.

Golden eagles may occur in the Project area, especially outside the breeding season when they can perch on utility poles far from cliffs and other rugged terrain.

Fish

According to CPW, nine fish species occur within Lake Nighthorse (Table 3.6). None of these species are listed as threatened, endangered, or candidate by the State of Colorado or the USFWS.

Table 3.6. Fish Species in Lake Nighthorse

| Common Name | Scientific Name |
|---------------------|------------------------------|
| White sucker | <i>Catostomus commersoni</i> |
| Bluehead sucker | <i>Catostomus discobolus</i> |
| Flannelmouth sucker | <i>Catostomus latipinnis</i> |
| Mottled sculpin | <i>Cottus bairdi</i> |
| Johnny darter | <i>Etheostoma nigrum</i> |
| Kokanee salmon | <i>Oncorhynchus nerka</i> |
| Fathead minnow | <i>Pimephales promelas</i> |
| Rainbow trout | <i>Salmo gairdneri</i> |
| Brown trout | <i>Salmo trutta</i> |

Of these nine fish species, three (rainbow trout [*Salmo gairdneri*], brown trout [*S. trutta*], and kokanee salmon [*Oncorhynchus nerka*]) were intentionally introduced into the lake and six (white sucker [*Catostomus commersoni*], flannelmouth sucker [*C. latipinnis*], bluehead sucker [*C. discobolus*], mottled sculpin [*Cottus bairdi*], Johnny darter [*Etheostoma nigrum*], and fathead minnow [*Pimephales promelas*]) were introduced into Lake Nighthorse via the intake pumps from the Animas River (White 2015).

3.4.2 Environmental Consequences

No Action

There would be no impact to general wildlife, threatened and endangered species with potential to occur, migratory birds, or fish from the No Action Alternative, as the disturbances related to the Project would not occur.

Proposed Action

Impacts to General Wildlife

Impacts to wildlife may occur directly through habitat loss from ground disturbance or indirectly through a reduction in habitat quality resulting from increased noise levels and human activity. The Proposed Action would result in 26 acres of temporary, direct ground disturbance and habitat removal. Construction of the pipeline would cause short-term impacts by temporarily removing vegetation from the 50-foot-wide corridor. Additional short-term impacts may include displacement of wildlife during construction activities or exposure of wildlife to hazards such as open trenches and Project-related vehicle traffic. Long-term, direct impacts to wildlife may occur as a result of the permanent removal of approximately 5.7 acres of vegetation for the constructed intake building, access road, and booster stations. Most species, however, should

become acclimated to the operational activities of the facilities, as wildlife typically habituates to new noise and activity over the long term.

Impacts to Threatened and Endangered Species

Short-term impacts to threatened and endangered species include removal or crushing of existing vegetation and compaction of soils from construction and maintenance traffic and disturbance from noise and human activity. Potential short-term direct impacts to special-status species are the risk of direct mortality of species during construction and loss or degradation of native habitat and displacement of wildlife species from habitat due to development. Potential short-term indirect impacts to special-status species may include disruption or displacement of species from nesting/birthing and foraging areas, changes in activity patterns due to construction, increased human activity, increased predation on sensitive species due to displacement from their habitat during construction, and other human activities such as noise disturbance. Potential long-term indirect impacts to special-status species could include a contribution to overall habitat fragmentation and isolation of connected habitats, including reduced habitat patch size, reduced distance between areas of disturbance, and the potential displacement of wildlife.

Those five special-status species that have the potential to occur within the proposed Project area (see Table 3.5 above) are discussed below.

Northern Leopard Frog (*Rana pipiens*)

The northern leopard frog is a brown- or green-backed frog with large round or oval spots, up to 4.3 inches in length. It is found throughout North America at elevations ranging from 3,500 to 11,000 feet. In Colorado, it is found in all areas except the extreme southeast and eastern parts of the state. They are typically found in wet meadows or on the banks of water bodies ranging from ditches to lakes and reservoirs. In moist areas and during wet weather, they may range far from permanent water. Breeding is done in shallow, still areas with some vegetation or algal mats (Hammerson 1999).

The Project area has one small, perennial pond and some ephemeral wetlands that could support populations of leopard frogs. Additionally, the intake station at Lake Nighthorse and the outlet at Lake Durango are adjacent to shallow areas of permanent water that may be used by these frogs. Construction activities may impact individuals or habitat, but are not likely to result in a trend toward federal listing or loss of viability.

Bald Eagle (*Haliaeetus leucocephalus*)

In Colorado, bald eagles are found throughout much of the state during both the summer and winter. They can often be seen near large reservoirs and along major rivers (South Platte, Arkansas, Rio Grande, Yampa, Colorado). In addition to fish (self-caught or stolen from other birds), bald eagles eat sick and injured waterfowl, muskrats, squirrels, rabbits, prairie dogs, and often eat carrion and road-killed animals. Nests can be 7 to 8 feet across, usually in tall trees high above the ground. Bald eagles often choose dead limbs in tall trees, possibly because their view is not obstructed by foliage. Nests are often found near water. The nesting season in Colorado is typically February through May (CPW 2014a).

One individual was observed as a flyover in the northern section of the Project area near Lake Durango. An unoccupied nest exists in a ponderosa pine 393 feet from the Project area (landowner stated the nest was not used in 2014). A prairie dog colony also exists within the Project area. Reproduction activities are well documented in the Lake Durango area, despite residential development activities. If construction were to take place during the bald eagle nesting season (February–May), a pre-construction nest survey would be conducted to determine if the bald eagle nest in close proximity to the PPA is active. If the nest is active prior to construction activities, construction would not take place within a Reclamation- or USFWS-specified buffer distance of the nest until the young have fledged. With the use of this mitigation, construction in the Project area may cause temporary disturbances, but is not likely to result in a trend toward federal listing or loss of viability.

Botta's Pocket Gopher (*Thomomys bottae*)

Botta's pocket gophers occur in southern Colorado, where several local races have evolved. They can be found in a variety of vegetation types, including agricultural land, grasslands, roadsides, open parklands, piñon-juniper woodlands, open montane forest, montane shrublands, and semidesert shrublands. Seeds, tubers, roots, and green vegetation of a variety of forbs and grasses are eaten. Most food consists of aboveground plant parts. Succulent grasses, especially bromes (*Bromus* sp.), may constitute 40% to more than 80% of the diet. They may occur in the Project area due to the known presence of gopher mounds (CPW 2015a). Construction activities may impact individuals or habitat, but are not likely to result in a trend toward federal listing or loss of viability.

Northern Pocket Gopher (*Thomomys talpoides*)

In Colorado, northern pocket gophers are common in a variety of habitats above about 5,000 feet in elevation. They are found in many different habitat types, including agricultural and pasture lands, semidesert shrublands, and grasslands at lower elevations upwards into alpine tundra. Gophers use all parts of plants, and diets vary on a seasonal basis partly in response to availability and partly because of quality and succulence. Roots and tubers provide most of the winter diet, whereas spring and summer diets are usually 60% to nearly 100% leaves and stems. Forbs, especially composites and legumes, are the most important foods. The species may occur in the Project area due to the known presence of gopher mounds and open pasture (CPW 2015a). Construction activities may impact individuals or habitat, but are not likely to result in a trend toward federal listing or loss of viability.

Townsend's Big-eared Bat (*Plecotus townsendii*)

Townsend's big-eared bat occurs throughout the Rocky Mountain region, but is not found on the eastern plains of Colorado. Females form maternal colonies in spring and summer, but males are solitary. Colonies may roost in caves, mines and buildings, usually in well-ventilated areas. Common habitats in Colorado include sagebrush, piñon-juniper woodland, ponderosa pine woodland, semi-desert scrub, and montane forest. The subspecies *P. t. pallescens* occurs in western Colorado (Adams 2003). The Project area does not contain suitable roosting or hibernacula sites, though the area may be used for foraging. Activities occurring during daylight hours are not likely to impact this species.

Impacts to Migratory Birds and Bald and Golden Eagles

Impacts to any migratory birds present in the general area at the time of construction are possible in the form of noise disturbance, but such impacts would be short term during construction and during the first year pumping event when the generators may be used. The majority of Project construction would occur outside the migratory bird season (March–August). If such timing is not feasible or construction extends beyond March, construction would be preceded by migratory bird surveys to identify the possibility of active nests in the Project area and establish avoidance buffers around any occupied nests. Adult migratory birds would not be directly harmed by the Proposed Action because of their mobility and ability to avoid areas of human activity. The increased human presence, traffic, noise levels, and dust dispersion during construction and reclamation may indirectly disturb or displace adults from nests and foraging habitats within and surrounding the Project area in the short term (approximately 1 year of construction and 1 year of reclamation). Long-term production operations would result in only a slight increase in human activity in the immediate Project area.

The Proposed Action is not expected to impact bald and golden eagles. See analysis above under Impacts to Threatened and Endangered Species for more information about the bald eagle. Golden eagles may occur in the Project area, particularly outside the breeding season when they can perch on utility poles far from cliffs and other rugged terrain. However, their presence would likely be of short duration and nesting within or adjacent to the Project area would be unlikely due to the absence of suitable nesting habitat within the Project area. The proposed Project is not anticipated to cause take of individual bald or golden eagles, their nests, or eggs.

In general, no major or long-term effects on migratory birds are anticipated from the implementation of the proposed Project. If vegetation clearing occurs during the bird breeding season (March–August), pre-clearing nesting bird surveys would be conducted to ensure avoidance of any occupied nests; however, incidental mortality or displacement is possible on a local scale. Plant communities present in the Project area are widespread elsewhere and many birds occurring locally would likely move into adjacent habitats in response to temporary habitat loss.

Impacts to Fish

Fish may be temporarily impacted during installation of fish screens on the intake in Lake Nighthorse because of the human presence of divers, as well as light and noise from welding and equipment. This impact would be temporary and localized. Pumping events during the operational phase would also impact fish and the fish habitat near the intake area because of noise generated during pumping and cleaning of the screens. These impacts would affect the area around the intake for the duration of the Project.

3.5 Air Quality

3.5.1 Existing Conditions

Air quality is determined by atmospheric pollutants and chemistry, along with dispersion, weather conditions, and terrain. It also includes applications of noise, smoke management, and visibility. The EPA has the primary responsibility for regulating air quality, including six nationally regulated ambient air pollutants (criteria pollutants). The Clean Air Act (40 CFR 50)

outlines air quality and emissions limits for these criteria pollutants: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM) (including PM equal to or less than 10 microns in diameter [PM₁₀] and 2.5 microns in diameter [PM_{2.5}]), and sulfur dioxide (SO₂). The EPA has established National Ambient Air Quality Standards (NAAQS), both primary and secondary, for criteria air pollutants to protect human health and the environment. The NAAQS are defined in terms of ambient threshold concentrations measured as an average over specific periods of time (EPA 2014a). Areas with ambient concentrations within the NAAQS are deemed “attainment” areas, while those that do not meet the standards are considered “non-attainment” areas. La Plata County is considered an attainment area and meets the NAAQS (EPA 2015).

Hazardous air pollutants (HAPs), also known as air toxics, are pollutants that are produced primarily by human-made sources. These pollutants are known or suspected to cause serious health impacts to both human populations and ecosystems. Humans come into contact with these pollutants in a variety of ways, including inhalation; ingestion of contaminated food, water, and soil; and dermal contact. The EPA has identified 187 different HAPs for which the agency conducts a periodic National-Scale Air Toxics Assessment (NATA) via the National-Scale Air Toxics Trends Station Network, which monitors air toxics at 27 sites throughout the United States. The 2005 NATA analysis estimated census tract–level total cancer risk for La Plata County in Colorado as 20 per 1 million. For comparison, the NATA analysis estimates the average national cancer risk for 2005 was 50 per 1 million, meaning one person out of every 20,000 had an increased likelihood of contracting cancer from breathing air toxics from outdoor sources if exposed to 2005 emission levels over his or her lifetime (EPA 2014b).

In addition to NAAQS criteria pollutants and HAPs, ongoing research has identified potential impacts of greenhouse gas (GHG) emissions, and subsequent effects to climate conditions causing net changes in the atmosphere. GHGs include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), water vapor, and other trace gases. Climate is the composite of generally prevailing weather conditions of a particular region throughout the year, averaged over a series of years. With variability in terrain, the climate of La Plata County is markedly different between the mountain regions and adjacent valleys. In the summer, the valleys are warm with much cooler temperatures in the mountains. Winters tend to be colder in the valleys than the lower slopes of the mountains due to cold air drainage, with the coldest temperatures in the higher elevations (NRCS 2015). Precipitation occurs in the mountains year round, with valley precipitation occurring at a lower frequency in the form of summer rains and winter snow. Rainfall averages around 20 inches a year, with an average snowfall of around 72 inches. Maximum temperatures during the summer months are generally in the 80s (degrees Fahrenheit [°F]) with winter minimum temperatures in the teens. Temperatures have occasionally reached above 100°F in June and July and have dipped below zero in December and January (NRCS 2015).

It is difficult to determine change in climate conditions on a national and global scale; however, it is understood that as levels of GHGs increase in the atmosphere, the rate of climatic changes are likely to increase. In 2007, La Plata County conducted a GHG emissions inventory, creating a baseline profile for the year 2005. The results of this inventory estimated that La Plata County’s total GHG emissions are estimated to be over 5 million tons of carbon dioxide equivalent (La Plata County 2008).

3.5.2 Environmental Consequences

No Action

Under the No Action Alternative, the proposed Project would not be constructed; therefore, no emissions or fugitive dust dispersion resulting from construction, operation, and maintenance of the pipeline and aboveground equipment would occur.

Proposed Action

Air quality impacts associated with construction of the pipeline under the Proposed Action would primarily arise from fugitive dust and emissions generated from construction vehicles and equipment. These emissions produced during construction activities would affect local air quality; however, these impacts would be temporary and minor, limited primarily to the area where Project activities would occur. Additionally, exhaust and dust emissions would be diluted in the atmosphere surrounding the Project area. Per Section 2.2.4, reasonable precautions would be used to prevent fugitive dust from becoming airborne during construction, including 1) using water or chemicals to control dust where possible, 2) covering open-bodied trucks at all times while transporting materials likely to produce airborne dust, 3) promptly removing earth or material from paved roads, and 4) re-establishing vegetation in temporary work areas as soon as possible after construction concludes. Impacts to air quality from ground-disturbing vehicles would cease once the Project is completed.

No impacts to climate are anticipated from implementation of the Proposed Action. While there would be a small amount of GHGs produced, this would not result in a measurable increase in overall GHG emissions as this small increase, when considered on a national and global scale, would be a minute contribution to the levels of GHGs in the atmosphere.

3.6 Cultural Resources

3.6.1 Existing Conditions

The Proposed Action is located in the Northern San Juan cultural region on the periphery of the Colorado Plateau physiographic province. As a federal undertaking, impacts to cultural resources must be considered as regulated by the NHPA. In order to comply with the NHPA, a Class III cultural resources inventory was conducted for the proposed pipeline. In addition to the NHPA, this work was conducted adhering to the Standards and Guidelines of the Secretary of the Interior (48 CFR 190); the Colorado Historical, Prehistorical, and Archaeological Resources Act of 1973; Colorado Revised Statutes 1973 24-80-401; and the Colorado Office of Archaeology and Historic Preservation (OAHP).

The Project area of potential effect (APE) for historic properties (cultural resources listed on, or considered eligible for listing on the National Register of Historic Places [NRHP]) is defined as a 150-foot-wide corridor for the linear portions of the Project, comprising the 50-foot-wide construction corridor centered on the proposed centerline alignment, as well as a 50-foot buffer on either side. For the non-linear facilities, the APE is defined as the area where ground disturbance may occur during construction and maintenance of the proposed Project, with a 50-foot-wide buffer around these areas. This APE includes the area of direct impact and adjacent

areas where indirect effects could occur and is congruent with the area inventoried for cultural resources.

Prior to fieldwork, a Class I archival records search was conducted through the OAHP to identify previously recorded archaeological sites within 0.5 mile of the APE. The records search yielded 99 previously recorded cultural resources within 0.5 mile of the proposed pipeline. The majority of these previously recorded sites are prehistoric, with 71 sites dating primarily to the Puebloan tradition of the region, specifically the Basketmaker II through Pueblo I time periods (400 B.C.–A.D. 900). The remaining 28 cultural sites were associated with historic-era occupation and activity in the region, particularly ranching and homesteading. Of the 99 sites identified during the archival records search, 12 were shown to be in the APE. Additional information on the archival search conducted for the Proposed Action is presented in the cultural resource inventory report prepared for the Project which is on file with Reclamation (SWCA 2015c).

A Class III inventory of the APE was conducted in August 2014 and June 2015, resulting in the identification of two newly recorded cultural sites and record updates for six previously recorded sites. The remaining six previously recorded cultural sites shown by OAHP records to be located within the APE during the Class I search were not located during the intensive pedestrian survey. Results of the cultural resources survey are summarized here; however, detailed site descriptions for all cultural sites recorded or updated during the survey can be found in the cultural resource inventory report (SWCA 2015c). Table 3.7 provides a summary of these 14 sites and the results from the survey.

Table 3.7. Site Summary, Eligibility, and Mitigation Recommendations

| Site No. | Site Type/Cultural Affiliation and Dates | Eligibility Determination | Land Ownership | Required Mitigation |
|-----------|---|---------------------------|----------------|---|
| 5LP 10658 | Ranching/Agricultural /U.S. Territorial– WWII (A.D. 1880– 1945) | Not eligible | Private | None. |
| 5LP 10659 | Grave or Cairn/Unknown | Undetermined | Reclamation | Monitor construction within 50 feet of the site. |
| 5LP 463 | Artifact scatter and features/ Basketmaker III– Pueblo I | Eligible | Reclamation | Monitor construction within 50 feet of the site. |
| 5LP 525 | Artifact scatter and features/ Basketmaker III– Pueblo I | Eligible | Reclamation | Monitor construction within 50 feet of the site. |
| 5LP 536 | Habitation/PI | Eligible | Reclamation | Monitor construction within 50 feet of the site. |
| 5LP 537 | Artifact scatter and features/ Basketmaker III– Pueblo I | Not eligible | Reclamation | Site was likely obliterated by previous pipeline construction; monitor construction within 50 feet of the site. |
| 5LP 640 | Artifact scatter and features/Late Archaic–Pueblo I | Not eligible | Reclamation | The site has been tested multiple times; monitor construction through the site and within 50 feet of |

| Site No. | Site Type/Cultural Affiliation and Dates | Eligibility Determination | Land Ownership | Required Mitigation |
|------------|---|---------------------------|----------------|--|
| | | | | the site. |
| 5LP 6656.1 | Historic ranching/1920–present | Eligible | Reclamation | The segments of ditch within the Project area would either be avoided or repaired to pre-construction state. |
| 5LP 512 | Artifact scatter / Basketmaker III–Pueblo I | Eligible | Reclamation | Site could not be relocated, possibly misplotted; no further work. |
| 5LP 522 | Lithic scatter/prehistoric unknown | Not eligible | Reclamation | Site could not be relocated. It is in an existing pipeline corridor and presumed destroyed; no further work. |
| 5LP 531 | Lithic scatter/prehistoric unknown | Not eligible | Reclamation | Site could not be relocated. It is in an existing pipeline corridor and presumed destroyed; no further work. |
| 5LP 533 | Lithic scatter/prehistoric unknown | Not eligible | Reclamation | Site could not be relocated. It is in an existing pipeline corridor and presumed destroyed; no further work. |
| 5LP 585 | Lithic scatter/prehistoric unknown | Not eligible | Reclamation | Site was excavated in 2008 and then destroyed by construction of a water intake structure; no further work. |
| 5LP 1985 | Lithic scatter/prehistoric unknown | Not eligible | Reclamation | Site could not be relocated. It is in an existing pipeline corridor and presumed destroyed; no further work. |

3.6.2 Environmental Consequences

No Action

Under the No Action alternative, the proposed pipeline would not be constructed, therefore no direct or indirect impacts resulting from construction, operation, and maintenance of the pipeline and aboveground equipment would occur.

Proposed Action

Direct impacts to cultural resources are indicated by the number of NRHP-eligible cultural resources to be disturbed within the Project area. If a cultural site is significant for reasons other than its potential to provide important scientific information, direct impacts may also include the introduction of audible, atmospheric, or visual elements that are out of character for the cultural resource.

In all, eight cultural sites (5LP463, 5LP525, 5LP536, 5LP537, 5LP640, 5LP6656.1, 5LP10658, and 5LP10659) were identified during the Class III inventory of the APE for the proposed Project (six of the sites listed in Table 3.7 above were not located during the survey). Of these, four are recommended eligible for the NRHP, three are recommended not eligible, and one is recommended as “needs data.”

One eligible site is the historic lateral of the Pine Ridge Ditch (5LP6656.1), which intersects the proposed construction corridor in five locations. The ditch may be directly impacted by open trenching during pipeline construction. However, the ditch could be restored to its original contours subsequent to Project construction; an existing culvert would be replaced at the easternmost crossing.

Site 5LP10659, which may be a cairn or grave, is of undetermined eligibility because more information is needed for evaluation for the NRHP. Located outside the construction area, the resource would be avoided by Project construction and no direct impacts from the Proposed Action are anticipated to the resource.

Three of the remaining six sites (5LP463, 5LP525, 5LP536) are recommended eligible for the NRHP under Criterion D. These sites are located outside the construction area and would be avoided during construction.

Sites 5LP640, 5LP537, and 5LP10658 and are not considered significant cultural resources. There would be no direct impacts to ineligible sites from the Proposed Action, as these sites are not considered significant resources.

Per Section 2.2.4, archaeological monitoring of blading, trenching, and other excavation work would be conducted within 50 feet of known archaeological sites due to the potential for previously unknown subsurface archaeological deposits. Archaeological monitoring is not recommended for the two historic built environment resources within 50 feet of the construction area (5LP6656.1 and 5LP10658), or for backfilling of previously excavated soils, recontouring, or directional boring. No further archaeological work, including monitoring, is recommended for those previously recorded cultural sites not identified during the survey, as they are presumed destroyed by construction of an existing pipeline that the proposed pipeline follows for much of its alignment or are misplotted on OAHP records, and are located outside the APE.

In the event of an unanticipated discovery of cultural material during construction, all work at that location would be stopped immediately, the area fenced off, and Reclamation immediately notified. Reclamation would then evaluate the site. Should a discovery be evaluated as significant, it would be protected in place until mitigating measures can be developed and implemented according to guidelines set by Reclamation.

3.7 Recreation

3.7.1 Existing Conditions

Currently there is no public recreation access around Lake Nighthorse. Since the establishment of the reservoir in 2009, Reclamation has met with ALP Project partners and stakeholders to develop a recreation strategy and management plan. Because Reclamation is not a recreation management agency, the first step towards allowing recreation is developing a lease and annexation agreement with the City of Durango, which is currently in progress. Plans for recreational facilities are currently being developed. A conceptual recreation plan released in October 2014 identifies access items such as road improvements, overflow parking, boat docking, and buoys, as well as measures for cultural resource protection (City of Durango and

Reclamation 2014). All of these facilities would be located in areas removed from the proposed Project area. Potential recreational uses include picnicking, boating, and fishing. Potential recreational users would be restricted from the proposed Project area by fencing, signs and gated access.

3.7.2 Environmental Consequences

No Action

Under the No Action Alternative, no impacts to recreational opportunities would occur, as the Proposed Action would not be approved and the pipeline and associated facilities would not be built.

Proposed Action

The proposed Project is planned in an area removed from the potential future recreational facilities. In the future, when Lake Nighthorse is open for recreational use, the intake building and a portion of the pipeline would be noticeable by boaters utilizing the lake surface (see the Visual Resources analysis below for more information). Buildings and infrastructure can reduce the scenic quality and natural vistas and the recreational experience for users seeking a remote experience. However, the proposed facilities have been designed to blend with the landscape's natural features and colors to a practicable extent. There would be no impacts to potential fishing or boating from the proposed Project, because these activities would occur elsewhere on the banks of Lake Nighthorse and recreationists would be warned from using areas near the proposed Project via signage. In addition, there would always be a minimum pool level of 30,000 acre-feet in the reservoir (Reclamation 2000a), and the Proposed Action includes the installation of fish screens to greatly minimize the potential of fish being pumped out of the reservoir.

3.8 Visual Resources

3.8.1 Existing Conditions

The vicinity of the Project area is dominated by piñon-juniper woodlands, meadows and pastures, rock outcrops, and rolling hills and mesas. The scenic quality of the area could generally be considered pleasing with scenic mountain vistas and a panoramic rural atmosphere. The visual characteristics of the entire basin are detailed in the FSEIS (Reclamation 2000a:3-280).

Structures visible in the vicinity of the proposed intake building area and lake surface include a number of transmission lines and pole structures, paved and gravel roads, the Ridges Basin dam, and a boat ramp (Figure 3.1).



Figure 3.1. View from Lake Nighthorse facing toward existing intake area (gravel area in the middle ground-left).

Structures visible in the vicinity of the pipeline route as it moves toward Lake Durango include transmission lines and pole structures, parallel ROWS, roads, residential structures, and fencing (Figure 3.2).



Figure 3.2. Existing pipeline route paralleling proposed pipeline route.

Viewers of the intake building area and pipeline corridor south of the booster pump station would include future recreational users of Lake Nighthorse. Viewers of the corridor as it progresses northwest would include nearby residents and users of the two county roads (CR 210 and CR 141).

3.8.2 Environmental Consequences

No Action

There would be no impact to visual resources as a result of the No Action Alternative, because the Project would not be approved and vegetation removal and construction of the pipeline and associated facilities would not occur.

Proposed Action

During construction, the pipeline corridor would be graded and vegetation would be removed. Following construction, the pipeline corridor would be revegetated and reseeded to match the surrounding landscape as much as possible. The pipeline corridor between the booster pump station and the intake area would be visible from Lake Nighthorse. This impact would be long term due to the change in vegetative composition and the time it takes to establish similar vegetative cover to the surrounding landscape. The pipeline corridor from CR 210 to Lake Durango would be visible from areas along CR 210 and CR 141 and from some residences immediately adjacent to the corridor. The pipeline corridor that affects woodland areas would be visible in the long term, as woodland features would not be expected to take root for many years, although portions of the corridor affecting grasslands would only be visible for the 2 years or so that grassland requires to re-establish and blend in with the surrounding landscape.

The intake building and parking area and intake road access would be visible from some vantage points upon the surface of Lake Nighthorse. The structures would be painted to blend with the landscape and would be screened from visibility by topography on some areas of the lake and from CR 210. The introduction of an additional structural element might attract the attention of the casual observer, but would not be out of character with other structural elements such as the transmission lines, linear roadways, and the Ridges Basin dam.

Overall, the level of change to the visual characteristics of the landscape in and around the Project area following construction would be low to moderate and not out of character with the surrounding structures or the rural-agricultural character of the Project vicinity. Potential viewers would notice the proposed Project facilities during operations in the long term, but these activities and structures would not be out of character for the area or surprising to lake users, as the potential and planned future uses of Lake Nighthorse have been well documented.

3.9 Land Use and Access

3.9.1 Existing Conditions

The proposed Project is in La Plata County, approximately 3 miles from the City of Durango. The area is primarily residential, with many residences clustered in subdivisions. Residents value the rural nature of the area, including maintaining open space, wildlife habitat, and agricultural use of the land. There are 22 private land parcels along the proposed pipeline route varying in size. There are 14 private parcels along CR 141 that would be directly crossed by the proposed pipeline corridor. Another six parcels are crossed by the proposed pipeline corridor within the Lake Durango Subdivision. In developing the alignment of the pipeline corridor, efforts were made to place the pipeline within the first 50 feet of the parcels adjacent to the county road ROW. All access across private lands for the pipeline corridor would be negotiated and detailed in agreements between LPWWA and the individual property owners.

Three of the private parcels crossed have conservation easements with LPOSC and an additional three parcels have expressed interest in obtaining an LPOSC easement. LPOSC seeks conservation easements on lands to maintain them for open space, agriculture, and wildlife habitat values. As such, LPOSC easements place limits on constructing buildings upon the property and require the landowner to steward and maintain the property for its conservation values. Construction of buried pipelines is an allowed use under these LPOSC agreements as long as the ground is appropriately restored and revegetated.

3.9.2 Environmental Consequences

No Action

There would be no impacts to land use and access from the No Action Alternative because the Project would not be built and thus no changes would occur to land uses or access.

Proposed Action

The Proposed Action would cause short-term impacts to the 22 private property parcels along the pipeline corridor during construction. Construction impacts would include clearing and grading of the surface, trenching, backfilling and recontouring, and reclamation of the disturbed area. These activities could cause dust dispersion and increased traffic and noise. Any infrastructure,

e.g., fences that are crossed or removed during construction, would be put back in place after construction and site reclamation. Construction time would vary based on the length of the pipeline crossing each private parcel, but in general, landowners can expect up to 3 days for pipeline construction and up to 1 week for reclamation of the disturbed area on their parcel. Reclamation of the pipeline corridor would be established and detailed in each easement agreement with the landowner. Landowners would be given adequate notice and interruptions would be coordinated with them in order to minimize the inconvenience. Construction would only occur during daytime hours in order to minimize noise and disruption to homeowners during the evening.

The Proposed Action would not affect the eligibility status of properties with conservation easements because construction impacts would be short term, the disturbed area would be reclaimed, and construction activities would be restricted in habitats during breeding, nesting, and migration seasons for those species with habitat in the area (LPOSC 2015).

The proposed water pipeline is expected to be in operation for at least 40 years. Hence, maintenance activities would occur throughout the life of the proposed pipeline, as needed. LPWWA would be responsible for maintenance of the proposed pipeline and facilities. Maintenance if needed on portions of the pipeline that are on private property would cause short-term impacts to those properties, including accessing the pipeline corridor and facilities for reconnaissance, trenching, replacement, repair, and installation of community service taps. Again, for any maintenance required, LPWWA would coordinate with the landowner to establish access times to minimize inconveniences.

3.10 Water Rights and Indian Trust Assets

3.10.1 Existing Conditions

As noted in the Introduction to this EA, the proposed Project is directly related to the Settlement Act and the ALP Project. In the Settlement Act, Congress agreed that resolution of the Colorado Ute Tribes' water rights claims would be accomplished by building a large water Project to supply water to the Colorado Ute Tribes. Hence, the purpose of the ALP Project was to implement the Settlement Act by providing the Colorado Ute Tribes an assured long-term water supply and water acquisition fund in order to satisfy the Colorado Ute Tribes' senior water rights claims as quantified in the Settlement Act and to provide for identified municipal and industrial water needs in the ALP Project area.

For analysis purposes during the development of the ALP Project, it was established that the Colorado Ute Tribes would use this assured water supply to satisfy future water demands on their reservations and provide water for regional municipal and industrial needs. However, being that tribes are sovereign nations, the ultimate use of the water is left to tribal discretion in accordance with federal law (Reclamation 2000a). After years of alternatives analysis, the ROD for the FSEIS was signed in 2000 and included the details and limits for establishing what is now Lake Nighthorse (Reclamation 2000b, 2015).

Indian trust assets are legal interests in property held in trust by the United States for federally recognized Indian tribes or Indian individuals. Assets can be real property, physical assets, or intangible property rights, such as lands, minerals, hunting and fishing rights, and water rights. The United States has an Indian trust responsibility to protect and maintain rights reserved by or granted to 70 such tribes or individuals by treaties, statutes, and executive orders. These rights are sometimes further interpreted through court decisions and regulations. This trust responsibility requires that all federal agencies take all actions reasonably necessary to protect trust assets.

3.10.2 Environmental Consequences

No Action

The No Action Alternative does not provide an option for the Colorado Ute Tribes to exercise use of their water right per the FSEIS and associated ROD (Reclamation 2000a, 2000b). LPWWA's efforts to establish increased water supply to existing end users in western La Plata County would not be achieved.

Proposed Action

The Proposed Action enables the Colorado Ute Tribes to exercise their water rights as purposed in the Settlement Act. The Proposed Action is an authorized use of the water rights as detailed in the FSEIS, and the Project has been developed in coordination with the Southern Ute and Ute Mountain Ute Indian Tribes. Further, this EA and associated environmental compliance documents for the proposed Project implement NEPA, as required by the FSEIS. Therefore, the proposed Project is in compliance with Colorado Ute Tribes' water rights and water uses.

Reclamation carries out its activities in a manner that protects Indian trust assets and avoids adverse impacts when possible. When impacts cannot be avoided, Reclamation would provide appropriate mitigation or compensation. Implementation of the Proposed Action would have no foreseeable negative impacts on Indian trust assets.

3.11 Transportation

3.11.1 Existing Conditions

The proposed pipeline corridor is within a predominantly residential area accessed by CR 210 and CR 141. Both roads are paved and receive moderate to high use, especially CR 141, which additionally receives a relatively high amount of use from vehicles traveling between northwest New Mexico and southwest Colorado. The majority of the pipeline corridor follows these county roads.

3.11.2 Environmental Consequences

No Action

There would be no impact to transportation from the No Action Alternative, as Project-related traffic and road impediments would not occur.

Proposed Action

There would be minimal and short-term impacts to traffic and roads during construction of the pipeline. There would not be any impacts to traffic and roads during the operation phase of the proposed Project, except when maintenance or repair is needed. The pipeline would cross three roads: CR 210, CR 141, and Lakeside Drive, which is a private road. CR 210 and 141 would be bored and therefore Project construction would not cause any impacts to the road or traffic patterns. Lakeside Drive would be open cut and traffic would be constrained to one lane during construction. As a result there would be short-term impacts and delays on Lakeside Drive during construction, which is estimated to take 1 to 3 days at the Lakeside Drive crossing. Once construction is completed, the roadbed would be restored to pre-construction conditions.

The proposed pipeline crosses approximately 20 properties, mostly crossing within the first 50 feet adjacent to the road ROW, thereby crossing private driveways. These residents would experience minor, short-term impacts during construction across their parcels and driveways. Construction at driveway crossings would likely last 1 day, but not more than 3 days. Landowners would be given adequate notice and interruptions would be coordinated with them in order to minimize the inconvenience. Construction would only occur during daytime hours in order to minimize noise and disruption to homeowners during the evening.

Construction vehicles would use CR 141 and 210, as well as the pipeline corridor itself to transport pipeline materials and construction equipment. The amount of traffic and vehicle type and size needed for construction would not be out of character for these county roads, and traffic patterns along these county roads would not be interrupted or altered.

The proposed access road to the intake building would not be open to the public. The road would be gated and only used by authorized personnel for operation, maintenance, and monitoring.

3.12 Socioeconomics and Environmental Justice

3.12.1 Existing Conditions

Population estimates for 2014 for La Plata County were 53,989 persons, higher than the population estimates base for 2010 at 51,334 persons (U.S. Census Bureau 2015a). These estimates show a population increase of approximately 5.2% for the county, which is lower than the population percent change for the state (6.5%), but above that of the national percent change at 3.3% (U.S. Census Bureau 2015a).

Census Tracts are geographic regions within the United States that are defined by the U.S. Census Bureau in order to track changes in a population over time. Census Tracts are based on population sizes and not geographic areas. The average population of a Census Tract is about 4,000 people, so rural areas that are sparsely populated may have very large Census Tracts, while densely populated urban areas may have very small Census Tracts.

La Plata County has 10 Census Tracts, eight of which are outside the Southern Ute and Ute Mountain Ute Reservations (U.S. Census Bureau 2010). Census Tract 9707.01 comprises the majority of western La Plata County and is a relatively large Census Tract, indicating this is a

less populated, rural area. In terms of population trends over the past 5 years for western La Plata County (Census Tract 9707.1), the American Community Survey 5-Year Estimates indicate that the population has dropped slightly from 28,803 persons in 2010 to 28,527 persons in 2013, a change of -0.9% (U.S. Census Bureau 2015b). In contrast, the population of La Plata County as a whole is estimated to have increased, from 51,334 persons in 2010 to 53,284 persons in 2013, a change of 3.8% (U.S. Census Bureau 2015a).

U.S. Census statistics from 2009 to 2013 indicate that the median household income of La Plata County (in 2013 dollars) was \$58,080, slightly lower than the state median household income at \$58,433, but above the national median household income of \$53,046 (U.S. Census Bureau 2014c). In order to identify a low-income population, the U.S. Census Bureau develops annual statistical poverty thresholds. The Council on Environmental Quality (CEQ) defines a low-income area as an area that has more than 50% of the population living below the poverty level. In 2013, poverty level was based on total income of \$11,888 for an individual and \$23,834 for a family of four (U.S. Census Bureau 2015a). Poverty data estimates for La Plata County from the U.S. Census Small Area Income and Poverty Estimates model indicate that the percent of the population living below the poverty level in the County as a whole is slightly below that of the state (12.4% and 13%, respectively), and lower than the national average of 14.5% (U.S. Census Bureau 2015a). La Plata County does not meet the CEQ (1997) definition of a low-income population area (50% or higher).

Based on 2013 data, minorities made up 20.4% of the population in La Plata County, compared to 30.6% in Colorado and 37.4% in the United States as a whole (Table 3.8). The proportion of minorities in the county is lower than the state and U.S. averages (U.S. Census Bureau 2015a). Within the Southern Ute and Ute Mountain Ute tribal nations, Native Americans represented the vast majority of the population. The largest minority group was of Hispanic or Latino origin.

Table 3.8. Population by Race/Ethnicity and Origin (2010–2013)

| Population | La Plata County | Colorado | United States |
|--|-----------------|--------------------|----------------------|
| White alone, not of Hispanic or Latino origin | 42,254 79.6% | 3,656,246 69.4% | 197,896,653 62.6% |
| Hispanic or Latino origin of any race | 6,660 12.5% | 1,106,357 21.0% | 54,058,031 17.1% |
| American Indian or Alaskan Native alone | 3,516 6.6% | 84,293 1.6% | 3,793,546 1.2% |
| Asian alone | 372 0.7% | 158,051 3.0% | 16,754,828 5.3% |
| Black or African American alone | 266 0.5% | 231,808 4.4% | 41,729,006 13.2% |
| Native Hawaiian and Other Pacific Islander alone | 53 0.1% | 5,268 0.1% | 632,257 0.2% |
| Two or more Races | 1,225 2.3% | 147,514 2.8% | 7,587,092 2.4% |
| Classified as Minority Population based on CEQ guidelines? | No | No | N/A |

Source: U.S. Census Bureau 2015a.

Based on the CEQ definition of a minority population area (minority residents exceed 50% of all residents), La Plata County is not considered a minority community (see Table 3.8).

When examined at the Census Tract level, western La Plata County (Census Tract 9707.1, non-reservation lands) has a population of Hispanic or Latino origin of approximately 53.1%. Taking into account other minority groups as well as the Southern Ute and Ute Mountain Ute populations, western La Plata County does have minority population greater than 50%.

Property values are an important indicator of socioeconomic health within a community. Based on information on owner-occupied units from the American Community Survey 5-Year Estimates (2009–2013) for La Plata County, there were an estimated 13,932 owner-occupied units for 2013, with the majority valued over \$200,000. Overall, the median value of owner-occupied units (in 2013 dollars) was \$339,400 (U.S. Census Bureau 2015a).

3.12.2 Environmental Consequences

No Action

Under the No Action Alternative, the proposed pipeline would not be constructed; therefore, no population groups would be impacted by the Proposed Action; however, water use conflicts and limits on development in western La Plata County would persist and increase in the area. Future domestic water needs in southwestern La Plata County would not be met and property values would not be affected.

Proposed Action

Development of the proposed water pipeline and associated facilities would not have disproportionately high or adverse effects to low-income or minority populations, and there would be no displacement of any community under the Proposed Action.

There may be beneficial indirect effects from construction and operation of the proposed Project, such as economic benefits to the state and La Plata County governments related to tax revenues produced from sales of the water to end users. Another indirect impact under the Proposed Action would be the future benefit of increased property values in the western portion of the County, resulting from the availability and sale of potential water taps. As environmental justice is defined as fair and meaningful involvement of all people, any effects related to environmental justice would also apply to those utilizing or living on lands surrounding the Proposed Action. These benefits would therefore not be restricted to low-income or minority populations. The water supply provided by the proposed pipeline would be a future benefit for all those living in the western portions of La Plata County.

3.13 Noise

3.13.1 Existing Conditions

The proposed pipeline corridor crosses two paved county roads and is partially located in a predominantly rural residential part of La Plata County. Aside from Lake Nighthorse, there are no other managed land uses on Reclamation land. Generally speaking, wildlife can be heard and seen in the area, as well as sounds associated with the daily activity of residences in the area and vehicles passing along the county roads and within residential subdivisions. Aside from traffic,

and the sounds from occasional home improvements and small-scale farm and ranch activities, there is minimal noise or disruptions to the quietude that characterizes the rural area where the pipeline corridor is proposed. There are residences that occur all along the private property portions of the Project area. No residences are located within 0.25 mile of where the generators would be operating. The nearest residence to the booster station is 0.40 mile.

3.13.2 Environmental Consequences

No Action

Under the No Action Alternative, there would be no additional noise because the Proposed Action would not be approved and the pipeline would not be constructed.

Proposed Action

The Proposed Action would result in noise during Project construction, disturbed area rehabilitation, and from generators during pumping events and operation of the proposed system. Sounds from construction equipment would be short term, lasting approximately 1 year. Furthermore, the sounds from construction would be localized to the segment where construction is occurring and, generally speaking, would not be audible more than a 0.25 mile away.

Maintenance and operations would generate some noise during the pumping events through use of the generators. This impact is expected during the first year of operations. LPWWA is currently in the process of applying for a line extension with La Plata Electric Association (LPEA) to deliver electricity to the intake and booster pump station. It is anticipated that by the second year of operations, and for all subsequent years of operation, that water would be pumped using LPEA-supplied electricity for power rather than the temporary generators. Hence, the noise from using generators during the first year of operation would be short term.

3.14 Public Health and Safety and Hazardous Materials

3.14.1 Existing Conditions

Ensuring health and human safety is a major priority for Reclamation and LPWWA. Reclamation follows its national, state, and local contingency plans as they apply to emergency responses. These plans are also consistent with federal and state laws and regulations. OSHA regulates worker safety under the Occupational Safety and Health Act of 1970. This act requires employers and operators to provide a safe and healthy workplace for employees, and the agency must track and monitor reportable incidents of accidents and injury.

The proposed Project is located in a residential area with commuter and commercial traffic (including delivery trucks, agricultural equipment, and some industrial field vehicles).

3.14.2 Environmental Consequences

No Action

Under the No Action Alternative, no potential risk would be presented to public health and safety since the Proposed Action would not be approved and the pipeline would not be built.

Proposed Action

During construction of the pipeline, physical hazards such as motor fuels, heavy machinery, and deep trenches would be present. Environmental impacts from hazardous materials or waste related to the Proposed Action involve potential spills or leaks of motor fuels and lubricants. Fuel and lubricant spills have the potential to impact soil and water resources, but because of the relatively small amounts of such materials that would be used in the Project area (i.e., a 55-gallon drum), impacts from accidental spills or leaks are expected to be avoided. In the event of a spill, all appropriate state and federal agency notification protocols would be adhered to. During construction, the use, storage and disposal of hazardous materials and wastes within the Project area would be managed in accordance with all federal, state, and local standards, including the Toxic Substances Control Act of 1976, as amended (15 United States Code 2601, et seq., 40 CFR 702–799, and 40 CFR 761.1–761.193). Any trash or solid wastes generated during the Proposed Action would be properly disposed off-site.

Traffic associated with the Proposed Action would be appropriately licensed and permitted and would only use the county roads to access the Project area. No safety risks related to Project traffic are expected.

4 Cumulative Impacts

Cumulative impacts are impacts on the environment, which result from the incremental impact of the action, when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Past, present, and reasonably foreseeable future actions which may contribute cumulatively to impacts from the Proposed Action are described below. The cumulative area of analysis is limited to those actions identified within the immediate vicinity of the Proposed Action.

4.1 Past and Present Actions

The Project is proposed in western La Plata County, which consists primarily of private lands, with some tribal lands, federal lands, and state lands dispersed throughout the area. Past and present development and land use in the area has primarily been from residential development, agricultural ranches, and farms and oil and gas development.

The past actions that contribute to impacts in the vicinity of the Proposed Action include the ALP Project itself with creation of the Ridges Basin Dam and Lake Nighthorse, the installation of the intake equipment, large and small transmission line and pipeline corridors that traverse the area, residential developments, and county and private roads.

4.2 Reasonably Foreseeable Future Actions

Reasonably foreseeable future actions in the area include a potential power line extension, additional water distribution pipelines, recreational use at Lake Nighthorse, and overall increased residential, agricultural, and industrial development from the availability of water to the region. Future actions described here are those with defined scopes that can be described, and would likely occur within approximately 1 year from initiation of the Proposed Action. Other actions that are still speculative in nature are not included in this analysis.

LPEA Distribution Line: LPWWA is currently working with LPEA to plan and site an electrical distribution line extension that would eventually provide a permanent source of electricity to the pump station and intake at Lake Nighthorse, subject to NEPA compliance and a separate license agreement with Reclamation. Temporary use of generators to power the pumps would be discontinued once the line extension is installed. Details about the distribution line are still being developed; however, it is anticipated that the electricity would likely be 4 kilovolts extending from the Bodo substation and connecting to the intake station at Lake Nighthorse, likely following the alignment of CR 210 for the majority of its length.

LPWWA RDWS: The Proposed Action is one step toward a reliable water supply delivery network to western La Plata County. LPWWA has tentatively mapped out a potential future water pipeline distribution network in several possible phases with the ultimate goal of distributing municipal water to users in southwestern La Plata County, as far as the New Mexico state line (LPWWA 2015). Water availability would foreseeably enable residential and agricultural growth in the area, as well as water use for industrial purposes. The actual extent and mileage of distribution is currently unknown, and LPWWA continues to hold public meetings on a regular basis.

Recreation at Lake Nighthorse: Reclamation has been working with the ALP Project partners and stakeholders to reach consensus regarding development and management of recreation at Lake Nighthorse. As part of these negotiations, Reclamation has been working on a recreation lease and annexation agreement with the City of Durango, in order to facilitate the provision for municipal services and to enable the City to manage the recreation area. Currently, no public or recreational access is permitted at Lake Nighthorse. Visitation and use would increase once a recreation plan is developed and the area is opened to the public for recreation. The Conceptual Recreation Plan released in October 2014 includes consideration of an aquatic nuisance species inspection station and decontamination area, measures to maintain water quality, protection of cultural resources, entrance area plans, overflow parking, road improvements, boat docking, and buoys. Later stages of the conceptual recreation plan include interpretive displays/education, natural surface trails, swimming beach, breakwater, permanent entrance building, and picnic areas (City of Durango and Reclamation 2014).

4.3 Cumulative Impacts by Resource Group

4.3.1 Soils, Water Resources, Vegetation and Noxious Weeds, and Air Quality

Impacts from past and present actions in the vicinity of the Project area include ground disturbance and increased human presence. Similarly, reasonably foreseeable future projects mentioned above would add to the ground disturbance already occurring. Construction and other ground disturbance on private lands would have a cumulative contribution, but such actions are estimated to be minimal given the minor actions that generally occur on private lands in the area. The Proposed Action would add 26 acres of ground disturbance to that expected from the reasonably foreseeable future actions.

4.3.2 Wildlife, Threatened and Endangered Species, Migratory Birds, and Fish

Together the Proposed Action, along with past, present, and reasonably foreseeable projects in the area would contribute to wildlife habitat fragmentation in the area and impact the quality of habitat. Impacts to wildlife, threatened and endangered species, and migratory birds would depend on the placement and type of ground disturbance and the available habitat within the individual project areas. Generally, native vegetation loss, increased noise, and habitat degradation would be expected to occur, especially during construction of the future actions. On Reclamation lands, mitigation would be required to reduce these impacts. In time, the reclaimed and seeded areas would result in stable plant communities with densities that are similar to the pre-disturbance plant densities. Some species would also adapt to noise associated with maintenance and operation of these actions. The Proposed Action would disturb 26 acres in addition to the past, present, and reasonably foreseeable ground disturbance described above.

4.3.3 Cultural Resources, Recreation, Visuals, Noise, Land Use, and Transportation

Past, present, and reasonably foreseeable projects that have or would contribute to ground disturbance, noise and access in the area would degrade scenic quality and quietude, increase traffic, and increase the overall presence of humans in the area. Cultural resources can be impacted directly by ground disturbance, and indirectly by changes to setting and feeling, resulting from noise, dust, and infrastructure. However, required avoidance and mitigation of such impacts associated with projects subject to federal and state law would minimize cumulative impacts to cultural resources. While there is currently no recreation on Reclamation

lands within the Project area, there are recreation opportunities on nearby public lands, and recreation is being planned for Lake Nighthorse. Future actions that create ground disturbances, introduce structures, or otherwise alter the natural landscape have the potential to increase traffic and noise and affect the experiences recreationists may be looking for, as well as the visual nature of the area. These types of activities would contribute cumulatively to altering the rural and agricultural values of the area. However, some of these impacts are minimized by implementing mitigation measures as well as through efforts to conserve open space by entities such as LPOSC. Additionally, there is a high percent of U.S. Forest Service and Bureau of Land Management lands in the county that provide an alternative experience to users seeking a more pristine environment rather than seeking to visit areas already subject to development and residential use. The Proposed Action would incrementally add to the impacts of past, present, and reasonably foreseeable actions by contributing to an increase in ground disturbance, visual and structural elements, and human presence.

4.3.4 Water Rights and Indian Trust Assets, Socioeconomics and Environmental Justice, and Public Health and Safety

No cumulative effects have been identified for water rights and Indian trust assets, socioeconomics and environmental justice, or public health and safety as the past, present, and reasonably foreseeable future actions, as well as the Proposed Action, are not expected to measurably affect these issues.

5 Consultation and Coordination

5.1 Background

The proposed Project and the need for domestic water supply in rural southwestern La Plata County have been discussed for many years. With the approval of the ALP Project in 2000, the idea of delivering water became more possible and a task force was formed to learn more about the options for developing an RDWS for western La Plata County. After years of study, including the publication of three major reports regarding domestic water, the task force formed into LPWWA in November 2007. LPWWA exists for the purpose of designing, constructing, and operating an RDWS in the western portion of La Plata County, and as such they have coordinated with the Southern Ute and Ute Mountain Ute Tribes, as well as La Plata County, the Southwestern Water Conservancy District, the State of Colorado Water Conservation Board, and regulatory agencies.

Specific to the Proposed Action, LPWWA has coordinated with Reclamation, tribes, and county and local residents to develop refine Project siting, plans, and alignment.

5.2 Scoping Process

Pursuant to NEPA, in November 2014 Reclamation announced that it was preparing an EA for the proposed raw water pipeline and that it would accept comments on the Proposed Action during the 30-day scoping period between November 10 and December 8, 2014. A press release announcing the scoping period and a public meeting for the Project was published in the *Durango Herald* on November 7, 2014. Additionally, a scoping letter was mailed or emailed to 95 recipients on the same date announcing the scoping period and public meeting. Recipients of the letter included Lake Durango residents and manager, landowners in the area and along the proposed pipeline corridor, government departments of the Southern Ute Indian Tribe and Ute Mountain Ute Tribe, the Southwestern Water Conservation District, the La Plata County Planning Department and Commissioners, the City of Durango, the CDPHE, and congressional representatives.

On November 18, 2014, Reclamation and LPWWA hosted a public meeting at the Durango Recreation Center. The meeting was attended by 62 members of the public, mostly residents with property along the proposed pipeline corridor. The meeting included brief introductions by Reclamation and SWCA, followed by a PowerPoint presentation by Bartlett & West, the engineering firm designing the pipeline. Several questions were answered following the presentation regarding capacity of the pipeline, specific design features, timelines, easements and permissions, impacts to cultural and visual resources, landowner rights, conservation easements, and cost of the Project.

Three letters were received during the scoping period that raised the following issues for consideration in the EA.

A letter from a Lake Durango landowner inquired whether the proposed ROW crossed his property. LPWWA worked with this commenter to identify his property and concluded that the Project does not affect the property in question.

A letter from Colorado Parks and Wildlife questioned whether there were any active bald eagle nests in the area and listed mitigations for active nests, as well as mitigation measures for elk and deer because the Proposed Action occurs within areas identified as elk and deer winter range. See the analysis above in Section 3.4 for detail regarding these issues, and the environmental commitments (Section 2.2.4).

The third letter raised concerns about the extent of impacts from the Proposed Action to threatened and endangered species and cultural resources, and suggested that such impacts would warrant an environmental impact statement before approving the Project. The commenter also requested that the analysis include the cost of operation and maintenance. Reclamation has taken these comments into consideration and will make the determination regarding level of NEPA analysis after review of the draft EA. Operations and maintenance costs are not publicly funded; therefore, no disclosure on the financial impact of the Project is required.

5.3 Agencies Consulted

Reclamation and /or LPWWA or its contractors are in the process of conducting ongoing consultation with several local, federal, tribal, and state agencies (Table 5.1).

Table 5.1. Agencies Consulted for the Proposed Action

| Agency | Coordination Role |
|--|---|
| Southern Ute Indian Tribe | Compliance with Section 106 of the NHPA, including tribal consultation to determine if the Proposed Action would impact areas of cultural importance. |
| Ute Mountain Ute Tribe | Compliance with Section 106 of the NHPA, including tribal consultation to determine if the Proposed Action would impact areas of cultural importance. |
| Colorado State Historic Preservation Office (SHPO) | Compliance with Section 106 of the NHPA, including SHPO review of the cultural resource report findings and site eligibility. |
| USACE Durango Regulatory Office | Compliance with the Clean Water Act, including a Section 402 general construction (stormwater) permit and a Section 404 wetland delineation. |
| USFWS | Compliance with the ESA to determine if any threatened or endangered species occur or would be affected by the Proposed Action. |
| La Plata County | Coordination with the planning department to assure that the Proposed Action is in compliance with county regulations. |

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