# Draft Environmental Assessment

## A&B Irrigation District – Unit A Pumping Plant #2
## Minidoka County, Idaho

U.S. Department of the Interior
Bureau of Reclamation
Pacific Northwest Region
Middle Snake Field Office
Boise, Idaho

U.S. Department of Agriculture
Natural Resource Conservation Service
Idaho State Office
Boise, Idaho

U.S. Department of Agriculture
Rural Development
Idaho State Office
Boise, Idaho

**May 2014**

# Acronyms and Abbreviations

| | |
|---|---|
| A&B or District | A&B Irrigation District |
| ACHP | Advisory Council on Historic Preservation |
| AIRFA | American Indian Religious Freedom Act |
| APE | Area of potential effect |
| APLIC | Avian Power Lines Interaction Committee |
| B.P. | Before present |
| BLM | Bureau of Land Management |
| BMP | Best Management Practice |
| CEQ | Council on Environmental Quality |
| cfs | cubic feet per second |
| CGP | Construction General Permit |
| Comprehensive Plan | Minidoka County's Comprehensive Plan |
| CWA | Clean Water Act |
| DPS | distinct population segment |
| EA | Environmental Assessment |
| EIRR | Eastern Idaho Railroad |
| EO | Executive Order |
| EPA | Environmental Protection Agency |
| ESA | Endangered Species Act |
| ESPA | Eastern Snake Plain Aquifer |
| FONSI | Finding of No Significant Impact |
| HUD | U.S. Department of Housing and Development |
| IDEQ | Idaho Department of Environmental Quality |

| | |
|---|---|
| IDFG | Idaho Department of Fish and Game |
| ITA | Indian Trust Assets |
| MBT | Migratory Bird Treaties |
| MOU | Memorandum of Understanding |
| NAGPRA | Native American Graves Protection and Repatriation |
| NEPA | National Environmental Policy Act |
| NHPA | National Historic Preservation Act |
| NOAA Fisheries | National Oceanic and Atmospheric Administration<br>National Marine Fisheries Service |
| NPDES | National Pollutant Discharge Elimination System |
| NRCS | Natural Resources Conservation Service |
| NRHP | National Register of Historic Places |
| NWR | National Wildlife Refuge |
| PEM | palustrine emergent marsh |
| Project | Unit A Pumping Plant EA |
| Reclamation | U.S. Bureau of Reclamation |
| RM | river mile |
| RMP | Resource Management Plan |
| ROW | right-of-way |
| SHPO | State Historic Preservation Office |
| SPCC | Spill Prevention Control and Countermeasures |
| SWPPP | Stormwater Pollution Prevention Plan |
| TCP | Traditional cultural properties |
| TMP | Transportation Management Plan |
| USACE | U.S. Army Corps of Engineers |
| USFWS | U.S. Fish and Wildlife Service |
| USGS | U.S. Geological Survey |

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# Chapter 1 PURPOSE AND NEED

The U.S. Department of the Interior Bureau of Reclamation (Reclamation) prepared this Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) for the proposed A&B Irrigation District (A&B or District) replacement pumping plant project. This EA analyzes the potential environmental impacts of constructing and operating an additional replacement pump station on the Snake River including an associated pipeline facility. The U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) and Rural Development (RD) serve as cooperating agencies in the completion of this EA.

## 1.1 Project Location and Background

The District is located in south-central Idaho near the town of Rupert (Figure 1-1). The District operates Reclamation's Minidoka Project North Side Pumping Division, which consists of approximately 77,000 acres of irrigable private land within Jerome and Minidoka counties. Approximately 62,000 acres (Unit B) are irrigated by pumping groundwater from deep wells from the Eastern Snake Plain Aquifer[1] (ESPA), and approximately 15,000 acres (Unit A) are irrigated by pumping surface water from the Snake River.

Water for Unit A is pumped from the Snake River by a pumping plant located about 8 miles west of Burley. The plant capacity is 270 cubic feet per second (cfs) which delivers water to a 26-mile-long unlined canal system that has the same capacity. The District and Reclamation hold natural flow water rights along with storage water rights in American Falls and Palisades reservoirs. The pumping plant is also used to deliver water to about 1,500 acres in Unit B that were previously converted to a surface water supply in the mid-1990s when certain wells failed for lack of a groundwater supply.

Water for Unit B is pumped from the ESPA by 174 wells ranging from 12 to 24 inches in diameter. The average discharge of these wells is about 6.4 cfs.

[1] The ESPA has been defined as the aquifer underlying an area of the Eastern Snake River Plain that is about 170 miles long and 60 miles wide as delineated in the report 'Hydrology and Digital Simulation of the Regional Aquifer System, Eastern Snake River Plain, Idaho,' U.S. Geological Survey Professional Paper 1408-F, 1992, excluding areas lying both south of the Snake River and west of the line separating Sections 34 and 35, Township 10 South, Range 20 East, Boise Meridian."

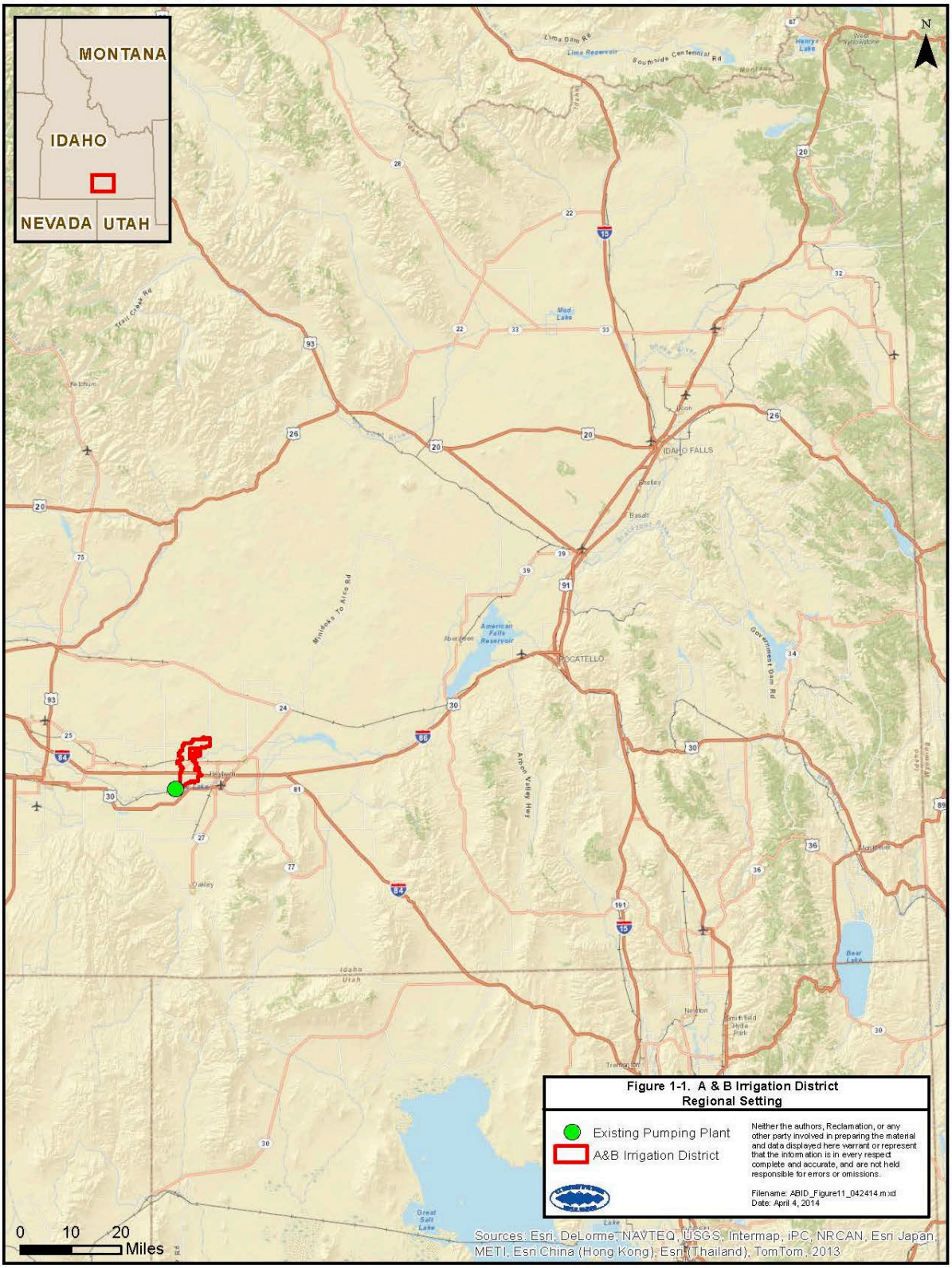


**Figure 1-1. Project location map.**

## 1.2 Proposed Action

The Proposed Action is to develop an additional replacement pump station on the Snake River including an associated pipeline facility. This pump station and pipeline would be used to (1) restore and/or improve reliability of surface water delivery to approximately 4,500 acres of existing Unit A lands located in Townships 9 and 10S, Range 22E, Minidoka County, and (2) deliver surface water supplies, when available, to the additional 1,500 acres of Unit B lands.

The project will convey 118 cfs of water from the Snake River to approximately 4,500 acres of existing Unit A surface water users and an additional 1,500 acres of existing groundwater Unit B lands. The project will enhance delivery efficiency to the existing Unit A system by replacing ditches with pipelines, and supplementing water deliveries to Unit B lands so that six to eight wells can be shut down when surface water is available, and ensure water delivery to areas where wells have already transitioned to surface water. The pipeline corridor will be returned to pre-existing conditions after the pipeline is installed.

## 1.3 Purpose and Need for Action

Reclamation developed the North Side Pumping Division of the Minidoka Project in the 1950s and early 1960s. Reclamation entered into a repayment contract with the A&B and turned over operations to the District in 1966. The Minidoka Project facilities for the North Side Pumping Division include a pumping plant on the Snake River for Unit A of the District, known as Unit A Pumping Plant #1, and 177 deep groundwater wells for Unit B of the District.

The District's Unit B wells were initially drilled in the 1950s and most were deepened at various points over time. Groundwater levels in the District have steadily declined, resulting in reduced production capacity and reduced water supplies. Deepening existing Unit B wells and drilling new wells have not resulted in a reliable new source of groundwater. In the mid-1990s, the District was forced to abandon 6 wells generally located in Township 9S Range 22E Minidoka County. The lack of available groundwater forced the District to convert approximately 1,500 acres in this area to a surface water supply, delivered through the existing canal infrastructure from the Unit A Pumping Plant #1.

The additional acreage served by the surface water system has resulted in side effects on some areas within Unit A, causing increased potential for affected lands to receive a restricted delivery rate, or what the District terms "go on allotment." Generally, when surface supplies are limited, acres served by the system share proportionately in the available water. However, due to changes in cropping patterns and capacity limitations in the existing

surface water delivery system, including the siphon under Interstate 84, some parts of Unit A go on allotment sooner than others and the reduced delivery can last for longer periods throughout the irrigation season. It is these lands that were most affected by extending surface irrigation to the 1,500 acres of Unit B noted above.

Currently, an additional 1,500 acres of Unit B lands are experiencing reduced or failing groundwater supplies and are in need of supplemental or replacement supplies from the District's surface water system. These lands are generally located in Township 9S Range 22E Minidoka County. Due to the location and the existing capacity limitations of Pumping Plant #1 and the canal system, the District is unable to provide this replacement water supply through the existing water delivery facilities. Moreover, adding additional converted groundwater acreage to the existing surface water delivery system would exacerbate the reduced surface water delivery rate to existing Unit A lands. The District needs to develop the means to maintain water delivery to these specific Unit B lands located in Township 9S Range 22E Minidoka County for an irrigation supply.

To overcome these existing infrastructure limitations and water delivery problems, the District proposes to develop an additional replacement pump station on the Snake River and an associated pipeline facility. This pump station and pipeline would be used to (1) restore and/or improve reliability of surface water delivery to approximately 4,500 acres of existing Unit A lands located in Townships 9 and 10S, Range 22E, Minidoka County, and (2) deliver surface water supplies, when available, to the additional 1,500 acres of Unit B land noted above. Overall, the goal of the proposed project is to ensure provision of an adequate and reliable source of irrigation water to approximately 6,000 acres within the District. Also, the project will help ensure efficient water delivery for entire district by reducing capacity restrictions on acres served by the Pumping Plant #1, increasing groundwater availability for the remaining deep wells in Unit B, and providing replacement facilities for the specific 6,000 acres referenced above. The project will benefit operations District-wide as water delivery operations will improve across Unit A and groundwater levels and pumping efficiency will be improved for lands in Unit B. The proposed project would be partially funded under the Agricultural Water Enhancement Program administered by the Natural Resources Conservation Service (NRCS). Thirty-one landowners located in Townships 9 and 10S, Range 22E, Minidoka County have executed agreements with NRCS to secure cost-share funding for the project. Construction and operation of the facilities would involve NRCS, Reclamation, and the District. This proposed project aligns with the objectives of the ESPA Comprehensive Aquifer Management Plan (CAMP) adopted by the Idaho Water Resources Board (IWRB) in 2009 and is consistent with recommended implementation action. The project is expected to reduce groundwater withdrawals from the ESPA, thereby benefiting groundwater levels throughout the remaining part of the District. The lands will be classified as "soft conversions" and will use available surface water supplies when available. When surface water is not available, the groundwater wells will still be available

to provide water to the lands. Further, the project will increase efficiency and assist the District in water delivery to all landowners throughout Unit A.

The NRCS, RD, and Reclamation are conducting an EA to determine potential for environmental impacts from development and operation, including acquisition of property interests as necessary, of the pumping plant and delivery pipeline proposed by the District. In addition to the project alternative preferred by the District, the EA also reviews potentially feasible alternatives. The intent is to confirm an alternative that provides optimum technical and cost feasibility, construction and operation efficiency, and avoidance of significant and unmitigable environmental impacts.

## 1.4 Authority

The Minidoka Project was authorized by the Secretary of the Interior on April 23, 1904, under the 1902 Reclamation Act. Investigation and construction funds for the Gravity Extension Unit (Gooding Division) were provided by the Interior Department Appropriation Act, 1927, the Act of January 12, 1927 (44 Stat. 934) and the Secretary`s finding of feasibility July 2, 1928, and was approved by the President on July 3, 1928 pursuant to section 4 of the Act of June 25, 1910 (36 Stat. 836) and subsection B of section 4 of the Act of December 5, 1924 (43 Stat. 702). The Upper Snake River Storage Project was authorized by a finding of feasibility by the Secretary of Interior on September 6, 1935, and approved by the President on September 20, 1935, pursuant to the foregoing acts. The North Side Pumping Division was authorized for construction by the Act of September 30, 1950 (64 Stat. 1083, Public Law 81-864). Transfer of facilities and rights-of-way of the South Side Pumping Division to the Burley Irrigation District was authorized by the Congress on January 27, 1998 (112 Stat. 3219-3221; Public Law 105-351).

## 1.5 Scoping of Issues and Concerns

Scoping requirements under the NEPA include requesting input from the public and interested parties. Scoping allows the public to help identify issues or concerns related to the project. These issues were considered in the development of the EA.

A public scoping period was held for the EA from July 12 2013, to August 12, 2013. A statement was released to the media and over 300 letters were sent notifying the public and interested parties of the intent to prepare an EA. The letter included the information on the project, scoping period duration, comment submittal instructions, and scoping meeting information (Appendix A). Concerns resulting from scoping included:

- Water rights/supply reliability for Unit A users.

- Economic – impacts including project cost versus benefit; potential devaluation of land; possible compensation for crop loss due to construction or repair.
- Land use – potential impacts of pumping plant to landowners, easement issues, impact of pipeline crossing, potential impacts to recreation, impacts from increased public access.
- Noise – resulting from pumping station to neighboring landowners.
- Cultural resources – pumping plant site has historical value.
- Wildlife – potential impact to bald eagles.
- Transportation – regarding review process for encroachment permit; pipeline must be underground across entire highway ownership.

# 1.6 Regulatory Compliance

Various laws, Executive Orders, and Secretarial Orders apply to the Proposed Action and are summarized below. The legal and regulatory environment within which the Federal activity would be conducted depends on which alternative is implemented.

## 1.6.1 National Environmental Policy Act

NEPA requires that the action agency use a public disclosure process to determine whether or not there are any environmental impacts associated with proposed Federal actions. If there are no significant environmental impacts, a FONSI can be signed to complete the NEPA compliance.

## 1.6.2 Endangered Species Act (1973)

The Endangered Species Act (ESA) requires all Federal agencies ensure that their actions do not jeopardize the continued existence of listed species, destroy, or adversely modify their critical habitat. As part of the ESA's Section 7 process, an agency must request information from the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NOAA Fisheries) on whether any threatened and endangered species occur within or near the action area. The agency then must evaluate impacts to those species. If the action may affect any listed species, the agency must consult with the USFWS or NOAA Fisheries.

## 1.6.3 Clean Water Act (33 U.S.C. 1251 et seq.)

Section 404 of the Clean Water Act (CWA) regulates the discharge of dredge and fills material into waters of the United States, including wetlands. The U.S. Army Corps of

Engineers (USACE) and the Environmental Protection Agency (EPA) work with the Department of Environmental Quality (DEQ) to obtain certification for National Pollutant Discharge Elimination System (NPDES) permits and Section 404 Dredge and fill permits. Permit review and issuance follows a sequence process that encourages avoidance of impacts, followed by minimizing impacts and, finally, requiring mitigation for unavoidable impacts to the aquatic environment. This sequence is described in the guidelines at Section 404(b)(1) of the CWA.

The Idaho DEQ (IDEQ) administers Section 401 of the CWA in Idaho. IDEQ determines if a proposed project will meet water quality standards for any activities requiring certain Federal permits including Section 404 permits. If the project will not create unacceptable water quality problems, IDEQ issues its 401 Certification.

Reclamation will obtain appropriate CWA and State permits prior to construction activities.

### 1.6.4 National Historic Preservation Act of 1966

Section 106 of the National Historic Preservation Act (NHPA), as amended, requires that Federal agencies consider the effects that their projects have on properties eligible for or on the National Register of Historic Places. The 36 CFR 800 regulations provide procedures that Federal agencies must follow to comply with the NHPA. For any undertaking, Federal agencies must determine if there are properties of National Register quality in the project area, the effects of the project on those properties, and the appropriate mitigation for adverse effects. In making these determinations, Federal agencies are required to consult with the State Historic Preservation Office (SHPO), Native American tribes with a traditional or culturally-significant religious interest in the study area, the interested public, and in certain cases, the Advisory Council on Historic Preservation (ACHP).

### 1.6.5 Executive Order 13007: Indian Sacred Sites

Executive Order 13007, dated May 24, 1996, instructs Federal agencies to promote accommodation of access to and protect the physical integrity of American Indian sacred sites. A “sacred site” is a specific, discrete, and narrowly delineated location on Federal land. An Indian tribe or an Indian individual determined to be an appropriately authoritative representative of an Indian religion must identify a site as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion. However, this is provided that the tribe or authoritative representative has informed the agency of the existence of such a site.

### 1.6.6 Secretarial Order 3175: Department Responsibilities for Indian Trust Assets

Indian Trust Assets (ITAs) are legal interests in property held in trust by the United States (with the Secretary of the Interior acting as trustee) for Indian tribes or Indian individuals. Examples of ITAs are lands, minerals, hunting and fishing rights, and water rights. In many cases, ITAs are on-reservation; however they may also be found off-reservation.

The United States has an Indian trust responsibility to protect and maintain rights reserved by or granted to Indian tribes or Indian individuals by treaties, statutes, and executive orders. These rights are sometimes further interpreted through court decisions and regulations. This trust responsibility requires that officials from Federal agencies, including Reclamation, take all actions reasonably necessary to protect ITAs when administering programs under their control.

### 1.6.7 Executive Order 12898: Environmental Justice

Executive Order 12898, dated February 11, 1994, instructs Federal agencies, to the greatest extent practicable and permitted by law, make achieving environmental justice part of its mission by addressing, as appropriate, disproportionately high and adverse human health or environmental effects on minority populations and low income populations. Environmental justice means the fair treatment of people of all races, income, and cultures with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment implies that no person or group of people should shoulder a disproportionate share of negative environmental impacts resulting from the execution of environmental programs.

### 1.6.8 Executive Order 13514: Federal Leadership in Environmental, Energy, and Economic Performances

Executive Order (EO) 13514, *Federal Leadership in Environmental, Energy, and Economic Performance,* seeks to establish an integrated strategy towards sustainability in the Federal Government. Section 8(i) of the E.O. requires that as part of the formal Strategic Sustainability Performance Planning process, each Federal agency evaluate agency climate change risks and vulnerabilities to manage both the short- and long-term effects of climate change on the agency's mission and operations. Section 5(b) of the EO specifies that the Chair of the Council on Environmental Quality (CEQ) shall issue instructions to implement the order (CEQ's *Federal Agency Climate Change Adaptation Planning: Implementing Instructions*, issued March 4, 2011). The purpose of this document is to provide implementing instructions to be used by Federal agencies in climate change adaptation planning.

# Chapter 2 ALTERNATIVES

This chapter describes the alternatives analyzed in this EA: the No Action alternative and three action alternatives are described in detail. Other alternatives that were considered but eliminated are also documented.

## 2.1 Alternative Development

NEPA requires agencies to evaluate a range of reasonable alternatives to a proposed Federal action. Alternatives should meet the purpose and need of the proposal while minimizing or avoiding environmental impacts. The NEPA alternative development process allows Reclamation to work with interested agencies and the public to formulate alternative management actions that respond to identified issues. This process resulted in the development of the alternatives described below.

## 2.2 Description of Alternatives

The goals for the action alternatives, including the Proposed Action, for the A&B Pumping Plant #2 project are to eliminate the delivery constraints to the system and manage the demands the District experiences annually to Unit A, as well as continue to provide water to lands in Unit B that are experiencing failing groundwater supplies. The local context of the overall District in relation to other irrigation districts is illustrated on Figure 2-1. Within the District, Figure 2-2 illustrates the location of Unit A and Unit B lands and the location of the proposed project.

The proposed project would convey 118 cfs of water from the Snake River to approximately 4,500 acres of existing Unit A surface water users, a portion of the 1,400 acres of Unit B lands provided with supplemental surface water from the existing system in the 1990s, and an additional 1,500 acres of existing groundwater Unit B lands. Changes in deliveries to Unit B lands are illustrated on Figure 2-2. Overall, the project would enhance delivery efficiency to the existing Unit A system by replacing ditches with pipelines, and supplementing water deliveries to Unit B lands so that six to eight wells can be shut down when surface water is available, and to ensure water delivery to areas where wells have already transitioned to surface water. The pipeline corridor would be returned to pre-existing conditions after the pipeline is installed.

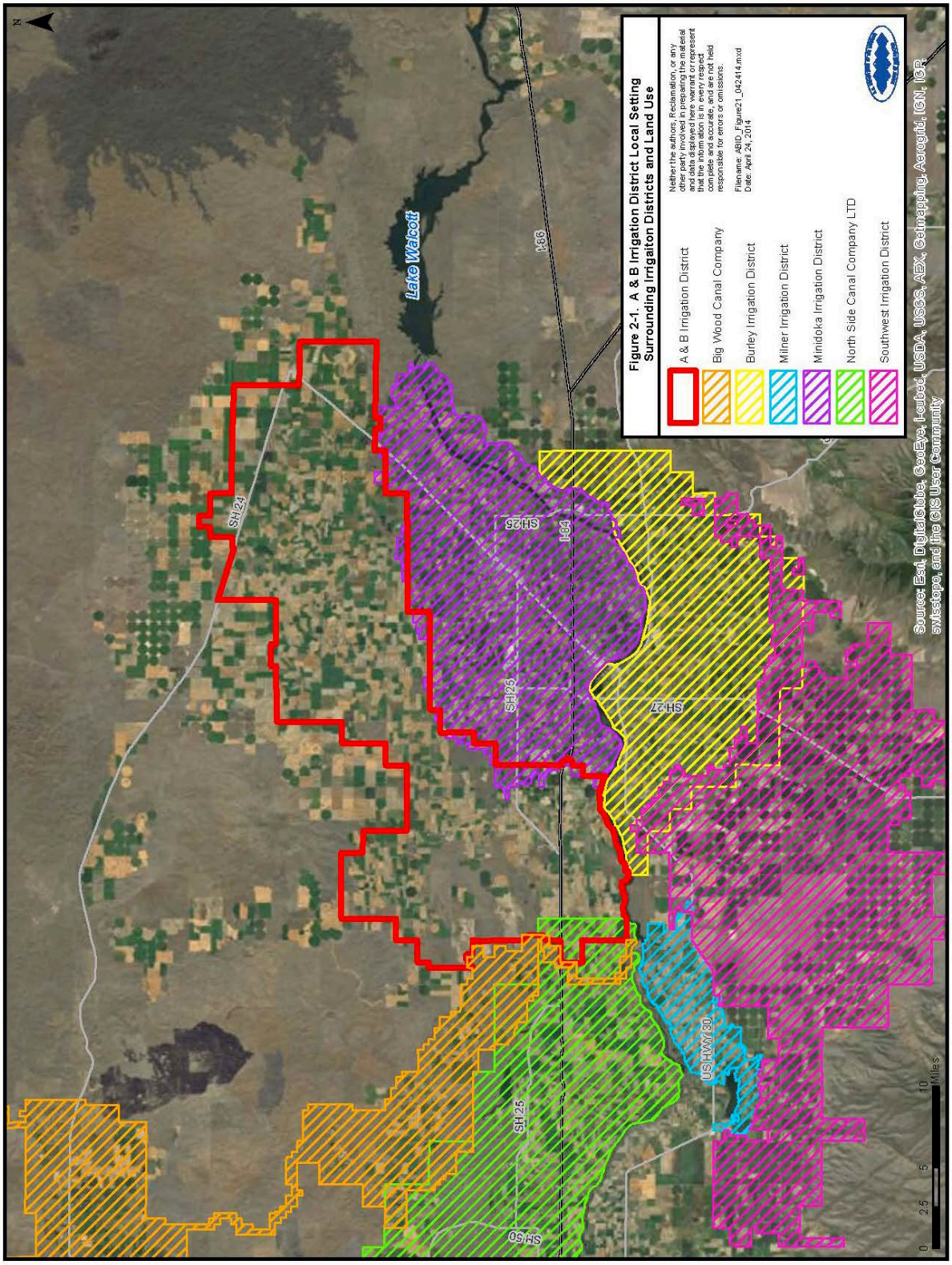


**Figure 2-1. A&B Irrigation District local setting – surrounding irrigation districts and land use.**

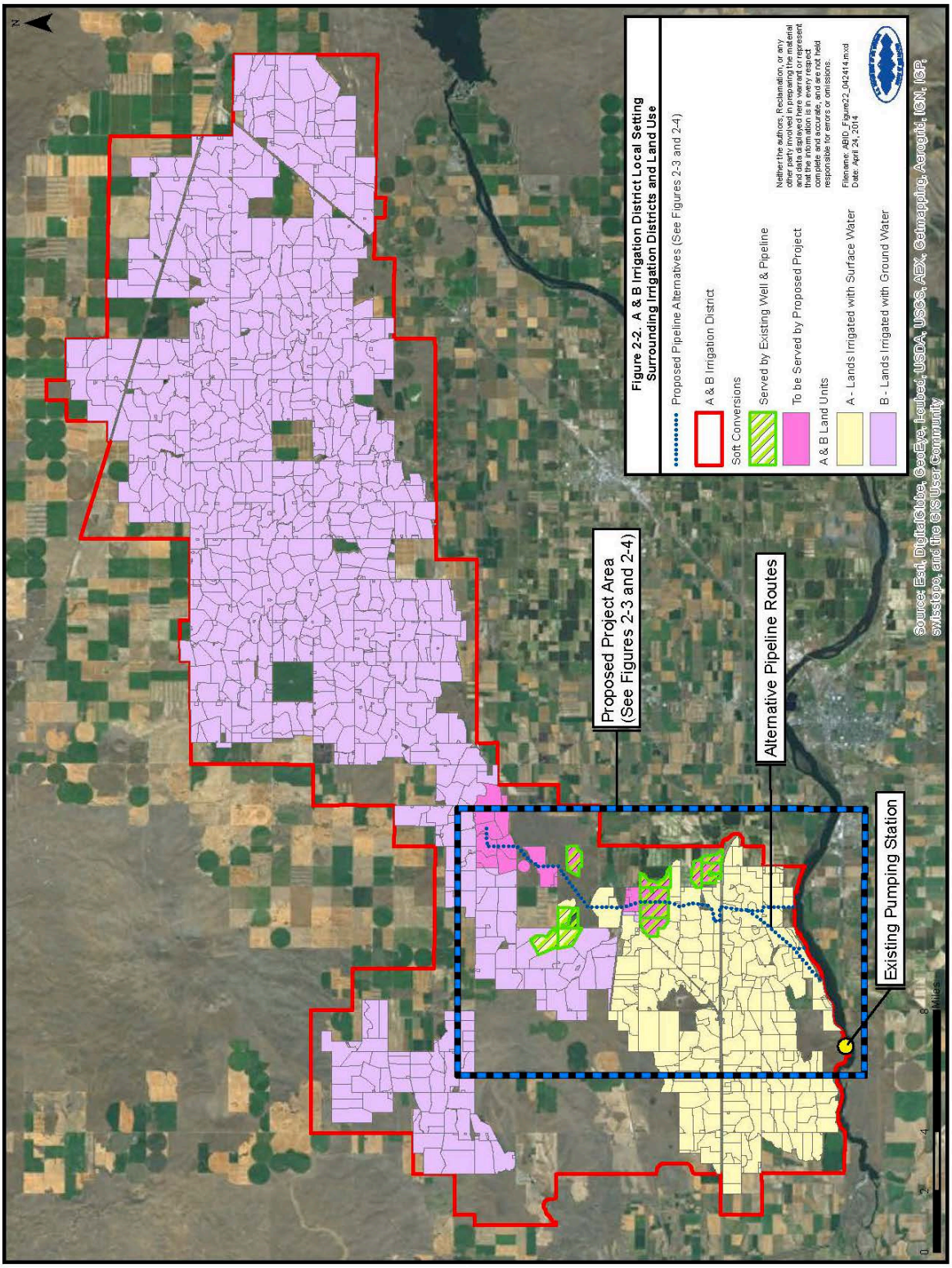


**Figure 2-2. A&B Irrigation District – locations of Unit A, Unit B, and transitional, soft conversion lands.**

The following alternatives are being considered for implementation of the A&B Pumping Plant and Pipeline #2 project. This section describes the No Action alternative and the three action alternatives in detail and provides a summary comparison.

### 2.2.1 Alternative 1 – No Action

The No Action alternative would continue to provide available water to the project lands through the existing facilities. The District would continue to deliver surface water to all existing Unit A lands (to be supplied under the proposed project) and previously converted Unit B project lands (approximately 4,500 acres and 1,400 acres, respectively) through the existing Pumping Plant #1 and canal and lateral distribution system. In addition, the District would continue to deliver groundwater to approximately 60,600 Unit B acres.

The existing delivery system in Unit A does not have sufficient capacity to meet crop demands throughout the irrigation season. Further, the existing groundwater supply for the Unit B groundwater wells is declining, reducing pumping levels and available capacity to provide sufficient irrigation water for District lands. If declines continue, it is anticipated that approximately 1,500 acres located in Township 9 S Range 22 E, Minidoka County) served through the existing deep wells referred to as follows (28A922, 15A922, 15C922, 15C922, 11B922, 11C922, and 3C922) and additional adjoining acres, are in jeopardy of being forced out of production because of insufficient water to produce a crop.

Also, under the No Action alternative, Reclamation and the District would not obtain ownership of land for a pump station or easements/rights-of-way (ROW) across private land for the pipeline associated with the proposed project. No replacement pump station or distribution pipeline would be constructed.

### 2.2.2 Action Alternatives 2, 3, and 4

The general location of the action alternatives within the District is illustrated on Figure 2-2. The specific location and layout of the action alternatives, Alternatives 2, 3, and 4, are illustrated on Figure 2-3 and Figure 2-4.

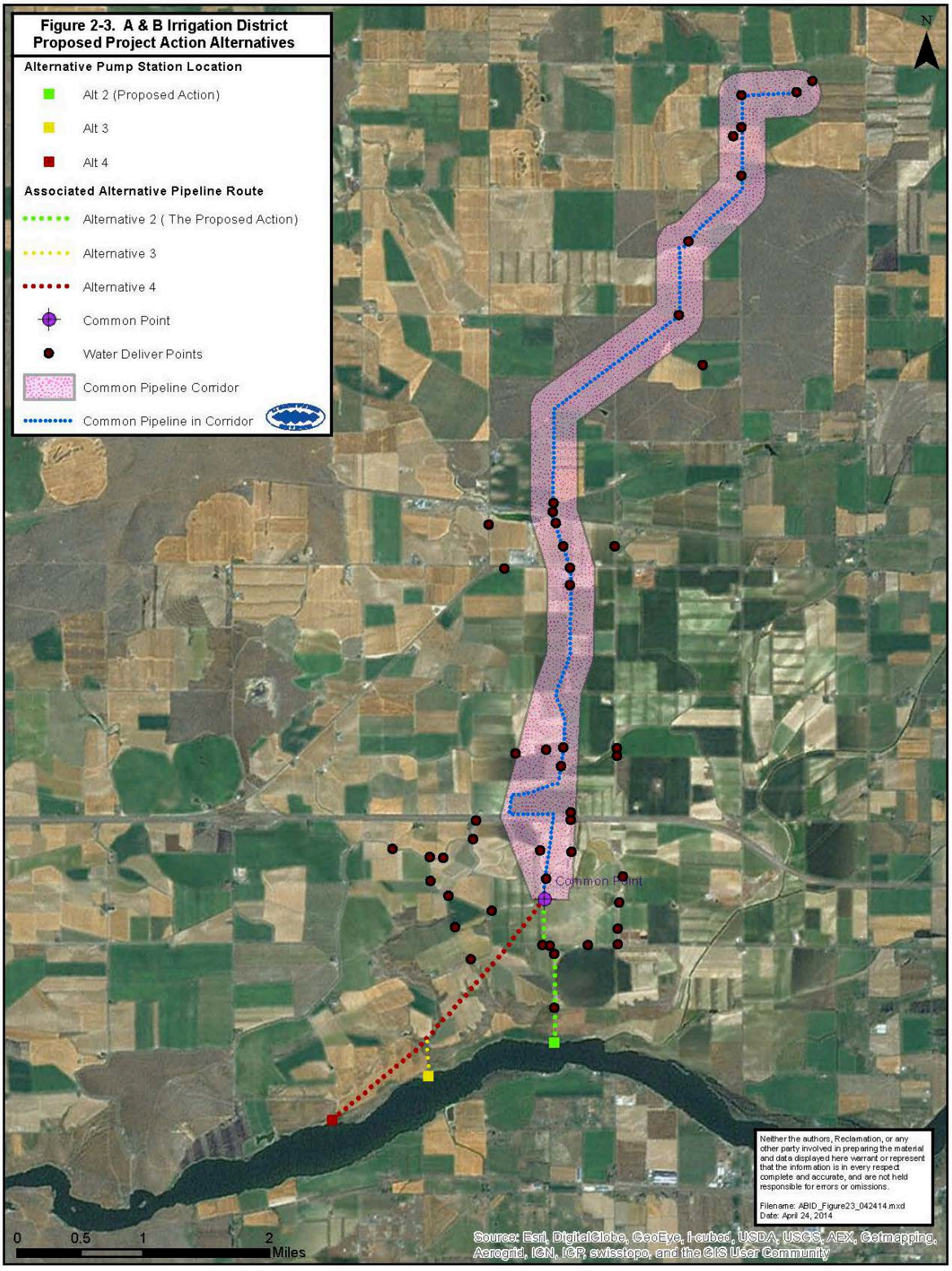


**Figure 2-3. A&B Irrigation District proposed project action alternatives.**

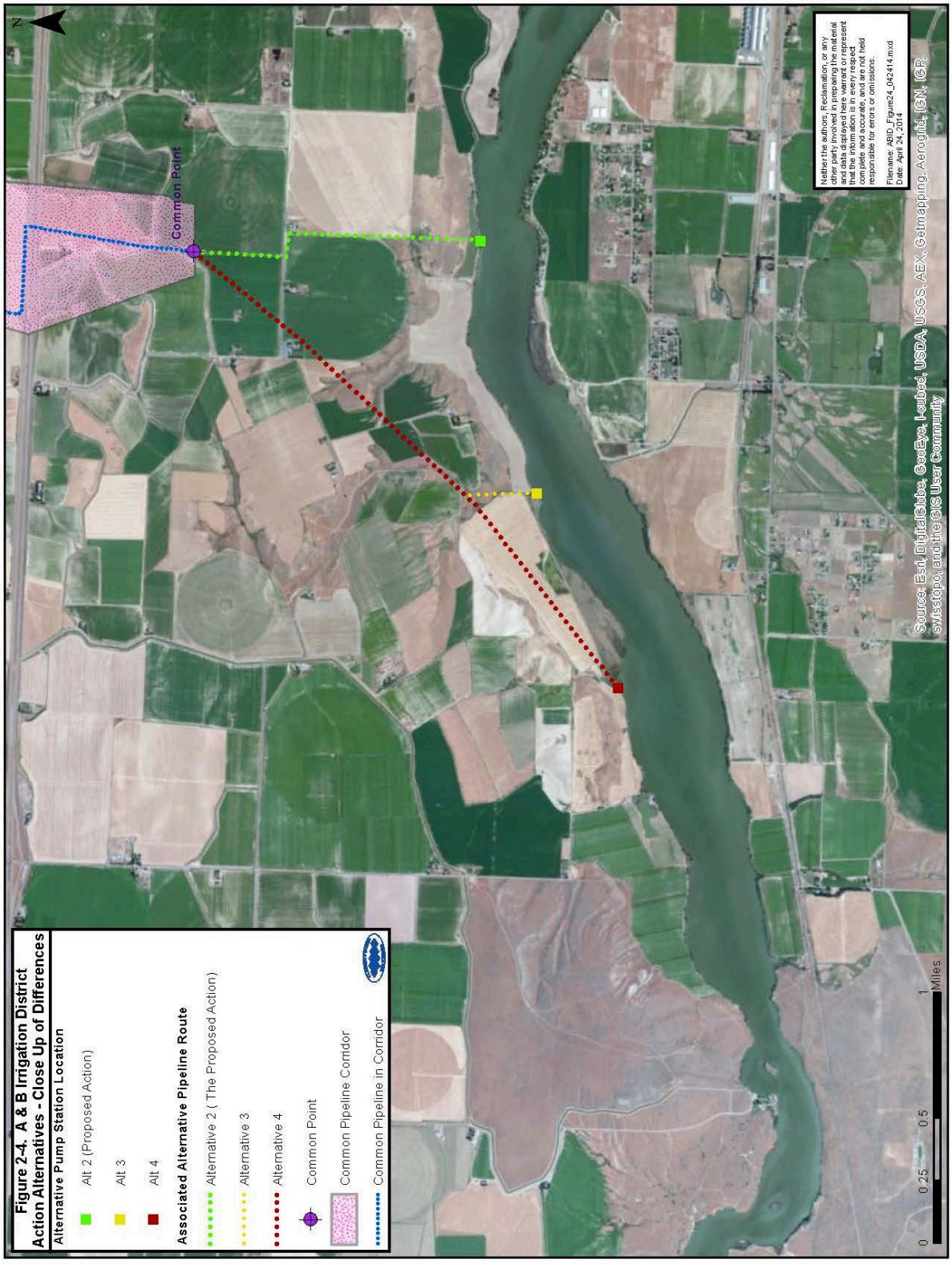


**Figure 2-4. A&B Irrigation District action alternatives – close up of differences.**

Common features and/or similarities exist between all of the action alternatives. These features and similarities are described below, and therefore, are not repeated under each individual action alternative.

### Pumping Plant and Pipeline to the Common Point

- Pumping is required to get water to the common point. The common point is highest elevation on the system.
- Reclamation would hold legal title to the site and facilities of the pumping plant but would transfer control and responsibility for operation and maintenance (O&M) of all of the newly constructed facilities to the District.
- The cost of constructing the pumping plant and appurtenances for each action alternative is approximately the same.
- The total shore zone site requirement and the number and size of structures required for the pumping plant is also the same for each of the action alternatives. The total site requirement, including structures, parking, and screening/landscape is expected to be approximately 1.4 acres. Structures are planned to be sited on shore, with a buffer to the shoreline containing berms and landscape screening materials to avoid potential visual impact.
- The pumping plant would be constructed using noise abatement materials/techniques as necessary to ensure that the plant complies with all applicable ambient noise standards and regulations.
- Construction of the pumping plant (all elements) is expected to require 2 to 3 months.
- Construction of pipeline sections is expected to take approximately 2 weeks in any given location. During that 2-week period, construction would be intermittent, as activities occur in sequence (e.g., excavation of trench, installation of pipe, refilling trench, etc.). Care will be taken to coordinate with landowners related to minimizing impact on crop production or other existing use. If construction is required during normal growing/use season, affected landowners will be compensated for lost production/use. Once the pipeline is installed, land will be restored to its previous condition.
- Reclamation would obtain fee title ownership of the pumping plant site. Necessary corridors for linear facilities to the common point (i.e., for pipeline, access road, or transmission line - as required for each alternative) would be obtained as easements or fee title rights-of-way, as appropriate. Land ownership and other land rights would be acquired through willing seller/willing buyer negotiations to maximum achievable extend. If circumstances arise where this approach is not feasible, land ownership/rights would be acquired through applicable Federal, state, or District authority.

## Corridor from the Common Point to Delivery points

The proposed route to construct the pipeline from the common point to the end of the pipeline would be within the defined corridor. From the common point, the pipeline would follow a route to the north. The corridor of the pipeline is determined by the most direct route to reach the current A&B delivery points and the deep wells that have been identified for soft conversion.[1] Pipe size(s) would be largest from the common point and would decrease as water is delivered to farms along the route. All pipe would be buried a minimum of thirty (30) inches below ground surface. It is anticipated that 100 feet wide strip of ground would be impacted along the pipeline route during construction. The planned corridor route would cross 9,853 feet of crop ground, 10,244 feet of range ground, and 17,637 feet would be installed between fields. The pipeline would cross Interstate 84, State Highway 25, and the Eastern Idaho Railroad tracks. The pipeline would also cross several county roads. Permits would be acquired from the respective owners for all road and railway crossings.

The pipeline corridor would be located predominantly on private lands and through a portion of Reclamation lands. The District has executed written agreements with all private landowners of properties within the pipeline corridor. The agreements state the landowners would execute a perpetual easement for the pipeline including the area needed to operate and maintain the pipeline. The agreements also state that each landowner would allow access for construction, surveying, trenching, installation of the pipeline and any related infrastructure (as described above).

The actual location of the pipeline would be recorded with Minidoka County upon completion. Further, the ground would be restored to preconstruction condition after installation is complete. In addition to private lands within the corridor, there would be several permits/easements that would be obtained prior to construction for road, railroad, and highway crossings. The final pipeline route would utilize existing ROW as practical. The District would be responsible for securing any additional permits and easements with state and local entities once the pipeline route is defined in the final engineering design and prior to construction

## Staging Areas and Transmission Corridor(s)

Under all action alternatives, all staging of equipment and materials required for construction would occur within an approximately 100-foot-wide construction zone along the pipeline route at the A&B West Division O&M yard, and/or at a limited number of temporary 1 to 2 acre staging areas along the route. These temporary construction work spaces would be sited

[1] Soft conversions are full or partial replacement of groundwater with additional surface water to irrigate mixed-source lands when additional surface water is available. Wells would be maintained for future use if the additional surface water is limited.

relative to the pipe centerline or otherwise to avoid existing roadways or environmentally sensitive areas.

New transmission lines would be required for each action alternative to transmit energy to the proposed pumping plant. For each action alternative, it is anticipated that approximately 4,000 feet of new transmission line would be required and costs for supply of energy via these transmission corridors is anticipated to be relatively the same for each alternative. Transmission routes for each alternative, however, do vary and are described in specific alternative text below.

## Construction of In-river Facilities

### *Intake Structures*

Construction of the pump station can occur at any time during the construction period. The pump station would be constructed 60 feet inland of the Snake River and therefore, would be isolated from "live" water during construction. An extensive cofferdam would, therefore, not be required.

After pump station construction is completed, an inlet channel would be excavated to connect the pump station to the Snake River. One or more culverts would be used to complete the final connection between the river and the screened pump station. Approximately 100 feet of river bank would be disturbed while constructing the channel/culvert entrance; bank shaping and riprap protection would then be completed.

Dewatering would only occur if necessary due to groundwater seepage and/or overland flow entering the excavated area where the pump station and/or inlet channel would be located. Best management practices or other conditions of any required permits would be followed if water removed would be discharged into the Snake River.

Some heavy machinery may be required adjacent but not in the Snake River channel during construction of the inlet channel entrance. Upon completion of construction, plant materials would be used on the land between the pump station and shoreline to provide visual screening.

### *Fish Screening*

The new intake structure would include screening developed in consultation with the Idaho Department of Fish and Game (IDFG) and would provide adequate surface area and automated cleaning systems to minimize the potential impingement entrainment of juvenile fish. The protective fish screen would provide for ease of maintenance including debris removal. General O&M of the proposed intake structure would include periodic cleaning of

the screen (using a brush or rake) from the bank of the river in conjunction with aerated pulses out of the intake to clear debris that has accumulated on the screens.

### 2.2.3 Alternative 2 – Proposed Action

At the shoreline near the Alternative 2 pump plant site the water level is roughly 12 feet deep with a gravel bottom. The approach to placing, stabilizing, and using necessary conduits to bring water from the river to the onshore pump station is common to all alternatives and is described above.

The pumping plant for this alternative would consist of six 500 horsepower (hp) and two 250 hp for a total of 3,500 hp. The motors would be connected to turbine pumps that would produce a flow of 118 cfs at a Total Dynamic Head (TDH) of 217. From the pumping plant the flow would be directed into buried, pressurized PVC pipe leading to the common point.

The pumping station is located 6,473 feet south of the common point. The pipeline would be placed 30 inches below the ground from the pumping station to the common point. The pipeline width of disturbance would not exceed 100 feet and would cross crop/pasture for 253 feet, range ground for 1,166 feet and follow property boundaries for 5,054 feet. The majority of this route would follow property boundaries. There are five landowners along this route that may have ground impacted during installation. This is the most direct route from the river to the common point. The total cost including pump, appurtenances, and pipe is estimated at $4,496,000.

Under Alternative 2 the new transmission corridor required to supply energy to the pumping plant would occur within the proposed pipeline ROW. Therefore, no additional lands would be disturbed.

### 2.2.4 Alternative 3

At the shoreline near the Alternative 3 pumping plant site the water level is roughly 3 feet deep with a sandy bottom. The approach to placing, stabilizing, and using necessary conduits to bring water from the river to the onshore pump station is common to all alternatives and is described above.

The pumping plant for this alternative would consist of one 750 hp, two 650 hp and three 500 hp motors for a total of 3550 hp. The motors would be connected to turbine pumps that would produce a flow of 118 cfs at a TDH of 221. As with Alternative 2, from the pumping plant the flow would be directed into buried, pressurized PVC pipe leading to the common point.

The pipeline would begin 30-inches below the ground at the pumping station which would be 5,500 feet down river from Alternative 2. Distance from the common point is approximately 9,152 feet. The pipeline would cross five landowner's properties. The pipeline width of disturbance would not exceed 100 feet and would cross crop/pasture for 7,170 feet, range ground for 716 feet and follow property boundaries for 1,266 feet. The additional distance the water would be pumped would increase the horsepower requirement of the pump and possibly increase the pressure rating required depending on the undulating topography. Additional fittings would also be required to accommodate increased horsepower. There are significant changes in topography on this proposed pipeline route. The total cost including pump, appurtenances, and pipe is estimated $4,921,000.

Under Alternative 3, the new transmission corridor required to supply energy to the pumping plant would require approximately an additional 4,000 feet of ROW outside the pipeline ROW through both crop and range land.

### 2.2.5 Alternative 4

At the shoreline near the Alternative 4 pump plant site the water is roughly 3 feet deep with a sandy bottom. The approach to placing, stabilizing, and using necessary conduits to bring water from the river to the onshore pump station is common to all alternatives and is described above.

The pumping plant would consist of one 800 hp, two 700 hp, and three 500 hp motors for a total of 3,700 hp. The motors would be connected to turbine pumps that would produce a flow of 118 cfs at a TDH of 232. As with the other action alternatives, from the pumping plant the flow would be directed into buried, pressurized PVC pipe leading to the common point.

The pipeline would begin 30-inches below the ground at the pumping station which would be 10,800 feet down river from Alternative 2. Distance from the common point is approximately 13,018 feet. The pipeline would cross six landowner's properties. The pipeline width of disturbance would not exceed 100 feet and would cross crop/pasture for 11,465 feet and range ground for 1,553 feet. There are significant changes in topography on this proposed pipeline route. The additional distance the water would be pumped would increase the horse power requirement of the pump and increase the pressure rating required for the pipeline. Additional fittings would also be required to accommodate increased horsepower. The total cost including pump, appurtenances, and pipe is estimated at $6,258,000.

Under Alternative 4, the new transmission corridor required to supply energy to the pumping plant would require approximately an additional 3,700 feet of ROW outside the pipeline ROW through both crop and range land.

### 2.2.6 Summary of Action Alternatives

The following table presents a summary of Alternatives 2, 3, and 4.

**Table 2-1. Summary of action alternatives.**

| | | | Ground disturbed with pipeline (feet) | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Alternative** | **Landowners on route** | **Feet to common point[1]** | **Irrigated acres (crop & pasture)** | **Range** | **Property boundary, road, and easement** | **Pipe Pressure rating (psi)** | **Cost Estimate[2]** | **Pump Size (horsepower)** |
| 2 | 5 | 6,473 | 253 | 1,166 | 5,054 | 125 | $4,496,000 | 3,450 |
| 3 | 6 | 9,152 | 7,170 | 716 | 1,266 | 125 & 165 | $4,921,000 | 3,550 |
| 4 | 7 | 13,018 | 11,465 | 1,553 | 0 | 165 | $6,258,000 | 3,700 |

1. Shortest route from the pump to common point. Changing route to avoid cutting across field would increase the cost of each route.
2. 125 psi pipe - $470/feet for pipeline and installation (*include language on timing and duration of construction*); 165 psi pipe - $620/foot for pipeline and installation.

## 2.3 Alternatives Eliminated from Consideration

In developing the Proposed Action, other pipeline alternatives, all of which would site the additional pump station adjacent to the existing pump station, were considered to meet the District's needs, but these did not require further evaluation for a variety of reasons Figure 2-5). These alternatives included:

- **Alternative 5a** – Pumping site is the existing A&B pump station. It is located 4 miles downstream of Alternative 2. The existing pumps are already operating at capacity; therefore, a new pump station with the same footprint as Alternatives 2 through 4 would be built on site. An additional 9,304 feet of pipeline would be added from existing pumping station to pump site 4. From existing pumping site to the common point would be approximately 22, 322 feet. The pipeline would cross an additional 9 landowner's properties. The pipeline would cross crop/pasture for 18,802 feet and rangeland for 3,520 feet. Increased friction loss due to the pipeline length would require additional horsepower in the pump and higher pressure rating on the pipeline. The cost includes pump, appurtenances, and pipe at is an estimated $13,839,640.

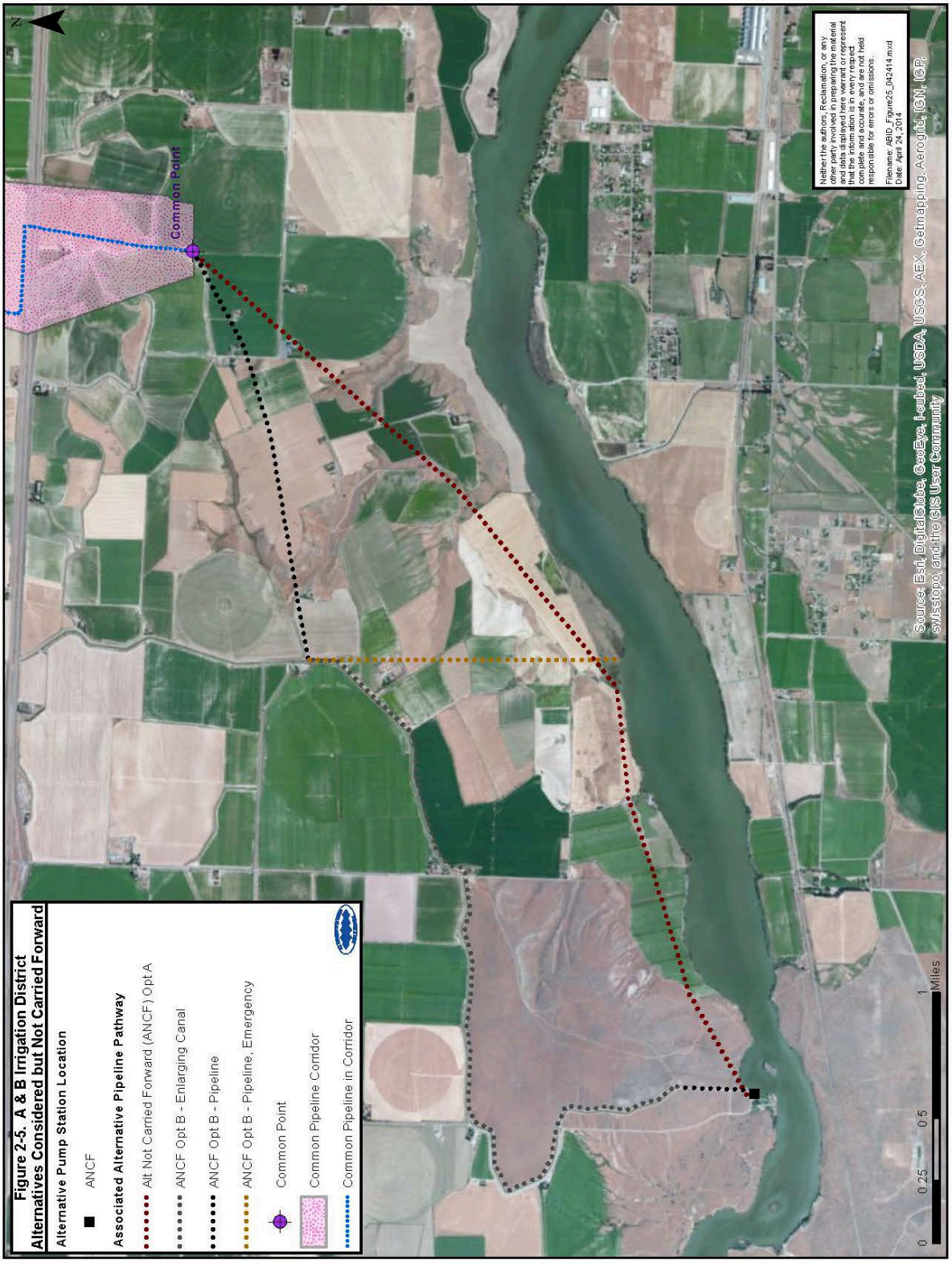


**Figure 2-5. A&B Irrigation District alternatives considered but not carried forward.**

- **Alternative 5b** – This option for water delivery uses the existing canal system. A new pumping station would move water from the existing pumping site to the open canal. The canal would be enlarged to carry the carry the additional 118 cfs of water. Increasing the capacity of 18,175 feet of canal would require movement of approximately 2.3 cubic yards of earth per foot. A total of 41,802 cubic yards of dirt would need to be moved. Also, an additional pump is required to get the water from the open canal to the common point. A spillway from the canal back to the river would also be required for this alternative. The canal enlargement would affect an additional nine landowners, the pipeline would affect an additional five landowners and the spillway would affect an estimated seven additional landowners. The cost including pump, appurtenances, and pipe is estimated at $14,088,370.
- **Alternative 6** – This alternative considered paying landowners for the purchase of existing lands and water rights where groundwater supplies are failing. This alternative was eliminated because Reclamation does not have authority under any authorization related to the Minidoka Project North Side Pumping Division to purchase lands and water rights from landowners that receive water from the A&B.

These alternatives were eliminated because of lack of operation efficiency, the additional pipeline/pumping stations, the increased area of disturbance, the required spillway to carry water from the canal back to the river, increased management required, increased power use, and the increased costs (four to five times the cost of Alternative 2). In addition, the operational constraints that would be added to the District's roles and responsibilities from governmental rules and regulations made these alternatives unreasonable to carry forward.

When considering the part of the pipeline that is common to all action alternatives (both those carried into detailed analysis and those not considered viable), no substantially different routing options are available. As shown on Figure 2-3, the proposed route for this length of the pipeline is sited to serve the target points of supply with minimum need for both length of the main pipeline and distance to the supply points. Significantly different routes for this reach of the pipeline, either West or East, would involve substantially increased cost for easement acquisition, construction, and operation.

## 2.4 Other Actions Considered for Cumulative Impact

The project will divert water from Lake Walcott within the Minidoka National Wildlife Refuge (NWR), convey the water through a pipeline to a State section of land 08S 25E 36 north of the reservoir, and inject the water into the aquifer through a series of injection wells. It is a joint effort between the Idaho Water Resource Board (IWRB), the District, and the Magic Valley Ground Water District for the general goal to assist with aquifer recharge on the

ESPA and develop a managed aquifer recharge facility from which recharge to the ESPA can be conducted in accordance with the Comprehensive Management Aquifer Plan adopted into law as part of the State Water Plan in 2009. The project is being designed to achieve a diversion and injection rate of 100 cfs or 45,000 gallons per minute with a yearly goal of 30,000 acre-feet volume of water recharging the aquifer. This project is analyzed in this EA for cumulative impacts.

It is notable that the Reclamation land located in the northern part of the A&B project area (and through which the proposed pipeline would pass) is part of one alternative being considered for relocation of the Burley municipal airport. However, study of the potential to relocate this airport has been limited to preliminary FAA site screening analysis. No decision or formal proposal has been made by the City to pursue an airport relocation, and Reclamation has not been contacted regarding such a project. Given these circumstances, the potential relocation of this airport is considered too speculative to be considered in a cumulative impact analysis at this time.

## 2.5 Summary Comparison of the Environmental Impacts of the Alternatives

The environmental impacts, including proposed mitigation, of each alternative are compared in Table 2-2 against the environmental impacts that would result under Alternative 1 – No Action. Potential short and long-term, direct and indirect impacts of the alternatives are summarized. As noted in the previous section, no cumulative effects would be associated with the project; thus this type of impact is not noted on the table.

The environmental consequences of the alternatives arranged by resource are described in detail in Chapter 3. The terms “environmental consequences” and “environmental impacts” are synonymous in this document.

**Table 2-2. Summary of environmental effects of actions.**

| Resource | Alternative 1 – No Action | Alternative 2 – Proposed Action | Alternative 3 | Alternative 4 |
|---|---|---|---|---|
| Land Use | Short-term – No construction of new project facilities would occur; therefore, there would be no short-term interruptions in existing land use.<br><br>Long-term: No improvements in water delivery would occur for Unit A lands and no surface water would be delivered to 1,500 acres of Unit B lands with failing groundwater supply. | Short-term, construction related impacts would occur in and around the pumping plant site for 2 to 3 months. Construction-related short-term impacts would occur along the pipeline route for approximately 2 weeks at any given location. These impacts would not be significant.<br><br>In the long term, the pump station would change land use on approximately 1.5 acres of land near the river shore. The change would be from open land or rural agriculture to an agricultural industry use. This small change would not be unlike similar uses downstream and would affect an insignificant portion of the broader landscape (see also Noise and Visual Quality). Beyond the pump station, project facilities would be subsurface, and would result in no significant long-term change in land use. | Same as Alternative 2. | Same as Alternative 2. |

| Resource | Alternative 1 – No Action | Alternative 2 – Proposed Action | Alternative 3 | Alternative 4 |
|---|---|---|---|---|
| Water Rights | No direct or indirect, short-term or long-term effects to water rights would occur as a result of the No Action alternative. | No direct or indirect, short-term or long-term effects to water rights would occur as a result of the Proposed Action. | Same as Alternative 2. | Same as Alternative 2. |
| Water Quantity | The No Action alternative would not change the amount of water the District currently pumps from the ESPA or diverts from the Snake River. Under No Action, groundwater availability for Unit B users will continue to diminish resulting in potential reduction in crop production. | The proposed project would have minimal effects on water quantity. The District would adjust use of a portion of its existing water right and may take advantage of the water bank to meet crop requirements. | Same as Alternative 2. | Same as Alternative 2. |
| Water Quality | There would be no effects on water quality as a result of No Action. | Any potential for short- or long -term impacts on water quality, associated with either on or offshore transfer of sediment into waterways would be minimized through the use of BMPs. | Same as Alternative 2. | Same as Alternative 2. |

| Resource | Alternative 1 – No Action | Alternative 2 – Proposed Action | Alternative 3 | Alternative 4 |
|---|---|---|---|---|
| Noise | No short or long-term impact on the noise environment in the study area would occur with the No Action alternative. | Construction activities would increase local noise levels during the short-term construction period. BMPs, including limits on hours of operation, would be employed to manage noise levels. Overall, the short-term increase in noise would not be significant.<br><br>In the long-term, only the pumping plant and associated facilities have potential to introduce new noise sources to the area. Commitments included in project design will ensure no significant impact would occur in the noise environment. | Same as Alternative 2. | Same as Alternative 2. |

| Resource | Alternative 1 – No Action | Alternative 2 – Proposed Action | Alternative 3 | Alternative 4 |
|---|---|---|---|---|
| Vegetation | There would likely be minimal or no short-term impacts to existing vegetation.<br><br>In the long-term impacts would likely include fallowing of agricultural fields currently in production. This would result in a potential increase of noxious weeds and overall habitat degradation. | Short-term impacts would consist of vegetation removal and all construction areas, including the pumping plant site and the pipeline route. With the exception of the facility (building and parking areas) footprints at the pumping plant and along permanent access roads, vegetation would be restored in all disturbed areas.<br><br>Long-term impacts would be limited to removal of vegetation (potentially including several large trees) within the pumping plant facility footprint and access road corridor. Mitigation for these impacts is included as part of project design. Vegetation would be restored, including tree planting, around the pumping plant facility. This would include vegetation screening between the facilities and the river edge. | Short-term and long-term impacts to vegetation, as well as restoration and mitigation measures would be essentially the same as those described for Alternative 2.<br><br>Differences from Alternative 2 would include: a larger area of temporary impact due to longer pipeline, and potentially increased long-term impact due to separation between the required transmission line and the access road (i.e., two corridors rather than one). | Impacts overall would be similar to those described for Alternative 2. The primary difference would be a longer distance of temporary impact due to the longer pipeline between the pumping plant and the common point.<br><br>Differences from Alternative 2 would include: a larger area of temporary impact due to longer pipeline, and potentially increased long-term impact due to separation between the required transmission line and the access road (i.e., two corridors rather than one). |

| Resource | Alternative 1 – No Action | Alternative 2 – Proposed Action | Alternative 3 | Alternative 4 |
|---|---|---|---|---|
| Fish | The No Action alternative would have no effects to fish or aquatic resources. | Minor, temporary impacts to fish may occur during installation of the intake conduits and associated shoreline stabilization near the pumping plant site.<br><br>Long-term impacts to fish resources would also not be significant due to elements in project design (such as fish screens designed in conjunction with IDFG. | Same as Alternative 2. | Same as Alternative 2. |
| Wildlife | The No Action alternative would have no impact on wildlife. | Temporary removal of vegetation and construction activity would result in less than significant short-term impacts.<br><br>Approximately 1.6 acres will be permanently lost for construction at the pump station location.<br><br>Construction is anticipated for fall and winter months, with a potential of continuing into spring. Construction during spring and early summer would disrupt migratory bird nesting activity, particularly in wetland and woody habitats. | Short-term impacts would be the same as Alternative 2 except that slightly more acreage would be needed for the longer pipeline; however, this is not expected to be a significant impact as no local or regional wildlife populations are threatened by this action. | Short-term impacts would be the same as Alternative 2 except that slightly more acreage would be needed for the longer pipeline. |

| Resource | Alternative 1 – No Action | Alternative 2 – Proposed Action | Alternative 3 | Alternative 4 |
|---|---|---|---|---|
| Threatened and Endangered Species (TES) | The No Action alternative would have no impact on listed species. | Reclamation analysis reveals no potential for adverse impact to ESA-listed species as a result of the construction or long-term operation of the pumping plant and pipeline under Alternative 2 (i.e., a finding of No Affect). | Same as Alternative 2. | Same as Alternative 2. |
| Cultural Resources | No impact to Cultural Resources would occur under the No Action alternative. | No impact to Cultural Resources would occur under Alternative 2. | Same as Alternative 2. | Same as Alternative 2. |
| Sacred Sites | No impact to Sacred Sites would occur under the No Action alternative. | No Sacred Sites have been identified within the project APE; therefore, no adverse effects on these resources would occur as a result of the proposed project. | Same as Alternative 2. | Same as Alternative 2. |
| Indian Trust Assets (ITAs) | No impact to ITAs would occur under the No Action alternative. | No ITAs have been identified within the study area; therefore, no adverse effects on these resources would occur as a result of the proposed project. | Same as Alternative 2. | Same as Alternative 2. |
| Transportation | No short or long-term impact to transportation systems would occur under the No Action alternative. | No impact to Transportation would occur under Alternative 2. | Same as Alternative 2 although the construction duration would be longer due to installation of a longer pipeline. | Same as Alternative 2 although the construction duration would be longer due to installation of a longer pipeline. |

| Resource | Alternative 1 – No Action | Alternative 2 – Proposed Action | Alternative 3 | Alternative 4 |
|---|---|---|---|---|
| Public Services and Utilities | No short or long-term impact to public services would occur under the No Action alternative. | No impact to Public Services and Utilities would occur under Alternative 2. | Same as Alternative 2. | Same as Alternative 2. |
| Energy | No short or long-term impact to energy would occur under the No Action alternative. | No short-term impact to energy would occur under Alternative 2. There could be a small beneficial impact to energy under Alternative 2 but it would not be significant. | Same as Alternative 2. | Same as Alternative 2. |
| Recreation | No short or long-term impact to recreation would occur under the No Action alternative. | Short-term construction activities associated with a pumping plant, pipelines, transmission line, and access road. None of these activities would result in a significant impact on recreation resources. | Same as Alternative 2. | Same as Alternative 2. |

| Resource | Alternative 1 – No Action | Alternative 2 – Proposed Action | Alternative 3 | Alternative 4 |
|---|---|---|---|---|
| Visual Resources | No construction of project facilities would occur; therefore no impact to visual resources. If short-term fallowing of agricultural land occurs, there would be a change to the landscape from existing condition. | Short-term effect – existing visual character of the area would temporarily change as a result of construction equipment, vehicles, workers, etc., being seen; however, it would be similar to those currently used in the transport of agricultural goods, etc., along the same roads. This results in a less than significant effect.<br><br>Long-term effects include changes in landscape due to presence of project facilities (pumping plant, overhead transmission line). O&M of new facilities would consist of periodic inspections as necessary; however, these would be in short duration and result in a less than significant impact. Alternative 2 is consistent with the Minidoka County's Comprehensive Plan. | Same as Alternative 2. | Same as Alternative 2. |

| Resource | Alternative 1 – No Action | Alternative 2 – Proposed Action | Alternative 3 | Alternative 4 |
|---|---|---|---|---|
| Socioeconomics | No Project facilities constructed. If water becomes unavailable, lands may be forced out of agricultural production (short-term fallowing) until another water source is developed, etc. Potential impacts to population, housing parameters; and current unemployment numbers. | Alternative 2 would result in short-term construction activities associated with the project. None of these activities would result in a significant impact on socioeconomics. | Same as Alternative 2 although the construction duration would be longer due to installation of a longer pipeline. | Same as Alternative 2. |
| Environmental Justice | No Project facilities constructed. If water becomes unavailable, lands may be forced out of agricultural production resulting in short-term unemployment of farm workers. As defined by HUD, no low-income population in Minidoka County; therefore, the population would not experience disproportionately high/adverse impacts. | Alternative would construction activities. These short-term and long-term activities would not result in significant environmental justice impacts because (1) there is no defined low-income population in the area, and (2) the population would not experience disproportionately high/adverse impacts. | Same as Alternative 2 with less-than significant impacts. | Same as Alternative 2 with less-than significant impacts. |

| Resource | Alternative 1 – No Action | Alternative 2 – Proposed Action | Alternative 3 | Alternative 4 |
|---|---|---|---|---|
| Air Quality and Climate Change | No Project facilities constructed. The long-term impact on air quality of implementing the No Action alternative would be potential dust being raised by wind from fallowed agricultural land. | Short-term impacts to air quality for fugitive dust during construction. Impacts would be mitigated to less than significant levels by the use of BMPs. No long-term impacts to air quality. No short or long term impacts to climate change would occur from Alternative 2. | Same as Alternative 2 although the construction duration would be longer due to installation of a longer pipeline. | Same as Alternative 2 although the construction duration would be longer due to installation of a longer pipeline. |

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# Chapter 3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

## 3.1 Introduction

This chapter supplies the background information and a description of the study conducted for key resources as part of the Unit A Pumping Plant #2 EA. It analyzes baseline conditions of various resource areas at the project site and in the project vicinity, and evaluates the potential effects of constructing and operating the three action alternatives and the No Action alternative, based upon the purpose and need and project description provided by Reclamation, NRCS, and A&B.

The affected environment section describes the existing environment that could be affected by the alternatives, and the environmental consequences section describes the potential environmental consequences of those alternatives, if implemented, on the resources evaluated below. Mitigation measures necessary to reduce any potential impacts to those resources are addressed in the mitigation section. Cumulative impacts, which are impacts which may result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, are also evaluated.

Public health and hazardous wastes were not addressed as there are no hazardous wastes identified in the project area and there would be no public health issues.

Information necessary to develop the affected environment discussion was obtained through a combination of online data searches; meetings, discussions, and reports from agencies; field review notes; and a review of available aerial photography.

## 3.2 Land Use and Ownership

This section describes the existing land uses and ownership at and in the vicinity of the project facility locations. It also lists the applicable goals and policies that are listed in Minidoka County's Comprehensive Plan (Comprehensive Plan).

**Study and Analysis Methodology**

Aerial photographs of the project facilities locations and the project vicinity, site visit notes, Reclamation mapping, and the Minidoka County Comprehensive Plan, were reviewed.

**Area of Potential Effect**

The area of potential effect (APE) for land use is the land where the project facilities would be constructed within Minidoka County.

## 3.2.1 Affected Environment

The majority of land in Minidoka County is privately owned (61.8 percent). Federal land ownership comprises 35.9 percent of the county's land, and the remainder of land (2.3 percent) is owned by the City, County, and State. Agriculture is an important part of Minidoka County's economy, but agricultural land use in Minidoka County is declining. The number of farms has increased but the average size of the farms has decreased (Minidoka County 2010).

The three alternative pumping plant sites are located on private land in Township 10 S Range 22 E on the north side of the Snake River. The Alternative 2 pumping plant site and its associated pipeline that would connect to the common pipeline route are located in Section 16. The Alternative 3 pumping plant site is located in Section 20 and its associated pipeline that would connect to the common pipeline route is located in Sections 16, 17, and 20. The Alternative 4 pumping plant site is located in Section 19 and its associated pipeline that would connect to the common pipeline route is located in Sections 16, 17, 19, and 20. The common pipeline route would be constructed on mostly private land, and it would also cross some Reclamation land. The Snake River abuts the southern ends of the three alternative pumping plant alternative sites.

The existing land use at the Alternative 2 pumping plant site is zoned as agricultural low and the parcel is currently undeveloped open space. There is a road at the southern end of the parcel, along with a few trees. To the north, east, and west of the pumping plant site, the land is zoned as agricultural low and is undeveloped open space and agricultural land uses, with a few rural residences located approximately 0.5 to 0.9 mile away (to the west, northwest, north, northeast, and east). The Snake River is on the south side of the pumping plant site. The nearest residence is located approximately 0.2 mile to the south of the pumping plant site, on the south side of the Snake River.

The existing land use at the Alternative 3 pumping plant site is zoned as agricultural low and the parcel is currently agriculture and undeveloped open space, with a road in the southern portion of the parcel and a few trees near the center and southern boundary of the parcel. The land is zoned agricultural low and is in agricultural and undeveloped open space uses to the

north, east and west of the pumping plant site. The Snake River is on the south side of the pumping plant site. The nearest rural residences are located approximately 0.4 mile to the northeast and approximately 0.4 mile to the southeast on the south side of the Snake River.

The Alternative 4 pumping plant site is zoned as agricultural low and the parcel is currently almost completely in agricultural land use, with a few trees at the southeast corner of the parcel and a road at the southern end. The land is zoned agricultural low and is in agricultural and undeveloped open space uses to the north, east and west of the pumping plant site. The Snake River is on the south side of the pumping plant site. There are a few rural residences located approximately 0.7 to 1.25 miles to the northwest, north, and northeast. The nearest residences are located approximately 0.6 mile to the south of the pumping plant site, on the south side of the Snake River.

The pipeline is proposed to be installed in land that is primarily in agricultural with a small amount of undeveloped open space and is zoned agricultural medium and agricultural highland use with a small amount of undeveloped open space. Grazing may occur within the undeveloped open space lands.

The following Minidoka County Comprehensive Plan Objectives are applicable to the project:

- Property Right Objective #3: To review each new proposed use carefully for its potential impact on current uses and that any potentially negative impact should be mitigated.
- Property Right Objective #5: To address the concepts of “Right to Farm” laws and encourage protection of agriculture.
- Land Use (High and Medium Agriculture) Objective #2: To have orderly rural growth by using the land according to its best use (as related to social, economic, and physical factors) while encouraging the property owner to retain as many acres as possible in agricultural use.
- Land Use (High and Medium Agriculture) Objective #3: To encourage maximum compatibility between land uses.
- Land Use (High and Medium Agriculture) Objective #11: Support the “Right to Farm” concepts in zoning and other developmental laws to protect the County’s agricultural base.
- Land Use (Low Agricultural) Objective #2: Support open space and rural residential lifestyle (Minidoka County, 2010).

### 3.2.2 Environmental Consequences

This section provides the expected potential impacts on land use from implementation of the alternatives.

**Methods and Assumptions**

Aerial photographs of the project facilities locations and the project vicinity were reviewed to aid in determining if the proposed project (all alternatives) would be compatible with existing land uses. In addition, the Minidoka County Comprehensive Plan (Comprehensive Plan) was reviewed to determine if the proposed project (all alternatives) would be consistent with the Comprehensive Plan's Objectives.

## Alternative 1 – No Action

### *Short-term Impacts*

If Alternative 1 is implemented, no Project facilities would be constructed, so no construction vehicles, equipment, and workers would be at the project sites, no construction activities would occur, and no short-term interruptions in existing land uses would occur. Therefore, there would be no short-term impact on land use from construction activities.

If the No Action alternative is implemented and water becomes unavailable for crop irrigation, then lands may be forced out of agricultural production (short-term fallowing) until another water source or delivery option is developed, or a different (less water intensive) crop is planted. This would result in a short-term change in land use.

### *Long-term Impacts*

If Alternative 1 is implemented, the District would continue to deliver surface water from the Snake River to the 15,000 acres of Unit A agricultural land and 1,500 acres of Unit B agricultural land via the existing pumping plant and canal. However, the existing Unit A delivery system does not have sufficient capacity to meet crop demands throughout the irrigation season. This may result in the long-term fallowing of agricultural land until another water source or delivery option is developed, or a different (less water intensive) crop is planted. Continuing groundwater declines could also result in eventually curtailing water deliveries to 1,500 Unit B acres due to insufficient water to produce a crop. If this occurs, then there would be a long-term impact on land use from implementation of Alternative 1.

In addition, the District would continue to deliver groundwater to approximately 60,600 Unit B acres of agricultural land, resulting in no impact to these acres.

### *Cumulative Impacts*

No cumulative impacts are anticipated on this resource as a result of the No Action alternative.

## Alternative 2 – Proposed Action

Alternative 2 would require the short-term construction activities associated with a pumping plant, and pipelines, a transmission line, and access road within the pipeline right-of-way. Alternative 2 would also result in pumping and conveyance of water from the Snake River to various locations along the pipeline alignment. These short-term and long-term activities would not result in significant land use impacts because the majority (approximately 82 percent) of the pipeline ROW (which would encompass the pipeline, transmission line, and access road) would follow property boundaries, thus avoiding many impacts on land use.

Alternatives 2 would also require acquisition by Reclamation and the District of land rights to the pumping plant site (fee title) and the route of the pipeline, access road and transmission line (easements or ROW). As noted above, these acquisitions would not result in significant impact on current or planned uses of involved lands. Given this conclusion, the necessary changes in landownership or access rights would not result in a significant impact.

### *Short-term Impacts*

Construction of Alternative 2 would require taking some agricultural fields along the pipeline/transmission line/access road alignment out of production while they are being constructed. Lands owned by five landowners would be affected by project construction. The pipeline ROW from the common point to the end point (which includes only the pipeline) would be approximately 43,942 feet long. The pipeline ROW from the common point to the pump station (in which the pipeline, transmission line, and access road would be located) would be approximately 6,145 feet long. Approximately 22.62 acres of crop/pasture land, approximately 40.49 acres of property boundary land, and approximately 23.52 acres of range land would be temporarily affected by project construction from the common point to the end point. Approximately 0.58 acres of crop/pasture land, approximately 11.6 acres of property boundary land, and approximately 2.68 acres of range land would be temporarily affected by project construction from the common point to the pump station. This impact would be short-term. Given the commitment by the District to compensate landowners at fair market value for any lost production during project construction, there would be no significant short-term impact on land use. All temporary impacts from pipeline construction from the common point to the project's end are the same for all action alternatives.

### *Long-term Impacts*

After the proposed pipeline, transmission line, and access road are constructed, it is expected that the remaining disturbed areas owned by the five landowners would return to their pre-construction land use. Land use on the approximately 1.6 acres used for the pumping plant would be converted from agricultural use (grazing) to developed land. In addition, approximately 2.4 acres of land within or near the pipeline ROW alignment would become a

permanent access road, and would, therefore, change land use. Given (1) the type of land-use affected, (2) the general scale of affected ownership in the area, and (3) the commitment to site and manage the access road and transmission line route in consultation with affected landowners, long-term impact would not be expected to be significant. This observation is further reinforced by the fact that O&M of the pumping plant, pipeline, transmission line, and the access roads would require only periodic visits to the site and alignments. Implementation of Alternative 2 would be consistent with the Comprehensive Plan's objectives to protect agricultural land uses.

### *Mitigation*

The following mitigation measures would be implemented to minimize the impacts to land use from construction and O&M under Alternative 2:

- Work with affected landowner(s) to site permanent access road and transmission line along property and/or field boundaries or as requested by the owner(s).
- Strive to site the 100-foot-wide construction disturbance area so that it uses the areas between fields and parcels, to minimize the amount of land that would be taken out of agricultural production for construction activities.
- Minimize land disturbance within the 100-foot-wide construction disturbance area.
- After project construction is complete, restore the construction disturbance area to its pre-construction condition.
- Compensate landowners at fair market value for production lost during construction activities.
- Consult with Minidoka County regarding its direction in its Comprehensive Plan to protect agricultural land uses and the project's impacts on land use from constructing the project.

### *Cumulative Impacts*

No cumulative impacts are anticipated on this resource as a result of the proposed project.

## Alternative 3

This alternative would result in the same land use impacts as were discussed for Alternative 2.

### *Short-term Impacts*

This alternative would result in the same land use impacts as were discussed for Alternative 2. The only differences are that this alternative has a longer pipeline from the common point to the pump station. This may also mean a longer access road. Therefore, construction duration, and associated short-term impacts, may be longer than for Alternative 2. These impacts are

quantified later in Section 3.7.2 (Vegetation – Environmental Consequences). Similar to Alternative 2, however, these short-term impacts would not be expected to be significant.

### *Long-term Impacts*

This alternative would result in the same land use impacts as discussed for Alternative 2. Land use on the approximately 1.6 acres used for the pumping plant would be converted from agricultural use (grazing) to developed land. The access road would result in the loss of 2.6 acres of crop/pasture, range, and property boundary land (1.8, 0.5, and 0.3 acres respectively) and would, therefore, change land use. Approximately 65 square feet of non-agricultural land would be lost from power pole placement. Similar to Alternative 2, however, these short-term impacts would not be expected to be significant.

### *Mitigation*

Mitigation measures for Alternative 3 are the same as described for Alternative 2.

### *Cumulative Impacts*

This impact is the same as described for Alternative 2.

## Alternative 4

This alternative would result in the same land use impacts as were discussed for Alternative 2.

### *Short-term Impacts*

This alternative would result in the same land use impacts as those discussed for Alternative 2. The only differences are that this alternative has a longer pipeline from the common point to the pump station than Alternative 2 (thereby affecting more landowners than Alternative 2). These impacts are quantified in Section 3.7.2 (Vegetation – Environmental Consequences). The construction duration for Alternative 4 is expected to be longer than for Alternative 2. Nonetheless, similar to Alternatives 2 and 3, these short-term impacts would not be expected to be significant.

### *Long-term Impacts*

This alternative would result in the same land use impacts as those discussed for Alternatives 2 and 3, but with a longer easement length for the pipeline. Land use on the approximately 1.6 acres used for the pumping plant would be converted from agricultural use (grazing) to developed land. The access road would result in the loss of 3.1 acres of crop/pasture, range, and property boundary land (1.9, 0.1, and 1.1 acres, respectively) and would, therefore, change

land use. Similar to Alternative 2, however, these short-term impacts would not be expected to be significant.

### *Mitigation*

Mitigation measures for Alternative 4 would be the same as those described for Alternative 2.

### *Cumulative Impacts*

This impact is the same as described for Alternative 2.

# 3.3 Water Rights

This section supplies the background information and a description of the study conducted for water resources.

**Study and Analysis Methodology**

The primary source of information for this analysis was personal communication with A&B staff.

**Area of Potential Affect**

The APE for water rights is focused on the Project footprint, but also extends to the A&B boundaries.

## 3.3.1 Affected Environment

A&B holds several decreed water rights for irrigation purposes in Basins 01 and 36. For surface water delivery, A&B holds seven surface water natural flow rights totaling 270 cfs with the earliest priority dating back to April 1, 1939. The District uses natural flow when it is available in priority, which can vary year to year. A&B also holds storage water rights in American Falls (46,826 acre-feet) and Palisades (90,800 acre-feet) reservoirs. When natural flow is unavailable, the District delivers storage from one or both reservoirs to supply water to the project. The total amount of surface water diverted by A&B varies by year but on average is approximately 55,000 to 63,000 acre-feet (Thompson 2014).

For groundwater delivery, A&B holds twelve groundwater rights totaling approximately 1,130 cfs with the earliest priority dating back to September 9, 1948. The groundwater rights are not fully utilized due to declining groundwater levels and the lack of available water supply in the ESPA in the area. However, on average A&B diverts approximately 170,000 to 190,000 acre-

feet annually. The District currently uses 177 wells to pump and deliver groundwater to the landowners (Thompson 2014).

## 3.3.2 Environmental Consequences

Water rights affect the distribution of available water for irrigation, domestic, and commercial uses. Water in the APE is a valuable commodity because of the region's heavy dependence on irrigated agriculture.

**Methods and Assumptions**

Impacts were quantitatively determined by comparing existing and proposed water rights. Impacts to water rights would be considered significant if project implementation resulted in modification of existing water rights in the APE.

### Alternative 1 – No Action

No direct or indirect, short-term, long-term, or cumulative effects to water rights would occur as a result of the No Action alternative.

### Alternative 2 – Proposed Action

Under Alternative 2, A&B will only need to file an application for transfer with the Idaho Department of Water Resources (IDWR) to add a point of diversion to its seven surface water natural flow rights. All of the other water right elements for the surface rights will remain unchanged. The surface water rights will continue to be fully utilized as water is available. No changes are expected for the groundwater rights; A&B will continue to use those rights as water is available. For the Unit A lands previously irrigated with groundwater, A&B intends to make annual application to the Water District 01[1] rental pool and lease available storage for delivery to these lands. These lands will be considered "soft conversions," meaning that the groundwater wells will still be operated and maintained and used only when storage water is unavailable. The total quantity and priority of the existing natural flow surface water rights will be maintained; consequently, there will be no impact to delivery of water to other lands with A&B's Unit A (Thompson 2014).

No direct or indirect, short-term, long-term, or cumulative effects to water rights would occur as a result of the Proposed Action.

[1] The State administrative district created by Idaho law to supervise the distribution of water among surface water rights in the Upper Snake River basin above Milner Dam (both natural flow and storage water rights).

### Alternative 3

All impacts to water rights related to Alternative 3 would be the same as identified for Alternative 2.

### Alternative 4

All impacts to water rights related to Alternative 4 would be the same as identified for Alternative 2.

# 3.4 Water Quantity

This section describes existing surface water and groundwater quantity in the project area.

**Study and Analysis Methodology**

The primary sources of information for this analysis were the USGS National Water Information System (USGS 2014) and Reclamation's *Minidoka North Side Resource Management Plan* (RMP) Environmental Assessment (Reclamation 2005). Reclamation's document addresses lands owned by Reclamation in Minidoka County, Idaho, which include the Project area. While the Project will be constructed primarily on private land, these lands are adjacent to or surrounded by Reclamation lands. Where applicable, the data in the RMP and EA were assumed representative of the private lands within the Project area.

**Area of Potential Effect**

The APE for water quantity extends beyond the Project footprint. Surface water resources were assessed in the Snake River (Milner Lake) from the proposed pump station locations, approximately 7 miles downstream to Milner Dam. Groundwater resources are connected throughout the ESPA, but localized effects on quantity are most likely within a few miles of the project area.

## 3.4.1 Affected Environment

The Snake River at Milner drains an area of 17,180 square miles in Idaho, Wyoming, and Utah. The hydrologic unit code for the project area is 17040209. Flows are regulated by American Falls Reservoir, Lake Walcott, Milner Lake, and other reservoirs with a usable capacity of approximately 4,700,000 acre-feet (USGS 2014). From 1926 through 2013 (regulated period), peak daily flow passing Milner was 31,200 cfs, and mean monthly discharge is shown in Table 3-1.

**Table 3-1. Mean discharge – gaging station 13088000 – Snake River at Milner, Idaho (1926 to 2013) (USGS 2014)**

| Month | Mean Discharge (cfs) |
|---|---|
| January | 3,380 |
| February | 3,450 |
| March | 3,640 |
| April | 4,680 |
| May | 3,940 |
| June | 3,800 |
| July | 1,000 |
| August | 520 |
| September | 549 |
| October | 1,610 |
| November | 2,320 |
| December | 2,910 |
| Note: Flow at this location represents combined flow to the Snake River from 13087995 Snake River gaging station at Milner and 13087505 lower Milner Powerplant. | |

The ESPA underlies the study area, covering an area approximately 180 miles by 60 miles from St. Anthony, Idaho, to Bliss, Idaho. The aquifer is supplied by seepage from streams and irrigation, underflow from tributary valleys, and precipitation. Water is discharged from the aquifer as spring flows and as groundwater pumped for irrigation, domestic, and commercial supplies. Depth of groundwater below the surface ranges from less than 10 feet up to 400 feet, and water yields range from less than 100 gallons per minute per foot of drawdown in the lower permeability sediment-basalt aquifer in the south (closer to the study area) up to several thousand gallons per minute per foot of drawdown in the basalt-dominated aquifer to the north (Reclamation 2005).

## 3.4.2 Environmental Consequences

The local economy, culture, and biological resources are dependent on water provided by the Snake River and the ESPA. Water quantity is critical because water in the region is in high demand and shortages limit the sustained growth of the parameters listed above.

**Methods and Assumptions**

Impacts to water quantity were qualitatively evaluated by assessing trends in affected water resources and looking at the potential for changes caused by the alternatives. Impacts to water quantity would be considered significant if project implementation resulted in reduced water availability for users in the APE.

## Alternative 1 – No Action

The No Action alternative would not change the amount of water that A&B currently pumps from the ESPA or diverts from the Snake River. Groundwater resources are declining in the aquifer, as evidenced by the approximately 1,500 acres in Unit B that used to be irrigated with groundwater and had to be converted to a surface water supply in the mid-1990s, when several wells failed because of a lack of groundwater supply. Over time, under the No Action alternative, groundwater availability for Unit B users will probably continue to diminish. It is anticipated that approximately 1,500 acres in Unit B currently served by deep wells 28A922, 15A922, 15C922, 11B922, 11C922, and 3C922 will be forced out of production because of insufficient groundwater supply at some point in the future. Also, since the existing delivery system in Unit A does not have sufficient capacity to meet crop demands throughout the entire irrigation season, additional acreage in Unit A or the portion of Unit B currently supplied with surface water may be forced out of production.

## Alternative 2 – Proposed Action

Alternative 2 would have a minimal effect on water quantity.

### *Short-term Impacts*

No short-term impacts to water quantity are anticipated under Alternative 2.

### *Long-term Impacts*

A&B's cumulative water right would not change under Alternative 2, although a higher percentage of water may be diverted as surface water from the Snake River rather than pumped as groundwater from the ESPA based upon a district-wide water use analysis. This redistribution of water source is not anticipated to cause a reduction in Snake River flows at the point of diversion because any additional water to be diverted at the proposed pumping plant would be storage water leased from the Water District 01 rental pool and released for the A&B's use on-call from one of the upstream storage reservoirs. Reduced groundwater pumping would reduce drawdown and groundwater depletion in the ESPA, allowing 1,500 acres in Unit B currently served by deep wells 28A922, 15A922, 15C922, 11B922, 11C922, and 3C922 to stay in production. Construction of a pipeline to replace the unlined canal and

ditch system will reduce evaporation and seepage, minimizing losses to the atmosphere but also reducing potential recharge to the aquifer.

### *Mitigation*

No mitigation for water quantity is anticipated under Alternative 2.

### *Cumulative Impacts*

The proposed Lake Walcott Groundwater Recharge Project is a joint effort between the Idaho Water Resource Board, A&B, and the Magic Valley Groundwater District to divert water from Lake Walcott (part of the Snake River system upstream of Milner Lake), convey the water through a pipeline to a State section of land north of the reservoir, and inject the water into the aquifer through a series of injection wells. The project is being designed to achieve a diversion and injection rate of 100 cfs with a yearly goal of 30,000 acre-feet volume of water recharging the aquifer. No cumulative impacts to water quantity are anticipated as a result of the implementation of Alternative 2 and the Lake Walcott Groundwater Recharge Project.

### Alternative 3

All impacts to and mitigation measures for water quantity related to Alternative 3 would be the same as identified for Alternative 2.

### Alternative 4

All impacts to and mitigation measures for water quantity related to Alternative 3 would be the same as identified for Alternative 2.

## 3.5 Water Quality

**Study and Analysis Methodology**

The study and analysis methodology for water quality is the same as that defined for water quantity, except the USGS National Water Information System was not referenced.

**Area of Potential Effect**

The APE for water quality is the same as that defined for water quantity.

## 3.5.1 Affected Environment

Pollutants of concern in the Snake River above Milner Dam (Milner Lake) include sediment, oil and grease, nutrients, and temperature. Sediment, oil and grease, and total phosphorus Total Maximum Daily Loads (TMDLs) have been developed for the Minidoka Dam to Milner Dam segment (IDEQ 2000). The Snake River between Milner Dam and Burley is not listed as impaired for any constituents in Section 5 of the 2010 Integrated Report (commonly referred to as the 303(d) list) (IDEQ 2011), but temperature is being further evaluated and a recent review of the Lake Walcott Subbasin Assessment, TMDL, and Implementation Plan found that water quality standards are still not fully supported (IDEQ 2012).

Although the Snake River canyon is deeply incised, the land surface in the adjacent Snake River Plain is generally flat to gently rolling. There are small benches and knolls, but much of the area lacks a well-defined stream drainage pattern, and many small basins have no natural drainage outlet. Since there are limited options for irrigation return flows and stormwater to be conveyed back to the river, A&B historically disposed of this water through injection wells into the underlying groundwater aquifer (Reclamation 2005). The ESPA was designated by the U.S. Environmental Protection Agency (EPA) as a sole source of drinking water under the Federal Safe Drinking Water Act in 1991, which resulted in more restrictive groundwater quality standards. Drain water monitoring results suggest that return flows entering injection wells often exceed the Safe Drinking Water act maximum contaminant levels for coliform bacteria and turbidity. Since continued injection could result in contamination of the ESPA (or the Snake River via horizontal transport of water within the aquifer back to the river), wetlands were constructed to reduce contamination and facilitate evaporation and evapotranspiration of the irrigation drain water (Reclamation 2005). As of January 2014, A&B had only nine active injection wells remaining and those receive precipitation flood flows only (Temple 2014).

## 3.5.2 Environmental Consequences

The local economy, culture, and biological resources are dependent on water provided by the Snake River and the ESPA. Water quality is critical for supporting healthy fish and wildlife populations, safe drinking water sources, and irrigation water that optimizes crop growth.

**Methods and Assumptions**

Impacts to water quality were qualitatively evaluated by assessing current status and trends in affected water resources and looking at the potential for changes caused by the alternatives. Impacts to water quality would be considered significant if project implementation resulted in exceedances of state water quality criteria or standards in the APE.

## Alternative 1 – No Action

No direct or indirect, short-term, long-term, or cumulative effects to water quality would occur as a result of the No Action alternative.

## Alternative 2 – Proposed Action

Alternative 2 would have a minimal effect on water quality.

### *Short-term Impacts*

Short-term degradation of water quality from small plumes of sediment could likely be released into the Snake River during construction of the pump station, regardless of mitigation measures and methods implemented. Ground-breaking activities may have some potential for erosion in the short term; however, these effects would be minimized through implementation of mitigation measures and other BMPs. The new construction areas surrounding the pump station would be potential sources of sediment until they are revegetated and stabilized, but potential delivery to the river would be very limited because of planned revegetation.

To protect water quality from chemical contamination associated with the Proposed Action, uncured concrete would not come in contact with flowing water; vehicles and other equipment would be refueled away from standing or flowing water in the Snake River, and spill containment equipment would be available during refueling. Consequently, no effects from contaminants are anticipated.

### *Long-term Impacts*

No long-term impacts related to slope erosion would be anticipated under this alternative because surfaces disturbed during construction would be seeded with a mixture of native grasses. Conversion of unlined canals and ditches to pipelines may result in slightly less suspended sediment in the delivery system, but sediment concentrations in drain water following field application are not anticipated to change. The riparian vegetation that would be removed during construction of the pump station and support structure is negligible and does not provide any appreciable stream shade. No increase in temperature is anticipated because there would be no reduction in Snake River flows at the point of diversion. Any additional water to be diverted would be released on-call from one of the upstream storage reservoirs.

### *Mitigation*

The Proposed Action would comply with all CWA requirements, including development of an Erosion and Sediment Control Plan. Construction activities are likely to result in some temporary water quality impacts such as sediment plumes, but these potential impacts will be

mitigated by erosion and sediment control BMPs and other mitigation measures. All appropriate permits from the State of Idaho, USEPA, and USACE would be obtained, and all work would comply with the mitigation required by those entities. Additional water quality-related mitigation measures are described in Fish Resources in Section 4 of the Unit A Pumping Plant Environmental Assessment Resource Reports (CH2M Hill 2014).

### *Cumulative Impacts*

No cumulative impacts to water quality are anticipated as a result of the implementation of Alternative 2.

### Alternative 3

All impacts to and mitigation measures for water quality related to Alternative 3 would be the same as identified for Alternative 2.

### Alternative 4

All impacts to and mitigation measures for water quality related to Alternative 3 would be the same as identified for Alternative 2.

## 3.6 Noise

This section describes the existing noise setting at and in the vicinity of the project facility locations, and it identifies existing sources of noise. It also lists the applicable goals and policies that are listed in Comprehensive Plan.

**Study and Analysis Methodology**

Aerial photographs of the project facilities locations and the project vicinity, as well as the Comprehensive Plan were reviewed.

**Area of Potential Effect**

The APE for noise is the land where the project facilities would be constructed and the lands surrounding those facilities within Minidoka County and the northern portion of Cassia County where residences are located across the river from the proposed pumping plants.

## 3.6.1 Affected Environment

The land use at and in the vicinity of the three pumping plant sites and along the pipeline alignment is primarily agricultural, with associated rural residences and a small amount of undeveloped open space. As such, the area's ambient noise levels are expected to be low except when farm equipment is operating. Existing noise sources include farm equipment, vehicles on local roadways, and people and their pets at the residences and along the Snake River.

There are no Comprehensive Plan Objectives for noise is applicable to the project.

## 3.6.2 Environmental Consequences

This section provides the expected potential impacts on ambient noise levels from implementation of the alternatives.

**Methods and Assumptions**

Aerial photographs of the project facilities locations and the project vicinity were reviewed to aid in determining the distances of residences to the proposed pumping plant. The analysis assumes that the pumping plant will be sound buffered to the extent that objectionable noise will not be heard by residences on the south side of the River. For purposes of the following analysis, a significant adverse impact is one where noise levels from the project results in an ambient average noise level that exceeds 65 decibels (dB) at a residence (IDT 2011). For residences where the average ambient noise level already exceeds 65 dB, a project related increase of 15 dB over the ambient average noise level would be adversely significant (IDT 2011). Table 3-2 below lists representative noise levels as perceived by the human ear (expressed in A-weighted decibels).

**Table 3-2. Representative inside and outside noise levels as measured in dBA units (USDOT FHA 2006).**

| At a Give Distance from Noise Source | A-Weighted Sound Level in Decibels | Noise Environments | Subjective Impression Effect |
|---|---|---|---|
| | — 140 — | | |
| | | | |
| Civil defense siren (100') | — 130 — | | |
| | | | |
| Jet takeoff (200') | — 120 — | | Pain threshold |
| | | | |
| | — 110 — | Rock music concert | |
| | | | |
| Diesel pile driver (100') | — 100 — | | Very loud<br>Hearing damage after 15 minutes exposure |
| | — 95 — | | Repeated exposure risks permanent hearing loss |
| Heavy truck (50') | — 90 — | Boiler room | Very annoying<br>Hearing damage (8 hours) |
| Freight cars (50') | | Printing press plant | |
| Pneumatic drill (50') | — 80 — | | Annoying, intrusive interferes with conversation |
| Freeway (100') | | In Kitchen With Garbage Disposal Running | |
| Vacuum cleaner (10') | — 70 — | | Moderately loud intrusive, interferes with telephone conversation<br>Noise begins to harm hearing |
| | | Data processing center | |
| Air conditioning unit (20') | — 60 — | | Intrusive |
| | | Department store | |
| Light traffic (100') | — 50 — | | |
| Large transformer (200') | | Private business office | |
| | — 40 — | | Quiet |
| | | Quiet bedroom | |
| Soft whisper (5') | — 30 — | | Very quiet |
| | | Recording studio | |
| | — 20 — | | |
| | — 10 — | | Threshold of hearing |
| | — 0 — | | |

## Alternative 1 – No Action

### *Short-term Impacts*

If Alternative 1 is implemented, no Project facilities would be constructed, therefore, no construction vehicles, equipment, and workers would be at the project sites, no construction activities would occur, and no short-term construction noise would be heard at the nearest residences to the project facilities. Therefore, there would be no short-term impact on ambient noise levels from project construction activities.

If the No Action alternative is implemented and water becomes unavailable for crop irrigation, then lands may be temporarily forced out of agricultural production (short-term fallowing) until another water source or delivery option is developed, or a different (less water intensive) crop is planted. If this occurred, then the noise that would be typically heard in an agricultural community from farm equipment, vehicles, and workers would not be heard. This would result in a short-term change in ambient noise levels.

### *Long-term Impacts*

The long-term impact on ambient noise levels of implementing the No Action alternative would be the same as described for the short-term, but the impacts would continue indefinitely until another water source, water delivery option, or crop change occurs.

### *Cumulative Impacts*

No cumulative impacts are anticipated on this resource as a result of the proposed project.

## Alternative 2 – Proposed Action

Alternative 2 would require the short-term construction activities associated with a pumping plant, pipelines, a transmission line, and access road within the pipeline ROW. Alternative 2 would also result in pumping and conveyance of water from the Snake River to various locations along the pipeline alignment. These short-term and long-term activities would not result in significant noise impacts; there are few residences in the vicinity of the project facility sites and appropriate noise attenuation is part of the design plan for the project pumping plant.

### *Short-term Impacts*

Construction activities associated with Alternative 2 facilities would generate noise from materials deliveries, vegetation removal, grading and other land preparation activities, pumping plant construction (in water and on land), pipeline trenching and installation, installation of transmission line poles and stringing conductor on the poles, waste pickup, and

land restoration. In addition, the increased traffic on the local roads leading to the project facilities would result in additional traffic noise.

Not all vehicles and pieces of equipment are expected to be used simultaneously, but would be used intermittently throughout the entire construction phase of the project. It is expected that the vehicles and equipment would be used only on Mondays through Fridays during daylight hours (approximately 7:00 a.m. to 7:00 p.m.). Nighttime and weekend construction is not planned, but may be needed at times. Construction is expected to start in the fall, and continue during the winter months, depending on weather conditions.

These increases in local noise levels would be short-term, occurring only during the construction period. Some of the project construction noise may be similar to that heard during farming operations. Therefore, construction of Alternative 2 would result in a less-than-significant noise impact.

### *Long-term Impacts*

Long-term and continuous noise from O&M associated with Alternative 2 would be generated from the pumps at the pumping plant and from the transmission line. Other noise sources during project operation and maintenance include the regular inspections of the project facilities and repairs, as needed. This periodic noise would be generated from the maintenance vehicles, maintenance and repair equipment, and the personnel. These noises would be consistent with current noise in the project area.

To the north, east, and west of the pumping plant site, the land is undeveloped open space and agricultural land uses, with a few rural residences located approximately 0.5 to 0.9 mile away (to the west, northwest, north, northeast, and east). The Snake River is on the south side of the pumping plant site. The nearest residence is located approximately 0.2 mile to the south of the pumping plant site, on the south side of the Snake River. The periodic long-term noise that would be generated during inspections, maintenance, and repairs of project facilities would result in a less-than-significant impact at the nearest residence. The continuous long-term noise that would be generated is also considered less than significant due to the distance to the nearest northern, western, and eastern residences, The residence located to the south has the greatest potential for being affected by the pumping plant operations noise. However, appropriate sound attenuation is part of the pump station design plan. This development commitment would mitigate any significant impact on surrounding land use.

### *Mitigation*

The following mitigation measures would be implemented to minimize the impacts to ambient noise levels from construction. Noise from operation and maintenance of Alternative 2 will be mitigated through pump design and therefore no mitigation measures for operation are included below.

- Noisy construction equipment would be placed on the construction sites so that they are as far away as possible from sensitive receptors (occupied residences). It may be possible to buffer them by placing other pieces of equipment/vehicles between the noise source and the receptor.
- Construction equipment would have mufflers, if standard; be in good working condition; and be maintained properly.
- Noisy equipment would be used only on Monday through Friday during daylight hours (approximately 7:00 a.m. to 7:00 p.m.). If nighttime and/or weekend construction is determined needed, or if construction activities are determined to be needed outside of the above-listed window of hours, a written notification would be delivered to all of the residences located within a one-mile radius of the project facility at least 48 hours prior to the construction schedule change.
- Operations equipment would be state-of-the-art; have mufflers, if standard; be in good working condition; and be maintained properly.

### *Cumulative Impacts*

No cumulative impacts are anticipated on this resource as a result of the proposed project.

## Alternative 3

### *Short-term Impacts*

This alternative would result in the same noise impacts as was discussed for Alternative 2. The only differences are that this alternative has a longer pipeline and transmission line, longer road, and a new road. Therefore, its construction duration is expected to be longer than for Alternative 2, so that its impacts on ambient noise levels are expected to be longer than for Alternative 2.

### *Long-term Impacts*

This alternative would result in the same noise impacts as discussed for Alternative 2. The existing land use at the Alternative 3 pumping plant site is agriculture and undeveloped open space, with a road in the southern portion of the parcel and a few trees near the center and southern boundary of the parcel. The nearest rural residences are located approximately 0.4

mile to the northeast and approximately 0.4 mile to the southeast on the south side of the Snake River.

### *Mitigation*

Mitigation measures for Alternative 3 would be the same as those for Alternative 2.

### *Cumulative Impacts*

This impact is the same as described for Alternative 2.

## Alternative 4

This alternative would result in the same noise impacts as were discussed for Alternative 2.

### *Short-term Impacts*

This alternative would result in the same noise impacts as discussed for Alternative 2. The only differences are that this alternative has a longer pipeline line than Alternative 2 and the transmission line and access road would be aligned along an east-west oriented private road. The construction duration for Alternative 4 is expected to be longer than for Alternative 2.

### *Long-term Impacts*

This alternative would result in the same noise impacts as was discussed for Alternative 2. The only differences are that this alternative has a longer pipeline than Alternative 2 and the transmission line and access road would be aligned along an east-west oriented private road.

The Alternative 4 pumping plant site is almost completely in agricultural land use, with a few trees at the southeast corner of the parcel and a road at the southern end. There are a few rural residences located approximately 0.7 to 1.25 miles to the northwest, north, and northeast. The nearest residences are located approximately 0.6 mile to the south of the pumping plant site, on the south side of the Snake River. For the same reasons discussed for Alternative 2, no significant long-term noise impact would be expected from this alternative.

### *Mitigation*

Mitigation measures for Alternative 4 would be the same as those described for Alternative 2.

### *Cumulative Impacts*

This impact is the same as described for Alternative 2.

# 3.7 Vegetation

**Study and Analysis Methodology**

The primary source of information for this analysis includes the Reclamation's *Minidoka Northside Resource Management Plan* (RMP) (Reclamation 2005) and EA (Reclamation 2004a). These documents address lands owned by Reclamation in Minidoka County, Idaho, which includes the Project area. While the Project will be constructed primarily on private land, these lands are adjacent to or surrounded by Reclamation lands. As such, the data in the RMP and EA was extended to include the private lands within the Project area. The IDFG Fish and Wildlife Information System (FWIS) was also consulted (IDFG 2012). A site visit was conducted to observe existing conditions at the proposed pumping station locations and along the proposed pipeline corridors.

**Area of Potential Effect**

The APE for vegetation resources is the Project footprint. This encompasses the proposed pipeline corridor ROWs, pumping stations, and any additional areas facilitating construction traffic and storage.

## 3.7.1 Affected Environment

This section describes existing vegetation resources, including State of Idaho and U.S. Bureau of Land Management (BLM) sensitive species that occur or could potentially occur within the project area. Any federally listed threatened and endangered species are not addressed here.

Historically, lands within the Project area consisted of shrub-steppe habitat, which is characterized by woody, mid-height shrubs, perennial bunchgrasses and forbs. Within the Project area, the original vegetation included Wyoming big sagebrush (*Artemisia tridentata ssp. wyomingensis*), bluebunch wheatgrass (*Pseudoroegneria spicata*), Sandberg bluegrass (*Poa secunda*), needlegrasses (*Hesperostipa spp.*), lupine (*Lupinus spp.*), Indian paintbrush (*Castilleja spp*.) and penstemon (*Penstemon spp*.).

During the 2013 site visit, four major land cover types were delineated within the Project area. These are discussed below.

- Crop and pasture lands consist chiefly of row crops, small grains, and hay. Most of the lands within the Project area have been converted to irrigated agricultural land. The primary crops include alfalfa, beans, corn, peas, potatoes, small grains, and sugar beets.
- Rangeland throughout the area is characterized by big sagebrush shrubland. The dominant shrub is Wyoming big sagebrush, with yellow rabbitbrush (*Chrysothamnus viscidiflorus*) scattered throughout. Recent fires have left a degraded herbaceous

understory, now dominated by invasive non-native species, including cheatgrass (*Bromus tectorum*), tall tumblemustard (*Sisymbrium altissimum*), and crested wheatgrass (*Agropyron cristatum*).

- Property boundaries within the Project area are dominated by non-native forb and grasslands. Common forb species include Canada thistle (*Cirsium arvense*), prickly lettuce (*Lactuca serriola*), tall tumblemustard, clasping leaf pepperweed (*Lepidium perfoliatum*), and kochia (*Bassia scoparia*). Common grass species include smooth brome (*Bromus inermis*), cheatgrass, and crested wheatgrass.
- Riparian fringe is found along the Snake River. Species found here include Russian olive (*Elaeagnus angustifoli*a), black cottonwood (*Populus trichocarpa*), willow (*Salix spp*.), softstem bulrush (*Schoenoplectus tabernaemontani*), and cattail (*Typha sp*.).

No special-status species occur within the APE.

## 3.7.2 Environmental Consequences

The quality of an area's vegetation is an important factor in determining the suitability of wildlife habitat. Vegetation provides forage and cover for birds and wildlife, and can be an indicator of an area's overall ecological integrity.

**Methods and Assumptions**

Impacts to vegetation were evaluated by the acreage of each land cover type potentially affected by the proposed actions. Impacts on vegetation resources would be considered significant if project implementation would be expected to reduce overall native vegetation resources through increased introduction of invasive species, particularly of legally noxious weeds and/or cheatgrass, and/or reduced habitat availability and function for wildlife habitat, especially breeding bird habitat, from reduction in riparian forested and/or shrub habitat.

Temporary impacts in Table 3-3 include pipeline installation. Permanent impacts in Table 3-3 include access roads, transmission lines, and pumping stations. For temporary pipeline impacts, acreages were calculated by multiplying the length of the pipeline crossing each land cover type by 100 feet, the width of the proposed construction corridor. However, in Alternative 2 and a portion of Alternative 3 the 25-foot-wide access road would be constructed within the 100-foot-wide pipeline corridor. This includes length of pipeline extending from the common point. For access road impacts, acreages were calculated by multiplying the length of the road crossing each land cover type by 25 feet, the width of the proposed access road. Pumping station impacts were determined by overlaying the land cover type map with the footprint (1.6 acres) of each proposed station. Transmission line impacts occur either within the pipeline/access road corridor (Alternatives 2 and 4) or as new disturbances on the landscape (Alternative 3), and are limited to the installation of 20-inch-diameter t-poles every 300 feet. In the case of Alternative 3, the amount of poles required and total area of permanent

impacts is negligible. These numbers are not reflected in Table 3-3. There are no potential impacts to special-status plant species.

**Table 3-3. Summary of impacts to each land cover type by alternatives (in acres).**

| | Alternative 1 | | Alternative 2 | | Alternative 3 | | Alternative 4 | |
|---|---|---|---|---|---|---|---|---|
| **Land Cover Type** | **Temporary** | **Permanent** | **Temporary** | **Permanent** | **Temporary** | **Permanent** | **Temporary** | **Permanent** |
| **Pumping Station, Access Road, and Pipeline Corridor from Common Point to Pump Station(s)** | | | | | | | | |
| Crop/pasture | 0 | 0 | 0.58 | 3.24 | 16.46 | 3.17 | 26.32 | 3.32 |
| Rangeland | 0 | 0 | 2.68 | 0.1 | 1.64 | 0.72 | 3.57 | 0.34 |
| Property boundaries | 0 | 0 | 11.6 | 0.71 | 2.91 | 0.36 | 0 | 1.1 |
| Riparian fringe | 0 | 0 | 0 | trace | 0 | trace | 0 | trace |
| **Sub Total** | **0** | **0** | **14.86** | **4.06** | **21.01** | **4.25** | **29.89** | **4.76** |
| **Pipeline Corridor from Common Point to End of Project** | | | | | | | | |
| Crop/pasture | 0 | 0 | 22.62 | 0 | 22.62 | 0 | 22.62 | 0 |
| Rangeland | 0 | 0 | 23.52 | 0 | 23.52 | 0 | 23.52 | 0 |
| Property boundaries | 0 | 0 | 40.49 | 0 | 40.49 | 0 | 40.49 | 0 |
| Riparian fringe | **0** | **0** | **86.63** | **0** | **86.63** | **0** | **86.63** | **0** |
| **Sub Total** | **0** | **0** | **101.49** | **4.06** | **107.64** | **4.25** | **116.52** | **4.76** |
| **Total** | 0 | 0 | 22.62 | 0 | 22.62 | 0 | 22.62 | 0 |

## Alternative 1 – No Action

Alternative 1 would have no short-term impacts on vegetation resources.

### *Long-term Impacts*

Under Alternative 1, long-term impacts to vegetation would include the fallowing of agricultural fields currently in production. This fallowed ground could potentially be invaded by noxious weeds, which would lead to an increase in noxious weed cover and overall habitat degradation throughout the Project area.

### *Mitigation*

Property owners would be required to control noxious weeds on their land, as stated in the Idaho Noxious Weed Law (Idaho Code Ann. § 22-24). This would result in an economic impact within the Project area.

### *Cumulative Impacts*

No cumulative impacts to vegetation are anticipated under the No Action alternative.

## Alternative 2 – Proposed Action

Alternative 2 would have temporary and permanent impacts on the vegetation within the Project area. Impacts to each vegetation type under this alternative are shown in Table 3-3.

### *Short-term Impacts*

Under Alternative 2, short-term impacts to the vegetation would include the removal of any existing vegetation within the construction corridor. These areas would be revegetated after the completion of construction. Crop areas would return to production as soon as appropriate. Disturbed sections within rangeland areas and along property boundaries would be reseeded with a mixture of native species, potentially including bluebunch wheatgrass, Sandberg bluegrass, lupine, and penstemon. The revegetation of these disturbed areas with native seed would result in the replacement of invasive non-native species, which would improve these areas over current conditions. Alternative 2 has the smallest amount of temporary vegetation impacts (101.49 acres). Alternative 2 also has the largest acreage of disturbed area dominated by rural vegetation, which would result in the largest replacement of invasive non-native species of the action alternatives. Short-term impacts related to pipeline construction from the common point to the project's end are the same for all action alternatives.

### *Long-term Impacts*

Under Alternative 2, long-term impacts to vegetation would include the removal of vegetation within the pumping station footprint (1.6 acres) and the access road corridor (2.4 acres). Vegetation within these areas, including several large trees along the Snake River, would not be replaced. Transmission lines would occur within the access road corridor, and would have no additional impacts.

### *Mitigation*

Prior to construction, weed control would be implemented on all ground being disturbed by this project. This would include the removal of noxious weeds via chemical and mechanical means. The revegetation of all disturbed areas immediately after construction would minimize

open ground where weeds could germinate. Constraints to keep the public from driving onto reseeded areas would be incorporated into the project design.

Prior to entering the worksite and after work is finished, all vehicles would be power-washed to minimize the spread of noxious weeds. All weeds germinating on reseeded or revegetated construction sites would be controlled using an approved herbicide. A dye would be placed in the weed control slurry, so that spray radius could be seen by both the sprayer and A&B. Spraying would include a dripless wand method so that spray would not be accidently dripped on unintended vegetation.

### *Cumulative Impacts*

No cumulative impacts to vegetation are anticipated under Alternative 2.

## Alternative 3

Alternative 3 would have temporary and permanent impacts on the vegetation within the Project area. Impacts to each vegetation type under this alternative are shown in Table 3-3. Mitigation, short-term impact, and cumulative impacts would be similar to those under Alternative 2, although temporary impacts are greater and total 107.64 acres. Long-term impacts caused by the construction of the access road (2.6 acres) and pumping plant (1.6 acres) would also be similar to those under Alternative 2, although the addition of a transmission line corridor outside of any other construction corridors would increase areas of permanent impact. Approximately 30 poles would be installed along the approximately 9,202 feet of transmission line outside of other construction areas resulting in approximately 65.4 square feet (2.18 square foot/pole) or 0.002 acres of lost vegetation; the vegetation type is unknown until design is complete. Vegetation in these areas would be permanently removed. As with Alternative 2, a few large trees would be removed during pumping plant construction and would not be replaced.

## Alternative 4

Alternative 4 would have temporary and permanent impacts on the vegetation within the Project area. Impacts to each vegetation type under this alternative are shown in Table 3-3. Mitigation, short-term impacts, long-term impacts, and cumulative impacts under Alternative 4 would be similar to those under Alternative 2, although temporary impacts would be greater and total 116.52 acres. There would be a permanent vegetation loss of 1.6 acres for the pumping plant and 3.1 acres for the access road. The transmission line will be constructed within the access ROW and along existing property boundary lines and result in no additional loss of native vegetation or cropland.

# 3.8 Fish

This section describes existing fish and aquatic resources, including State of Idaho-listed sensitive species that occur or could potentially occur within the Project area. Any federally listed threatened and endangered species are not addressed here.

**Study and Analysis Methodology**

As for vegetation, the primary source of information for this analysis include the Reclamation's RMP (Reclamation 2005) and EA (Reclamation 2004a), as well as the Middle Snake River Watershed Management Plan (IDEQ 1997). These documents address lands owned by Reclamation in Minidoka County, Idaho, as well as other private and state-owned lands/resources which occur in the Project area. While the Project will be constructed primarily on private land, these lands are adjacent to or surrounded by Reclamation lands. As such, the data in the RMP and EA was extended to include the private lands within the Project area. The IDFG FWIS was also consulted (IDFG 2012). A site visit was conducted July 25 and 26, 2013, to observe existing conditions at the proposed pumping station locations and along the proposed pipeline corridors.

**Area of Potential Effect**

The APE for fish and aquatic resources includes the Project footprint and extends upstream (in the Snake River) approximately 150 feet to accommodate for noise associated with construction and approximately 1,000 feet downstream to accommodate for sediment and turbidity that may result during construction and installation of the pump station. The project footprint encompasses the proposed pipeline corridor ROWs and pumping stations, and any additional areas facilitating construction traffic and storage. The primary potential for effects to fish and aquatic resources surrounds the pumping plant.

## 3.8.1 Affected Environment

The Snake River in the Project area is designated as Hydrologic Unit Code 17040209 and is part of the Middle Snake River Watershed. The Middle Snake River extends approximately 94 miles from Milner Dam downstream to King Hill, Idaho. This stretch of the Snake River is influenced by hydroelectric development and receives return flows from irrigated agriculture, hatchery effluent, sewer treatment plant discharges, and natural spring flows.

Cold water biota and salmonid spawning are both designated as beneficial uses in the Snake River in the Project area. Biological diversity of cold water biota has been reduced from historic conditions and is clearly stressed by water quality concerns surrounding temperature, nutrient loading, and sedimentation. In turn, salmonid spawning in this stretch is now confined to cold, clear, and well-oxygenated spring areas.

Aquatic biota in the Middle Fork Snake River that may occur in the Project area include some threatened and endangered invertebrates, numerous exotic species, and a few remaining native species. Fish assemblages in the Middle Snake River are indicative of both river and lake habitats. In total, as many as 20 species of fish (Table 3-4) are identified as having potential to occur in the area. Two of these species, Shoshone sculpin (*Cottus greenei*) and White Sturgeon (*Acipenser transmontanus Richardson*) are recognized as a state-sensitive species, with stateside ranks of S1 and S2, respectively (as determined by the IDFG IFWIS).

**Table 3-4. Fish species occurring in the middle Snake River.**

| Common Name | Scientific Name | Status |
|---|---|---|
| Largescale sucker | *Catostomus catastomus* | None |
| Bridgelip sucker | *Catostomus columbianus* | None |
| Shoshone sculpin | *Cottus greenei* | S2 |
| Mottled sculpin | *Cottus bairdi* | None |
| Chislemouth | *Acrocheilus alutaceus* | None |
| Cutthroat trout | *Oncorhynchus clarki* | None |
| Rainbow Trout | *Oncorhynchus mykiss* | None |
| Rainbow-Cutthroat hybrid | *O. mykiss x O. clarki* | None |
| Mountain whitefish | *Prosopium williamsoni* | None |
| White Sturgeon | *Acipenser tranmontanus Richardson* | S1 |
| Specled dace | *Rhinichthys osculus* | None |
| Redside shiner | *Richardsonius balteatus* | None |
| Utah Chub | *Gila atraria* | None |
| Channel catfish | *Ictalurus punctatus* | None |
| Brown bullhead | *Ameiurus nebulosus* | None |
| Yellow perch | *Perca flavescens* | None |
| Bluegill | *Lepomis macrochirus* | None |
| Smallmouth bass | *Micropterus dolomieui* | None |
| Largemouth bass | *Micropterus salmoides* | None |
| Common Carp | *Cyprinus carpio* | None |

**Status: None**=No Special Status.

**S1**= Critically imperiled: at high risk because of extreme rarity (often five or fewer occurrences), rapidly declining numbers, or other factors that make it particularly vulnerable to rangewide extinction or extirpation.

**S2**= Imperiled: at risk because of restricted range, few populations (often 20 or fewer), rapidly declining numbers or other factors that make it vulnerable to rangewide extinction or extirpation.

The most abundant fish species known to occur in this section is the largescale sucker (*Catastomus marcocheilus*) (IDEQ 1997). Salmonids found in the area include rainbow trout

(Oncorhynchus mykiss), cutthroat trout (*Oncorhynchus clarki*), and brown trout (*Salmo trutta*). Cut-bows (rainbow trout-cutthroat trout hybrids) are also known to occur (IDFG 2001). Warm-water species present in the area include largemouth bass (*Micropterus salmoides*), smallmouth bass (*Micropterus dolomieu*), bluegill (*Lepomis macrochirus*), yellow perch (*Perca flavescens*), and channel catfish (*Ictalurus punctatus*). Other species in the Middle Snake River Watershed include mountain whitefish (*Prosopium williamsoni*), mottled sculpin (*Cottus bairdi*), redside shiner (*Richardsonius balteatus*), Utah chub (Gila atraria), common carp (*Cyprinus carpio*), bridgelip sucker (*Catostomus columbianus*), chislemouth (*Acrocheilus alutaceus*), and speckled dace (*Rhinichthys osculus*) (IDEQ 1997).

The Middle Snake River fishery below Minidoka Dam is directly affected by seasonally fluctuating water levels and poor water quality conditions in the area are exacerbated during low-flow periods. In general, the fishery is considered to be a moderate-use area that can produce trophy-size salmonids. Fishing is permitted all year, with salmonids and bass being the primary game species.

Although natural reproduction in the Snake River is limited by fluctuating water levels, lack of spawning gravels, heavy siltation, and generally poor water quality (IDEQ 1997), this stretch of the Middle Snake River still supports a self-sustaining salmonid population that is not stocked. With the exception of spawning areas, trout habitat in the main Snake River is available throughout most of the free-flowing reaches between C.J. Strike Reservoir and Lake Walcott. It is especially good in the section between Milner Dam and King Hill (which includes the Project area), where large amounts of spring flow are discharged into the Snake River from the Snake River Plain Aquifer. Trout (such as rainbow, brown, cutthroat, and rainbow x cutthroat hybrids) are found in portions of the Snake River, below Minidoka Dam and Upper Salmon Falls Dam. The cutthroat trout and rainbow x cutthroat hybrids are found mainly in the area between Milner Dam and Twin Falls Dam, which has been seriously impacted by low flows during the irrigation season.

The bass population in this area is also self-sustaining and more tolerant of poor water quality conditions than salmonids. Many of the tributaries to the Middle Snake River contain good trout habitat and continue to support healthy fish populations with species indicative of good water quality (such as sculpin). Some of these streams and springs in the area provide important spawning grounds for salmonids in the area.

## 3.8.2 Environmental Consequences

**Methods and Assumptions**

Effects to fish and other aquatic organisms may result from a variety of factors related to construction activities. These include reduced or impaired water quality, habitat alteration, and displacement of individuals. Impacts to fish and other aquatic biota were qualitatively determined by evaluating the potential effects of proposed construction activities and considering the effects these may have on individual species, populations, and the habitats they occupy. These include the construction and O&M phases of the Project.

Impacts on fisheries would be considered significant if project implementation would be expected to reduce overall reproductive fitness of established fisheries and other aquatic resources through increased introduction of invasive species, reduced habitat availability and function for established fisheries and aquatic resource populations (including deleterious impacts on the riparian corridor, increased erosion, decreased bank stability and/or altered flows), and/or mortality to fish or other aquatic resources that would not occur under current conditions.

### Alternative 1 – No Action

No direct or indirect, short-term, long-term, or cumulative effects to fish or aquatic resources would occur as a result of the No Action alternative.

### Alternative 2 – Proposed Action

No effects to fish and aquatic resources in the Snake River would occur as a result of constructing the pipeline under any of the action alternatives. Constructing the pump station(s) does, however, have the potential to affect fish and aquatic resources. Effects to fish and other aquatic resources as a result of constructing the pump station under this alternative and the other action alternatives are primarily related to water quality over the short term, and the potential for entrainment/impingement of fish in the pumps over the long term. These effects are the same for each action alternative, as pump station construction would not vary significantly.

#### *Short-term Impacts*

Short-term degradation of water quality from small plumes of sediment could likely be released into the Snake River during construction of the pump station, regardless of mitigation measures and methods implemented. Ground-breaking activities may have some potential for erosion in the short term; however, these effects would be minimized through implementation of mitigation measures and other BMPs. Other ground-breaking activities may have some potential for erosion in the short term; however, these effects would be minimized through the

implementation of mitigation measures described below. The new construction areas surrounding the pump station would be potential sources of sediment until they are revegetated and stabilized, but delivery to the river would be very limited because of planned revegetation and other mitigation measures to be implemented.

To protect water quality from chemical contamination associated with the proposed action, uncured concrete would not come in contact with flowing water; vehicles and other equipment would be refueled away from standing or flowing water in the Snake River and spill containment equipment would be available during refueling. In turn, no affects from contaminants are anticipated.

Aquatic organisms (including those identified as state sensitive) have the potential to be temporarily disturbed during construction. Application of BMPs and mitigation measures would minimize impacts from construction, but the physical action of working in the stream would still likely displace individual organism. These organisms would be anticipated to return to the project area following cessation of construction activities. Short-term adverse effects to aquatic species (primarily in the form of displacement) may result in association with this alternative, as well as the other action alternatives.

### *Long-term Impacts*

The short-term impacts surrounding sediment delivered to the river are not likely to be a cause of permanent decline in instream habitat quality. Water quality in the Snake River would not be degraded over the long term under this alternative. The riparian vegetation that would be removed during construction of the pump station and support structure is negligible and does not provide any effective stream shade. In turn, this is not anticipated to affect temperature in the Snake River (relative to existing conditions). Disturbed areas would be scarified, and the soil surfaces left with a rough, corrugated surface to help anchor seed. The concrete and riprap structure proposed in association with construction of the pump station would be amended by soils. Disturbed lands would be seeded with a mixture of native grasses suitable for the site. Slopes would be hydro-seeded including fertilizer and mulch to retain moisture and facilitate germination and survival. No long-term impacts related to slope erosion would therefore be anticipated under this alternative.

The footprint of the proposed pump station would alter bank composition from soils to concrete and riprap, but not to the extent that is anticipated to recognizably affect fish and other aquatic biota. Substrate composition and embeddedness would be minimally altered over the long term (in the pump station footprint) as a result of the proposed action, but not to the extent that it would be anticipated to adversely affect fish or other aquatic biota.

Design of the pump station would create a slack pool at the intake(s) for the pump station. Although design of the pumps would minimize the potential for fish to be sucked into the pump station, there is still the potential for juvenile fish to be entrained and/or impinged on the

screens. Due to the isolation of the slack water pool this would only occur to fish voluntarily entering the area and would not be anticipated to occur at a level that would noticeably affect fish at the population level.

## *Mitigation*

Mitigation measures to minimize direct, indirect, short-term, and long-term impacts associated with this alternative (in addition to those identified in the project description above) are described in the following text. The following measures to minimize potential detrimental effects to water quality include erosion and sediment control as well as measures to prevent deleterious materials associated with construction equipment from entering the water. No cumulative impacts to fish or other aquatic organisms are anticipated in association with this alternative and, in turn, no mitigation to address cumulative impacts is required. Guidelines that would be followed during construction of project features include:

**Low-water Work Window**

All instream work in the Snake River relative to the project will be conducted during low-flow conditions. All instream construction activities will be completed within one work season.

**Fish Avoidance**

All water intakes (pumps) used during project implementation will have a fish screen installed, operated, and maintained in accordance with IDFG fish screen standards.

**Erosion Control Measures**

*Minimize Site Preparation Impacts*

i. Site clearing, staging areas, access routes, and stockpile areas will be identified to minimize overall disturbance, minimize disturbance to riparian vegetation, and preclude sediment delivery to stream channels.

ii. Silt fence, straw bales, straw wattles, or other sediment barriers will be placed around disturbed sites to prevent sediment from entering a stream directly or indirectly, including by way of roads and ditches.

*Minimize Earthmoving-related Erosion*

i. Ground-disturbing activities will be confined to the minimum area necessary to complete the project.

ii. An onsite supply of erosion control materials (for example, silt fence and straw bales) will be used to respond to sediment emergencies. Sterile straw or “weed free” certified straw bales will be used to prevent introduction of noxious weeds.

iii. All project operations will cease, except efforts to minimize storm or high-flow erosion, under precipitation and high-flow conditions that result in uncontrollable erosion in the construction area.

iv. Sediment control measures will be installed prior to construction activities and will remain in place, until threats of erosion exceeding existing conditions cease. After this determination is made, all sediment control measures will be removed within 30 days and disposed of in accordance with all federal, state, and local laws and regulations.

*Site Rehabilitation*

i. Upon project completion, project-related waste would be removed. Rehabilitation of all disturbed areas would be conducted in a manner that results in conditions similar to pre-work conditions through spreading of stockpiled soil materials, seeding, and/or planting with native seed mixes or plants. If native stock is not available, soil-stabilizing vegetation (seed or plants) would be used that does not lead to propagation of exotic species.

ii. Only approved herbicide application would occur as part of the action.

iii. Trees will be retained at the project sites wherever possible. Instream or floodplain rehabilitation materials (if required) would mimic as much as possible those found in the project vicinity. Such materials may be salvaged from the Project site or hauled in from offsite, but cannot be taken from streams, wetlands, or other sensitive areas.

iv. Site rehabilitation activities will be completed prior to the end of the construction field season.

**Pollution Control Measures:**

*State Water Quality Guidelines and Clean Water Act*

The CWA requires states to set water quality standards sufficient to protect designated and existing beneficial uses. In Idaho, "Sediment shall not exceed quantities…which impair designated beneficial uses. Determinations of impairment shall be based on water quality monitoring and surveillance and the information utilized as described in Section 350." (Idaho Administrative Procedures Act [IDAPA] 58.01.02.200.08). In Idaho State Water Quality Standards for Aquatic Life (Section 250), "Turbidity shall not exceed background turbidity by more than 50 nephelometric turbidity units (NTUs) instantaneously (at any point in time)" (IDAPA Idaho Code 58.01.02.350.01.a). In Section 350 (Rules Governing Nonpoint Source Activities), "Best management practices should be designed, implemented, and maintained to provide full protection or maintenance of beneficial uses. Violations of water quality standards which occur in spite of implementation of best management practices would not be subject to enforcement action. However, if subsequent water quality monitoring and surveillance indicate water quality standards are not met due to nonpoint source impacts, even

with the use of current best management practices, the practices would be evaluated and modified as necessary by the appropriate agencies in accordance with the provisions of the Administrative Procedures Act" (IDAPA 58.01.02.350.01.a).

Project actions will follow all substantive requirements of the CWA and provisions for maintenance of water quality standards under the jurisdiction of the Department of Environmental Quality (DEQ). Project activities will be in substantive compliance with all applicable state and federal laws and processes (for example, Section 404 permits).

*Spill Prevention, Containment, and Reporting*

All vehicles carrying fuel will have specific equipment and materials needed to contain or clean any incidental spills at the project site. Equipment and materials will be specific to the project site and will include a spill kit appropriately sized for specific quantities of fuel (absorbent pads, straw bales, containment structures and liners, and/or booms). Storing and refueling areas will be located away from streams in areas where a spill would not have the potential to reach live water. Containment structures will be used as appropriate to prevent spilled material from reaching live water. All pumps and generators used within Snake River floodplain will have appropriate spill containment structures and/or absorbent pads in place during use.

Should quantities of stored fuel for the project exceed 1,320 gallons, A&B will be required to have a standard EPA written Spill Prevention Control and Countermeasures (SPCC) Plan onsite that describes measures to prevent or reduce impacts from potential spills (e.g., from fuel or hydraulic fluid) (40 CFR 112, Oil Pollution Act relating to SPCC Plans).

A&B will be required to prepare a written spill plan, also known as a Stormwater Pollution Prevention Plan (SWPPP). The plan will conform with National Pollutant Discharge Elimination System (NPDES) general permit requirements and contain a description of the specific hazardous materials, procedures, and spill containment that will be used, including inventory, storage, and handling.

Federal and Idaho state regulations regarding spills will be followed (see http://www.deq.state.id.us/water/data_reports/storm_water/catalog/index.cfm). Any spills resulting in a detectable sheen on water would be reported to the EPA National Response Center (1-800-424-8802). Any spills over 25 gallons will be reported to the IDEQ (1-800-632-800) and cleanup will be initiated within 24 hours of the spill.

*NPDES Construction General Permit*

Compliance with a NPDES Construction General Permit (CGP) will prevent water quality impacts. EPA, Region 10, is the NPDES permitting authority for Idaho and as such is responsible for issuing NPDES stormwater permits (IDEQ does not have an EPA-approved

NPDES program). Construction site operators engaged in clearing, grading, and excavating activities that disturb 1 acre or more are required to obtain coverage under an NPDES permit for their stormwater discharges. Coverage under the CGP will be necessary for stormwater management associated with construction activities (clearing, grading, and excavation) and requires a Notice of Intent (NOI), and an SWPPP containing erosion control measures. Coverage under this permit is available only if stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities are not likely to jeopardize the continued existence of any species that are federally listed as endangered or threatened under the Endangered Species Act (ESA) or result in the adverse modification or destruction of habitat that is federally designated as critical under the ESA ("critical habitat"). This federally-issued CGP triggers the requirement for ESA Review. ESA Review requires informal consultation with the USFWS, or may trigger formal Section 7 Consultation between EPA and USFWS. This may result in the requirement for biological surveys to assess risk of federally listed species and mitigative action under Section 10 of the ESA. In order to be eligible for coverage under this permit, consultation must result in a "no jeopardy opinion" or a written concurrence by the USFWS and/or National Marine Fisheries Service (NMFS) on a finding that the stormwater discharge(s) and stormwater discharge-related activities are not likely to adversely affect listed species or critical habitat.

Coverage under the CGP does not trigger review under NEPA because the CGP does not regulate new sources (that is, dischargers subject to New Source Performance Standards under section 306 of the CWA), and is thus statutorily exempted from NEPA. However, some construction activities might require review under NEPA for other reasons such as Federal funding or other Federal involvement in the project.

*Minimize Exposure to Heavy Equipment Fuel/Oil Leakage*

Methods to minimize fuel/oil leakage from construction equipment into the stream channel will include the following:

i. All equipment used for instream work will be cleaned of external oil, grease, dirt and mud, and leaks repaired, prior to arriving at the project site. All equipment will be inspected by the Contract Administrator before unloading at site. Any leaks or accumulations of grease will be corrected before entering streams or areas that drain directly to streams or wetlands. Equipment shall not have damaged hoses, fittings, lines, or tanks with the potential to release pollutants into any waterway.

ii. Equipment used for instream or riparian work will be fueled and serviced in an established staging area. When not in use, vehicles will be parked in the designated staging area. The staging area will be in an area that would not deliver fuel or oil, for example, to streams.

iii. Oil-absorbing floating booms and other equipment, such as absorbent pads appropriate for the size of the stream, will be available onsite during all phases of construction.

Booms will be placed in a location that facilitates an immediate response to potential petroleum leakage.

iv. Vehicle staging, cleaning, maintenance, refueling, and fuel storage will occur as far as possible from any stream, waterbody, or wetland to minimize concerns associated with exposure to fuel and other fluids.

**Aquatic Invasive Control Measures**

Many streams have invasive aquatic species such as the New Zealand Mudsnail and Whirling Disease. Many of these species are practically invisible to the naked eye and impossible to detect if attached to heavy equipment. To ensure that equipment is not contaminated, any visible plants, mud, and dirt will be removed at a predetermined decontamination area away from the Snake River or other waters.

### *Cumulative Impacts*

No cumulative impacts to fish or other aquatic organisms would occur as a result of this alternative.

### Alternative 3

All impacts to and mitigation measures for fish and aquatic resources related to Alternative 3 would be the same as identified above for Alternative 2.

### Alternative 4

All impacts to and mitigation measures for fish and aquatic resources related to Alternative 4 would be the same as identified above for Alternative 2.

## 3.9 Wildlife

This section describes existing wildlife resources, including State of Idaho and BLM-sensitive species that occur or could potentially occur within the Project area. Any federally listed threatened and endangered species are not addressed here.

**Study and Analysis Methodology**

The primary sources of information for this analysis include the Reclamation RMP (Reclamation 2005) and EA (Reclamation 2004a). The data in the RMP and EA was extended to include the private lands within the Project area. The IDFG FWIS was consulted for wildlife (IDFG 2012) and evaluated during the site visit on July 25 and 26, 2014.

**Area of Potential Affect**

The APE for wildlife resources includes the Project footprint and includes a buffer of approximately 1/2 mile to accommodate for concerns to wildlife related to noise generated during construction of the project. The project footprint encompasses the proposed pipeline corridor ROWs and pumping stations, and any additional areas facilitating construction traffic and storage.

## 3.9.1 Affected Environment

Wildlife use in the APE is directly related to the habitat available. As described in Section 3.7 – Vegetation, habitats available include irrigated crop land, sagebrush with a degraded herbaceous layer, and property boundary areas dominated by non-native grasses and forbs. One additional terrestrial habitat within the wildlife APE is riverine riparian shrub/forest. Riparian habitat is concentrated in a narrow band along the Snake River and is dominated by Russian olive (*Elaeagnus angustifolia*) with scattered cottonwood (*Populus trichocarpa*) and willow (*Salix sp*.). Aquatic habitats include palustrine emergent marsh (PEM) and open water. PEM habitat is found along the shoreline of the Snake River and in a small constructed wetland to the south of the pipeline ROW between Pumping Station #3 and the common pipeline point (see Figure 2-2). Emergent wetlands are dominated by cattails (*Typha spp.*) and bulrush (*Scirpus spp*.). The open water habitat includes the Snake River, stock ponds, and drain water areas with no wetland vegetation.

Compared to historical conditions, wildlife diversity in the APE has decreased through reduction in native vegetation and plant structural diversity, overgrazing, and fire (Sands, Sather-Blair, and Saab 2000). Wildlife is mostly restricted to species tolerant of the interspersed sagebrush-cropland habitat with the exception of the wetland and open water species.

The predominant big game species are scattered mule deer (*Odocoileus hemionus*) and pronghorn (*Antilocarpa americana*). Mule deer are both resident and migratory, with numbers increasing during severe winters (Reclamation 2004a). Terrestrial furbearing mammals likely to occur include coyote (*Canis latrans*), red fox (*Vulves vulpe*s), and badger (*Taxidea taxus*). Wetland and open water furbearers likely include raccoons (*Procyo lotor*), muskrats (*Ondatra zibethica*), long-tailed weasels (*Mustela frenata*), and mink (*Mustela vison*). Black-tailed jackrabbits (*Lepus californicus*) and deer mice (*Peromyscus maniculatus*) are common small mammals.

Birds are the most common wildlife in the APE. These include nongame birds that breed on sagebrush parcels such as common nighthawks (*Chordeiles minor*), western kingbirds (*Tyrannus verticalis*), sage thrashers (*Oreoscoptes montanus*), loggerhead shrikes (*Lanius ludovicianus*), and Brewer's sparrows (*Spizella breweri*) (Reclamation 2004a). Common

game birds include pheasant (*Phasianus colchicus*), gray partridge (*Perdix perdix*), and mourning dove (*Zenaida macroura*).

More than 230 species of birds have been observed at the Minidoka National Wildlife Refuge (NWR) since 1950, according to USFWS (2002). The more common breeding raptors are northern harrier (*Circus cyaneus*), red-tailed hawk (*Buteo Jamaicensis*), American kestrel (*Falco sparverius*), and burrowing owl (*Athene cunicularia*). Less common raptors that are present during migration or summer include prairie falcon (*E. mexicanus*), Swainson's hawk (*B. swainsoni*), ferruginous hawk (*B. regalis*), turkey vulture (Cathartes aura), short-eared owl (*Asio flammeus*), and great horned owl (*Bubo virginianus*) (Reclamation 2004a). The most abundant wintering raptors are the rough-legged hawk (*Buteo lagopus*), red-tailed hawk, and prairie falcon. Northern goshawks (*Accipiter gentilis*) may be present in the winter, especially near the Snake River, and golden eagles (*Aguila chrysaetos*) may also be present during winter (Reclamation 2004a). A red-tailed hawk was exhibiting nest protection behavior during the 2013 field visit adjacent to the Pump Station #2 location.

Migrating and nesting waterfowl habitat is present along the Snake River and in wetlands and open water habitat in the APE. Although specific surveys to document wildlife use were not conducted, it is likely that species that use the nearby Minidoka NWR would also use the APE. Waterfowl species most likely to use the APE include mallards (*Anas platyrhynchos*), gadwalls (*A. strepera*), and cinnamon teal (*A. cyanoptera*) (Reclamation 2004a; USFWS 2002). Limited numbers of redheads (*Aythya americana*), ruddy ducks (*Oxyura jamaicensis*), pintails (*Anas acuta*), American wigeon (*Anas americana*), and northern shovelers (*Anas clypeata*) breed in the Minidoka NWR and may occasionally use wetlands in the APE. Wintering waterfowl including Canada geese (*Branta canadensis*), mallards, pintails, gadwalls, American wigeon, northern shovelers, and green-winged teal (i) and tundra swans (*Cygnus columbianus*) forage in grain fields in relatively low numbers during migration (Reclamation 2004a).

Shorebirds potentially found along the Snake River and other APE wetlands include great blue herons (*Ardea herodias*), American avocets (*Recurvirosta americana*), long-billed curlews (*Numenius americanus*), and killdeer (*Charadrius vociferous*). Red-winged blackbirds (*Agelaius phoeniceous*) and white-faced ibis (*Plegadis chihis*) were observed during the 2013 field visit.

In recent years, pheasants have declined drastically (Rybarczyk and Connelly 1985) compared to historical conditions. Much of the decline is due to loss of permanent and carry-over wintering and nesting habitat that resulted from changes in farming practices. Conversion of rangelands to agriculture, more efficient farming, loss of roadside cover, removal of riparian vegetation, increased use of herbicides and insecticides, and burning of fence rows and ditch banks have also contributed to the decline. In addition to pheasants, other upland game

species in the Project area include gray partridge (*Perdix perdix*), mourning dove (*Zenaida macroura*), and Nuttall's cottontail (Sylvilagus nuttallii) (Reclamation 2004a).

Amphibians and reptiles expected to occur include long-toed salamanders (*Ambystoma macrodactylum*), pacific treefrogs (*Hyla regilla*), western chorus frogs (*Pseudacris triseriata*), longnose leopard lizards (*Gambelia wislizenii*), side-blotched lizard (*Uta stansburiana*), racers (*Coluber constrictor*), gopher snakes (*Pituophis melanoleucus*), garter snakes (*Thamnophis spp*.), and western rattlesnakes (*Crotalus viridis*) (Reclamation 2004a).

Federal agencies are required to protect migratory birds under the four Migratory Bird Treaties (MBT Conventions) to which the United States is a signatory (Executive Order 13186). Many North American birds are considered migratory under one or more of the MBT Conventions. There are likely migratory birds nesting in the APE including raptors, waterfowl, and songbirds.

There are no known occurrences of threatened or endangered species in the APE (IDFG 2012).

## 3.9.2 Environmental Consequences

Wildlife is found throughout the APE and is an important resource for ecological, recreational, and aesthetic purposes. Game species are pursued during recreational hunting seasons and bird watching is a popular activity where public access is permitted. Nesting habitat along the Snake River and foraging habitat in agricultural fields provides an important resource to support migratory birds and the food chain above them.

**Methods and Assumptions**

Wildlife impacts are directly related to vegetation (habitat) loss described in the Vegetation section and indirectly to construction-related activities such as noise, vehicle collisions, and human presence. There are no known special status wildlife species in the APE and therefore no impacts are anticipated to special status wildlife species. For purposes of the following analysis, a significant adverse impact is one that endangers the long-term viability of local or regional wildlife populations. A significant beneficial impact is one that substantially increases the size or viability of local or regional wildlife populations.

### Alternative 1 – No Action

#### *Short-term Impacts*

Current conditions would continue under the No Action alternative. There would be no additional short-term impacts.

### *Long-term Impacts*

There would be beneficial and adverse wildlife impacts over the long-term resulting from no action. Aquifer drawdown will eventually result in an unknown acreage of irrigated areas reverting to a fallow condition. Wildlife habitat for nesting and foraging will improve where the abandoned cropland reverts to native shrub and herbaceous species. Abandoned cropland that is colonized by invasive and non-native vegetation will provide poor habitat conditions and not benefit most wildlife species. Loss of irrigated grain fields will reduce forage available to certain migratory species such as tundra swans and geese. The magnitude of these effects cannot be determined with confidence, as it is not known how much or at what rate irrigated land will go fallow from lack of water.

## Alternative 2 – Proposed Action

Alternative 2 would have a greater effect on wildlife than the No Action alternative. Impacts are not anticipated to be significant over the long-term.

### *Short-term Impacts*

Temporary removal of vegetation and construction activity would result in short-term wildlife impacts. Approximately 23.2 cropland/pasture acres, 26.2 rangeland acres, and 52.09 acres of property boundary areas would be cleared for construction of the pipeline. This habitat would be lost for breeding and foraging during construction and for up to one growing season following construction as vegetation recovers. Short-term impacts related to the construction of the pipeline from the common point to the project's end are the same for all action alternatives. This would be a non-significant impact.

Construction activities could result in limited mortality of small mammals, reptiles, and amphibians that cannot quickly move out of the ROW prior to clearing. Wildlife/vehicle collisions during construction could also possibly result in mortality. The small number of individuals affected relative to the size of the local and regional populations would not result in a significant impact.

Construction is anticipated as taking place during the fall and winter months, but may continue into the spring. Construction during spring and early summer would disrupt migratory bird nesting activity, particularly in wetland and woody habitats. Sound will startle nesting wildlife within the APE's buffer and potentially result in nest abandonment. Raptors are especially sensitive to human disturbance around nests. Mitigation measures would reduce this effect, but not entirely, particularly for waterfowl. There would be no effect to birds protected under the MBT Conventions following implementation of mitigation.

### *Long-term Impacts*

Habitat along the pipeline ROW would be restored following construction to the same habitat type as existed prior to disturbance. The exception is in the 11.6 acres of property boundary areas where revegetation would use native plant species to replace the previous condition of non-native and invasive plant species. This will be beneficial, as the new habitat would be a higher quality than that removed.

Approximately 1.6 acres of shoreline habitat would be permanently lost at the pump station location. The habitat includes herbaceous vegetation and a few scattered cottonwood and Russian olive trees. Trees are scattered and in clumps along the shoreline adjacent to the site and do not have a continuous canopy. Therefore, the removal of the trees would not be disrupting any wildlife travel corridor. The short statured nature of the herbaceous vegetation does not provide waterfowl or shorebird nesting habitat, although migratory birds could nest in the trees. The trees would be permanently lost, but herbaceous vegetation would be replanted. This is not a significant impact as no local or regional wildlife populations are threatened by this action. Mitigation measures described below would avoid long-term impacts to migratory birds at the pumping station.

Approximately 2.4 acres of primarily crop/pasture land would be lost with construction of the access road to the pumping station. This is not a significant impact as no local or regional wildlife populations are threatened by this action. No habitat would be lost to transmission line construction.

There is the possibility for avian/power line interaction on the electric transmission power poles constructed to supply power to the pumps. Birds, especially raptors, utilize power poles for nesting and perching, resulting in an electrocution risk. Implementation of the guidelines to protect birds published by the Edison Electric Institute's, Avian Power Lines Interaction Committee (APLIC) would reduce this risk to non-significance (APLIC 2006).

### *Mitigation*

The following mitigation measures would be implemented to reduce all impacts to non-significant levels.

- Land disturbed by construction would be the minimum needed to minimize habitat disruption.
- Areas disturbed during construction would be restored following construction to avoid long-term effects on wildlife habitat.
- Construction and laborer vehicle speed would be kept low to minimize vehicle/wildlife collisions.
- Construction would be confined to daylight hours to avoid light pollution impacts on wildlife.

- Vegetation clearing would be completed during the non-breeding season (mid-summer to late winter) to avoid disturbance to nesting migratory species.
- Pre-construction breeding bird surveys would be conducted to ensure there are no active nests.
- Construction would not be allowed adjacent to active migratory bird nests until the young have fledged from the nest.
- The pump station would be sound insulated to avoid disturbing wildlife during operation.
- The avian protection measures published by APLIC shall be included in the power line design specification.
- Public access would be prohibited to the pipeline corridor and pumping station after construction to minimize disturbance.

### *Cumulative Impacts*

There are no cumulative impacts from implementation of Alternative 2.

## Alternative 3

All impacts to and mitigation measures for wildlife resources related to Alternative 3 would be essentially the same as identified above for Alternative 2 with the exceptions below.

### *Short-term Impacts*

Approximately 39.08 cropland/pasture acres, 25.16 rangeland acres, and 43.4 property boundary lands would be cleared for construction of the pipeline. This habitat would be lost for breeding and foraging during construction and for as long as one growing season following construction as vegetation recovers; a short-term, non-significant impact.

### *Long-term Impacts*

Based on behavior observed during field surveys, a red-tailed hawk was believed to be nesting at this location, although the nest was not located. Operation of the pumping station may result in this hawk relocating its nest to another location along the shoreline, depending on the level of human use for maintenance. The availability of numerous alternative nesting locations results in this not being a significant impact. No additional migratory bird impacts would be anticipated.

Of the approximate 1.6 acres permanently impacted by the pump station, a greater amount (0.22 acres) of rangeland would be impacted, as compared to Alternative 2. Approximately 2.6 acres of primarily crop/pasture land would be lost with construction of the access road to

the pumping station. This is not a significant impact as no local or regional wildlife populations are threatened by this action.

Approximately 65 square feet of habitat would be permanently lost due to power pole footprints. This is not a significant impact as there are no long-term impacts to any regional or local wildlife population. Nesting and foraging activities would resume as before construction.

### *Mitigation*

Mitigation measures would be the same as proposed for Alternative 2.

### *Cumulative Impacts*

There are no cumulative impacts from implementation of Alternative 3.

## Alternative 4

All impacts to and mitigation measures for wildlife resources related to Alternative 4 would be the same as identified above for Alternative 2, except as follows.

### *Short-term Impacts*

Approximately 46.24 cropland/pasture acres, 27.09 rangeland acres and 40.49 acres of property boundary land would be cleared for construction of the pipeline. This habitat would be lost for breeding and foraging during construction and as long as one growing season following construction as vegetation recovers; a short-term, non-significant impact.

### *Long-term Impacts*

Of the approximate 1.6 acres permanently impacted by the pump station, a greater amount (0.24 acres) of rangeland would be impacted, as compared to Alternative 2. Approximately 3.1 acres of crop/pasture and property boundary land would be lost with construction of the access road to the pumping station. This is not a significant impact as no local or regional wildlife populations are threatened by this action. There would be no habitat lost due to power pole footprints as the poles would be in the access road ROW.

### *Mitigation*

Mitigation measures would be the same as proposed for Alternative 2.

### *Cumulative Impacts*

There are no cumulative impacts from implementation of Alternative 4.

# 3.10 Threatened and Endangered Species

The area of impact is located within southwestern Minidoka County extending from the Snake River north approximately 8 miles. The USFWS web site for Idaho identifies all the listed, proposed, and candidate species for each county (USFWS 2014). Species that are known or expected to occur in the area of impact or that occur near the area of impact are the Snake River physa (endangered), Bliss Rapids Snail (threatened), Greater Sage Grouse (candidate), and Yellow-billed Cuckoo (proposed). Expected presence in the area of impact is based on habitat suitability, occurrence of similar habitats, and available literature.

## 3.10.1 Affected Environment

### Aquatic Mollusks

Five species of aquatic mollusks in the middle Snake River were listed as endangered or threatened in 1992 (57 FR 59244). The Banbury Springs lanx (*Lanx sp.*), the Idaho springsnail (*Pyrgulopsis idahoensis*), the Snake River physa (*Physa natricina*), and the Utah valvata (*Valvata utahensis*) were listed as endangered. The Bliss Rapids snail (*Taylorconcha serpenticola*) was listed as threatened. The Federal Register notice provided summary information for the species. All five species are endemic to the Snake River and/or some springs and tributaries, and all are thought to be generally intolerant of pollution. These species were listed due to declining distribution within the Snake River, adverse habitat modification and deteriorating water quality from hydroelectric development, peak-loading effects from water and power operations, water withdrawal and storage, water pollution, and inadequate government regulatory mechanisms.

The USFWS (1995) recovery plan for these species includes short- and long-term multi-agency objectives to restore viable, self-reproducing colonies of the listed snails. Downlisting or delisting will depend on the detection of increasing, self-reproducing colonies at monitoring sites within each species' recovery area for at least a 5-year period. The Idaho springsnail (2007) and Utah valvata (2010) have been delisted. The recovery area for the existing listed species extends from American Falls Dam (RM 709) downstream to C.J. Strike Reservoir (RM 518) (USFWS 1995). For the purpose of the aquatic mollusk analysis, the area of potential impact will extend from the proposed intake construction sites downstream to Brownlee Reservoir. Two of the three listed mollusks are known to occur within the area of impact: Snake River physa and Bliss Rapids snail. This EA focuses on these two species.

### Snake River Physa

Prior to 2006, live verified specimens of the Snake River physa (Physa natricina) had not been collected during invertebrate surveys conducted on the Snake River for over 10 years;

however, there were 2 unverified suspected sightings near Bliss, Idaho (Stephensen and Cazier 1999). In 2004, Keebaugh (2004) at the Orma J. Smith Museum of Natural History discovered 4 Snake River physa (alive when sampled) and 12 empty Snake River physa shells. The Orma J. Smith Museum of Natural History, located at the College of Idaho (formerly Albertsons College) in Caldwell, Idaho, is the Federal depository for Federal Snake River snail collections. Reclamation consultants collected the potential Snake River physa specimens during samplings in 1996 below Minidoka Dam. The specimens were verified as Snake River physa by the late Dr. Terrance Frest, a regional malacologist.

Very little is known about the general life history of Snake River physa. Life span is likely 2 years (USFWS 1994). Taylor (1982) reported finding live snails on boulders in the deepest accessible portion of the Snake River near rapid margins. Additionally, Pentec Environmental (1991) reported finding several snails on substrate ranging from 0.7 to 5 centimeters (m) in diameter at several locations 30 meters (m) offshore during low-water periods (46 and 52 centimeters per second, dissolved oxygen 7.7 to 8 mg/L) (Pentec Environmental 1991). Snake River physa is thought to require clean, cold, well-oxygenated, swift water with low turbidity (USFWS 1995) but the specific environmental conditions necessary for Snake River physa reproduction and recruitment are unknown. Known distribution of Snake River physa is based on several empty shell and live specimen collections. Prior to 2006, less than fifty specimens of Snake River physa had ever been collected thus, population densities throughout much of the suspected range are not available. Historically, Snake River physa was thought to have existed on the Snake River in Idaho from Grandview (RM 486.5) upstream through the Hagerman Reach (RM 569.5) (USFWS 1995).

In 2005, Reclamation finalized Section 7 ESA consultation with USFWS for future Reclamation operations on 12 Federal projects located in the Snake River basin above Brownlee Reservoir (Reclamation 2004b, 2005; USFWS 2005). One of Reclamation's proposed actions was to conduct 3 years (during a 5-year period) of Snake River physa surveys from below Minidoka Dam downstream to above Milner Pool. Data collection for the study began in 2006 and was completed in 2008. Two hundred seventy four live Snake River physa were collected throughout the study. Snake River physa was found predominantly in permanently wetted habitat greater than 1.2-meter depth on substrate 16-64 mm diameter.

Snake River physa are not known to occur in the Snake River above Minidoka Dam. Reclamation conducted extensive surveys for Snake River physa in the Snake River above Minidoka Dam from below Massacre Rocks State Park upstream to the Vista boat ramp in 2002, 2010 and 2011. No Snake River physa were encountered. Although snails from the family Physidae were encountered, no Snake River physa were found. It should be noted that all snails from the family Physidae were retained for final identification verification by malcologists.

Existing populations of the Snake River physa are known only from the Snake River in central and south-southwest Idaho, with the exception of two (live-when-collected) specimens recovered in 2002 from the Bruneau River arm of C.J. Strike Reservoir (Keebaugh 2009). Within the species current known range (RM 675 to RM 368), Snake River physa have been recovered live from the reach below Lower Salmon Falls Dam (RM 573) downstream to RM 368 (and including the Bruneau Arm of C.J. Strike Reservoir) and in the Minidoka Reach (RM 675-663.5). They have not been found in the reaches between Lower Salmon Falls Dam and the Minidoka Reach (RM 573 to RM 663.5), although surveys in this area have been sporadic. While the presence of the species in this area cannot be ruled out, the occupied range of Snake River physa consists of the Minidoka Reach and the reach between Lower Salmon Falls Dam to RM 368.

### Bliss Rapids Snail

The Bliss Rapids snail distribution was described as the middle Snake River from approximately RM 525 to RM 610, based on mollusk surveys dating back to 1884 (USFWS 1995). Known populations of the Bliss Rapids snail are discontinuously distributed throughout the Snake River within this reach; primarily concentrated in the Hagerman, Idaho area, below several dams, and in cold-water springs and spring-fed tributaries from approximately RM 546 to RM 599.

The current system of dams in the Hagerman area divides the Bliss Rapids snail's range into three major river segments: Bliss Reach from Clover Creek (RM 547) to Bliss Dam (RM 560); Hagerman Reach from upper Bliss Reservoir (RM 565) to Lower Salmon Falls Dam (RM 573); and the Shoshone Reach from the upper end of Upper Salmon Falls Reservoir (RM 587.2) to Shoshone Falls (RM 614). The river reach between Upper and Lower Salmon Falls Dams consists entirely of impounded waters from Idaho Power's Lower Salmon Falls Project, and Bliss Rapids snails do not occur there. The Bliss Reach and the Hagerman Reach have the greatest number of Bliss Rapids snails, although populations in the Bliss Reach are believed to be restricted to a few locations (Bliss tailrace, Bancroft Springs, and Clover Creek). Within each of the isolated river segments, most if not all of the sizable populations are within major cold-water springs and spring tributaries. Any connection between these tributary populations is probably only possible during high flows that might transport snails and attenuate, through dilution, the relatively poor water quality in the mainstem Snake River. However, even under such a scenario, dispersing snails are unlikely to find suitable habitat with adequate water quality in the mainstem due to the presence of reservoirs, which do not support Bliss Rapids snails (Hershler et al. 1994).

The Bliss Rapids snail is most abundant in tributaries and spring complexes in the Hagerman area of the Snake River, and the species' occurrence decreases both upstream and downstream from this reach.

## Avian Species

### *Yellow-billed Cuckoo*

The Yellow-billed Cuckoo is a neotropical species that breeds in North America and winters primarily south of the U.S.-Mexico border. Cuckoos may go unnoticed because they are slow moving, use few vocalizations and prefer dense vegetation. In the West, they favor areas with a dense understory of willow (*salix spp*.) combined with mature cottonwoods (*Populus spp.*) and generally within 100 meters of slow or standing water (Gaines 1974; Gaines 1977; Gaines and Laymon 1984). It feeds on insects, mostly caterpillars, but also beetles, fall webworms, cicadas and fruit (primarily berries). Populations seem to fluctuate dramatically in response to fluctuations in caterpillar abundance. These fluctuations are erratic, but not necessarily cyclic (Kingery 1981).

A petition to list the Yellow-billed Cuckoo (*Coccyzus americanus*) was filed in 1998. The petitioners stated that "habitat loss, overgrazing, tamarisk invasion of riparian areas, river management, logging, and pesticides have caused declines in yellow-billed cuckoo." In the 90-day finding published on February 17, 2000, USFWS indicated that these factors may have caused loss, degradation, and fragmentation of riparian habitat in the western United States, and that loss of wintering habitat may be adversely affecting the cuckoo. In December, 2013, the USFWS proposed to list the Western Distinct Population Segment (DPS) of the Yellow-billed Cuckoo as threatened and initiated the 12-month review period.

Most Idaho records are of isolated, non-breeding individuals (USFWS 1985). Although occasional reports of this bird are noted, including several birds at Lawyers Creek in Lewis County in 1979, six sightings in the vicinity of Lake Walcott State Park between 1978 and 2005, and six at Cartier Slough Wildlife Management Area on the Henry's Fork of the Snake River, in 1980, no nesting attempts or young have been observed. Breeding populations of Yellow-billed cuckoos in Idaho are believed to be extirpated (Reese and Melquist 1985) although suitable habitat exists in multiple locations in southeastern Idaho.

### *Greater Sage Grouse*

The greater sage-grouse is a large, rounded-winged, ground-dwelling bird, up to 30 inches long and two feet tall, weighing from two to seven pounds. It has a long, pointed tail with legs feathered to the base of the toes. Females are a mottled brown, black, and white. Males are larger and have a large white ruff around their neck and bright yellow air sacks on their breasts, which they inflate during their mating display. The birds are found at elevations ranging from 4,000 to over 9,000 feet and are highly dependent on sagebrush for cover and food.

Currently, greater sage-grouse are found in Washington, Oregon, Idaho, Montana, North Dakota, eastern California, Nevada, Utah, western Colorado, South Dakota and Wyoming and

the Canadian provinces of Alberta and Saskatchewan and occupy approximately 56 percent of their historical range.

After a thorough analysis of the best available scientific information, the USFWS concluded that the greater sage-grouse warranted protection under the ESA. However, the USFWS also determined that proposing the species for protection is precluded by the need to take action on other species facing more immediate and severe extinction threats. As a result, the greater sage-grouse will be placed on the list of species that are candidates for ESA protection. As part of a court-approved settlement, the USFWS published certain ESA listing actions – petition findings, listing determinations, critical habitat designations – in Fiscal Years (FY) 2013 through 2018. The USFWS will review the status of the Greater Sage Grouse in FY-2015, and will propose the species for protection when funding and workload priorities for other listing actions allow.

Evidence suggests that habitat fragmentation and destruction across much of the species' range has contributed to significant population declines over the past century. If current trends persist, many local populations may disappear in the next several decades, with the remaining fragmented population vulnerable to extinction. However, the sage-grouse population as a whole remains large enough and is distributed across such a large portion of the western United States that the needs of other species facing more immediate and severe threat of extinction are taking priority. Additionally, much attention has been given by State and Federal land and resource management agencies to the management of lands so as to benefit greater sage grouse.

Although Sage grouse are located across southern Idaho, their distribution is related to habitat availability and suitability. In Minidoka and Jerome Counties, sage grouse have been documented in multiple locations, including lands managed by Reclamation. Surveys conducted by Reclamation and the USFWS have documented sage grouse use of native sage in each county, although the numbers remain low due to the quality of habitat, range damage as a result of fire, invasive species and the lack of connectivity with larger, higher-quality native sage parcels.

## 3.10.2 Environmental Consequences

This section describes, assesses, and discusses the environmental consequences of the range of alternatives on threatened, endangered, proposed and candidate species located within the area of impact. This analysis is broken down by alternative, species, and impact type (i.e., construction activities or total system operations).

Most of Reclamation's storage above Milner Dam is used as a supplemental water supply for irrigation. As a result, most irrigators relying on surface water use a combination of storage and natural flows, including reach gains. Providing a sufficient amount of water in the river

for out-of-stream diversion requires a high degree of coordination among irrigators, storage operators, and the State watermaster. Essentially, this involves storing water as physically high (upstream) in the system as possible, then moving water downstream only when required. In general, demands are met from the nearest storage reservoir upstream from the point of diversion, then from reservoirs progressively upstream as the water supply diminishes.

This operations analysis of potential impacts resulting from the four proposed alternatives will focus on the Snake River corridor and extend from the point of diversion and extend downstream to above Brownlee Reservoir. The construction analysis of potential impacts resulting from the four proposed alternatives will focus on the construction footprint of the pumping plant and pipeline. It is not anticipated that any of the proposed alternatives will impact ESA-listed species within or outside of the area of impact.

## Alternative 1 – No Action

### *Aquatic Mollusks & Avian Species*

#### System Operations Impacts

In the absence of the proposed diversion and associated distribution system, the Snake River will continue to be operated consistent with current river operations as described in the *Operations Description of the Upper Snake River Biological Assessment* and resultant USFWS Biological Opinion (Reclamation 2004b, 2005; USFWS 2005). All potential impacts associated with this ongoing action will not change, as described in the above-referenced documents.

#### Construction Impacts

In the absence of the proposed construction project, no impacts will occur as a result of construction activities. The three locations identified as potential construction locations will continue to exist in their current state with no impacts. Additionally, as previously described, lands experiencing periodic water shortages will continue to be operated and managed consistent with current land-management practices.

## Alternative 2 – Proposed Action

### *Aquatic Mollusks & Avian Species*

#### System Operations Impacts

Reclamation would continue to operate the upper Snake River system under Alternative 2 consistent with the operations description identified in Reclamation 2004b, 2005, and USFWS 2005. The diversion of an additional 118 cfs would not result in any measurable changes to

river stage. Although an additional 118 cfs will be diverted through implementation of Alternative 2, this 118 cfs will come from currently appropriated water either through the District's 270 cfs natural flow right or through the District's storage contracts for American Falls or Palisades reservoirs. This additional diversion will not result in an additional appropriation of water or an overall increase in the current cumulative diversion above Milner Dam.

To illustrate this, Reclamation conducted a modeling effort to identify overall system impacts resulting from this diversion. This section discusses this modeling effort. In order to assess the river system under different operating schemes or hydrologic conditions, a previously constructed model of the Snake River system was utilized. The model output of river flows provides a basis for comparative analyses of the range of possible conditions resulting from the 118 cfs diversion under Alternative 2. The analysis utilized the Snake River MODSIM Model, version 8.3, a general-purpose river and reservoir operations computer simulation model.

Varying hydrologic conditions and numerous other factors influence the way reservoir projects operate. Daily operations of the projects are influenced by many factors, including the amount of recent precipitation influencing project inflow, reservoir carryover at the end of the storage season, spatial water supply distribution, temperature, amount of irrigation demand, special operating requests, or emergency situations. These types of circumstances are difficult to predict or simulate in modeling activities. Therefore, it is important to note that when model output is compared to historical data, differences would be apparent as the model is incapable of predicting the day-to-day decisions made on a real-time basis.

This surface water distribution model was structured with a monthly time-step. While the monthly time-step of the model output does not capture the variations of day-to-day circumstances and real-time operational decisions, it does provide a means to make relative comparisons between operational scenarios under different hydrologic conditions and system constraints.

To illustrate this, Reclamation modeled the 118 cfs under two separate scenarios and compared the two scenarios to current operations. Diversion rate and system operations are the same for each action alternatives; therefore two water-demand scenarios were utilized to characterize the use of the 118 cfs. Reclamation looked at increasing demand by 118 cfs for A&B in MODSIM. For the current operations component, no modifications were made to the model. A 30-year period of record using historic data from 1971 through 2008 was utilized. Scenario 1 was a more conservative look at the increase in demand for A&B. This scenario used a percentage (unit hydrograph) approach to determine, historically, what percentage of peak monthly demand was required in wet, dry and average years. This monthly percentage was then applied to the 118 cfs and added to the monthly demands in MODSIM, thereby providing an incremental demand throughout the irrigation season. Scenario 2 illustrates maximum

diversion each month throughout the entire irrigation season by increasing system demand by the full 118 cfs. Therefore, the 118 cfs was added, each month, to current demands in MODSIM. Although this is not a likely operational scenario, it represents the maximum capability of the diversion for each alternative, utilizing natural flow rights. Total Snake River flows, in cfs, were modeled at Milner Dam, King Hill and Brownlee Reservoir (Figure 3-1, Figure 3-2, and Figure 3-3).

The results of the modeling show little to no change between current system operations and the two scenarios. Scenario 1, incremental flow partitioning using use percentages, represents the most likely scenario as demands typically start low early on in irrigation season and increase through irrigation season until early fall/late summer when they diminish. The increased diversion of the 118 cfs is nearly in detectable below Milner Dam and results in no changes to river stage at any point in the system.

Additionally, Reclamation modeled the impacts of the 118 cfs diversion on Reclamations ability to provide water for flow augmentation purposes. Again, the impacts of the 118 cfs diversion are nearly undetectable and will have no impacts on Reclamations ability to provide flow augmentation water (Figure 3-4).

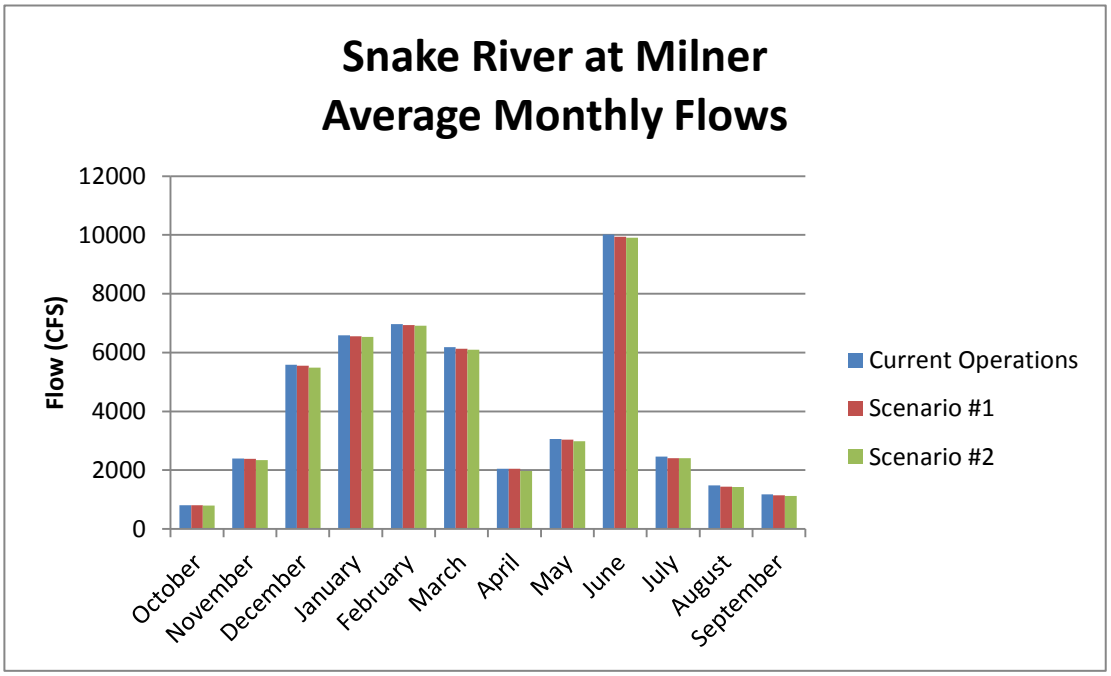


**Figure 3-1. Average Snake River flows, by month, at Milner Dam.**

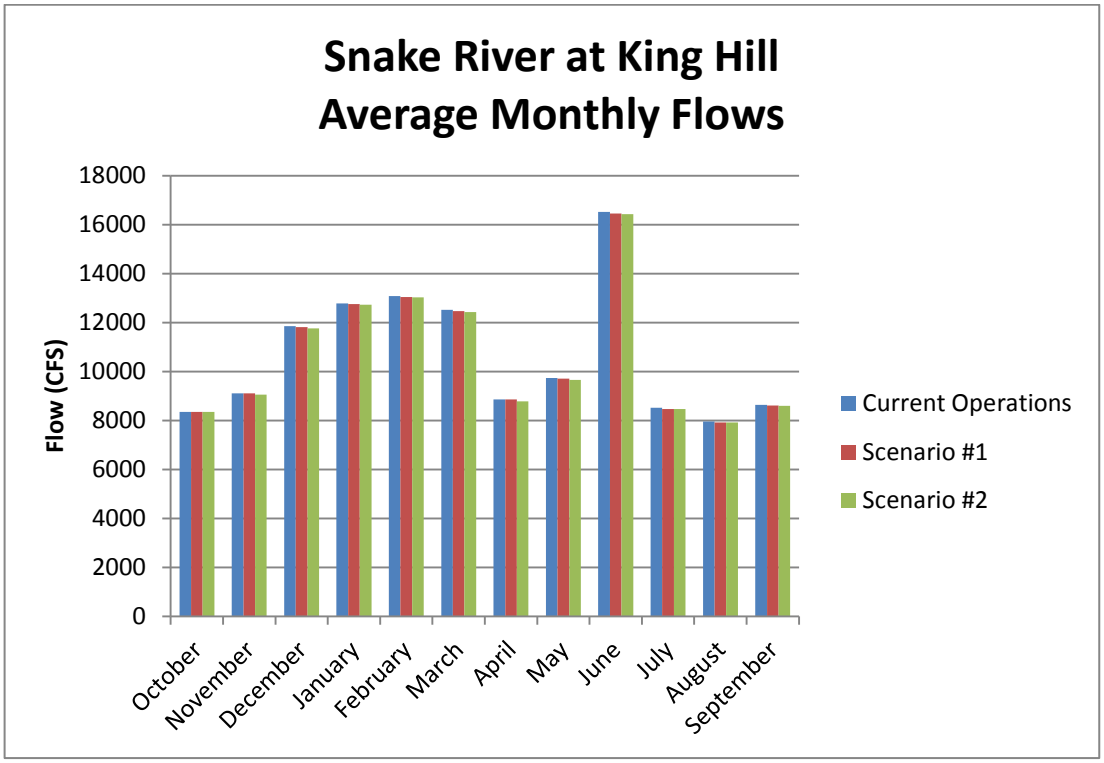


**Figure 3-2. Average Snake River flows, by month, at King Hill.**

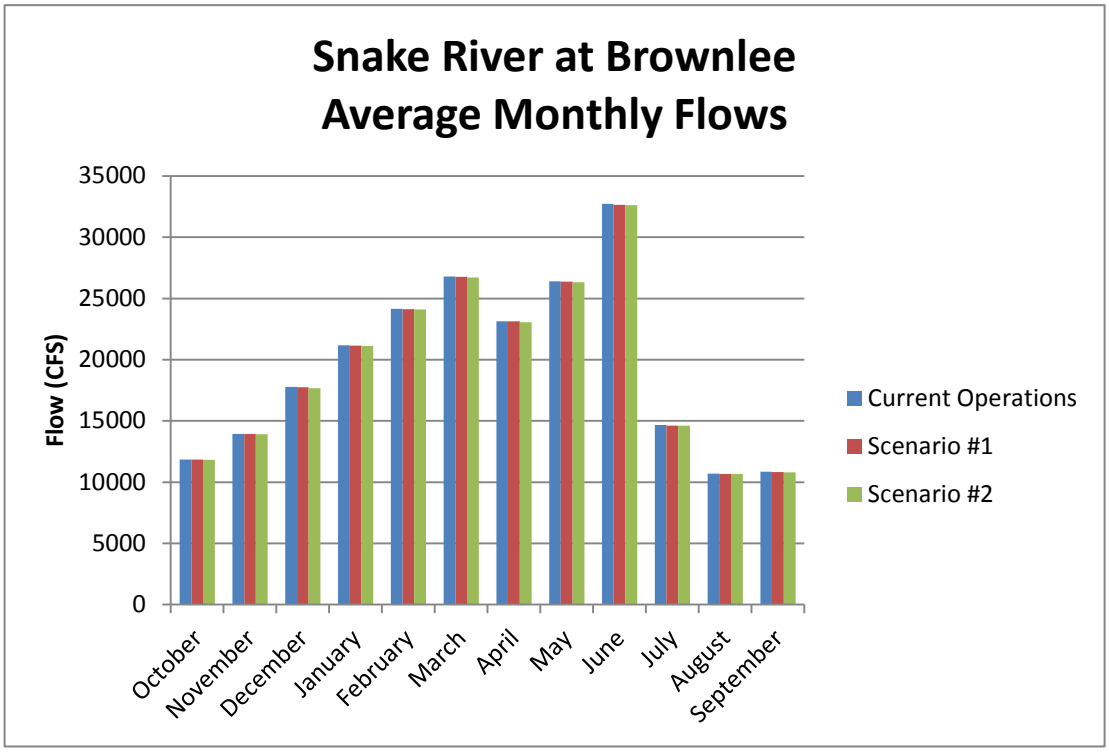


**Figure 3-3. Average Snake River flows, by month, at Brownlee Reservoir.**

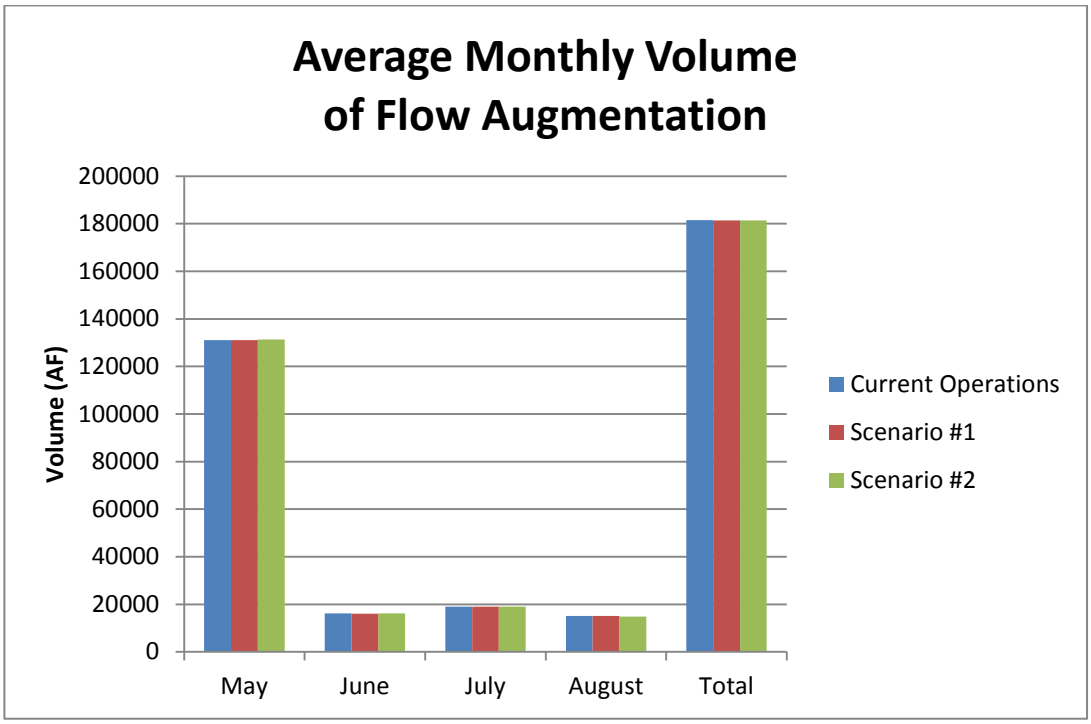


**Figure 3-4. Average monthly volume of flow augmentation water delivered from the Upper Snake River.**

It needs to be noted that although the MODSIM model was run using the proposed increase diversion of 118 cfs, this may not always be the case. The modeled scenarios represent the most extreme scenarios. During scenarios where portions or all of the 118 cfs are delivered from storage in either American Falls or Palisades Reservoirs, no changes in Snake River flow past Milner Dam will occur. The two reservoirs are operated to meet targets. Real time flows of storage water from either reservoir, to the respective point of diversion are accounted to meet the respective demand. Put another way, storage water will be delivered to the point of diversion upon request. Therefore no storage water will pass Milner Dam under any scenario, thereby resulting in no changes to Snake River flow or river stage at any point below Milner Dam. As a benefit, the delivery of surface water to lands currently utilizing groundwater, will reduce the demand on the ESRPA; a known source of water for the Bliss Rapids snail.

Based on the above-described scenarios, Reclamation does not anticipate any impacts to ESA-listed species as a result of river operations under Alternative 2. Reclamation therefore finds there will be No Affect to the Snake River physa or Bliss Rapids Snail as a result of the implementation of Alternative 2.

### Construction Impacts

Construction activities under Alternative 2, as previously discussed would impact approximately 100 linear foot of river bank and extend approximately 100 feet inland from the

shoreline. Based on past survey results, Snake River physa and the Bliss Rapids snail are not known to occur within or adjacent to the construction site. The proposed pumping location is located within the Milner Pool. Since each species is a flow-dependent species, site-specific attributes preclude their establishment within the pool.

Additionally, approximately 50,100 feet of pipeline would be buried to a minimum depth of approximately 2.5 feet, extending north from the Snake River. The construction corridor for this activity would be approximately 50 feet wide and will be temporary in nature. The pipeline will be located in conjunction with previously disturbed grounds (i.e., road ROWs, fields, etc.) with the exception of one isolated parcel of land owned and managed by Reclamation. Much of the parcel burned in 2007 and consists primarily of cheat grass with some native sage on the southern and western portions. Due to the isolated nature of this parcel and the lack of connectivity to larger native sage communities, it is not anticipated the Greater Sage grouse will occupy this area. Further, as part of the preparation of Reclamation's Minidoka North Side Resource Management Plan, surveys for sage grouse did not locate any grouse, grouse sign, or identify suitable habitat in this location.

Operation of the pumping plant and associated water conveyance system would result in no changes in land use, land-use conversions or disturbance of previously undisturbed lands within the action area. Water would be delivered to lands currently being managed for agricultural production. The delivery of the additional 118 cfs would simply augment existing deliveries.

No Yellow-billed Cuckoo habitat is located within or adjacent to the proposed project footprint. The closest documented Yellow-billed Cuckoo sighting occurred along Lake Walcott State Park in 2005. No Yellow-billed Cuckoo has been documented along the Snake River near the proposed construction site and pipeline corridor. Based on this and the previously-identified factors, Reclamation does not anticipate any impacts to ESA-listed species as a result of the construction or long-term operation of the pumping plant and pipeline under Alternative 2. Reclamation therefore finds there will be No Affect to the Greater Sage Grouse, Yellow-billed Cuckoo, Snake River physa or Bliss Rapids snail as a result of construction and system operations associated with the implementation of Alternative 2.

## 3.10.3 Alternatives 3

### Aquatic Mollusks & Avian Species

#### *System Operations Impacts*

Overall system operations and respective impacts under the implementation of Alternative 3 will be the same as described under Alternative 2. The proposed diversion and total system operations are the same for each action alternative. Reclamation therefore finds there will be

No Affect to the Snake River physa or Bliss Rapids Snail as a result of the implementation of Alternative 3.

### *Construction Impacts*

Overall system design and the proposed water conveyance system are the same under each alternative. The only change is minor changes in plant location and final length of pipeline installed. Although there are slight changes in pumping plant locations, they are all with in the same general area within Milner Pool. Each specific site possess' the same physical and biological attributes. Additionally, pipeline construction will occur within the same general areas, leading to the same final point of distribution for each alternative. Reclamation, therefore, finds there will be No Affect to the Greater Sage Grouse, Yellow-billed Cuckoo, Snake River physa or Bliss Rapids snail as a result of construction and system operations associated with the implementation of Alternative 3.

## 3.10.4 Alternative 4

### *System Operations Impacts*

Overall system operations and respective impacts under the implementation of Alternative 4 would be the same described under Alternative 2.

### *Construction Impacts*

Overall system design and the proposed water conveyance system are the same under each alternative.

# 3.11 Cultural Resources

**Study and Analysis Methodology**

The primary sources of information used for this analysis are Reclamation's RMP (Reclamation 2005), Reclamation's Minidoka Northside Resource Management Plan Environmental Assessment (Reclamation 2004a), and an Idaho State Historic Preservation Office (SHPO) records search. The first two documents address lands owned by Reclamation in Minidoka County, Idaho, which includes the project area. The project would be constructed primarily on private land; however, these lands are adjacent to or in some cases, surrounded by Reclamation lands. As such, the data in the RMP and associated Minidoka EA was extended to include the private lands within the proposed project area. The SHPO record search addressed all known cultural resources within ½- mile of the project area. A Class III Archaeological Survey was also conducted throughout the entire project area to locate and

record all cultural resources, consistent with the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716).

**Area of Potential Affect**

Because this is a primarily linear project, the APE for cultural resources is a ½- mile-wide band centered on the Project footprint. This footprint includes the proposed pipeline ROWs, pumping station, booster pump stations, and additional areas associated with project construction and operation.

## 3.11.1 Affected Environment

The earliest evidence of human occupation in south-central Idaho dates to approximately 14,500 years before present (B.P.) Three major prehistoric cultural periods have been identified for southern Idaho:

- Early Prehistoric Period (15,000 to 7,500 B.P.)
- Middle Prehistoric Period (7,500 to 1,300 B.P.)
- Late Prehistoric Period (1,300 to 150 B.P.)

These three periods reflect a transition over time from a highly mobile lifestyle of hunting and gathering (roots, seeds, fish, and mammals) to a reduced mobility and increased use of specific highly productive resources (salmon and camas). Numerous archaeological sites located adjacent to the project APE have yielded extensive diagnostic artifacts, indicating that the area was in use during all three prehistoric periods.

Groups using the area included the Shoshone and Bannock Tribes. The extent and length of time these Tribes have occupied southern Idaho is a subject of debate among anthropologists and other scholars. Both Tribes' lifestyles and subsistence practices were very similar to other Great Basin cultural populations. Due to the fact that the environment could not sustain large populations, people moved from resource to resource relying on a wide variety of items, including berries, nuts, roots, rabbits, squirrels, marmots, insects, large game, and fish. By the time of the first Euro-American contact in the early 1800s, the Shoshone and Bannock Tribes had acquired the use of the horse, making it easier to acquire resources and hunt large game, such as bison, which could also be used for trade (Reclamation 2004a). Euro-Americans arrived in south-central Idaho to explore and survey the region, as well as expand the fur trade. The preferred east-west travel routes for these early explorers passed through the region along the Snake River. Sections of the route later became the Oregon Trail, but were first used by these emigrants in 1841 and the alternative trails known as the Northside Alternate Oregon Trail and the California Trail. As a part of the expansion of Mormon communities out of Utah, emigrants began to settle in south-central Idaho in 1870. The arrival of the railroad in the 1880s was vital to the development of south-central Idaho, with multiple Union Pacific

Railroad branch lines constructed near the proposed project. In the late 19th and early 20th centuries, agriculture served as the staple of the economy, and associated irrigation systems were of primary importance to overall development. Congress passed the Carey Act in 1894 to encourage private and state cooperation in further developing agriculture, and 8 years later it created the Reclamation Service to help federalize the expanding irrigation systems in the west. The Minidoka Project of 1904 was one of the earliest federal reclamation projects in Idaho, resulting in the construction of Minidoka Dam, which was finished in 1906, along with other dams and thousands of miles of canal systems.

In the middle and late 1800s, as emigrant populations increased in south-central Idaho, Euro-American and Indian relationships began to deteriorate. Treaties with the United States Government in 1863 and 1868, combined with the establishment of the Fort Hall Indian reservation in 1867, confined the Shoshone-Bannock Tribes and opened the area for further Euro-American settlement. However, increasing hostilities led to military action by the U.S. military and eventually to the Bannock War of 1878. As a result of the Bannock War, the area of the Fort Hall Indian Reservation was reduced several times (Reclamation 2004a).

There are a total of 11 previously recorded cultural resource sites within 1/2 mile of the project APE. The sites include four archaeological sites, one historical property site, and six linear sites. Two of the archaeological sites are small prehistoric lithic flake scatters produced during tool manufacture or repair. Small open sites such as lithic scatters, composed of multiple materials such as cryptocrystalline silicate (chalcedony, jasper, chert), ignimbrite, and obsidian, are representative of many of the site types found in this region. Archaeological excavations near the proposed project APE (but not in the APE) contain cultural deposits providing circumstantial evidence for an intensive prehistoric use of the area over a long range of time.

The other two archaeological sites are historic dump sites comprised of multiple cans, glass, and other associated objects that can be traced back to the residential activities associated with emigrant settlement and land use.

The historical property site and the six linear sites are historical period sites representing a variety of resources pertaining to irrigation in the form of canals and transportation in the form of emigrant trails, railroads and ferries.

A Class I inventory of existing data for the proposed project APE portrays lands within the project area as containing a small number of resources representing both prehistoric and historic use of the area. Of the 11 previously recorded cultural resources within the project APE, those listed below in Table 3-5 are considered eligible for listing in the NRHP. These sites have been recommended as eligible because they meet National Register Evaluation Criterion D and have the potential to offer key information pertaining to the historic use of the project area.

**Table 3-5. Cultural resources within the Project APE and considered eligible for listing in the NRHP (SHPO 2013).**

| Identification Number | Attributes |
|---|---|
| 10CA654 | Historic J Canal |
| 10CA655 | Historic G Canal |
| 10MA24 | Historic Dump |
| 10MA27 | Historic Dump |
| 10MA144 | Oregon Short Line Railroad – Northside Branch EIRR |
| 31-13644 | Union Pacific Railroad |

As previously mentioned, in addition to the Class I records search, an intensive Class III archaeological survey was conducted across the entire project APE. As a result of the survey, no new cultural resources eligible for listing in the NRHP or otherwise, were recorded or noted. However, through the public scoping process, a property was identified by a landowner as having historical value. The Schodde property as it is known, included 320 acres homesteaded in 1874 by Henry Schodde. Mr. Schodde was the first settler in southern Idaho to build and use water wheels to help irrigate farm lands. He built between 10 and 14 water wheels along the Snake River and adjacent to his property to help irrigate approximately 160 acres of land where he grew primarily grain and hay. With the construction of the Milner Dam in 1904, the waters of the Snake River calmed and eventually rose, making Mr. Schodde's water wheels inoperable.

In addition to constructing the first water wheels in southern Idaho, Mr. Schodde was also involved with operating one of only two ferries along this section of the Snake River. Starrh Ferry, as it was known, was constructed by George Starrh in 1880 on the south Side of the Snake River across from the Schodde property with the northern end of the ferry located on the Schodde property. Ferry operations slowed down in 1905 with the introduction of the railroad, and all but stopped in 1910 with the construction of a toll bridge in the vicinity (South Idaho Press 2006).

As pointed out by Henry Lynn Schodde in his letter during public scoping, in 1989 the Schodde property was listed as the only Century Farm in Minidoka County. In addition to this, Mr. Henry Lynn Schodde states that "The heritage of the ranch is very important to the Schodde family. It is important that the ranch remains unchanged. By cutting a road through the middle of the property and putting power lines and a pumping station at Site 1, A&B is changing the operation and appearance of the Ranch forever" (Schodde 2013).

It is important to note that the Class I records search showed that neither the Schodde property and associated water wheels nor the Starrh Ferry meet the criteria as outlined in the NHPA to be listed as or recommended as eligible for listing on the NRHP. Additionally, during the Class III Archaeological Survey, no new data was recorded for the Schodde Property and associated water wheels, or the Starrh Ferry. As a result, of a meeting with SHPO staff, it has been determined that due to the lack of physical evidence from the Class III Archaeological Survey and the lack of record search information pertaining to the Schodde Ranch and the Starrh Ferry, there is insufficient information to determine historic integrity and, therefore, eligibility for either property.

Upon review of the survey report submitted to Reclamation, an additional cultural resource was found to exist within the APE. Though no documentation of this historic property was revealed during the SHPO record search, and no surface evidence was found during the intensive on-the-ground survey work, it turns out that a portion of the pipeline transects the land on which Camp Rupert, a World War II prisoner of war camp, once stood. Consultation with SHPO revealed that the camp is considered an eligible historic property, and while it has not yet been fully documented, additional research and a brief narrative will be required to be submitted during the consultation process. Fortunately, the pipeline through this area will be run in an existing ditch, which is elevated in the area of the camp. There should be little to no disturbance of the existing ground surface within the footprint of the camp, and a recommendation of No Adverse Effect will be presented to the SHPO during consultation.

Tribal members are generally reluctant to provide detailed locational information where traditional economic, artistic, or other cultural practices were conducted within the study area. Nevertheless, some natural resources near, but not necessarily within the project area, are still used by members of the Shoshone-Bannock Tribes, as well as other Tribes claiming sovereign rights to the area. Access to some of these resources has been limited over time due to both historic and modern development, particularly in regards to agriculture and irrigation. Some identified resources include round rocks found near the river for use in ceremonies such as sweats; sagebrush, chokecherries, pine nuts, and roots used for medicine, food, and trading; animals such as groundhogs and deer used for both clothing and food; and fish from the Snake River.

Within the project APE closest to the Snake River alluvium (gravels, sands, and lake beds), there is a high potential for finding fossils. Although there are no known fossils within the project APE, all of the fossils found to date within proximity of the project boundaries have been found during construction of the Minidoka Dam and in association with gravel quarrying along the Snake River. The well preserved fossils include many late Pleistocene species such as horses, camels, musk ox, ground sloth, and mammoth (Reclamation, 2004).

## 3.11.2 Environmental Consequences

**Methods and Assumptions**

Cultural resources are subject to review under both Federal and state laws and regulations. Section 106 of the NHPA empowers the ACHP to comment on federally initiated, licensed, or permitted projects affecting cultural sites listed in, or eligible for listing in, the NRHP. Eligibility evaluation is the process by which resources are assessed relative to the NRHP eligibility criteria. Cultural resources that are determined to be eligible for the NRHP are known as historic properties and are protected under NHPA. Impacts are considered significant if they adversely affect the NRHP eligibility of historic properties.

Under Federal law, impacts to cultural resources could be considered adverse if the resources have been determined eligible for listing in the NRHP or have been identified as important to Native Americans as outlined in the American Indian Religious Freedom Act and EO 13007 Indian Sacred Sites. Agencies are required to assess resource significance, evaluate impacts on significant sites, and select resource management actions in consultation with the SHPO, the ACHP, and other interested parties. In addition to this, Native Americans must be consulted where cultural resources of concern to a Tribe could be present, or where human burials and other Native American Graves Protection and Repatriation (NAGPRA) cultural items affiliated with Tribes could be affected by agencies actions.

Analysis of potential impacts to cultural resources considers both direct and indirect impacts. Direct impacts may occur by physically altering, damaging, or destroying all or part of a resource; altering characteristics of the surrounding environment that contribute to the resource's significance; introducing visual or audible elements that are out of character with the property or alter its setting; or neglecting the resource to the extent that it deteriorates or it is destroyed. The direct impacts associated with this project were assessed by identifying the types and locations of the proposed project activities and then determining the exact location of known cultural resources that could be affected. Indirect impacts generally result from the residual effects related to the project. These can include increased use of newly developed infrastructure such as access roads for maintenance purposes. As mentioned in the Affected Environment section of this report, a Class I Records Search and a Class III Intensive Archaeological survey were conducted to determine, to the extent possible, the location of cultural resources.

### Alternative 1 – No Action

Under the No Action alternative there would be no direct, indirect, short-term, long-term, or cumulative effects to cultural resources. None of the alternatives would be constructed and there would be no need for ground disturbance for any potential excavation, equipment staging

areas, deposit areas, or new roads. The existing conditions would remain intact and would not be affected.

### Alternative 2 – Proposed Action

For the APE a 100 percent intensive survey for cultural resources has been completed by Great Basin CRM and no new cultural resources were identified. Documentation of the APE for action alternatives, including maps and photographs and a determination of effect to cultural resources are included in a report sent to the Idaho SHPO (SHPO 2013). There are a total of 11 previously recorded cultural resource sites within the APE. The sites include four archaeological sites, one historical property site, and six linear sites. Camp Rupert, the WWII POW camp, also exists within the APE, and though currently not documented, is considered eligible.

As outlined in Table 3-5 and the narrative above, per National Register Criteria 36, Code of Federal Regulations (CFR) Part 63, only six of the 11 sites located within the APE meet the criteria to be considered eligible for listing in the NRHP. Per NRHP criteria, particularly 36 CFR Part 63, the pumping plant and associated pipeline would be sited so that it would avoid eligible cultural resources to the extent possible.

No effects to known cultural resources within the construction footprint of the pumping plant would occur. Nonetheless, under all of the alternatives excluding the No Action alternative, the proposed pipeline associated with the pumping plant would cross the Oregon Trail Northside Alternative and the Oregon Short Line Railroad – Northside Branch Eastern Idaho Railroad (EIRR). However, because of farming, ranching, and other Euro-American developmental practices in previous years, the segment of the Oregon Trail Northside Alternative located in the project APE, is no longer visible. As a result, the original trail has been destroyed and the trail is no longer of historic value. Under all of the proposed project alternatives excluding the No Action alternative, project impacts could possibly affect the Oregon Short Line Railroad – Northside Branch EIRR. However, because boring technology would be used to install the pipeline under the railroad, there would be no impact to this resource. At the site of Camp Rupert, the pipe will be laid within an existing raised ditch and may or may not require any deepening of the ditch to achieve the necessary elevation for the pipeline. This is recommended by Reclamation to constitute a No Adverse Effect to the historic property of the camp.

Under this and all of the action alternatives, the five remaining eligible cultural resources, which include one historic railroad, two historic dumps, and two historic canals, would be protected by avoidance; therefore, there would be no effect to these resources.

### *Short-term Impacts*

No short-term impacts to cultural resources located within the project APE would occur as a result of this or any other action alternative.

### *Long-term Impacts*

Direct and/or indirect impacts extending beyond the construction period of the project fall into the category of long-term impacts. Long-term impacts can adversely affect a cultural resource to the point that its integrity has been compromised and it is no longer eligible for listing in the NRHP.

No long-term impacts to cultural resources located within the project APE would occur as a result of this or any other action alternative.

### *Mitigation*

Pursuant to 36CFR 800.6, consultation will occur between Reclamation, the Idaho SHPO, and the Shoshone-Bannock Tribes regarding the cultural resources within the project APE. If it is determined that eligible historic properties will be adversely affected, the ACHP will be invited to consult, and the agency will work to develop a mitigation plan that will minimize the adverse impacts.

As a part of this alternative and all of the action alternatives, avoidance should be used to mitigate impacts to the eligible cultural resources located within the project APE. It is highly recommended under this and all of the action alternatives, that if project construction should reveal any additional cultural resources, then A&B should contact a qualified archaeologist to evaluate these resources using Section 106 criteria. If the resource(s) is eligible for listing on the NRHP, or if other conditions require it, then A&B would develop a mitigation plan in consultation with Reclamation and the Idaho SHPO.

### *Cumulative Impacts*

No known cumulative impacts to cultural resources would occur as a result of this or any of the action alternatives.

## Alternative 3

All impacts to and mitigation measures for cultural resources related to Alternative 3 would be the same as identified for Alternative 2.

### Alternative 4

All impacts to and mitigation measures for cultural resources related to Alternative 4 would be the same as identified for Alternative 2.

# 3.12 Sacred Sites

## 3.12.1 Affected Environment

This section discusses sacred sites as defined by Executive Order (EO) 13007 and the potential of the projects impacts on sacred sites, as well as the Memorandum of Understanding (MOU) signed by the Advisory Council on Historic Preservation (ACHP) and numerous participating federal agencies which further identifies federal agencies responsibilities to identify and protect Indian Sacred Sites.

Sacred sites are defined by EO 13007 as specific, discrete, narrowly delineated locations on federally owned land that is identified by an Indian individual or Tribe determined to be an identified and appropriate representative of an Indian religion, as sacred by virtue of its established religious importance to, or ceremonial use by, an Indian religion. As a part of EO 13007 and the MOU between ACHP and multiple federal agencies, federal agencies must accommodate access to and ceremonial use of all Indian Sacred Sites by Indian religious practitioners, and avoid any adverse effects to the physical integrity of sacred sites. In addition to this, federal agencies must also make a good faith effort to improve the protection of Tribal Access to Indian Sacred Sites through enhanced and improved interdepartmental coordination and collaboration.

There is no information on any specific Indian Sacred Sites within the proposed project APE. However, as identified in the Minidoka North Side Resource Management Plan Final EA, there are certain ceremonial practices and activities with possible religious or sacred components that continue to be practiced in the vicinity of the APE. For example, Shoshone-Bannock Tribal members collect rocks for ceremonial purposes within the greater project area. Certain physical and natural features that could be located near the project area (buttes, foothills, lakes, springs, and rivers) obtain their power and sacredness from an undisturbed natural state. Additionally, specific cultural sites may be regarded as sacred to Tribes. Examples include petroglyph and pictograph sites, burials, battle or massacre sites, and travel routes (Reclamation 2004a).

## 3.12.2 Environmental Consequences

### Alternative 1 – No Action

Under the No Action alternative there would be no direct, indirect, short term, long term, or cumulative effects to Indian Sacred Sites. None of the alternatives would be constructed and there would be no need for ground disturbance for any potential excavation, equipment staging areas, deposit areas, or new roads. The existing conditions would remain intact and would not be affected.

### Alternatives 2 – Proposed Action

Possible impacts to Indian Sacred Sites can only be dealt with in a generalized fashion due to the fact that the specific location and nature of sacred sites within the proposed project APE is unknown. If Indian Sacred Sites are located within the proposed project APE, their integrity can be compromised not only by physical disturbances, but also audio or visual intrusions that change the association, feeling or character of the site. If this is the case, their "sacredness" and overall importance as a sacred or religious site can be reduced.

#### *Short-term Impacts*

No short-term impacts to Indian Sacred Sites would occur as a result of this or any other action alternative.

#### *Long-term Impacts*

Direct and/or indirect impacts extending beyond the construction period of the project fall into the category of long-term impacts. Long-term impacts can adversely affect an Indian Sacred Site to the point that its integrity has been compromised and it is no longer eligible for listing in the NRHP.

No long-term impacts to cultural resources located within the project APE would occur as a result of this or any other action alternative.

#### *Mitigation*

EO13007 does not authorize Federal agencies to mitigate the impacts of their own actions upon Indian Sacred Sites. Nevertheless, it does direct them to avoid adverse impacts to the extent possible. Reclamation will consult with Tribes in conjunction with any 36 CFR 800 consultations. As a part of these consultations, Reclamation will seek to further identify and avoid adversely impacting sacred sites.

### Cumulative Impacts

No known cumulative impacts to Indian Sacred Sites would occur as a result of this or any of the action alternatives.

### Alternative 3

All impacts to and mitigation measures for Indian Sacred Sites related to Alternative 3 would be the same as identified for Alternative 2.

### Alternative 4

All impacts to and mitigation measures for Indian Sacred Sites related to Alternative 4 would be the same as identified for Alternative 2.

# 3.13 Indian Trust Assets

## 3.13.1 Affected Environment

ITAs are legal interests in property that are held in trust by the United States Government for Indian Tribes or individuals. Acting as the trustee, the Secretary of the Interior holds many assets in trust such as, minerals, lands, water rights and hunting and fishing rights. Most ITAs are located on Indian Reservations; however, they may be found off-reservation as well.

The United States Government has a trust responsibility to Indians to protect and maintain rights granted to or reserved by Indian individuals or Indian Tribes by treaties, statutes, and EOs. At times, these trusts are further interpreted by regulations and court decisions.

The Shoshone-Bannock Tribes are a federally-recognized Tribe located at Fort Hall Indian Reservation in southeastern Idaho who has trust assets both on and off of the reservation. The Fort Bridger Treaty was agreed to and signed by Shoshone and Bannock leaders on July 3, 1868. In Article 4 of the treaty, it states that all members of the Shoshone-Bannock Tribes "shall have the right to hunt on the unoccupied lands of the United States…"

Tribal members believe their rights extend to the right to fish. The Fort Bridger Treaty for the Shoshone-Bannock Tribes has been interpreted in the case of State of Idaho v. Tinno, an off-reservation fishing case. The Idaho Supreme court determined that the Shoshone word for 'hunt" could also be interpreted to include "fish." Under this court case, the Idaho Supreme Court reaffirmed Shoshone-Bannock Tribal members' right to fish off-reservation pursuant to the Fort Bridger Treaty (Reclamation 2004a).

The Nez Perce Tribe is another federally recognized Tribe and is located on the Nez Perce Reservation in northern Idaho. Pursuant to the Treaty of 1855, Treaty of 1863, Treaty of 1868, and the Agreement of 1893, the rights of the Nez Perce Tribe include the right to hunt, gather, and graze livestock on unclaimed and open lands and the right to fish in all of the usual and accustomed places (Reclamation 2004a).

The Northwestern Band of the Shoshone Indians, a federally recognized Tribe with no reservation, also possess protected hunting and fishing rights on unoccupied lands within the area acquired by the United States Government pursuant to the 1868 Fort Bridger Treaty. It is important to note that no opinion has been expressed as to which areas may be regarded as "unoccupied."

Other federally recognized Tribes that do not have designated off-reservation ITAs may have cultural and religious interests in the lands containing the proposed project APE and surrounding areas. These additional tribal interests may be protected under other historic preservation laws including the NAGPRA (Reclamation 2004a)

## 3.13.2 Environmental Consequences

### Alternative 1 – No Action

Under the No Action alternative there would be no direct, indirect, short term, long term, or cumulative effects to ITAs. None of the alternatives would be constructed and there would be no need for ground disturbance for any potential excavation, equipment staging areas, deposit areas, or new roads. The existing conditions would remain intact and would not be affected.

### Alternative 2 – Proposed Action

Unfortunately, there is no universally accepted understanding relating to the specific treaty rights to hunt and fish within or near the proposed project APE. This stems from the fact that there has not been a settlement with either the Shoshone-Bannock Tribes, the Northwestern Band of the Shoshone Nation, or the Nez Perce Tribe on the nature and extent of their off-reservation hunting and fishing treaty rights. Since this is the case, considered ITAs are Tribal hunting and fishing rights that may exist. Historically, water rights claims, or in some cases lack thereof, within the Snake River Basin, are not necessarily determining factors of these kinds of rights.

#### *Short-term Impacts*

No short-term impacts to ITAs within the project APE would occur as a result of this or any other action alternative.

### *Long-term Impacts*

Direct and/or indirect impacts extending beyond the construction period of the project fall into the category of long-term impacts. No long-term impacts to ITAs located within the project APE would occur as a result of this or any other action alternative.

### *Mitigation*

If it is determined that treaty rights to hunt and fish are adversely impacted by the proposed project, the Reclamation will work with the affected Tribes to minimize these minimize or altogether avoid these impacts.

### *Cumulative Impacts*

No known cumulative impacts to ITAs would occur as a result of this or any of the action alternatives.

### Alternative 3

All impacts to and mitigation measures for ITAs related to Alternative 3 would be the same as identified for Alternative 2.

### Alternative 4

All impacts to and mitigation measures for ITAs related to Alternative 4 would be the same as identified for Alternative 2. Other impacts to resources that may be associated with hunting and fishing treaty rights are discussed in socioeconomic, water and biological resources reports.

# 3.14 Transportation

**Study and Analysis Methodology**

The Comprehensive Plan was reviewed. Data are provided for Minidoka County as a whole.

**Area of Potential Effect**

The APE for transportation is the local roads providing access to the land where the project facilities would be constructed, as well as the highways and freeways within Minidoka County that provides access to those roads.

## 3.14.1 Affected Environment

There are approximately 15 miles of interstate highways, 72 miles of state highways, and 608 miles of local roads within the county. The Minidoka County Highway District (Highway District) serves the unincorporated areas of the county with respect to road and bridge construction and maintenance. The Highway District has responsibility for the maintenance of all roads outside the limits of all incorporated cities. City streets are developed and maintained by the individual cities and the Idaho Transportation Department maintains all federal and state highways and roads.

The area where the three pumping plant sites and pipeline alignment would be constructed is primarily agricultural with associated rural residences and a small amount of undeveloped open space. There are few roads in the area, including North Road, South Road, West Road, West Baseline Road, State Route 25, and Interstate 84. The Union Pacific Railroad traverses the area in an east-west direction approximately mid-way along the pipeline route (i.e., the pipeline would cross the rail line in this location) and also to the south of the alternative pump station sites on the south side of the Snake River (i.e., the project would not affect this rail line).

The Highway District has created standards for construction of both gravel and paved roadways in the county. These standards address new construction, maintenance, and upgrade of roads. Any roads to be constructed must meet these standards prior to the Highway District accepting them for maintenance. The Highway District has also addressed policies for the building of new roads (i.e., their necessity and placement).

There currently is no rail passenger service to the county. A mainline of the Union Pacific Railroad runs through the northern part of the county with a primary switching facility depot in the City of Minidoka. An Eastern Idaho Railroad spur line takes off at Minidoka and travels through Acequia, Rupert, Paul, Burley, Jerome, Twin Falls, and Wendell. The railroad transports agricultural products (Minidoka County 2010).

The following Comprehensive Plan Objectives are applicable to the project:

- Transportation Objective #2: To reduce any hazards that may impair the people's safety.
- Transportation Objective #9 (c): A policy concerning the acceptance of private roads, placement, construction and maintenance within the county or cities should be developed.
- Transportation Objective #9 (d): The inclusion of utility corridors and easements within streets and rights-of-way should be encouraged.

- Transportation Objective #9 (g): The Highway District shall be encouraged to continue coordination with IDR and the cities to maintain continuity and safety in the maintenance of existing roads and the development of new roads within the county.
- Transportation Objective #9 (j): It is recommended that any new highways or roads constructed in the county be carefully located to give minimum disruption to farming practices.
- Transportation Objective #9 (q): The Highway District, utility companies and the cities should continue to cooperate and exchange future development and expansion plans by written agreement.
- Transportation Objective #9 (r): A policy concerning the construction of new roads within the county will be developed to determine when new roads will be constructed and who will bear the responsibility for such (Minidoka County 2010).

## 3.14.2 Environmental Consequences

**Methods and Assumptions**

Aerial photographs of the project facilities locations and the project vicinity were reviewed to determine the roads in the area. In addition, the Comprehensive Plan was reviewed to determine if the proposed project (all alternatives) would be consistent with the Comprehensive Plan's Goals and Objectives.

### Alternative 1 – No Action

#### *Short-term Impacts*

If Alternative 1 is implemented, no Project facilities would be constructed, so no construction vehicles, equipment, and workers would be at the project sites and no construction activities would occur. Therefore, there would be no short-term impact on transportation from construction activities. If the short-term fallowing of agricultural land occurs, there would be fewer farm trucks and farm equipment traveling on the local roads, when compared to what currently occurs, resulting in a positive impact (i.e., a benefit) to transportation (i.e., less traffic) along those roads from implementation of Alternative 1.

#### *Long-term Impacts*

If the long-term fallowing of agricultural land occurs due to the current water delivery system not having sufficient capacity to meet crop demands, there would be fewer farm trucks and farm equipment traveling on the local roads, when compared to what currently occurs, resulting in a positive impact (i.e., a benefit) to transportation (i.e., less traffic) along those roads from implementation of Alternative 1.

### *Cumulative Impacts*

No cumulative impacts are anticipated on this resource as a result of the proposed project.

## Alternative 2 – Proposed Action

Alternative 2 would result in short-term and long-term impacts to transportation, which differ from that described for No Action.

### *Short-term Impacts*

During Alternative 2's construction activities, the traffic on the existing roads is expected to change. The construction of a pumping plant, pipeline, transmission line, and new access roads would likely result in increased traffic on roads that would provide access to those sites. During times of project materials deliveries or when construction workers are arriving or leaving the project sites, speeds on the roads used to access the project facility sites is expected to decrease as traffic increases. Access to some properties could be affected by some construction activities. Temporary road closures would be required during pipeline placement; however, the redundancy of the local road network should not result in lack of ingress or egress from the project area. These impacts would be short-term, occurring only during the construction period. Construction of Alternative 2 would, therefore, result in a less than significant transportation impact.

### *Long-term Impacts*

O&M of the pumping plant, pipeline, and transmission line would consist of periodic inspections and repairs, if necessary, by inspectors via truck. Maintenance would require only periodic visits to the site and alignments and would require few vehicles. Traffic disruptions are expected to be infrequent and minor, if at all. Inspectors would use the access roads, the gates to which would be locked to prevent public access to private property. This would result in a less-than-significant transportation impact. In addition, Alternative 2 would not be inconsistent with the Comprehensive Plan.

### *Mitigation*

Although impacts were determined to be less-than-significant, the following mitigation measures shall be implemented to minimize the impacts to transportation from construction, operation, and maintenance of Alternatives 2 through 4:

- Prior to the start of project construction (all alternatives), a Transportation Management Plan (TMP) shall be prepared. There are several purposes and objectives of the TMP: (1) to identify which roads will be used to construct and operate the proposed project (all alternatives), (2) to coordinate with the applicable agencies that have jurisdiction

over those roads and that use the roads for emergency purposes, and (3) to minimize the potential impacts on traffic circulation, transportation modes, roadway condition, and emergency service providers (law enforcement, fire, and medical). The TMP may include, but not be limited to, the following items:

- A list of roads that shall be designated as transportation routes for construction equipment, materials, and construction workers.
- An inventory of the roads that comprise the proposed transportation routes, including a description of the road, the designated speed limit, and roadway condition; improve the roads that comprise the proposed routes, as necessary, to enable them to withstand the expected construction traffic.
- Provide a traffic flag person to direct traffic at roadway locations that are identified as being potentially problematic during project construction and/or operation.
- Identify traffic detours around work sites.
- Maintain access to all residences in the project work site vicinity.
- During peak construction periods, schedule project vehicles so that they arrive at intervals considered suitable to provide smooth traffic flow patterns.
- Schedule materials and equipment deliveries so that they do not arrive during peak hour traffic periods for the area.
- Schedule construction worker shifts so that they do not require workers to arrive at project site during peak hour traffic periods for the area.
- Schedule construction worker shifts and materials and equipment deliveries so that they do not coincide with morning or afternoon school bus routes.
- Set up carpools, van pools, or shuttles for construction workers.
- Stagger work shifts to reduce the number of construction workers commuting to the work sites at a given time.
- Use construction techniques that will not affect railroad or interstate highway operations.

### *Cumulative Impacts*

No cumulative impacts are anticipated on this resource as a result of the proposed project.

## Alternative 3

This alternative would result in the same less-than-significant transportation impacts as were discussed for Alternative 2.

### *Short-term Impacts*

This alternative would result in the same less-than-significant transportation impacts as was discussed for Alternative 2. The only differences are that this alternative has a longer pipeline and transmission line, a longer road, and a new road. Therefore, its construction duration is expected to be longer than for Alternative 2, so that its impacts on transportation are expected to be longer than for Alternative 2.

### *Long-term Impacts*

This alternative would result in the same less-than-significant transportation impacts as was discussed for Alternative 2. The only differences are that this alternative has a longer pipeline and transmission line than Alternative 2, as well as a new road, so that more access points to the project facilities would be needed from the local roads. Because O&M of the pumping plant, pipeline, and transmission line would require only periodic visits to the site and alignments and would require few vehicles, traffic disruptions are expected to be infrequent and minor, if at all.

### *Mitigation*

The mitigation for Alternative 3 is the same as described for Alternative 2.

### *Cumulative Impacts*

This impact is the same as described for Alternative 2.

## Alternative 4

This alternative would result in the same less-than-significant transportation impacts as were discussed for Alternative 2.

### *Short-term Impacts*

This alternative would result in the same less-than-significant transportation impacts as was discussed for Alternative 2. The only differences are that this alternative has a longer pipeline line than Alternative 2 and the transmission line and access road would be aligned along an east-west oriented private road. The construction duration for Alternative 4 is expected to be longer than for Alternative 2, so that its impacts on transportation are expected to be longer than for Alternative 2.

### *Long-term Impacts*

This alternative would result in the same less-than-significant transportation impacts as was discussed for Alternative 2. The only differences are that this alternative has a longer pipeline than Alternative 2 and the transmission line and access road would be aligned along an east-west oriented private road. Because O&M of the pumping plant, pipeline, and transmission line would require only periodic visits to the site and alignments and would require few vehicles, traffic disruptions are expected to be infrequent and minor, if at all.

### *Mitigation*

The mitigation for Alternative 4 is the same as described for Alternative 2.

### *Cumulative Impacts*

This impact is the same as described for Alternative 2

# 3.15 Public Services and Utilities

This section describes the existing the applicable public services and utilities provided within Minidoka County. It also lists the applicable goals and policies that are listed in the Comprehensive Plan.

**Study and Analysis Methodology**

The Comprehensive Plan and IDWR water rights database (IDWR 2014) whereas reviewed. Data are provided for Minidoka County as a whole. Domestic and irrigation water supplies are the only public services and utilities that may be affected by the proposed project. Therefore, other public services and utilities are not discussed further.

**Area of Potential Effect**

The APE for public services and utilities is the land where the project facilities would be constructed and the lands surrounding those facilities within Minidoka County.

## 3.15.1 Affected Environment

Utilities addressed in this discussion include domestic water only.

Domestic and irrigation water needs within Minidoka County are supplied by the ESPA and the Snake River, including Reclamation's Upper Snake River Reservoir System. With the exception of the City of Burley that has 2 surface water rights for irrigation and water quality

improvement, the major towns and cities in the county draw municipal water from the ESPA. A&B and the Minidoka Irrigation District deliver surface water for their respective landowners within the county. A&B also delivers groundwater to its landowners. In addition, rural private residences and some farmlands are irrigated or supplied domestic water through private wells. Many of the private wells however, are located within a shallow groundwater aquifer.

The following Comprehensive Plan Objectives are applicable to the project:

- Public Utilities Objective #2: To consult and plan with utility companies so that facilities installed may be located and designed to minimize the impact on the environment and surrounding uses where practical.

## 3.15.2 Environmental Consequences

### Alternative 1 – No Action

#### *Short-term Impacts*

If Alternative 1 is implemented, no Project facilities would be constructed; therefore, there would be no short-term impact on public services and utilities from project construction activities.

If the No Action alternative is implemented and groundwater levels continue to drop, domestic water users will need to drill deeper wells or find alternative sources in order to continue to supply water. This may result in short-term water rationing until alternative sources are developed.

Implementation of the No Action alternative could also result in water becoming unavailable for crop irrigation, resulting in lands being forced out of agricultural production (short-term fallowing) until another water source or delivery option is developed, or a different (less water intensive) crop is planted. There would be a short-term impact on utilities that provide irrigation water from short-term fallowing of agricultural lands.

#### *Long-term Impacts*

The long-term impact on public services and utilities of implementing the No Action alternative would be the same as described for the short-term, but the impacts would continue indefinitely until another water source, water delivery option, or crop change occurs.

#### *Cumulative Impacts*

No cumulative impacts are anticipated on this resource as a result of the proposed project.

## Alternative 2 – Proposed Action

Alternative 2 would require the short-term construction activities associated with a pumping plant, and pipelines, a transmission line, and access road within the pipeline ROW. Alternative 2 would also result in pumping and conveyance of water from the Snake River to various locations along the pipeline alignment. The short-term and long-term activities would not result in a significant public services and utilities impact.

### *Short-term Impacts*

Construction activities associated with Alternative 2 facilities would include materials deliveries, vegetation removal, grading and other land preparation activities, pumping plant construction (in water and on land), pipeline trenching and installation, installation of transmission line poles and stringing conductor on the poles, waste pickup, and land restoration. A pre-construction background check would locate all buried underground utilities, resulting in no significant impact.

### *Long-term Impacts*

Once Alternative A is constructed, the project facilities would be unmanned. Visits to the facilities would consist of regular periodic inspections, and repairs, as necessary. These visits are expected to be performed using few vehicles and personnel. As such, no impacts on law enforcement, fire protection, ambulance services, school buses, libraries, and utilities are expected. Operation of Alternative 2 would require electricity; the electricity required to operate the project is not considered a significant impact.

### *Mitigation*

The following mitigation measure would be implemented to minimize the impacts to local utilities from constructing Alternative 2:

- Prior to starting any ground-disturbing activity during project construction, the construction contractor would confirm that no underground utilities are located in the path of disturbance.

### *Cumulative Impacts*

No cumulative impacts are anticipated on this resource as a result of the proposed project.

## Alternative 3

This alternative would result in the same public services and utilities impacts as were discussed for Alternative 2.

### *Short-term Impacts*

This alternative would result in the same public services and utilities impacts as was discussed for Alternative 2. The only differences are that this alternative has a longer pipeline and transmission line, a longer road, and a new road. Therefore, its construction duration is expected to be longer than for Alternative 2, so that its impacts on public services and utilities are expected to be longer than for Alternative 2.

### *Long-term Impacts*

This alternative would result in the same public services and utilities impacts as was discussed for Alternative 2. The only differences are that this alternative has a longer pipeline than Alternative 2 and the transmission line and access road would be aligned along an east-west oriented private road.

### *Mitigation*

The mitigation for Alternative 3 is the same as described for Alternative 2.

### *Cumulative Impacts*

This impact is the same as described for Alternative 2.

## Alternative 4

This alternative would result in the same public services and utilities impacts as were discussed for Alternative 2.

### *Short-term Impacts*

This alternative would result in the same public services and utilities impacts as was discussed for Alternative 2. The only differences are that this alternative has a longer pipeline line than Alternative 2 and the transmission line and access road would be aligned along an east-west oriented private road. The construction duration for Alternative 4 is expected to be longer than for Alternative 2.

### *Long-term Impacts*

This alternative would result in the same public services and utilities impacts as was discussed for Alternative 2. The only differences are that this alternative has a longer pipeline than Alternative 2 and the transmission line and access road would be aligned along an east-west oriented private road.

### *Mitigation*

The mitigation for Alternative 4 is the same as described for Alternative 2.

### *Cumulative Impacts*

This impact is the same as described for Alternative 2.

# 3.16 Energy

This section describes the existing Reclamation Minidoka Project North Side Pumping Division facilities that are operated by the A&B.

**Study and Analysis Methodology (Approach)**

Qualitative information regarding the North Side Pumping Division facilities and lands were reviewed.

**Area of Potential Effect**

The APE for energy use is the Minidoka Project North Side Pumping Division.

## 3.16.1 Affected Environment

A total of approximately 77,000 acres of irrigable private land within Jerome and Minidoka counties are irrigated by the Minidoka Project North Side Pumping Division. An existing pumping plant located approximately eight miles west of Burley pumps water from the Snake River (i.e., surface water) for Unit A's 15,000 acres of land. In addition, water is pumped from 174 wells (i.e., groundwater) for Unit B's 62,000 acres of land. The Unit A Main Canal is approximately 4.4 miles long (Reclamation 2014).

The Minidoka Powerplant serves large irrigation pumping requirements on and near the Minidoka Project in southern Idaho. Power not needed for Reclamation project purposes is marketed in the Federal Southern Idaho Power System administered by the Bonneville Power Administration (Reclamation 2014).

## 3.16.2 Environmental Consequences

This section describes the change in energy use by A&B to operate Reclamation's Minidoka Project North Side Pumping Division from implementation of the alternatives.

**Methods and Assumptions**

Qualitative information regarding the North Side Pumping Division and the four alternatives described in this EA (the No Action alternative plus three action alternatives) were compared. It is expected that the vehicles and equipment for construction would be used only on Mondays through Fridays during daylight hours (approximately 7:00 a.m. to 7:00 p.m.). Nighttime and weekend construction is not planned, but may be needed at times. Construction will start in the fall, and continue during the winter months, depending on weather conditions.

## Alternative 1 – No Action

### *Short-term Impacts*

If the No Action alternative is implemented and water is pumped and conveyed over longer distances or pumped from deeper wells, the amount of energy (i.e., electricity) that would be required to operate the pumps to irrigate the agricultural lands could increase. If water becomes unavailable, agricultural lands may be forced out of production until another water source or delivery option is developed, or a different (less water intensive) crop is planted. If the lands are fallowed, then energy use (i.e., electricity) would be expected to decline because the pumps would not be used.

### *Long-term Impacts*

The long-term impact of implementing the No Action alternative would be the same as described for the short-term, but the impacts would continue indefinitely until another water source, water delivery option, crop change, or land use change occurs.

### *Cumulative Impacts*

No cumulative impacts are anticipated on this resource as a result of the proposed project.

## Alternative 2 – Proposed Action

Alternative 2 would require the short-term construction activities associated with a pumping plant, and pipelines, a transmission line, and access road within the pipeline right-of-way. Alternative 2 would also result in pumping and conveyance of water; therefore, it would require the use of electricity to operate the pump(s). Impacts (short-term and long-term) are not considered significant. This is because the project construction period would be relatively short, and the short-term energy impacts would then cease. The long-term energy impacts are expected to also not be significant because the project would add only a small increment of energy requirement to A&B's energy consumption for its existing facilities, and the new facilities are expected to be state-of-the-art and energy efficient.

### *Short-term Impacts*

Energy would be required to construct the pipelines and pump station. The types of energy expected to be needed include gasoline and diesel to fuel vehicles and equipment and portable generators. A tie into an existing electrical distribution line may become necessary. Not all vehicles and pieces of equipment are expected to be used simultaneously, but would be used intermittently throughout the entire construction phase of the project. This impact is not considered significant.

### *Long-term Impacts*

Energy would be required to operate the project. On the approximately 1,500 acres being supplied by the 6 to 8 deep wells, the average pumping lift is 270 feet. The lift from the new river pumping plant would be 165 feet to supply the same lands. All other considerations being the same, the reduction in lift would be a power savings to these acres.

The approximately 3,000 acres of surface water lands the new pumping plant would serve are the same total acreage currently being served by the original Unit A Pumping Plant that has the same 165 feet of lift. Therefore, there would be no net increase in power usage by using both pumping plants. The only time there could be a small increase in power usage between the two pumping plants would be during peak season irrigation demands, when the District may possibly pump approximately 30 cfs more than it currently has the ability to pump. However, the power savings between the deep wells and the new pumping plant reduced lift would offset this increase.

The overall savings in power usage would be a small positive impact to energy.

### *Mitigation*

Although impacts were determined to be less than significant, the following mitigation measures would be implemented to reduce energy use from construction, operation, and maintenance of Alternative 2:

- Vehicles and equipment to be used during project construction would be relatively new, in good working order, properly maintained, and would not be left to idle.
- Pumps and other energy-using project facilities to be used during project operation would reflect current technology, be energy efficient, in good working order, properly maintained, and replaced with energy efficient models, when replacement is needed.

### *Cumulative Impacts*

Although the proposed project (all alternatives) would require energy during its construction and its operation, this planned energy use is not considered a significant increase in electrical

load for A&B, and therefore, would not result in a significant impact. No cumulative impacts are anticipated on this resource as a result of the proposed project.

### Alternative 3

This alternative would result in the same less-than-significant energy use impacts as were discussed for Alternative 2.

#### *Short-term Impacts*

This alternative would result in the same less-than-significant energy use impacts as were discussed for Alternative 2. The only difference is that this alternative has a longer pipeline, so that its construction duration is expected to be longer than for Alternative 2.

#### *Long-term Impacts*

This alternative would result in the same less-than-significant energy use impacts as were discussed for Alternative 2. The only difference is that this alternative has a longer pipeline than Alternative 2, so that it may require more energy to pump the water.

#### *Mitigation*

The mitigation for Alternative 3 is the same as described for Alternative 2.

#### *Cumulative Impacts*

This impact is the same as described for Alternative 2.

### Alternative 4

This alternative would result in the same less-than-significant energy use impacts as were discussed for Alternative 2.

#### *Short-term Impacts*

This alternative would result in the same less-than-significant energy use impacts as were discussed for Alternative 2. The only difference is that this alternative has a longer pipeline, so that its construction duration is expected to be longer than for Alternative 2.

#### *Long-term Impacts*

This alternative would result in the same less-than-significant energy use impacts as were discussed for Alternative 2. The only difference is that this alternative has a longer pipeline than Alternative 2, so that it may require more energy to pump the water.

### *Mitigation*

The mitigation for Alternative 4 is the same as described for Alternative 2.

### *Cumulative Impacts*

This impact is the same as described for Alternative 2.

# 3.17 Recreation

**Study and Analysis Methodology**

Aerial photographs of the project facilities locations and the project vicinity, as well as the Comprehensive Plan and the *Minidoka North Side Resource Management Plan* and Final Environmental Assessment and Finding of No Significant Impact were reviewed. Data are provided for Minidoka County as a whole.

**Area of Potential Effect**

The APE for recreation resources is the land where the project facilities would be constructed and the lands surrounding those facilities within Minidoka County.

## 3.17.1 Affected Environment

The primary water bodies in the vicinity of project facilities are the Snake River and Milner Lake. The Snake River spans the southern boundary of the County, and it would be the water source for the project. The three alternative pumping plant sites would be located on the north side of the river. Much of the property along the river corridor is privately owned. Milner Lake, managed by Reclamation, is located adjacent to the project facilities. Recreation opportunities associated with the River include camping, boating, hiking, picnicking, hunting, and fishing.

Recreation providers in the area include Idaho Department of Parks and Recreation (IDPR), BLM, IDFG, Idaho Power, Inc., and various local agencies.

The following Comprehensive Plan Objectives are applicable to the project:

- Recreation Objective #3: Expand recreational opportunities through both public and private means.
- Recreation Objective #8: Need, design and maintenance of public recreation accesses to the Snake River reviewed and established in development and approval processes.

## 3.17.2 Environmental Consequences

### Alternative 1 – No Action

#### *Short-term Impacts*

If Alternative 1 is implemented, no Project facilities would be constructed. In addition, if the No Action alternative is implemented and water becomes unavailable for crop irrigation, then lands may be temporarily forced out of agricultural production (short-term fallowing) until another water source or delivery option is developed, or a different (less water intensive) crop is planted. No impacts on recreation resources would occur as a result of either of these scenarios.

#### *Long-term Impacts*

The long-term impact on recreation resources of implementing the No Action alternative would be the same as described for the short-term, but the impacts would continue indefinitely until another water source, water delivery option, crop change, or fallowing occurs.

#### *Cumulative Impacts*

No cumulative impacts are anticipated on this resource as a result of the proposed project.

### Alternative 2 – Proposed Action

Alternative 2 would require the short-term construction activities associated with a pumping plant, and pipelines, a transmission line, and access road within the pipeline ROW. Alternative 2 would also result in pumping and conveyance of water from the Snake River to various locations along the pipeline alignment. None of these activities would result in a significant impact on recreation resources.

#### *Short-term Impacts*

Construction activities associated with Alternative 2 facilities would include materials deliveries, vegetation removal, grading and other land preparation activities, pumping plant construction (in water and on land), pipeline trenching and installation, installation of transmission line poles and stringing conductor on the poles, waste pickup, and land restoration. These activities would have no impact on recreation resources.

#### *Long-term Impacts*

Operation of the Alternative 2 pumping plant, pipeline, transmission line, and road would have no impact on recreation resources.

### *Mitigation*

The following mitigation measure would be implemented to minimize the impacts to recreation from constructing Alternative 2:

- Warning signs or other safety devices will be placed on the water side of the pumping plant to warn boaters of a potential hazard.

### *Cumulative Impacts*

There would be no cumulative impact concerns associated with the proposed project.

## Alternative 3

This alternative would result in the same recreation resources impacts as were discussed for Alternative 2.

### *Short-term Impacts*

This alternative would result in the same recreation resources impacts as was discussed for Alternative 2. The only differences are that this alternative has a longer pipeline and transmission line, a longer road, and a new road. Therefore, its construction duration is expected to be longer than for Alternative 2.

### *Long-term Impacts*

This alternative would result in the same recreation resources impacts as was discussed for Alternative 2. The only differences are that this alternative has a longer pipeline than Alternative 2 and the transmission line and access road would be aligned along an east-west oriented private road.

### *Mitigation*

The mitigation for Alternative 3 is the same as described for Alternative 2.

### *Cumulative Impacts*

This impact is the same as described for Alternative 2.

## Alternative 4

This alternative would result in the same recreation resources impacts as were discussed for Alternative 2.

### *Short-term Impacts*

This alternative would result in the same recreation resources impacts as was discussed for Alternative 2. The only differences are that this alternative has a longer pipeline line than Alternative 2 and the transmission line and access road would be aligned along an east-west oriented private road. The construction duration for Alternative 4 is expected to be longer than for Alternative 2.

### *Long-term Impacts*

This alternative would result in the same recreation resources impacts as was discussed for Alternative 2. The only differences are that this alternative has a longer pipeline than Alternative 2 and the transmission line and access road would be aligned along an east-west oriented private road.

### *Mitigation*

The mitigation for Alternative 4 is the same as described for Alternative 2.

### *Cumulative Impacts*

This impact is the same as described for Alternative 2.

# 3.18 Visual Resources

**Study and Analysis Methodology**

Aerial photographs of the project facilities locations and the project vicinity, site visit notes, and the Comprehensive Plan were reviewed.

**Area of Potential Effect**

The APE for visual resources is the land where the project facilities would be constructed and the lands surrounding those facilities within Minidoka County.

## 3.18.1 Affected Environment

The land use at and in the vicinity of the three pumping plant sites and along the pipeline alignment is primarily agricultural with associated rural residences and a small amount of undeveloped open space. There are few roads, highways, and railroads in the area. An aerial view of the landscape reveals it is not a natural appearing landscape, but instead, individual crop fields and pasture, section lines, residences, and roads are apparent. The pipeline

alignment would be routed through a relatively flat area except in a couple of locations where there are rolling hills.

The following Comprehensive Plan Goal and Objectives are applicable to the project:

- Transportation Objective #5: To increase concern for the scenic quality along transportation routes.
- Hazardous Areas Goal: To create a setting in Minidoka County and the City of Rupert which protects, maintains and conserves the county's natural beauty and countless resources and reduce the areas of both natural and man-made hazards.
- Special Areas or Sites Objective #4: Preserve and maintain access to scenic and recreational areas of interest within the county and city.
- Special Areas or Sites Objective #8: Preserve and protect the scenic and recreational areas of the county and city and to contribute to the quality of life enjoyed by present residents of Minidoka County and the City of Rupert and undoubtedly contribute to the local economy. This objective stresses the preservation of this quality of life and opportunities for future generations (Minidoka County 2010).

## 3.18.2 Environmental Consequences

Implementation of the alternatives has the potential to alter the landscape in the project area, resulting in potential impacts to visual resources.

**Methods and Assumptions**

The visual resources assessment is a multistep process, including:

- Describing the visual change that is expected from Project construction and operation
- Determining the degree of visual impact by considering:
  - The consistency of the visual changes from the Project with the Comprehensive Plan; the Comprehensive Plan's Community Design Goal is: To encourage the development of an aesthetically pleasing community and to protect the quality of life Minidoka County and the City of Rupert residents currently enjoy
  - The compatibility of the visual changes from the Project with the nearby landscape; whether the Project would substantially degrade the existing visual quality of the Project facility sites or their surrounding landscapes
  - The number of people who would have views of the proposed facilities, their typical sensitivity to landscape change, and the duration of their views
  - Whether Project facilities would introduce a new source of substantial light or glare which would adversely affect day or nighttime views in the area

- Developing mitigation for identified impacts on visual resources, as necessary

## Alternative 1 – No Action

### *Short-term Impacts*

If Alternative 1 is implemented, no Project facilities would be constructed, so no construction vehicles, equipment, and workers would be at the project sites and no construction activities would occur. Therefore, there would be no short-term impact on visual resources from construction activities. If the short-term fallowing of agricultural land occurs, there would be a change to the landscape from what currently occurs, resulting in an impact on visual resources from implementation of Alternative 1.

### *Long-term Impacts*

If Alternative 1 is implemented, the District's existing delivery of irrigation water, both from the river and from available groundwater wells, would remain unchanged. No significant improvements would be made in the efficiency and equity of the Unit A acreage, and no additional acreage historically irrigated only with groundwater would be supported when possible with surface water (i.e., via a "soft conversion" water rights system). This condition would likely result in the 5,000 acres proposed for soft conversion under the action alternatives to eventually (time uncertain) either transition to crops requiring less water or be fallowed. Such a change to a 5,000 acre area would represent an impact to the visual environment. However, this change may be considered positive by some observers and adverse/negative by other observers. This fact in context with the scale and variety of the visual environment in the area and region would likely prevent this change from being considered significant.

In addition, the District would continue to deliver groundwater to Unit B lands. Assuming continued decline in groundwater levels, progressive fallowing of this agricultural land would be a long-term change to the landscape, resulting in an impact on visual resources from implementation of Alternative 1.

### *Cumulative Impacts*

No cumulative impacts are anticipated on this resource as a result of the proposed project.

## Alternative 2 – Proposed Action

Alternative 2 would result in short-term impacts to visual resources, which differ from that described for Alternative 1. Alternative 2 would result in different long-term changes to the landscape (and also different long-term impacts to visual resources) than were described for Alternative 1.

### *Short-term Impacts*

During construction activities for Alternative 2, the existing visual character of the area would temporarily change. The construction of a pumping plant, pipeline, transmission line and new access roads would temporarily change the views from, and visual character of, the area due to the presence of construction equipment, vehicles, and workers, removal of vegetation, construction activities, and generation of dust. During construction, motorists and residents in the area would see construction vehicles driving within their viewsheds during the construction period; however, the vehicles and equipment used may be similar to those used in the transport of agricultural goods along the same roads. Construction of Alternative 2 would, therefore, result in a less than significant impact.

### *Long-term Impacts*

The changes in the landscape from implementation of Alternative 2 that would be long-term include the presence of the aboveground Project facilities: a pumping plant and an overhead electrical transmission line that would be aligned along a 25-foot-wide permanent dirt access road that would extend along the pipeline right-of-way.

A few rural residences are located approximately 0.5 to 0.9 mile away (to the west, northwest, north, northeast, and east). The Snake River is on the south side of the pumping plant site. The nearest residence is located approximately 0.2 mile to the south of the pumping plant site, on the south side of the Snake River. The proposed transmission line would be moderately visible by motorists and residents due to lack of topography and mature vegetation along the alignment. It would not likely impair views or visually dominate the viewshed due to the poles' expected wide spacing and small diameters. The transmission line and roads would appear similar to other existing local transmission lines and roads. Operation and maintenance activities of the pumping plant, pipeline, transmission line, and roads would consist of periodic inspections by inspectors via truck, and repairs, as necessary. Maintenance activities at the Project facilities are expected to be short-term, creating low visual contrast. Due to the expected periodic timing and short duration at any given location, this would be considered a low visual change and a less than significant impact. In addition, Alternative 2 would not be inconsistent with the Comprehensive Plan.

### *Mitigation*

Although impacts were determined to be less-than-significant, the following mitigation measures would be implemented to minimize the impacts to visual resources from construction, operation, and maintenance of Alternative 2:

- Water areas where dust is generated, particularly along unpaved haul routes and during earth moving activities, to reduce impacts to views and the landscape caused by dust.
- Prohibit unnecessary ground disturbance outside of the construction disturbance area.

- Revegetate and restore disturbed ground surfaces at each Project facility to their original condition to the extent feasible.
- Minimize light scatter and glare from portable temporary light sources that would be used for nighttime construction (if nighttime construction is needed) by using shielded and directional lighting, and install temporary visual barriers, as needed, to prevent light spill from equipment lighting in areas with sensitive receptors.
- Design, construct, and finish all new and structures using non reflective materials, non-glare finishes, and colors that would blend with the natural environment and not create a new source of glare.
- Design the transmission line structures to be similar in appearance to the existing transmission lines in the Project vicinity to the extent feasible. Use non specular conductors and non-reflective and non-refractive insulators.
- Use minimal Project construction signs; signs that would be installed shall be made of non-glare materials, finishes, and unobtrusive colors to the extent possible. The design of any signs required by safety regulations shall conform to the criteria established by those regulations.
- Use native trees, bushes, and shrubs for screening at Project facilities that may generate new sources of light or glare, in a manner that does not compromise facility safety and access.
- Minimize nighttime lighting to areas required for safety, security, and operations, and shield lighting from public view to the extent possible. Timers and sensors shall be used to minimize the amount of time that lights are on in areas where lighting is not normally needed for safety, security, or operation. Use shielded and directional permanent lighting.
- Use minimal Project signs; signs that would be installed shall be made of non-glare materials, finishes, and unobtrusive colors to the extent possible. The design of any signs required by safety regulations shall conform to the criteria established by those regulations.

### *Cumulative Impacts*

No cumulative impacts are anticipated on this resource as a result of the proposed project.

## Alternative 3

This alternative would result in the same less-than-significant visual resources impacts as were discussed for Alternative 2.

### *Short-term Impacts*

This alternative would result in the same less-than-significant visual resources impacts as was discussed for Alternative 2. The only differences are that this alternative has a longer pipeline and transmission line, a longer road, and a new road, so that its construction duration is expected to be longer than for Alternative 2, so that its impacts on visual resources is expected to be longer than for Alternative 2.

### *Long-term Impacts*

This alternative would result in the same less-than-significant visual resources impacts as was discussed for Alternative 2. The only differences are that this alternative has a longer pipeline and transmission line and road than Alternative 2, as well as a new road, so that a larger landscape (more agricultural fields) would be affected, including having more poles and a longer access road. The nearest rural residences are located approximately 0.4 mile to the northeast and approximately 0.4 mile to the southeast on the south side of the Snake River.

### *Mitigation*

The mitigation for Alternative 3 is the same as described for Alternative 2.

### *Cumulative Impacts*

This impact is the same as described for Alternative 2.

## Alternative 4

This alternative would result in the same less-than-significant visual resources impacts as were discussed for Alternative 2.

### *Short-term Impacts*

This alternative would result in the same less-than-significant visual resources impacts as was discussed for Alternative 2. The only differences are that this alternative has a longer pipeline line than Alternative 2 and the transmission line and access road would be aligned along an east-west oriented private road. The construction duration for Alternative 4 is expected to be longer than for Alternative 2.

### *Long-term Impacts*

This alternative would result in the same less-than-significant visual resources impacts as was discussed for Alternative 2. The only differences are that this alternative has a longer pipeline than Alternative 2 and the transmission line and access road would be aligned along an east-west oriented private road. There are a few rural residences located approximately 0.7 to 1.25

miles to the northwest, north, and northeast. The nearest residences are located approximately 0.6 mile to the south of the pumping plant site, on the south side of the Snake River. It is expected that a larger landscape (adjacent to more agricultural fields) would be affected by more poles and a longer access road.

### *Mitigation*

The mitigation for Alternative 4 is the same as described for Alternative 2.

### *Cumulative Impacts*

This impact is the same as described for Alternative 2

# 3.19 Socioeconomics

**Study and Analysis Methodology**

The Idaho Department of Labor (IDL) and U.S. Census Bureau (USCB) websites were consulted for current population, employment, unemployment, and housing data for Minidoka County.

**Area of Potential Effect**

The APE for socioeconomics is Minidoka County.

## 3.19.1 Affected Environment

The population of Minidoka County has been increasing since 2005. The 2012 estimated population in Minidoka County is provided in Table 3-6.

The County's economy is heavily dependent on agriculture and food processing; however, the economy has diversified to include durable manufacturing and wholesale and retail trade tied to agriculture. Employment in Minidoka County has traditionally been seasonal. The civilian labor force, and number of persons employed and unemployed in 2012 are shown in Table 3-6 for 2012.

**Table 3-6. Minidoka County civilian labor force, employment, and unemployment characteristics for 2012 (IDL 2013).**

| Parameter | Number |
|---|---|
| People in civilian labor force | 10,434 |
| People employed | 9,800 |
| People unemployed | 634 |

Housing statistics for Minidoka County are presented in Table 3-7.

**Table 3-7. Minidoka County housing characteristics for 2010 (USCB 2010).**

| Parameter | Number/Percent |
|---|---|
| Total housing units | 7,665/100 |
| Occupied | 7.170/93.5 |
| Owner-Occupied | 5,333/74.4 |
| Renter-Occupied | 1,837/25.6 |
| Vacant | 495/6.5 |
| Vacant for Rent | 128/25.8 |
| Vacant for Sale | 90/18.1 |

## 3.19.2 Environmental Consequences

### Methods and Assumptions

Current population, employment, unemployment, and housing data for Minidoka County were reviewed to assess whether the existing local population and housing supply is adequate to construct and operate the proposed project (all alternatives).

### Alternative 1 – No Action

#### *Short-term Impacts*

If Alternative 1 is implemented, no Project facilities would be constructed. In addition, if the No Action alternative is implemented and water becomes unavailable for crop irrigation, then lands may be forced out of agricultural production (short-term fallowing) until another water source or delivery option is developed, or a different (less water intensive) crop is planted. No impacts on the population and housing parameters of socioeconomics would occur as a result of either of these scenarios. If lands are fallowed, then farm workers could be expected to be

laid off, which would affect the unemployment and unemployment parameters of socioeconomics, and is not expected to affect housing.

### *Long-term Impacts*

The long-term impact on socioeconomics of implementing the No Action alternative would be the same as described for the short-term for employment and unemployment, but the impacts would continue indefinitely until another water source, water delivery option, or crop change occurs. If farm workers are unemployed for extended periods of time, it is anticipated that they may need to relocate from their residence, which could result in additional vacant housing in the area.

### *Cumulative Impacts*

No cumulative impacts are anticipated on this resource as a result of the proposed project.

## Alternative 2 – Proposed Action

Alternative 2 would require the short-term construction activities associated with a pumping plant, and pipelines, a transmission line, and access road within the pipeline right-of-way. Alternative 2 would also result in pumping and conveyance of water from the Snake River to various locations along the pipeline alignment. None of these activities would result in a significant impact on socioeconomics.

### *Short-term Impacts*

Construction activities associated with Alternative 2 facilities would include materials deliveries, vegetation removal, grading and other land preparation activities, pumping plant construction (in water and on land), pipeline trenching and installation, installation of transmission line poles and stringing conductor on the poles, waste pickup, and land restoration. These activities would require workers, resulting in a positive impact (i.e., a benefit) on the employment and unemployment parameters of socioeconomics. Because it is anticipated that the construction workers would come from the local area, the project's construction activities would have no impact on housing.

### *Long-term Impacts*

Once Alternative 2 is constructed, the project facilities would be unmanned. Visits to the facilities would consist of regular periodic inspections, and repairs, as necessary. These visits are expected to be performed using few vehicles and personnel. Because it is anticipated that the inspection/maintenance personnel would already be employed by A&B, the project' O&M would have no impact on the employment, unemployment, and housing parameters of socioeconomics.

It is expected that the agricultural fields located along the pipeline alignment would be irrigated, thus allowing for the regular and continued cropping of the fields and the associated employment of farm workers. Because the farm workers are expected to come from the local area, there would be no impact on the employment, unemployment, and housing parameters of socioeconomics.

### *Mitigation*

No mitigation is needed or recommended.

### *Cumulative Impacts*

No cumulative impacts are anticipated on this resource as a result of the proposed project.

## Alternative 3

This alternative would result in the same socioeconomics impacts as were discussed for Alternative 2.

### *Short-term Impacts*

This alternative would result in the same socioeconomics impacts as was discussed for Alternative 2. The only differences are that this alternative has a longer pipeline and transmission line, a longer road, and a new road. Therefore, its construction duration is expected to be longer than for Alternative 2.

### *Long-term Impacts*

This alternative would result in the same socioeconomics impacts as was discussed for Alternative 2. The only differences are that this alternative has a longer pipeline than Alternative 2 and the transmission line and access road would be aligned along an east-west oriented private road.

### *Mitigation*

The mitigation for Alternative 3 is the same as described for Alternative 2.

### *Cumulative Impacts*

This impact is the same as described for Alternative 2.

### Alternative 4

This alternative would result in the same socioeconomics impacts as were discussed for Alternative 2.

#### *Short-term Impacts*

This alternative would result in the same socioeconomics impacts as was discussed for Alternative 2. The only differences are that this alternative has a longer pipeline line than Alternative 2 and the transmission line and access road would be aligned along an east-west oriented private road. The construction duration for Alternative 4 is expected to be longer than for Alternative 2.

#### *Long-term Impacts*

This alternative would result in the same socioeconomics impacts as was discussed for Alternative 2. The only differences are that this alternative has a longer pipeline than Alternative 2 and the transmission line and access road would be aligned along an east-west oriented private road.

#### *Mitigation*

The mitigation for Alternative 4 is the same as described for Alternative 2.

#### *Cumulative Impacts*

This impact is the same as described for Alternative 2.

## 3.20 Environmental Justice

This section describes the ethnic and income characteristics of the populations within Minidoka County and the State of Idaho, for comparison purposes.

EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations (59 FR 7629), was signed on February 11, 1994, by President Clinton. EO 12898 requires that each federal agency make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low income populations (FR 1994).

The intent of EO 12898 is to assess potential impacts from the implementation of development projects, subject to federal permitting requirements, to confirm that no person in the United

States shall, on the basis of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. Where possible, measures should be taken to avoid negative impacts to these communities or mitigate the adverse effects.

The USCB provides a definition of minority and low income populations. The term "minority population" includes persons who identify themselves as African American, Asian or Pacific Islander, American Indian or Alaskan Native, or Hispanic (USCB 2009a). Race refers to census respondents' self-identification of racial background. For example, Hispanic origin refers to ethnicity and language, not race, and may include persons whose heritage is Puerto Rican, Cuban, Mexican, or Central or South American, and other Spanish cultures (OMB 1997).

According to the Council on Environmental Quality (CEQ), to be considered a minority population, the population of the affected area must either exceed 50 percent minority, or the minority population percentage of the affected area must be meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.

A minority population also exists if there is more than one minority group present and the minority percentage, as calculated by aggregating all minority persons, meets one of the above stated thresholds (CEQ 1997). In addition, according to the EPA guidelines, similar to the CEQ, a minority population refers to a minority group that has a population of greater than 50 percent of the affected area's general population; or the minority population percentage of the affected area must be meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis (EPA 1998).

The USCB does not provide a specific definition for "low income." Rather, the term "poverty" is used, and poverty thresholds are established each year for statistical purposes (USCB 2009b). To be considered a low income population, the low income population in an affected area should be identified using the annual statistical poverty thresholds from the USCB. The U.S. Department of Housing and Urban Development (HUD) defines a low-income population as one that receives 80 percent of the median family income for the area (HUD 1984). The U.S. Department of Health and Human Services issues poverty guidelines each year that are a simplification of the U.S. Census Bureau's poverty thresholds. The guidelines are another version of the federal poverty measure; they are used for administrative purposes (for example, such as determining financial eligibility for certain Federal programs) (IRP 2008).

**Study and Analysis Methodology**

The USCB website was consulted for current population, race/ethnicity, income, and poverty data for Minidoka County and for the State of Idaho, for comparison purposes.

**Area of Potential Effect**

The APE for environmental justice is Minidoka County.

## 3.20.1 Affected Environment

To characterize the population, race, and ethnicity of Minidoka County and the State of Idaho, data from the U.S. Census Bureau were obtained and reviewed. Table 3-8 presents the total 2012 population and population breakdown by race and ethnicity for Minidoka County and the State of Idaho, based on the American Community Survey (USCB 2013). Population estimates for 2013 were not available at the time this report was produced.

**Table 3-8. Minidoka County and Idaho race and ethnicity, 2012 estimate (USCB 2013).**

| Parameter | Minidoka County | Idaho |
|---|---|---|
| Total Population | 20,037 | 1,595,728 |
| White (%) | 94.9 | 93.8 |
| Black or African American (%) | 0.6 | 0.8 |
| American Indian and Alaska Native (%) | 2.0 | 1.7 |
| Asian (%) | 0.6 | 1.4 |
| Native Hawaiian and Other Pacific Islander (%) | * | 0.2 |
| Two or More Races (%) | 1.8 | 2.2 |
| Hispanic or Latino (any race) (%) | 32.6 | 11.6 |
| White alone (not Hispanic or Latino) (%) | 64.8 | 83.5 |
| * Value greater than zero, but less than half unit of measure shown. | | |

As shown in Table 3-8, the Hispanic population in Minidoka County is less than the 50 percent CEQ and EPA threshold, indicating that a majority of the County population does not identify itself as a minority population. The Hispanic or Latino percentage is, however, meaningfully

greater than the comparable percentage for the State of Idaho, indicating that there is a minority population in Minidoka County.

Table 3-9 provides income, poverty, and unemployment data for Minidoka County and the State of Idaho.

Minidoka County's median family income is 93.4 percent of Idaho's median family income. This indicates that Minidoka County does not have a low-income population, as defined by HUD. This is further supported in Table 3-9, in which the Individuals Below Poverty Level is indicated as 15 percent, which is not meaningfully different than the comparable statistic for the State of Idaho.

**Table 3-9. Minidoka County and Idaho income, poverty, unemployment, and housing, 2012 estimate (USCB 2012).**

| Parameter | Minidoka County | Idaho |
|---|---|---|
| Median family income | $50,879 | $54,483 |
| Per capita income | $19,466 | $22,053 |
| Individuals below poverty level (%) | 15.0 | 15.9 |
| Percent unemployed | 7.1 | 8.0 |

## 3.20.2 Environmental Consequences

### Methods and Assumptions

In accordance with CEQ, EPA, and HUD guidelines, the first step undertaken in this environmental justice analysis was to determine if there was a minority and/or low-income population in Minidoka County.

If a minority and/or low-income population were determined to exist in Minidoka County, then the second step undertaken in this environmental justice analysis was to determine if a "high and adverse" impact would occur. The CEQ guidance indicates that, when determining whether the effects are high and adverse, agencies are to consider whether the risks or rates of impact "are significant or above generally accepted norms." If no minority or low-income population exists in Minidoka County, then the analysis is finished, and the conclusion is no impact.

The final step undertaken in this analysis was to determine if the impact on the minority or low income population would be disproportionately high and adverse. The CEQ includes a non-

quantitative definition stating that an effect is disproportionate if it appreciably exceeds the risk or rate to the general population.

## Alternative 1 – No Action

### *Short-term Impacts*

If the No Action alternative is implemented and water becomes unavailable, then lands may be temporarily forced out of agricultural production until another water source or delivery option is developed, or a different (less water intensive) crop is planted. If the lands are fallowed, then farm workers (minority and non-minorities) would likely become unemployed.

There is a minority population in Minidoka County, as defined by CEQ and EPA guidelines; however, that population would not experience health or environmental impacts from the implementation of the No Action alternative that are greater or different than the other farm workers or the remainder of the local population. In addition, because there is no low-income population in Minidoka County, as defined by HUD, that population would not experience disproportionately high and adverse human health or environmental impacts from implementation of this alternative.

### *Long-term Impacts*

The long-term impact of implementing the No Action alternative would be the same as described for the short-term, but the impacts would continue indefinitely until another water source, water delivery option, or crop change occurs.

### *Cumulative Impacts*

No cumulative impacts are anticipated on this resource as a result of the proposed project.

## Alternative 2 – Proposed Action

Alternative 2 would require the short-term construction activities associated with a pumping plant, pipelines, a transmission line, and access road within the pipeline ROW. Alternative 2 would also result in pumping and conveyance of water from the Snake River to various locations along the pipeline alignment. These short-term and long-term activities would not result in significant environmental justice impacts because (1) there is no defined low-income population in the area, and (2) the human health and/or environmental impacts from constructing and operating this alternative are not expected to be disproportionately high and adverse to the existing minority population of the area.

### *Mitigation*

No mitigation is needed or recommended.

### *Cumulative Impacts*

There is a minority population in Minidoka County, as defined by CEQ and EPA guidelines; however, that population would not experience health or environmental impacts from the proposed project (all alternatives) that are greater or different than the remainder of the local population. Because there is no low-income population in Minidoka County, as defined by HUD, that population would not experience disproportionately high and adverse human health or environmental impacts from the project (all alternatives). Therefore, the proposed project (all alternatives) would not contribute to cumulative environmental justice impacts.

## Alternative 3

This alternative would result in the same less-than-significant environmental justice impacts as were discussed for Alternative 2. No mitigation is proposed.

### *Cumulative Impacts*

This impact is the same as described for Alternative 2.

## Alternative 4

This alternative would result in the same less-than-significant environmental justice impacts as were discussed for Alternative 2. No mitigation is proposed.

### *Cumulative Impacts*

This impact is the same as described for Alternative 2.

# 3.21 Air Quality and Climate Change

**Study and Analysis Methodology**

Aerial photographs of the project facilities locations and the project vicinity, site visit notes, and the Comprehensive Plan were reviewed.

**Area of Potential Effect**

The APE for air quality and climate change is the land where the project facilities would be constructed and the lands surrounding those facilities within Minidoka County.

## 3.21.1 Affected Environment

Air quality of the project area could be affected by the amount of pollutants released, potentially exceeding acceptable air quality levels, and the surrounding physical and natural environment contributing to the air quality of the area (trees, car traffic, industry, etc.). According to the Comprehensive Plan, air quality in Minidoka County is generally excellent and the greatest sources of air pollution from non-beneficial uses include smoke from grass fires, crop burning and dust. Emissions from the Twin Falls area as it grows may affect the county's air shed.

The EPA has established air quality standards for six 'criteria' air pollutants: ozone, carbon monoxide (CO), lead, nitrogen dioxide, particulate matter (PM-10), and sulfur dioxide. Environmentally, air pollution can: damage soils, water, crops, vegetation, manmade materials, property, animals and wildlife, impair visibility, affect climate and weather, and create transportation hazards. Human health can also be impacted by harmful air quality conditions.

For each of the six criteria pollutants, the EPA has determined a maximum concentration above which adverse effects on human health may occur. These threshold concentrations are called National Ambient Air Quality Standards (NAAQS), and it is when an area exceeds these standards that it is designated as a nonattainment area. Pollution control measures are mandated for Federal actions in nonattainment areas.

A nonattainment area can be listed for any one, or more, of the criteria pollutants. An area that was once a nonattainment area, but has since improved its air quality enough so that it now meets the EPA established air quality standards, is up-graded to a maintenance area designation. Maintenance areas also have pollution controls imposed on them, but because the air quality is not as poor as in nonattainment areas, the control standards are not as strict in maintenance areas. All other areas not listed by the EPA for air quality degradation are considered attainment areas.

The project area lies within Minidoka County and is not within an EPA-listed nonattainment area or maintenance area for any of the criteria pollutants.

The following Comprehensive Plan Goal and Objectives are applicable to the project:

- Natural Resources and Hazardous Areas Objective #1: To preserve, maintain and enhance soil, water, air, plants, wildlife, and other natural resources so they may be used by this and later generations.

## 3.21.2 Environmental Consequences

**Methods and Assumptions**

Air quality information for the project area was reviewed to determine the existing air quality status. In addition, the Comprehensive Plan (Comprehensive Plan) was reviewed to determine if the proposed project (all alternatives) would be consistent with the Comprehensive Plan's Objectives. There are no Non-Attainment areas, Areas of Concern, Maintenance Areas, or Class 1 areas in or near the project area (IDEQ 2014).

### Alternative 1 – No Action

#### *Short-term Impacts*

If Alternative 1 is implemented, no Project facilities would be constructed. In addition, if the No Action alternative is implemented and water becomes unavailable for crop irrigation, then lands may be temporarily forced out of agricultural production (short-term fallowing) until another water source or delivery option is developed, or a different (less water intensive) crop is planted. No short-term impacts on air quality resources would occur as a result of either of these scenarios.

#### *Long-term Impacts*

The long-term impact on air quality of implementing the No Action alternative would be potential dust being raised by wind from fallowed agricultural land. The impacts would continue indefinitely until another water source, water delivery option, or crop change occurs.

#### *Cumulative Impacts*

No cumulative impacts are anticipated on this resource as a result of the proposed project.

### Alternative 2 – Proposed Action

Alternative 2 would require the short-term construction activities associated with a pumping plant, and pipelines, a transmission line, and access road within the pipeline right-of-way. Alternative 2 would also result in pumping and conveyance of water from the Snake River to various locations along the pipeline alignment. These activities would have a temporary effect on air quality.

#### *Short-term Impacts*

Construction activities associated with Alternative 2 facilities would include materials deliveries, vegetation removal, grading and other land preparation activities, pumping plant construction (in water and on land), pipeline trenching and installation, installation of

transmission line poles and stringing conductor on the poles, waste pickup, and land restoration. Emissions of particulate matter (PM2.5 and PM10) would occur during earth-disturbing activities. A 100 percent level of control for fugitive emissions is not attainable as some particulate matter in the form of dust and exhaust emissions would be emitted during construction. Implementation of mitigation measures would result in no violations of air quality standards, as the anticipated emissions impact would be expected to be below the threshold values for PM10 and PM2.5 (15 tons per year and 10 tons per year, respectively) as identified in the Idaho Air Rules Section 006. Mitigation would reduce this impact to non-significance.

Construction equipment emits exhausts which contain greenhouse gases (GHG). The level of GHG emissions in the project area overall are not high and the project would not be expected to increase the total GHG emissions in the project area to a level that would result in a significant impact.

### *Long-term Impacts*

Operation of the Alternative 2 pumping plant, pipeline, transmission line, and road would have no measureable impact on air quality. Alternative 2 would be consistent with the Minidoka County Comprehensive Plan's goal to preserve, maintain and enhance soil, water, air, plants, wildlife and other natural resources so they may be used by this and later generations.

**Climate Change**

Climate change could alter precipitation patterns and river hydrology. This could result in potential increases or decreases in the magnitude and duration of flow events, alter the timing of snowmelt, increase or decrease flow regimes, and change River levels. Increases in velocities and erosive forces along streambanks and impacts on water temperatures also could likely occur. All of these factors could influence physical sites and biological communities - affecting species assemblages, timing, and use of the project area, and could also lead to changes in noxious and invasive weed cover. The factors could also affect the long-term ability of the project to provide a reliable water source.

Climate change could affect soil erosion rates due to more or less precipitation. Restoration of disturbed land and maintenance of project facilities would reduce the potential impact on soil erosion from climate change to non-significance.

### *Mitigation*

The following mitigation measures shall be implemented to minimize the impacts to air quality and climate change from constructing Alternative 2:

- All exposed soil surfaces shall be kept damp to reduce dust generation during construction. Water shall be applied as needed to maintain moist surface conditions.
- Dirt will be cleaned from public highways each day to prevent dust from passing traffic.
- Construction equipment and vehicles will be maintained in good operating condition, including regular maintenance of emission control devices.

### *Cumulative Impacts*

Vehicular traffic, agricultural activities, and commercial and residential facilities in the project area have all contributed to air quality impacts and GHG emissions. These emission sources would continue to occur. The combustion emissions and dust generation from the project are expected to have a temporary and localized air quality impact. However, given the low level of emissions from the project and good air quality in the project area, the incremental impact on air quality and climate change would be low. Therefore, the cumulative impact from the project on air quality and climate change would be low.

## Alternative 3

This alternative would result in the same air quality and climate change impacts as were discussed for Alternative 2.

### *Short-term Impacts*

This alternative would result in the same air quality and climate change impacts as were discussed for Alternative 2. The only differences are that this alternative has a longer pipeline and transmission line, a longer road, and a new road. Therefore, its construction duration is expected to be longer than for Alternative 2.

### *Long-term Impacts*

This alternative would result in the same air quality and climate change impacts as were discussed for Alternative 2. The only differences are that this alternative has a longer pipeline than Alternative 2 and the transmission line and access road would be aligned along an east-west oriented private road.

### *Mitigation*

The mitigation for Alternative 3 is the same as described for Alternative 2.

### *Cumulative Impacts*

This impact is the same as described for Alternative 2.

## Alternative 4

This alternative would result in the same air quality and climate change impacts as were discussed for Alternative 2.

### *Short-term Impacts*

This alternative would result in the same air quality and climate change impacts as were discussed for Alternative 2. The only differences are that this alternative has a longer pipeline line than Alternative 2 and the transmission line and access road would be aligned along an east-west oriented private road. The construction duration for Alternative 4 is expected to be longer than for Alternative 2.

### *Long-term Impacts*

This alternative would result in the same air quality and climate change impacts as were discussed for Alternative 2. The only differences are that this alternative has a longer pipeline than Alternative 2 and the transmission line and access road would be aligned along an east-west oriented private road.

### *Mitigation*

The mitigation for Alternative 4 is the same as described for Alternative 2.

### *Cumulative Impacts*

This impact is the same as described for Alternative 2.

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# Chapter 4 CONSULTATION AND COORDINATION

## 4.1 Agency Consultation and Coordination

### 4.1.1 National Historic Preservation Act

In compliance with Section 106 of the NHPA of 1966 (as amended in 1992), Reclamation consulted with the Idaho SHPO to identify cultural and historic properties in the area of potential effect. A letter was sent to the SHPO on April 23, 2014 initiating consultation (Appendix B).

### 4.1.2 Endangered Species Act (1973) Section 7 Consultation

The ESA requires Federal agencies to ensure that their actions do not jeopardize the continued existence of listed species or destroy or adversely modify their critical habitat. To comply with this requirement, agencies must consult with the U.S. Fish and Wildlife Service (USFWS) on discretionary actions which may affect listed species. If an action may affect a listed species, the agency must initiate formal or informal consultation. If an action has no effect on listed species, no consultation is necessary.

Reclamation obtained a list threatened and endangered species and critical habitat in Minidoka County, Idaho from the USFWS web site. After review of the best available data regarding the occurrence of these species within areas affected by this project, Reclamation concluded this project would have no effect on listed species because neither was present in the action area. Consequently, no consultation is required for this action.

## 4.2 Tribal Coordination and Consultation

A scoping letter was sent to the Shoshone-Bannock Tribes to seek their involvement and address any questions or concerns related to the proposed action (Appendix C). An additional letter was sent to the tribes detailing the cultural resources evaluation and asking for their input.

# 4.3 Public Involvement

As part of the NEPA process, Reclamation submitted a press release giving the dates of the scoping period. A scoping letter was sent to Federal and State agencies, Tribal Government, and local city and county officials soliciting comments, concerns, and issues related to the proposed action. A copy of the scoping letter is included in Appendix A. There were multiple responses to the scoping letter or the press release received during the July 12, 2013 to August 12, 2013 comment period. The letters are included in Appendix A. Issues mentioned in the letters are either addressed in this EA, supported the proposed action, or were outside the scope of the project.

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# APPENDICES

# APPENDIX A
## PUBLIC SCOPING

United States Department of the Interior

BUREAU OF RECLAMATION
Pacific Northwest Region
Snake River Area Office
230 Collins Road
Boise, ID 83702-4520

IN REPLY REFER TO:

SRA-1215
ENV-1.10

JUL 12 2013

Subject: Request for Public Comments for the A&B Irrigation District – Unit A Pumping Plant #2, Minidoka Project, Idaho

Dear Interested Parties:

The Bureau of Reclamation is asking for your help in identifying issues and concerns associated with the proposed A&B Irrigation District Unit A Pumping Plant #2, with Reclamation retaining ownership of the new facility. Reclamation will use this information to help develop alternative access options and analyze the environmental impacts of the proposal in an Environmental Assessment as required by the National Environmental Policy Act (NEPA).

Reclamation is evaluating several alternatives for the location of the proposed pumping plant and associated pipeline. The alternatives shown on Figure 1 enclosed with this letter include but are not limited to:

- Expansion of the existing pump plant (see Figure 1, enclosed) and construction of the related distribution pipeline.
- The construction of a new pumping plant on the Snake River upstream from the existing plant, along with the construction of the associated pipeline. The location of the new plant will be determined during the NEPA process (see Figure 1, enclosed).

The Environmental Assessment required under NEPA will evaluate the impacts of each alternative on the human and natural environments and consider this evaluation in the decision-making process. Reclamation anticipates the final Environmental Assessment will be distributed for public review in December 2013. Reclamation is asking for your assistance in identifying issues and concerns, developing and refining a range of alternatives, and evaluating potential impacts of implementing the alternatives.

Reclamation invites you to send your written comments on this proposal to Ms. Julia Pierko, Activity Coordinator, Bureau of Reclamation, Snake River Area Office, 230 Collins Road, Boise, Idaho 83702, by August 12, 2013. If you wish to comment via email, you may send comments to: jpierko@usbr.gov.

Also, please fill out and return the form below or notify us via Ms. Pierko's email address if you wish to remain on the mailing list to receive a copy of the Environmental Assessment. If

Reclamation does not receive notification, we will assume you do not wish to be on the mailing list.

If you have any questions concerning the Environmental Assessment process, please contact Ms. Pierko at 208-383-2284.

Sincerely,

Jerrold D. Gregg
Area Manager

Enclosure

cut along this line

---

☐ Please keep my name on the mailing list for the A&B Irrigation District – Unit A Pumping Plant Project

☐ Please change my address on your mailing list to:

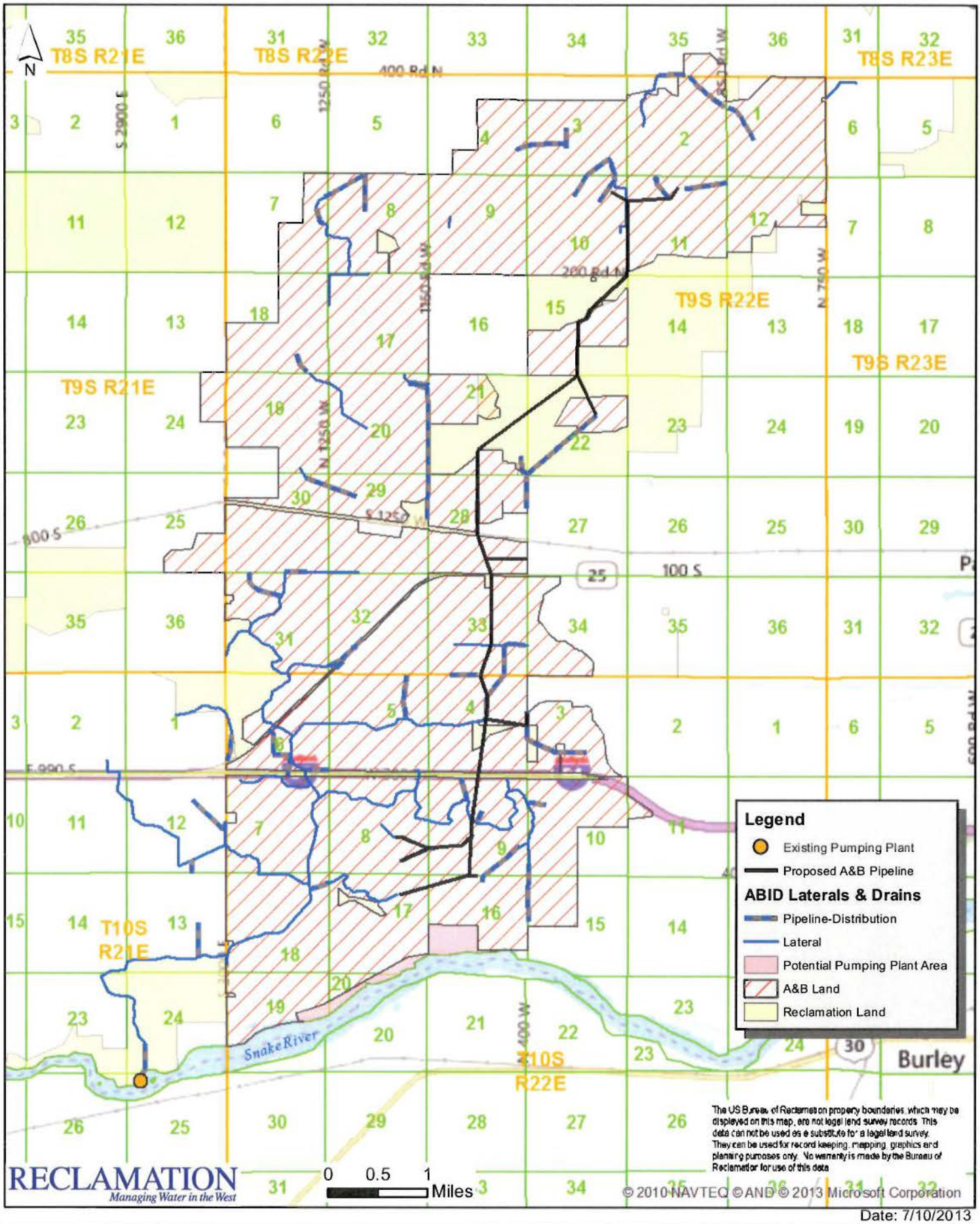
_____
Name

_____
Address

_____
City, State, Zip Code

# ABID Unit A Pumping Plant #2

**U.S. Bureau of Reclamation**
**Upper Snake Field Office**




Date: 7/10/2013

# APPENDIX B
## STATE HISTORIC PRESERVATION OFFICE CORRESPONDENCE

# United States Department of the Interior

BUREAU OF RECLAMATION
Pacific Northwest Region
Snake River Area Office
230 Collins Road
Boise, ID 83702-4520

IN REPLY REFER TO:

MSF-6135
LND-1.10

APR 2 3 2014

Ms. Mary Anne Davis
Associate State Archaeologist
Idaho State Historical Society
210 Main Street
Boise, ID 83702-7264

Subject: Invitation to Consult on Proposed Pump Plant and Delivery Pipeline Installation Project – Minidoka Project, Idaho

Dear Ms. Davis:

The Bureau of Reclamation with the A&B Irrigation District (District), the U.S. Department of Agriculture–Rural Development (RD) and the Natural Resources Conservation Service (NRCS), is proposing to construct a new pump plant and associated pipeline to replace wells in Unit B lands of the District. The long, linear project area is located in Minidoka County, Idaho and extends through the following legal coordinates: T.9S, R.22E, Sections 10, 11, 15, 21, 22, 28 and 33; and T.10S, R.22E, Sections 4, 8, 9, 16, 17, 19, and 20 (see Figures 1 & 2). The U.S. Geological Survey 7.5' topographic map quadrangles involved include Burley, Burley NW, Burley NE, and Burley SW. The proposed action constitutes an undertaking according to the definition in the National Historic Preservation Act of 1966, as amended, triggering the Section 106 process.

As required at 36 CFR Part 800.5(b), enclosed please find documentation in support of a finding of "No Adverse Effect on Historic Properties," including that specified in § 800.11(e): (1) A description of the undertaking, specifying the Federal involvement, and its area of potential effects, including photographs, maps, drawings, as necessary; (2) A description of the steps taken to identify historic properties; (3) A description of the affected historic properties, including information on the characteristics that qualify them for the National Register; (4) A description of the undertaking's effects on historic properties; (5) An explanation of why the criteria of adverse effect were found applicable or inapplicable, including any conditions or future actions to avoid, minimize or mitigate adverse effects; and (6) Copies or summaries of any views provided by consulting parties and the public.

**Description of the Undertaking**

Reclamation developed the North Side Pumping Division of the Minidoka Project in the 1950s and early 1960s. Reclamation entered into a repayment contract with the District and turned over operations to them in 1966. The Minidoka Project facilities for the North Side Pumping Division include a pumping plant on the Snake River for Unit A of the District, known as Unit A Pumping Plant #1 (Figure 3), and 177 deep groundwater wells for Unit B of the District. Currently, 1,500 acres of Unit B are experiencing reduced or failing groundwater supplies and are in need of supplemental or replacement supplies from the District's surface water system. To overcome these existing infrastructure limitations and water delivery problems, the District proposes to develop an additional replacement pump station on the Snake River and an associated distribution pipeline facility. Construction and operation of the facilities would involve Reclamation, NRCS, RD, and the District. Reclamation, which will retain ownership of the proposed pump station when construction is complete, has assumed the lead Federal agency status for the Section 106 process.

Reclamation, the NRCS and RD are conducting an Environmental Assessment (EA) as part of the National Environmental Policy Act requirements to determine the potential for environmental impacts from development and operation, including acquisition of property interests as necessary, of the pumping plant and delivery pipeline proposed by the District. In addition to the project alternative preferred by the District (Alternative 2), the EA also reviews a No Action alternative and two additional, potentially feasible alternatives for the placement of the pump plant (Figure 2). The intent is to confirm an alternative that provides optimum technical and cost feasibility, construction and operation efficiency, and avoidance of significant and immitigable environmental and cultural resource impacts.

**Identification and Description of Historic Properties**

Reclamation has contracted with CH2M Hill for the development of the EA, which included the performance of on-the-ground cultural resources survey in order to develop the Cultural Resources section of the document. CH2M Hill subcontracted the fieldwork to Great Basin, LLC, who conducted the pedestrian survey and produced a Survey Report enclosed in both hard copy and electronically on CD, (Enclosure #1). Great Basin, LLC investigated all lands associated with every alternative identified for the EA. The Area of Potential Effect (APE) for this project was defined as the 12.25 miles of pipeline corridor, which includes all three alternative routes and a 100 foot corridor (50 ft. on each side of the pipeline) which totals approximately 148.5 acres. All staging and materials storage locations would occur within the proposed 100 foot pipeline right-of-way and all pipeline is planned to be buried. A small potential adjustment to the planned route in T.10S R.22E Section 4 is also included in Figure 2 that may be utilized to take advantage of an existing pipeline trench (and was included in the SHPO Record Search area). The crew found that much of the proposed route is currently in agriculture (Figure 4) or consists of existing open ditches in which pipe will be laid and covered (Figure 5). In addition, all three possible pump plant locations (1.6 acres each) were surveyed,

totaling an additional 4.8 acres. Therefore, the entire project APE comprises approximately 152 acres.

Great Basin, LLC, conducted pre-field research for this survey, including a SHPO records search (Record Search #13258). The records search revealed 11 documented archaeological and historic sites within the one-half-mile radius extending along the APE. These site types included two historic dumps, two prehistoric lithic scatters, two historic canal segments, the site of the Starrh's Ferry, segments of two different emigrant trails, and two railroads. Of these properties, only the lithic scatters and the site of the Starrh's Ferry are considered not eligible. Of the eligible properties, only one of the emigrant trails and one railroad actually cross through the APE of the proposed project. The North Side Alternate of the Oregon Trail, an eligible historic property, runs east-to-west across the pipeline corridor in T. 10S R. 22E Sections 16, 17 and 19. This portion of the trail, however, is not visible and its exact, original location is not discernable. The Oregon Short Line Railroad – North Side EIRR crosses the project APE in T. 9S R. 22E Sections 27 and 28. The railroad (site numbers 67-14801 and 10MA144) was determined eligible August 31, 2006, and is still in active use.

During the intensive pedestrian survey through the APE, Great Basin, LLC, encountered cultivated farmland in the majority of the area, with greatly reduced visibility (5-15%). As private landowners along the route only gave permission for visual survey, no shovel test pits were conducted. Some undeveloped lands are involved in the APE, and on these the archaeologists had much better ground surface visibility (75-100%). However, no new cultural sites were discovered within the APE. The final survey report is enclosed in both hard copy and electronically on CD (Enclosure #1). It is important to note that because of the large areas of low surface visibility during pedestrian survey work, but with a number of other sites known in the area, Great Basin, LLC recommends that an archaeologist be on-site during construction activities that include ground disturbance to monitor for evidence of subsurface cultural resources as pipeline excavations are ongoing. Reclamation agrees with this recommendation.

During the planning process, private landowners whose property is involved in the pipeline routes (including the alternatives) were notified of that fact and were able to provide feedback. In a letter to Reclamation dated August 9, 2013, (Enclosure #2), Henry Lynn Schodde expressed his concern that the buried pipeline and pump house alternative locations would impact areas of his land that hold historic significance. Mr. Schodde reported that their family takes great pride in the fact that this property has been solely in their ownership for more than one hundred years, and at Idaho's Centennial in 1990 it was one of only 279 farms in the state that was identified as a "Century Farm." Near the site of Alternative 2, which is the District's preferred alternative, Mr. Schodde expressed concern that this was the area where Starrh's Ferry was located, and also where his father's early water wheels had functioned in the river. In short, Mr. Schodde is concerned that the alternative pump house locations, which are all on his property, may negatively impact the long-held heritage of the family's land.

The pedestrian survey performed by Great Basin, LLC, involved intensive coverage of all pump house alternative areas on the Schodde property. Their investigations did not result in the

discovery of any artifacts or remains of either the Starrh's Ferry or the 14 water wheels once erected by Mr. Schodde's father (photos of which are included from a newspaper article in Enclosure #2). If those remains still exist, it is believed they are outside the APE and would not be affected by project activities. According to the survey form, no historic documentation of the water wheels was ever created so we do not have the advantage of knowing the wheels' exact locations.

An additional historic property was found to be involved only after the records search and pedestrian survey work were completed. A photograph by Great Basin, LLC of a road-side historical marker near the project APE spurred research into Camp Rupert, a World War II prisoner of war encampment. The road-side marker is outside the APE, but research revealed that it had been placed a half mile west of the actual camp location, which put the proposed pipeline running through the west side of the camp footprint (Figure 6). The camp has never been documented, so no record of the camp came up in the records search. And almost nothing remains of the camp physically, so the pedestrian survey resulted in no visual surface indications within the pipeline APE. In a meeting with you at the SHPO office on Monday, March 10, the significance of the camp (even without physical remains) was discussed, including the fact that this was the largest POW camp in Idaho. It was determined that Reclamation should proceed under the assumption that the camp is eligible for listing on the National Register. No documentation of the camp is required at this time, but you requested that a brief narrative history of the camp be included with the consultation letter. A hard copy of the narrative and a fact sheet are enclosed (Enclosure #3), and electronic versions were included on the CD (Enclosure #1).

Ms. Jenny Huang, archeologist on my staff, performed a site visit to the camp area on Friday, March 14. The vast majority of the camp area is now in agriculture (Figure 7), with a small parcel at what would have been the northwest of the camp area now being utilized as an A&B Irrigation District storage yard (Figure 8). Ms. Huang had been informed by NRCS proponents that there is an existing open ditch through this area in which the proposed pipe would be laid and covered. The ditch was thought to be deep enough as is, and little to no excavation would be necessary to deepen it for pipe placement. Upon her visit, Ms. Huang discovered that the existing ditch in the area through which buildings may have been present in the camp was actually built into a 3 foot high berm (Figure 8). The bottom of the ditch exists either above or at the original ground surface level. Thus, activities related to construction of the proposed project would likely have very little impact on possible subsurface camp remains. Dirt to fill the ditch once the pipe is laid would be trucked in and would not be excavated from the site.

**No Adverse Effect to Historic Properties**

During the course of investigations relating to the Section 106 process of identifying the historic properties involved in a proposed project, three historic properties were located through which the APE would cross. These properties include a non-visible section of the Oregon Trail North Side Alternate route, the North Side EIRR section of the Oregon Short Line railroad, and the west end of Camp Rupert. As we do not know the exact location of the Oregon Trail route, it is

not possible to avoid or mitigate the impact, which essentially negates the impact entirely. As the Oregon Short Line railroad is still active, construction across that resource will be performed through underground boring so as not to affect the function of the line. This can be considered avoidance. And the portion of pipeline to be laid through the west end of Camp Rupert will be laid in an existing above-ground ditch and will be filled with dirt trucked in from another location.

In accordance with procedures specified in 36 CFR Part 800, Reclamation requests your concurrence that the current proposed undertaking will result in "No Adverse Effect to Historic Properties." We request your concurrence with this finding so that the subject project may proceed as planned. We also request your concurrence that a professional archaeologist perform monitoring of all ground disturbance that will occur during construction of this project because of the low surface visibility experienced during pedestrian survey, and the possibility of subsurface cultural resources existing in the area. This monitoring will be of primary importance on the Schodde property and will serve to lessen wanton loss of the property's history through documentation of any cultural materials that may unexpectedly be turned up during excavation and construction activities.

Please direct any questions to Ms. Jenny Huang, Archeologist, at 208-383-2257 or by email at jhuang@usbr.gov.

Sincerely,

C.J. BEARDSLEY

Christopher J. Beardsley
Deputy Area Manager

Enclosures

cc: Mr. Elliot Traher
District Conservationist
Natural Resources Conservation Service
1361 East 16th St.
Burley, ID 83318
(w/o encls)

Mr. Dan Temple
Manager
A&B Irrigation District
P.O. Box 675
Rupert, ID 83350
(w/o encls)

bc: PN-6515 (Taylor)
SRA-1206 (Petrovsky)
USF-6300 (Boyer)
(w/o encls to each)

WBR:JHuang:ealopez:3/25/2014:208-383-2257:MSF-6135
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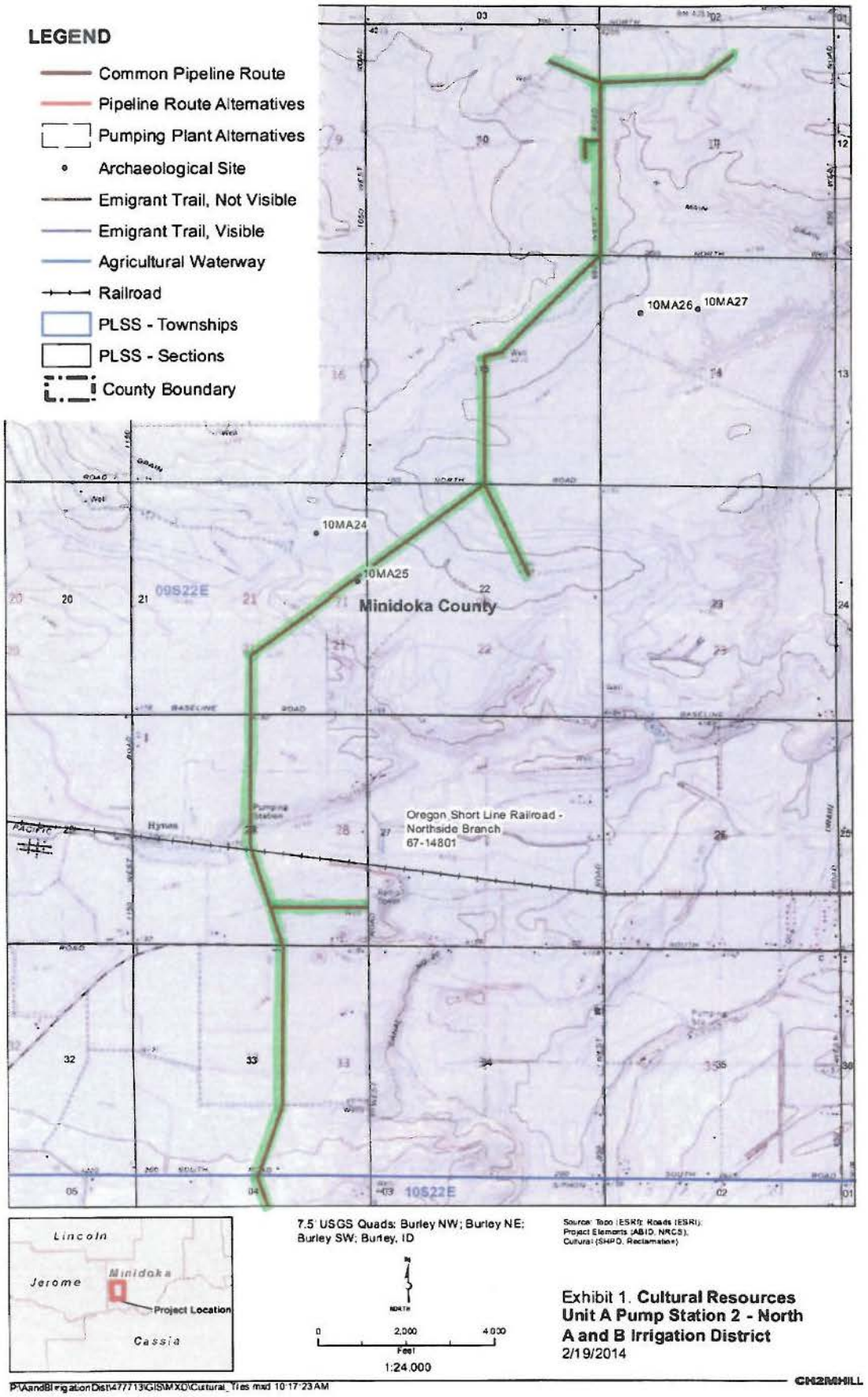


Figure 1. North half of the project area. Green highlighted line represents proposed pipeline routes that will occur in all three alternate actions.

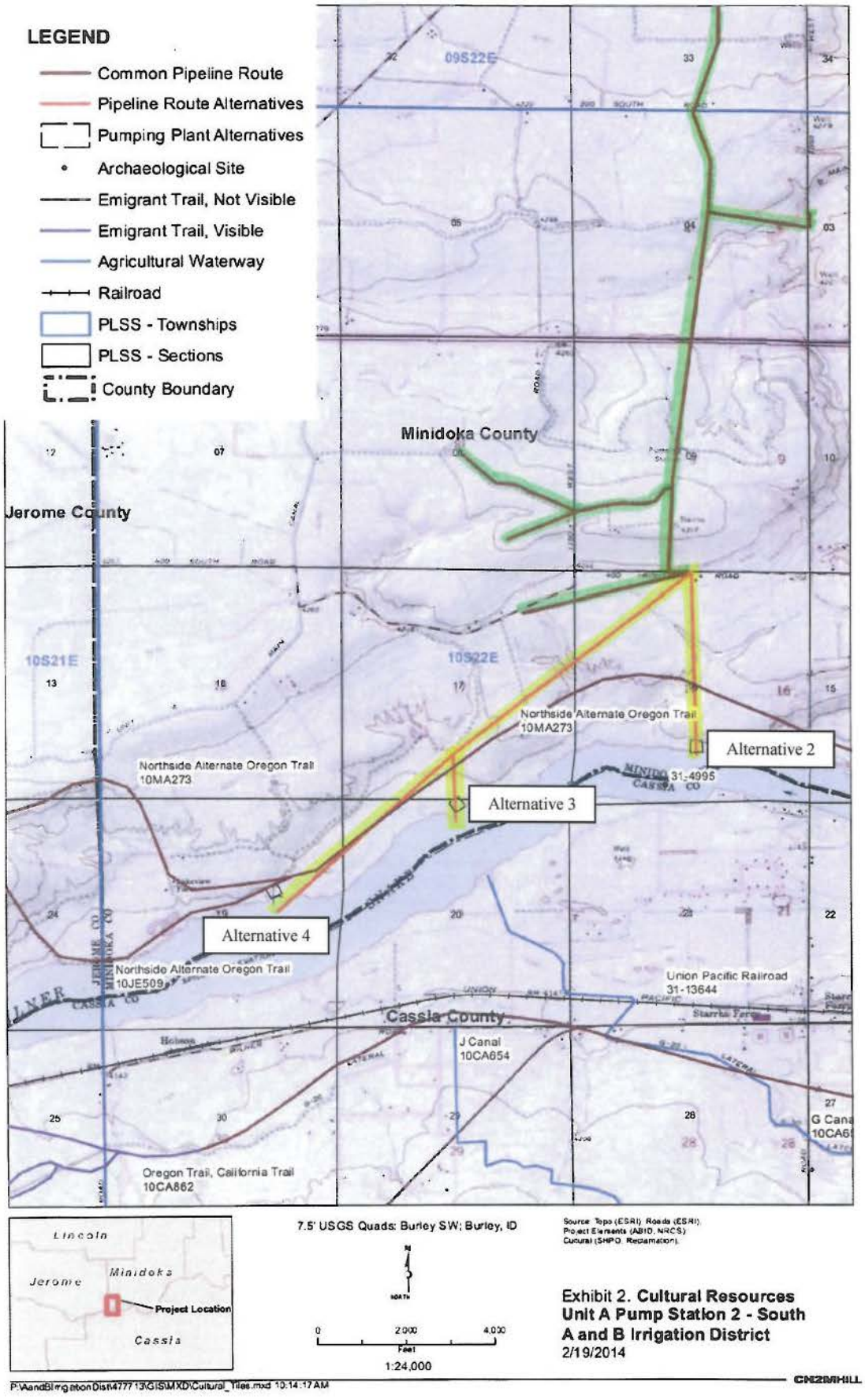


Figure 2. South half of the project area. Green highlighted line represents proposed pipeline that would occur in all three alternative actions. The yellow highlighted lines represent the three alterative pump station locations.

Figure 3. Existing pump plant and an example of what the new plant will entail.

Figure 4. Example of proposed distribution pipeline route corridor currently in agriculture.

Figure 5. Example of an existing open ditch along the proposed distribution route that will have pipe laid inside and will be covered over with dirt (trucked in).

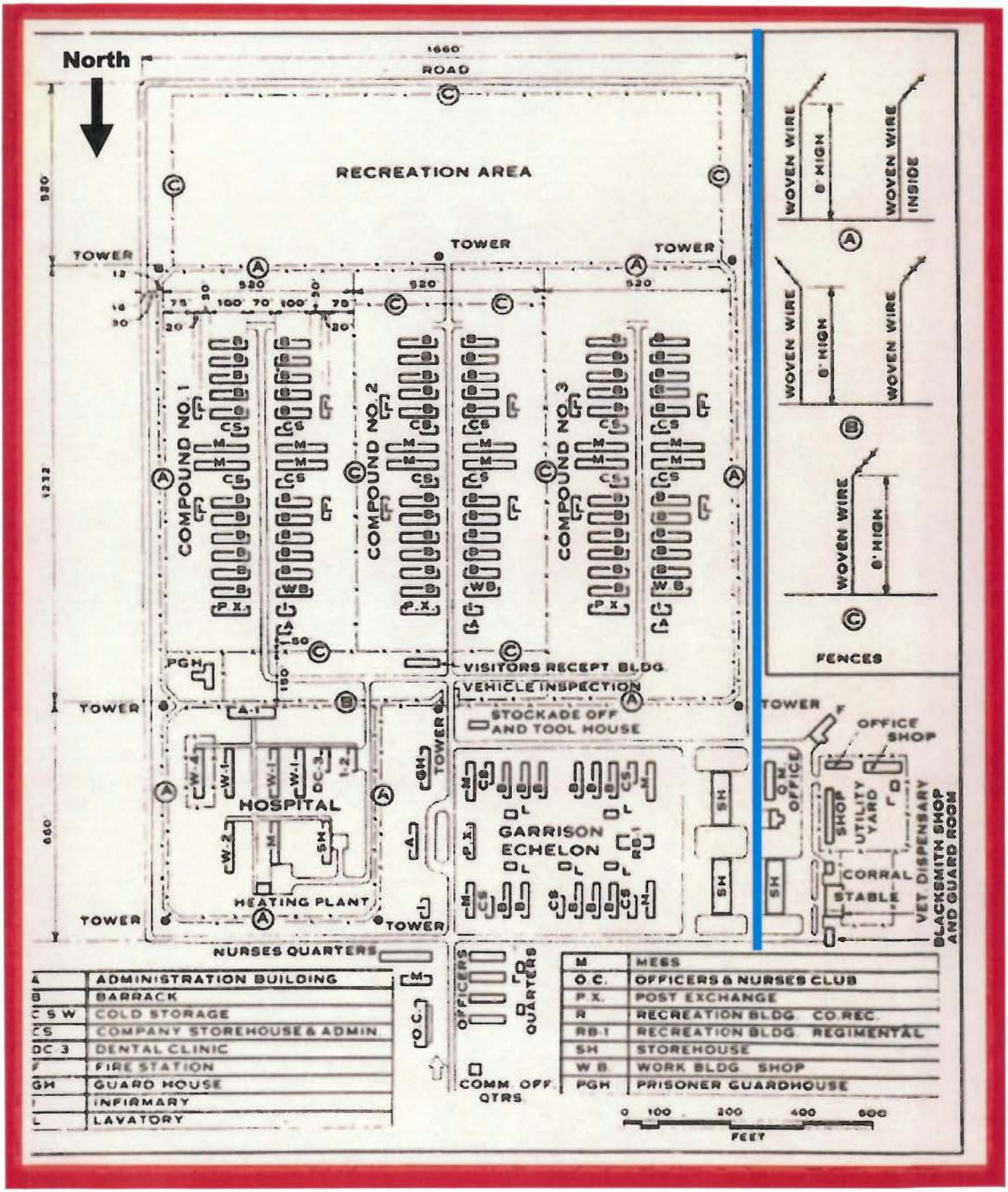


Figure 6. Layout map of Camp Rupert (North at bottom) with estimated location of proposed pipeline route represented in blue.

Figure 7. View from atop road (berm) across existing field where Camp Rupert buildings once stood.

Figure 8. Existing open ditch in raised berm at an area thought to be near old camp storehouses. The existing A&B yard is seen at top of photo. A chunk of cement sits atop the berm at bottom left.

# APPENDIX C
## TRIBAL CORRESPONDENCE

To be included in the Final EA/FONSI.

# APPENDIX D
# EA DISTRIBUTION LIST

## Federal Agencies and Elected Officials

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