U.S. Department of the Interior
Bureau of Reclamation
Provo Area Office
Provo, Utah

FINDING OF NO SIGNIFICANT IMPACT

Environmental Assessment Davis Aqueduct Parallel Pipeline
Davis County, Utah

EA-20-008

Recommended by:

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I. Introduction

In compliance with the National Environmental Policy Act of 1969, as amended (NEPA), the U.S. Bureau of Reclamation (Reclamation), Provo Area Office has conducted an Environmental Assessment (EA; attached) to determine the potential effects to the human and natural environment of approving the Davis Aqueduct (DA) Parallel Pipeline Project (Project) in Davis County, Utah. The DA is part of the Weber Basin Project, which was originally planned, designed, and constructed by Reclamation. The DA is owned by Reclamation and operated by the Weber Basin Water Conservation District (WBWCD). If the Project is approved, WBWCD would construct a pipeline parallel to the DA to increase the conveyance capacity and resilience of the Weber Basin Project. The Project and related facilities would be owned, operated, and maintained by WBWCD and would carry Reclamation Weber Basin Project water.

A draft EA was published prior to issuing the final EA and this Finding of No Significant Impact (FONSI). A 30-day comment period was conducted for the draft EA. The 30-day comment period ended on August 9, 2020. Six comments were received during the comment period. All comments were considered and addressed in the preparation of the final EA.

II. Alternatives

The EA analyzed two alternatives: the No Action and the Proposed Alternative (Proposed Action). The Proposed Action is refined from the EIS Selected Alternative, used for comparison in the effects analysis and discussed in depth in the EA.

No Action

With the No Action Alternative, WBWCD would not construct a new parallel pipeline between the bifurcation structure at the end of the Gateway Tunnel and the Davis North Water Treatment Plant (DNWTP). The existing DA would continue to be the only source of water for the DA system, and WBWCD would continue to operate and maintain the existing DA. The existing DA would continue to age, more leaks would appear, and the risk to the public from geological hazards would increase over time.

Proposed Action

The Proposed Action includes constructing 2.2 miles of new 72-inch-diameter pipe between the bifurcation structure at the end of the Gateway Tunnel and the DNWTP. The Proposed Action is described in detail in Section 2.4 of the final EA.

III. Environmental Commitments

The commitments found in Chapter 4 of the final EA are incorporated into this FONSI by reference and considered part of the Proposed Action. The environmental commitments must be implemented as outlined in the final EA.

IV. Decision

Based on a review of the final EA and its supporting documents, implementing the Proposed Action, will not significantly affect the human or natural environment. Consequently, an Environmental Impact Statement is not required for this Proposed Action.

Furthermore, the Proposed Action meets the purpose and need of the Project. The No Action alternative does not meet the purpose or need for the Project. Based on the lack of significant effects to the human environment and because the Proposed Action meets the purpose and need of the Project while the No Action alternative does not, it is Reclamation's decision, therefore, to issue this FONSI pursuant to NEPA and implementing regulations at 40 CFR 1500-1508, and authorize the Proposed Action to be implemented as described in the attached EA.

BUREAU OF RECLAMATION

Davis Aqueduct Parallel Pipeline Final Environmental Assessment

PRO-EA-20-008

Interior Region 7 – Upper Colorado Basin
Provo Area Office
Provo, Utah

U.S. Department of the Interior **November 2020**

Mission Statements

The Department of the Interior conserves and manages the Nation's natural resources and cultural heritage for the benefit and enjoyment of the American people, provides scientific and other information about natural resources and natural hazards to address societal challenges and create opportunities for the American people, and honors the Nation's trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities to help them prosper.

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

Davis Aqueduct Parallel Pipeline Final Environmental Assessment

PRO-EA-20-008

Interior Region 7 – Upper Colorado Basin
Provo Area Office
Provo, Utah

The U.S. Bureau of Reclamation (Reclamation) prepared this Davis Aqueduct Parallel Pipeline Environmental Assessment (EA) to assess the potential consequences of the Davis Aqueduct Reach 1 Parallel Pipeline Project (Project), which is being proposed by the Weber Basin Water Conservancy District (WBWCD) in Davis County, Utah. Reclamation's proposed alternative, described in Chapter 2 of this EA, includes constructing 2.2 miles of new 72-inch-diameter pipe between the bifurcation structure at the end of the Gateway Tunnel and the Davis North Water Treatment Plant (DNWTP). The Project is needed because (1) there is no redundancy in the existing Davis Aqueduct system, (2) the existing Davis Aqueduct is not resilient to geologic and seismic hazards and is in poor existing condition due to its age, and (3) the existing Davis Aqueduct is hydraulically deficient, is not accommodating the hydraulic design capacity, and is unable to meet future demand. Chapter 2 of this EA describes other alternatives that were considered but eliminated from further study based on risk reduction, constructability reviews, environmental impacts and economic costs.

This EA has been prepared in compliance with the National Environmental Policy Act and Reclamation procedures, and is intended to serve environmental review and consultation requirements pursuant to Executive Order 11988 (Floodplain Management), Executive Order 11990 (Wetlands Protection), Executive Order 12898 (Environmental Justice), the National Historic Preservation Act (section 106), the Endangered Species Act [section 7(c)], and Departmental and Reclamation Indian Trust Asset policies.

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Acronyms and Abbreviations

Acronym/ Abbreviation	Meaning
APE	area of potential effects
BMP	Standard Reclamation best management practices
Certus	Certus Environmental Solutions, LLC
CFR	Code of Federal Regulations
cfs	cubic feet per second
CMCL	cement mortar lined and coated
DA	Davis Aqueduct
DNWTP	Davis North Water Treatment Plant
DSWTP	Davis South Water Treatment Plant
EA	Environmental Assessment
EDRR	Early Detection Rapid Response
ER	Engineer Regulation
et seq.	and subsequent sections
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Risk Map
GIS	geographic information systems
I-84	Interstate 84
ITA	Indian Trust Asset
MOA	Memorandum of Agreement
NEPA	National Environmental Policy Act
NFS	National Forest System
NHPA	National Historic Preservation Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
Project	Davis Aqueduct Reach 1 Parallel Pipeline Project
R2	Davis Aqueduct Reach 2
Reclamation	U.S. Bureau of Reclamation
S.R.	State Route
SHPO	State Historic Preservation Officer
U.S. 89	U.S. Highway 89
UDOT	Utah Department of Transportation
UPDES	Utah Pollutant Discharge Elimination System
USACE	U.S. Army Corps of Engineers
USC	United States Code
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
WBWCD	Weber Basin Water Conservancy District

1 Purpose and Need

1.1 Introduction and Background

This Environmental Assessment (EA) was prepared to examine the potential environmental impacts of the Davis Aqueduct (DA) Parallel Pipeline Project (Project) in Davis County, Utah. The DA is part of the Weber Basin Project, which was originally planned, designed, and constructed by the U.S. Bureau of Reclamation (Reclamation). The DA is owned by Reclamation and operated by the Weber Basin Water Conservation District (WBWCD). If the Project is approved, WBWCD would construct a pipeline parallel to the DA to increase the conveyance capacity and resilience of the Weber Basin Project. The Project and related facilities would be owned, operated, and maintained by WBWCD and would carry Reclamation Weber Basin Project water.

The hydraulic source for the DA is the Weber River. Reclamation owns water rights on the Weber River. The diversion on the Weber River is located in Morgan County and is operated nearly continuously. The amount of diversion varies seasonally based on demand.

To reach the DA in Davis County, water enters the Gateway Canal at the Stoddard Diversion Dam on the Weber River in Morgan, Utah. The Gateway Canal has a capacity of 700 cubic feet per second (cfs). The water is delivered via the Gateway Canal to the Gateway Tunnel and the Gateway Power Plant. The Gateway Tunnel, designed for 435 cfs, conveys raw water 3.3 miles through the Wasatch Mountains to the Wasatch Front. There, the water is split in a bifurcation structure that sends water to the Weber Aqueduct to the north and the DA to the south, providing municipal and industrial water to approximately 650,000 customers in Davis and Weber counties. The DA is the primary water source for many of the cities and residents of Davis County (Figure 1).

Figure 1. Davis Aqueduct Overview

The DA extends to the south, running high on the east bench of the Wasatch Front about 23 miles to North Salt Lake, and has an initial capacity of 355 cfs. WBWCD treats water at two water treatment plants of the DA: the Davis North Water Treatment Plant (DNWTP) in Layton for distribution to communities in north Davis County and south Weber County, and the Davis South Water Treatment Plant (DSWTP) for communities in south Davis County. Part of the water is pumped for irrigation to land above the aqueduct (in Layton, Bountiful, and North Salt Lake); the remaining water is sold by WBWCD to irrigation companies, improvement districts, subconservancy districts, and individual landowners. A small block of treated and untreated industrial water is also delivered to Chevron Oil Company and Big West Oil Company in the extreme south end of Davis County.

The DA was completed in 1958 and was constructed using concrete pipe with unrestrained bell and spigot joints with rubber gaskets. The existing DA is a combination of reinforced concrete pipe (RCP), reinforced concrete cylinder pipe (RCCP), and prestressed concrete cylinder pipe (PCCP) that extends from the Gateway Tunnel to North Salt Lake. The diameter of the DA pipe varies but is largest at the Gateway Tunnel (84 inches) and progressively reduces to smaller-diameter pipes as it moves south (the smallest-diameter pipe is 21 inches). Between Interstate 84 (I-84) and Farmington, the DA is an 84-inch-diameter pipe from the Gateway Tunnel to State Route (S.R.) 193 and a 78-inch-diameter pipe from S.R. 193 to Farmington. DA Reach 1 is about 2 miles long and extends from the bifurcation structure to the DNWTP by S.R. 193. Water flows through the DA by gravity. The DA pipeline is underground in all locations downstream of the bifurcation structure.

WBWCD completed a *Raw Water Conveyance Master Plan* in 2017 that includes recommendations to restore the DA's hydraulic capacity (its current actual capacity is 15 percent less than its design capacity because the pipe was undersized) and to improve the DA's resiliency by constructing a redundant pipeline specifically designed to withstand seismic activity and other geological hazards.

1.2 Proposed Action

WBWCD is proposing to construct a new 2.2-mile-long subgrade pipeline parallel to the existing DA in a new alignment located north and west of the existing DA. In most locations, the new pipeline would be located between 0.25 mile and 0.33 mile from the existing DA. The new 72-inch-diameter pipeline would extend from the bifurcation structure at the end of the Gateway Tunnel to the DNWTP (see Figure 2 on page 10).

This pipeline would be able to convey 170 cfs. The Proposed Action also includes installing new valve vaults and other appurtenant structures.

These components are described in detail in Section 2.4, Proposed Action, of this EA.

1.3 Purpose and Need for the Action

The Proposed Action is needed because (1) there is no redundancy in the existing DA system; (2) the existing DA is not resilient to geological and seismic hazards and is in reasonably good existing condition for its age, but, because the DA has pipe joints every 8 to 12 feet and gaskets that are beginning to fail, it is very susceptible to these hazards; and (3) the existing DA is hydraulically deficient and is not accommodating the hydraulic design capacity. The following items provide additional information regarding each of these three needs.

1. **Lack of Redundancy**: There is no redundant facility for the existing DA. Because there is no redundancy, if the DA is shut down, no water would be delivered to the approximately 650,000 users of the DA system. In addition, WBWCD's ability to shut off water to, and do maintenance on the existing DA is limited. A minimum flow of 125 cfs is needed to meet WBWCD's baseline demand for three critical turnouts: the DNWTP, the DSWTP, and industrial users in North Salt Lake. A redundant facility would need to provide a minimum capacity of 125 cfs to service this baseline demand and allow WBWCD to shut down the existing DA to perform maintenance.
2. **Lack of Resiliency**: The existing DA is located in areas with debris flows, multiple fault crossings, the potential for liquefaction, and high landslide hazards. The existing DA is now over 60 years old. The rubber gaskets are no longer resilient, and each joint is sensitive to movement. The existing DA is not resilient to geological hazards in its current alignment in its current condition.
3. **Hydraulic Deficiency**: The maximum hydraulic capacity of the existing DA is about 15 percent less than Reclamation's original design. The existing DA Reach 1 was designed to carry 355 cfs, but flow tests show that the actual capacity is about 300 to 305 cfs. Demand has reached 290 cfs in several of the past 10 years, surpassing 90 percent of maximum capacity: the 90-percent threshold is a common planning trigger to implement expansions or alternate supplies. Constructing targeted improvements, including a parallel line in DA Reach 1, would restore the DA's hydraulic capacity to meet its original design of 355 cfs with the combination of the existing DA Reach 1 and a new parallel line.

The purpose of the Proposed Action consists of three objectives, which are to (1) provide redundancy in the DA system to facilitate maintenance and eventually rehabilitating or replacing the existing 84-inch-diameter DA, (2) increase resiliency by having water infrastructure that has reduced

and/or mitigated geological hazards, and (3) meet hydraulic demands by having a system that can convey a minimum flow of 125 cfs. The minimum flow of 125 cfs is needed to meet WBWCD's baseline demand at three critical turnouts to maintain high level of service goals.

1.4 Relevant Statutes, Regulations, Permits, and Other Plans

The lead federal agency for this EA is Reclamation. This EA is prepared in compliance with all applicable federal statutes, regulations, and executive orders.

1.4.1 National Environmental Policy Act (NEPA) of 1969, as Amended (42 United States Code [USC] Section 4321 et seq.)

- Procedures for Implementing NEPA (33 Code of Federal Regulations [CFR] Part 230; Engineer Regulation [ER] 200-2-2)
- Regulations for Implementing the Procedural Provisions of NEPA (40 CFR Part 1500 et seq. and 43 CFR Part 46 et seq.)

1.4.2 Endangered Species Act of 1973, as Amended (16 USC Section 1531 et seq.) and Related Statutes and Orders

- Fish and Wildlife Coordination Act of 1958, as amended (16 USC Section 661 et seq.)
- Secretarial Order 3206, American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act

1.4.3 National Historic Preservation Act of 1966, as Amended (16 USC Section 470 et seq.) and Related Statutes, Regulations, and Orders

- American Indian Religious Freedom Act of 1978 (42 USC Section 1996)
- Archaeological Resources Protection Act of 1979 (16 USC Section 470)
- Native American Graves Protection and Repatriation Act of 1990 (25 USC Section 3001 et seq.)
- Protection and Enhancement of the Cultural Environment (Executive Order 11593)

1.4.4 Clean Water Act of 1972, as Amended (33 USC Section 1251 et seq.) and Related Orders

- Protection of Wetlands (Executive Order 11990)

1.4.5 Other Statutes, Regulations and Orders

- Clean Air Act of 1972, as amended (42 USC Section 7401 et seq.)
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 1994
- Floodplain Management (Executive Order 11988)
- Wild and Scenic Rivers, 1968 (Public Law 90-542; 16 USC Section 1271 et seq.)
- Migratory Bird Treaty Act of 1918 (16 USC 703 et seq.) and Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds

1.4.6 Permits

- A U.S. Army Corps of Engineers (USACE) permit, in compliance with Section 404 of the Clean Water Act, would be required prior to the discharge of dredged or fill material into waters of the United States.
- A Stream Alteration Permit under Section 404 of the Clean Water Act and Utah statutory criteria of stream alteration described in the Utah Code would be required prior to impacts to perennial streams or creeks. The Stream Alteration Permit is issued by the Utah Division of Water Rights.
- A U.S. Forest Service (USFS) special use authorization is needed for the area where the Project would cross National Forest System (NFS) lands. The Forest Service is a cooperating agency through jurisdiction by law and special expertise. The Forest Service decision is whether or not to issue a special use permit to authorize the construction and operation of a pipeline across NFS lands.
- A Utah Pollutant Discharge Elimination System (UPDES) Permit from the Utah Division of Water Quality would be necessary for stormwater discharges from construction activities because the Project would impact more than 1 acre of land.

1.4.7 Other Projects and Documents

The Utah Department of Transportation (UDOT) is currently widening U.S. Highway 89 (U.S. 89) from Farmington to S.R. 193. That project involves relocating many utilities, including DA irrigation laterals.

2 Alternatives

2.1 Introduction

This section describes the Proposed Action Alternative. As described in Section 2.2, the inclusion of the No Action Alternative serves as a benchmark against which project alternatives can be evaluated. This section also includes a short description of the alternative development process, alternatives that were considered but eliminated from further study, and a designation of the preferred alternative.

2.2 No Action Alternative

The No Action Alternative consists of the reasonably foreseeable future conditions in the absence of the proposed Project. The purpose of the No Action Alternative is to allow decision-makers to compare the impacts of approving the Project to the impacts of not approving the Project. The No Action Alternative reflects existing and expected future conditions in the Project area if no action is taken.

With the No Action Alternative, WBWCD would not construct a new parallel pipeline between the bifurcation structure at the end of the Gateway Tunnel and the DNWTP. The existing DA would continue to be the only source of water for the DA system, and WBWCD would continue to operate and maintain the existing DA. The existing DA would continue to age, more leaks would appear, and the risk to the public from geological hazards would increase over time. This alternative would not meet the purpose of, or need for, the Proposed Action.

2.3 Alternatives Considered but Eliminated from Further Study

WBWCD performed a geotechnical and geological hazard investigation in conjunction with an alignment study for the Project (Brown and Caldwell 2018). In this alignment study, WBWCD evaluated seven different alternatives (three distinct alignments with four variations). WBWCD selected the preferred alignment because it would provide the best hydraulic performance and would have the lowest risk from geological hazards (landslides, liquefaction, and seismic events). All of the other evaluated alternatives in the alignment study had geological hazards that would not meet the purpose of and need for the Project as described in Section 1.3, Purpose and Need for the Action. The preferred alignment that came out of the alignment study is the Proposed Action Alternative described in this EA. More details and information about the other evaluated alternatives are provided in the alignment study for the Project (Brown and Caldwell 2018).

Reclamation adopted the process and results of the WBWCD alignment study. No other action alternatives were considered or evaluated by Reclamation for this EA.

2.4 Proposed Action Alternative

The Proposed Action Alternative is the preferred alternative.

The Proposed Action Alternative consists of the following elements. Figure 2 on page 10 provides an overview of the Proposed Action Alternative. Additional figures that identify more of the features listed below are provided in the 30 percent design files in Appendix A.

- WBWCD would construct approximately 2.2 miles of cement mortar lined and coated (ML) steel pipe. The parallel pipe would be 72 inches in diameter.
- The new pipe would be located primarily on federally owned properties (Reclamation or USFS) or on properties for which WBWCD would be required to purchase fee title or permanent exclusive easements. The width of the permanent easement would vary but would be a minimum of 50 feet wide where existing features constrain the easement, an average of 86 feet wide where there are no constraints, and a maximum of 150 feet wide on steep cross slopes. Additional, larger easements or parcels are proposed for the northeast terminus area by the bifurcation structure, the southwest terminus area by the DNWTP, areas adjacent to the U.S. 89 crossing, and the two Davis-Weber Canal crossings. The Project and related facilities would be owned, operated, and maintained by WBWCD and would carry Reclamation Weber Basin Project water.
- The right-of-way and easements included with the Proposed Action Alternative are wide enough to accommodate a second, future 72-inch aqueduct between the DA and the DNWTP. The second, future 72-inch aqueduct would be in the same easement and would be located south or east of the 72-inch Proposed Action Alternative parallel pipe from just east of the Weber Basin Job Corps property to the DNWTP. The construction of the second, future 72-inch aqueduct is not included with the Proposed Action Alternative. An additional environmental study would be required before the construction of the second, future 72-inch aqueduct.
- WBWCD would remove the existing valve vault and construct and install a new valve vault adjacent to the existing bifurcation structure. The new valve vault would be either at grade or up to two feet above grade. Retaining walls would be installed to protect the access hatches. The door of the bifurcation structure will be repainted or replaced. There would be no changes to the existing bifurcation structure besides the door improvement.
- WBWCD would divert the water coming out of North Military Springs into the parallel pipeline.
- WBWCD would install a new pump to divert the tunnel drain into the bifurcation structure.
- The new parallel pipe would cross the existing 84-inch DA just west of the bifurcation structure.
- The new parallel pipe would be designed to minimize geological hazards in areas where the parallel pipe crosses debris flow areas, the Wasatch Fault, liquefaction areas, and landslide areas.
- The new parallel pipe would cross the Weber Basin Job Corps facility on an alignment that avoids impacting structures and minimizes exposure to the fault and fault uncertainty zone. The alignment results in a single fault crossing where the seismic uncertainty zone is at its narrowest width.
- The new parallel pipe would have two crossings of the Davis-Weber Canal.

- WBWCD would install a new valve vault on the parcel that WBWCD owns at 7692 S. U.S. 89 on the south side of Cornia Drive and east of U.S. 89. The new valve vault would include a sectional isolation valve, drains, and accommodations for a pump station with a 24 inch intake pipe from the Davis-Weber Canal. A new diversion box with a fly gate would also be constructed in this location. The new 24 inch intake pipe would go through the liner of the Davis-Weber Canal. The new diversion box for the intake would be the only permanent alteration to the Davis-Weber Canal.
- The new parallel pipe would cross U.S. 89 at about 7850 South.
- The new parallel pipe would cross Weber State University and UDOT properties on the west side of U.S. 89; WBWCD is negotiating the purchase of both properties.
- The new parallel pipe would connect to the DNWTP and the existing 60-inch turnout from the existing 84-inch DA.
- The Proposed Action Alternative also includes construction staging areas north and west of the bifurcation structure, south of Cornia Drive or the frontage road near the Davis-Weber Canal crossings, on the west side of U.S. 89 near the U.S. 89 crossing, and in the areas near the southwest terminus at the DNWTP.
- The Proposed Action Alternative would also include road improvements to the existing bifurcation access road, an existing access road that goes between the bifurcation access road and the Weber Basin Job Corps site, and a two-track dirt road that connects the eastern Job Corps site to the bifurcation access road. The road improvements include regrading and widening the existing gravel roads and trimming back vegetation. All roads would remain gravel roads during and after construction.
- The Proposed Action Alternative would construct a new 48-inch overflow line from the DNWTP that would connect with the existing WBWCD 48-inch overflow line south of S.R. 193. The purpose of the new overflow line is to replace the overflow from the existing vent structure on the east side of U.S. 89, not to create an additional overflow source. The overflow line might not be constructed concurrently with the new pipe.
- The Proposed Action Alternative would also construct a new 78-inch Reach 2 (R2) Extension between the DNWTP and the existing DA R2 near 3025 North in Layton. The R2 Extension would be about 0.3 mile long and would have a capacity of 275 cfs. The R2 Extension is needed to adequately accommodate the hydraulics of the new parallel pipeline in Reach 1 at the DNWTP. The R2 Extension would provide an alternate connection to the existing DA R2 south of the DNWTP. Two options for this R2 Extension are included in the Proposed Action Alternative. Only one of these options would be constructed. Both of these R2 Extension options are shown in Figure 2. The R2 Extension might not be constructed concurrently with the new pipe.

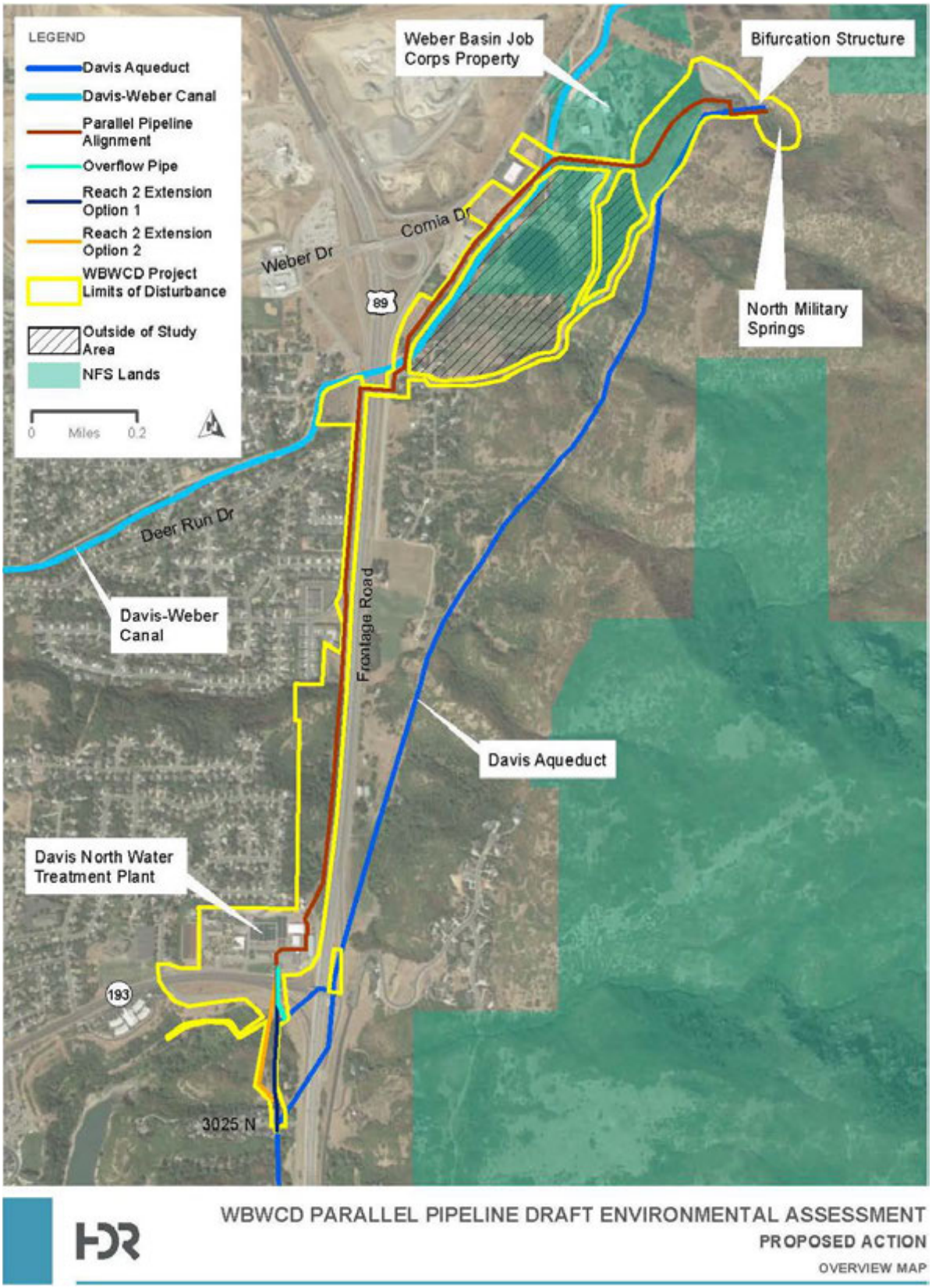
2.4.1 Construction Schedule

WBWCD anticipates that construction of the Proposed Action Alternative could begin in spring 2021 for the construction of the U.S. 89 crossing. The rest of the Proposed Action Alternative would occur as early as 2021 or as late as 2023, depending on the timing of the U.S. 89 project, and will take approximately 2 years to complete. The new overflow line and R2 Extension might not be constructed concurrently with the new pipe.

2.4.2 Construction Procedures

For all Proposed Action Alternative work, WBWCD and its contractor will follow all general Reclamation and WBWCD procedures along with all project-specific procedures, equipment, and conditions.

Figure 2. Proposed Action Alternative Overview Map



3 Affected Environment

3.1 Introduction

This section describes the environment in which the Proposed Action Alternative would be implemented. The various associated environmental resources are discussed, including physical resources such as water resources, water quality, and air quality; and biological resources such as vegetation, wetlands, noxious weeds, fish and wildlife resources, and endangered species; and socio-economic resources such as Indian Trust Assets, environmental justice, and cultural resources.

3.2 Resources Considered but Eliminated from Further Study

Table 1 lists the resources that were considered for analysis but were eliminated from further study in this EA.

Table 1. Resources Considered and Rationale for Eliminating Them

Resource	Rationale for Eliminating from Further Study
Paleontological resources	According to the letter received from the Utah Geological Survey, there are no known paleontological localities in the Project's area of potential effects (APE), and the formations in the Project area have a low potential for containing fossil remains. A copy of this letter is provided in Appendix B.
Wilderness and wild and scenic rivers	There are no designated wilderness areas or wild and scenic rivers in the Project area. Therefore, the Proposed Action Alternative would not affect these resources.
Prime and unique farmland	The Project area is located in areas defined as "urbanized areas" by the U.S. Census Bureau (U.S. Census Bureau 2010). Per 7 CFR Section 658.2, farmland does not include land already in or committed to urban development.
Threatened or endangered species	No critical habitat for threatened or endangered species is present in the Project area. Reclamation has made a determination that the Proposed Action Alternative would have **no effect** on threatened, endangered, or sensitive species.
Recreation	There are no parks, trails, or other recreation facilities in the Project area. There are NFS lands in the Project area, but most of the NFS lands are the Weber Basin Job Corps facility. There are no designated trails or recreation areas in the Project area.
Water rights	There would be no change to water rights from the Proposed Action Alternative.

3.3 Description of Relevant Affected Issues and Resources

This section provides a full description of the relevant affected issues and resources that could be impacted by the Project.

3.3.1 Hydrology and System Operations

The Weber River watershed covers an area of about 2,400 square miles in area in northern Utah. The Weber River and most of its tributaries begin in the Uinta Mountains. The Weber River ends at the Great Salt Lake.

As described in Section 1.1, Introduction and Background, WBWCD diverts water from the Weber River at the Stoddard Diversion Dam on the Weber River in Morgan, Utah. The Gateway Canal has a capacity of 700 cfs. The water is delivered via the Gateway Canal to the Gateway Tunnel and the Gateway Power Plant. The Gateway Tunnel, designed for 435 cfs, conveys raw water 3.3 miles through the Wasatch Mountains to the Wasatch Front. There, the water is split in a bifurcation structure that sends water to the Weber Aqueduct to the north and the DA to the south.

North Military Springs is located in a small drainage south of the bifurcation structure.

As summarized in Section 1.3, Purpose and Need for the Action, the maximum hydraulic capacity of the existing DA is about 15 percent less than Reclamation's original design. The existing DA Reach 1 was designed to carry 355 cfs but actually carries only about 300 to 305 cfs. Demand has surpassed 90 percent of maximum capacity in several of the past 10 years; the 90-percent threshold is a common planning trigger to implement expansions or alternate supplies.

3.3.1.1 No Action Alternative

The No Action Alternative would have no effect on hydrology or system operations compared to existing conditions. The existing DA Reach 1 would continue to be hydraulically deficient. With the No Action Alternative, the DA would have more leakage than with the Proposed Action Alternative, and these leaks would require repairs that would disturb the land above or around the existing DA. WBWCD expects that, with the No Action Alternative, the frequency of these repairs would increase over time.

3.3.1.2 Proposed Action Alternative

There would be no increase in the amount of water diverted from the Weber River with the Proposed Action Alternative beyond the amount of the water rights currently owned by Reclamation. Because the amount of the water diverted from the Weber River would not change, the Proposed Action Alternative would not change the hydrology of the Weber River or any other waters.

WBWCD owns all of the water rights for the water coming through the Gateway Tunnel. WBWCD owns or is in the process of obtaining two separate water rights totaling 2.07 cfs for North Military Springs. The drainage below North Military Springs would receive less water compared to existing conditions because the Proposed Action Alternative's new connection of the North Military Springs water to the parallel pipe and the Proposed Action Alternative's new connection between the Gateway Tunnel drain and the bifurcation structure. However, the Proposed Action Alternative would not capture all of the subterranean flow or surface runoff in the North Military Springs drainage

area and any water in excess of the permitted water rights would remain in the drainage below North Military Springs. Therefore, the drainage below Military Springs would likely still have intermittent flow. WBWCD will coordinate with the USFS during the special use authorization process to determine if instream flow determinations are needed for this drainage below Military Springs, and, if applicable, will work with the USFS to determine appropriate instream flows pursuant to Wasatch-Cache Forest Plan Standard S5.

The Proposed Action Alternative would have beneficial impacts to system operations by increasing the hydraulic capacity between the bifurcation structure and the DNWTP and by providing a redundant, more seismically resilient facility. The Proposed Action Alternative's new 72-inch pipeline could convey up to 170 cfs and would help WBWCD meet the hydraulic design of 355 cfs for the DA system.

3.3.2 Water Quality

The existing DA conveys water from the Weber River in a buried pipe between the bifurcation structure and the DNWTP. There are no impaired waters in the Project area.

3.3.2.1 No Action Alternative

The No Action Alternative would have no effect on water quality.

3.3.2.2 Proposed Action Alternative

The Proposed Action Alternative would have no permanent impacts to water quality because it would continue to convey water from the bifurcation structure in a buried pipe that would not allow any contaminants to enter the water.

There could be short-term impacts to surrounding or adjacent waters during construction. WBWCD would obtain and follow the terms of the UPDES permit during construction to ensure that construction-related sediments or untreated water would not enter surrounding waters during construction (see the environmental commitments in Chapter 4, Environmental Commitments).

3.3.3 Geology and Soils Resources

The Project area contains several locations with geological hazards (potential liquefaction areas, landslide and/or debris flow areas, and fault lines). A detailed report describing the geological hazards is included in the *Basis of Design Report* (Brown and Caldwell 2018).

Soils in the Project area have been mapped by the Natural Resources Conservation Service (NRCS) on the agency's Web Soil Survey website (NRCS 2019). Soils in the Project area are composed of loam, gravelly sandy loam, loamy fine sand, fine sandy loam, stony sandy loam, and gravelly loam.

3.3.3.1 No Action Alternative

The No Action Alternative would have no effect on locations with geological hazards. However, the existing DA would remain located in areas with high debris flow, multiple fault line crossings, the potential for liquefaction, and high landslide hazards without any redundant water facility.

3.3.3.2 Proposed Action Alternative

As described in the *Preliminary Design Report*, the Proposed Action Alternative was designed to minimize geological hazards in the Project area and to be resilient to seismic events and known seismic hazards. The Proposed Action Alternative would cross the Wasatch Fault perpendicularly just east of the Weber Basin Job Corps facility. Crossing the Wasatch Fault in this location would minimize the number of fault line crossings. The Proposed Action Alternative would also cross liquefaction areas and landslide and/or debris flow areas.

The Proposed Action Alternative would temporarily affect soils during construction in areas through grading or excavation to install the pipeline and other associated features. Disturbed areas would have the topsoil and vegetation removed during construction and then replaced. Construction documents will include provisions for revegetation of the disturbed areas.

Mitigation measures to minimize geological hazards would include using thicker pipe walls designed for seismic events and using welded steel pipe, full-penetration butt welds, and slope stabilization measures in liquefaction, landslide, or debris flow areas.

3.3.4 Floodplains

Reclamation reviewed Federal Emergency Management Agency (FEMA) flood zone maps to determine whether the Project area is within an area of flood risk (FEMA 2019). Flood zones are geographic areas that FEMA has defined according to varying levels of flood risk. These zones are depicted on a community's Flood Insurance Risk Maps (FIRM), which reflect the severity or type of flooding that could occur.

In the Project area, there is a 1.5-acre Zone AE floodplain associated with the North Fork of Kays Creek on the south side of S.R. 193 and the west side of U.S. 89 (Figure 3). FEMA defines Zone AE as the "area with a 1-percent chance of flooding [in a given year], or the 100-year floodplain." Base flood elevations are provided for Zone AE areas. Additionally, less than 0.1 acre of the Project area around the North Fork of Kays Creek is considered to be Zone X, which has a 0.2-percent annual chance of flooding (not shown in Figure 3). The rest of the Project area is considered by FEMA to be an "area of minimal flood hazard."

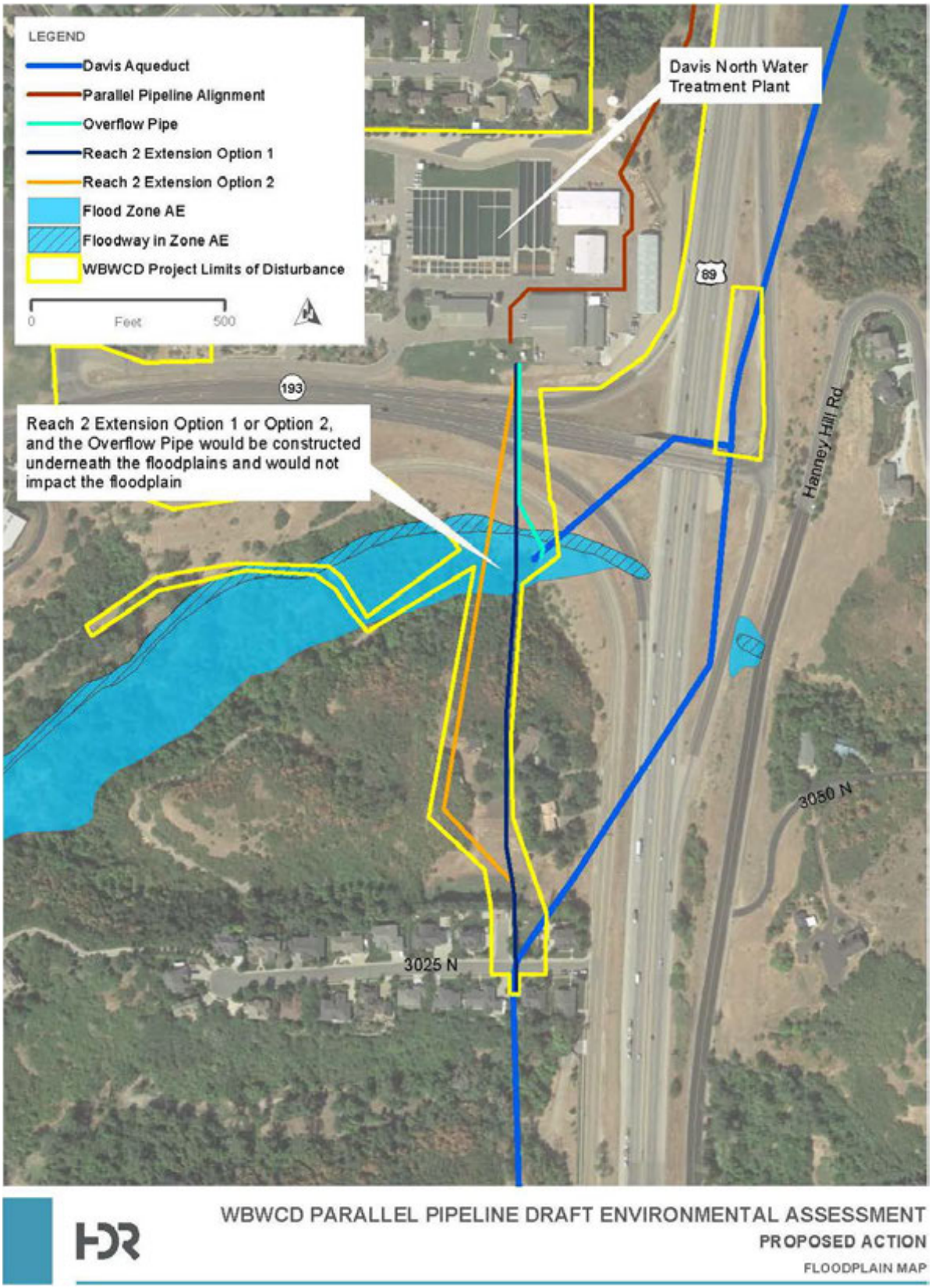
3.3.4.1 No Action Alternative

The No Action Alternative would have no effect on the floodplain associated with the North Fork of Kays Creek.

3.3.4.2 Proposed Action Alternative

The Proposed Action Alternative would construct a new overflow line from the DNWTP that would connect with the existing WBWCD 48-inch overflow line by the North Fork of Kays Creek. This new overflow line would be buried and constructing the line would not impact the floodplain associated with the North Fork of Kays Creek. The purpose of the new overflow line is to replace the overflow from the existing vent structure on the east side of U.S. 89, not to create an additional overflow source. The overflow line might not be constructed concurrently with the new pipe.

Figure 3. Floodplain Impacts from the Proposed Action Alternative



The Proposed Action Alternative would also construct a new R2 Extension between the DNWTP and the DA near 3025 North in Layton that would cross the floodplain associated with the North Fork of Kays Creek. The R2 Extension would be a buried 78-inch pipe that would cross under the floodplain associated with the North Fork of Kays Creek. Constructing the R2 Extension would not permanently impact the floodplain associated with the North Fork of Kays Creek. The R2 Extension might not be constructed concurrently with the new pipe.

After construction, any disturbed areas would be restored to match existing grades. With this restoration, the Proposed Action Alternative would not cause a rise in base flood elevation for this floodplain and would not have any permanent impacts to the floodplain.

3.3.5 Waters of the United States

Waters of the United States (that is, wetlands and other surface waters) provide important and beneficial functions including protecting and improving water quality, providing fish and wildlife habitat, and storing floodwaters. Because they provide these important functions, this resource is protected via two acts: Section 10 of the Rivers and Harbors Act (1899) and Section 404 of the Clean Water Act of 1972, as amended. These acts require that Reclamation strive to first avoid adverse impacts, then minimize adverse impacts, and finally offset unavoidable adverse impacts to existing aquatic resources; and for wetlands, strive to achieve a goal of no overall net loss of values and functions.

USACE has authority to regulate work in the Nation's waters (that is, waters of the United States) through the Rivers and Harbors Act. This act established permit requirements to prevent unauthorized obstruction or alteration of any navigable water. However, because there are no navigable waters in the Project area, WBWCD does not anticipate that a Section 10 permit would be required for the Proposed Action.

USACE also regulates work in, on, or over waters of the United States via the Clean Water Act, which authorizes USACE to require permits for discharging dredge and fill material into waters of the United States. Specifically, this EA will determine whether a Clean Water Act Section 404 permit is required for affecting wetlands and/or other surface waters.

Reclamation assessed the Project area for USACE jurisdictional aquatic resources by reviewing the U.S. Fish and Wildlife Service's (USFWS) National Wetland Inventory maps in geographic information systems (GIS) format and aerial images, and through wetland delineation fieldwork. HDR prepared an *Aquatic Resources Delineation Report* for the Project area (HDR 2020a). The delineation fieldwork was conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual* (USACE 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (USACE 2008a), *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual* (USACE 2008b), *Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2010), and USACE regulatory guidance letters and joint (USACE and U.S. Environmental Protection Agency) regulations, policies, references, and guidance.

The fieldwork identified 1.31 acres of wetlands, four perennial streams, two open water features, one unnamed drainage ditch, a detention basin, and the Davis-Weber Canal in the Project area (HDR 2020a).

3.3.5.1 No Action Alternative

The No Action Alternative would have no effect on waters of the United States.

3.3.5.2 Proposed Action Alternative

The Proposed Action Alternative would impact wetlands. The Proposed Action Alternative would permanently fill 0.854 acre of wetlands, 0.092 acre of open waters, and 0.045 acre (325 linear feet) of perennial streams.

The Proposed Action Alternative would also temporarily impact 0.306 acre of wetlands, 0.011 to 0.013 acre of perennial streams (depending on which option is used for crossing the North Fork of Kays Creek), and 0.016 acre of an unnamed drainage. In areas with a temporary impact, WBWCD would impact the wetland or streams when constructing and installing the buried pipeline as part of the Proposed Action Alternative. These areas would be regraded, revegetated, and restored to a wetland condition after construction.

The Proposed Action Alternative would also cross the Davis-Weber Canal in two locations. This work would occur between October and April during the nonirrigation season. Because the work would occur during the nonirrigation season, there would be no impacts to the Davis-Weber Canal. The Davis-Weber Canal would be restored to its previous condition after the new pipe is constructed.

Table 2 lists, and Figure 4 shows, the impacts to aquatic resources from the Proposed Action Alternative.

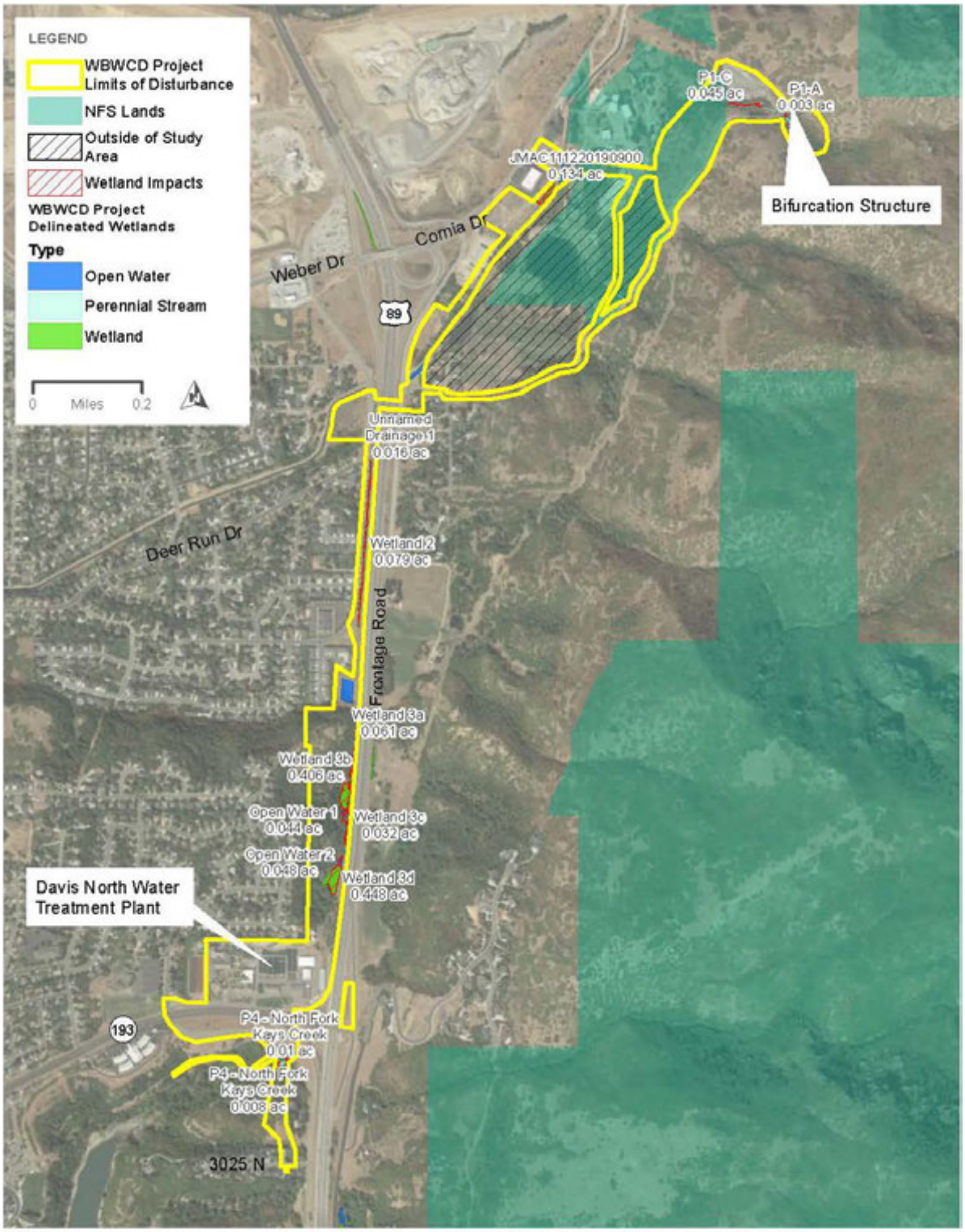
Table 2. Impacts to Aquatic Resources from the Proposed Action Alternative

Feature	Total Acreage in Delineation Area	Impacted Acreage (and Linear Feet)	Temporary or Permanent Impact?	Ownership	Notes
Open Water 1	0.044	0.044	Permanent	UDOT	Feature would be filled due to grading for new pipeline.
Open Water 2	0.048	0.048	Permanent	UDOT	Feature would be filled due to grading for new pipeline.
Unnamed drainage	0.016	0.016	Temporary	UDOT	New pipeline would be installed under the drainage.
P1-A	0.007	0.003 (28 linear feet)	Temporary	State of Utah	Perennial stream would be connected to the new pipeline.

Feature	Total Acreage in Delineation Area	Impacted Acreage (and Linear Feet)	Temporary or Permanent Impact?	Ownership	Notes
P1-C	0.104	0.045 (325 linear feet)	Permanent	State of Utah	Perennial stream would be piped.
P4 – North Fork Kays Creek	0.066	0.008 0.010	Temporary	UDOT	New pipeline would be installed under the perennial stream.
Wetland JMAC111220190900	0.134	0.134	Temporary	Private	New pipeline would be installed under the wetland.
Wetland 2	0.079	0.079	Temporary	UDOT	New pipeline would be installed under the wetland.
Wetland 3a	0.061	0.061	Temporary	UDOT	New pipeline would be installed under the wetland.
Wetland 3b	0.435	0.406	Permanent	UDOT	Wetland would be filled due to grading for new pipeline.
Wetland 3c	0.032	0.032	Temporary	UDOT	New pipeline would be installed under the wetland.
Wetland 3d	0.571	0.448	Permanent	UDOT	Wetland would be filled due to grading for new pipeline.

Based on the wetland impacts listed in Table 2 above and coordination with the USACE, WBWCD anticipates that a Clean Water Act Section 404 Letter of Permission would be required for the Proposed Action Alternative. WBWCD intends to mitigate for impacts to wetlands by purchasing credits from a USACE-approved wetland mitigation bank. WBWCD has confirmed with USACE that credits are available at the Machine Lake Mitigation Bank and that these credits could be used for the Proposed Action Alternative.

Figure 4. Wetland Impacts from the Proposed Action Alternative



3.3.6 Riparian Areas and Existing Vegetation

Riparian areas and existing vegetation were evaluated in the undeveloped parts of the Project study area. The northern terminus of the study area is south of I-84 near the Weber Basin Job Corps campus. The southern terminus of the survey area is near U.S. 89 and the Weber Basin Water Conservancy District offices. More details are provided in the *Biological Resources Baseline Environment Report* that was prepared for the Project (HDR 2020b)

Riparian

Riparian areas are directly influenced by water from a watercourse or water body. They are typically located along lakes, streams, rivers, and constructed water bodies such as ditches, canals, ponds, and reservoirs. Riparian vegetation was identified in the Project area around the North Fork of Kays Creek south of S.R. 193 and the North Military Springs drainage near the bifurcation structure.

Riparian Habitat Conservation Areas (RHCAs). RHCAs are designated by the USFS and can include traditional riparian corridors, wetlands, intermittent streams, and other areas that help maintain the integrity of aquatic ecosystems by (1) influencing the delivery of coarse sediment, organic matter, and woody debris to streams, (2) providing root strength for channel stability, (3) shading the stream, and (4) protecting water quality. This designation still allows for a full range of activities while emphasizing the achievement of riparian management objectives that are identified on a site-by-site basis (including riparian vegetation and instream habitat condition). The 2003 Revised Forest Plan for the Wasatch-Cache National Forest (USFS 2003) does not identify any RHCAs in the project study area (USFS 2003).

Existing Vegetation

In general, the study area consists primarily of upland shrublands, riparian areas, small wetland areas, and areas with residential and commercial development.

Upland shrubland communities in the study area consist primarily of gambel oak (*Quercus gambelii*), bigtooth maple (*Acer grandidentatum*), rubber rabbitbrush (*Ericameria nauseosa*), big sagebrush (*Artemisia tridentata*), and a mix of native and introduced grasses and forbs.

Riparian and wetland areas include boxelder (*Acrer negundo*), Woods' rose (*Rosa woodsii*), redosier dogwood (*Cornus sericea*), Fremont cottonwood (*Populus fremontii*), Russian olive (*Elaeagnus angustifolia*), reed canary grass (*Phalaris arundinacea*), common reed (*Phragmites australis*), and broadleaf cattail (*Typha latifolia*).

Residential and developed areas support a mix of native and introduced grasses (particularly in highway rights-of-way) as well as maintained landscapes.

3.3.6.1 No Action Alternative

With the No Action Alternative, the DA would have more leakage than with the Proposed Action Alternative, and these leaks would require repairs that would disturb the land above or around the existing DA. WBWCD expects that, with the No Action Alternative, the frequency of these repairs would increase over time. The No Action Alternative would likely have temporary impacts to riparian habitat or existing vegetation when these repairs are necessary.

3.3.6.2 Proposed Action Alternative

The Proposed Action Alternative would impact riparian areas and existing vegetation. The Proposed Action Alternative would permanently impact 0.034 acre of riparian area and temporarily impact 0.008 acre of riparian area. The Proposed Action Alternative would have temporary impacts to existing vegetation in all areas where there would be excavation, grading, or staging activities. The temporary impacts would include removing some existing vegetation prior to construction. Impacted areas would be treated to control weeds and revegetated after construction.

3.3.7 Wildlife Resources (State of Utah Sensitive Species, USFS Sensitive Species, Raptors and Migratory Birds, and Big Game)

Wildlife resources were evaluated for the undeveloped parts of the Project study area. The northern terminus of the study area is south of I-84 near the Weber Basin Job Corps campus. The southern terminus of the survey area is near U.S. 89 and the Weber Basin Water Conservancy District offices. More details are provided in the *Biological Resources Baseline Environment Report* that was prepared for the Project (HDR 2020b). No critical habitat for threatened or endangered species or federally listed sensitive species is present in the Project area. This section discusses only the impacts to species that are not threatened or endangered or federally listed sensitive species.

General Wildlife Species

Animals that might be present in the study area include mule deer, mountain lions, coyotes, raccoons, skunks, foxes, snakes, lizards, rabbits, squirrels, bats, frogs, weasels, mice, and a variety of bird species.

State of Utah Sensitive Species

Consultation with the Utah Conservation Data Center (UDWR, no date) indicates that 17 state-listed sensitive species (2 amphibians, 9 birds, 3 fish, 2 mammals, and 1 mollusk) are known to occur in or near Davis County, Utah (HDR 2020b). A review of the study area indicates that there is potentially suitable habitat for 5 of these species: Columbia spotted frog (*Rana luteiventris*), western toad (*Bufo anaxyrus*), Lewis's woodpecker (*Melanerpes lewis*), Townsend's big-eared bat (*Corynorhinus townsendii*), and western pearlshell (*Margaritifera falcata*).

USFS Sensitive Species

Consultation with the USFS (USFS 2016) indicates that forty-three USFS sensitive species are known or suspected to occur in the Wasatch-Cache National Forest. A review of the NFS lands in the study area indicates that there is potentially suitable habitat for 5 of these species: boreal toad (*Bufo boreas*), Columbia spotted frog (*Rana luteiventris*), Northern leatherside chub (*Lepidomeda copei*), Spotted bat (*Euderma maculatum*), and Townsend's big-eared bat (*Corynorhinus townsendii*).

Raptors and Migratory Birds

Consultation with USFWS (USFWS 2019) indicates that seven migratory birds are known to occur in or near the study area, five of which have potentially suitable habitat in the study area (HDR 2020b). These five species are Brewer's sparrow (*Spizella breweri*), golden eagle (*Aquila chrysaetos*), green-tailed towhee (*Pipilo chlorurus*), Virginia's warbler (*Vermivora virginiae*), and willow flycatcher (*Empidonax traillii*).

Big Game
Mule deer (*Odocoileus hemionus*) are likely to be present in the study area. The study area is located in mule deer crucial winter habitat. According to Forestwide Standards and Guidelines disruptive management activities should be avoided on deer, elk, mountain goat and bighorn sheep winter range from November 15 through April 30 (USFS 2003).

3.3.7.1 No Action Alternative
With the No Action Alternative, the DA would have more leakage than with the Proposed Action Alternative, and these leaks would require repairs that would disturb the land above or around the existing DA. WBWCD expects that, with the No Action Alternative, the frequency of these repairs would increase over time. The No Action Alternative would likely have temporary impacts to wildlife resources when these repairs are necessary.

3.3.7.2 Proposed Action Alternative
The Proposed Action Alternative would have no major, long-term negative impacts to wildlife, including the 5 USFS and 5 state sensitive species with potentially suitable habitat in the study area. The Proposed Action Alternative would construct a subsurface pipeline, and any impacted areas would be revegetated after construction. Construction activities would occur primarily in areas that have frequent human use and degraded habitat, areas such as the Weber Basin Job Corps site, industrial areas along Cornia Drive, and undeveloped areas on the west side of U.S. 89. Although there are some impacted areas with suitable habitat for small mammals, raptors, migratory birds, and big game, the short-term and long-term effects would be minor and are not expected by Reclamation to reduce the local populations of wildlife. The NFS lands in the study area that would be temporarily impacted by the Proposed Action Alternative would not have potentially suitable habitat for any of the 5 USFS sensitive species.

WBWCD would ensure the Project's compliance with the Migratory Bird Treaty Act. If construction activities occur during the late spring or early summer, or at any time when active breeding, nesting, or pre-fledging behavioral activities occur, WBWCD would follow USFWS's Utah Raptor Guidelines and would place appropriate buffers on nests until fledging is finished.

3.3.8 Indian Trust Assets
Indian Trust Assets (ITAs) are legal interests in property held in trust by the United States for Indian tribes or individuals. The U.S. Department of the Interior's policy is to recognize and fulfill its legal obligations to identify, protect, and conserve the trust resources of federally recognized Indian tribes and tribal members, and to consult with tribes on a government-to-government basis whenever plans or actions affect tribal trust resources, trust assets, or tribal safety (see the *Departmental Manual*, 512 DM 2). Under this policy, as well as Reclamation's ITA policy, Reclamation is committed to carrying out its activities in a manner that avoids adverse impacts to ITAs when possible, and to mitigate or compensate for such impacts when it cannot. All impacts to ITAs, even those considered nonsignificant, must be discussed in the trust analyses in NEPA compliance documents, and appropriate compensation or mitigation must be implemented.

Trust assets can be real property, physical assets, or intangible property rights such as lands, minerals, hunting and fishing rights, traditional gathering grounds, and water rights. Impacts to ITAs are evaluated by assessing how the proposed action would affect the use and quality of ITAs. Any

action that would adversely affect the use, value, quality, or enjoyment of an ITA is considered to have an adverse impact on the resources.

Inquiries about ITA concerns were included in the cultural consultation letters for the Project that were sent out to the Northwestern Band of the Shoshone Nation, the Eastern Shoshone Tribe of the Wind River Reservation, and the Shoshone-Bannock Tribes of the Fort Hall Reservation on May 13, 2020. Reclamation has received no response to these letters to date. There are no known ITAs in the project area. Therefore, implementation of the No Action or Proposed Action Alternative would have no foreseeable negative impacts on Indian Trust Assets.

3.3.9 Cultural Resources

Cultural resources are defined as physical or other expressions of human activity or occupation. Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA), mandates that Reclamation consider the potential effects of a proposed federal undertaking on historic properties. Historic properties are a subset of cultural resources that include prehistoric or historic districts, sites, buildings, structures, or objects that are at least 50 years of age and are included in, or eligible for, inclusion in the National Register of Historic Places (NRHP). Potential effects of the described alternatives on historic properties are the primary focus of this analysis.

In compliance with the regulations specified in Section 106 of the NHPA (36 CFR Section 800.16), the affected environment for cultural resources is identified as the area of potential effects (APE). The APE is defined as the geographic area within which federal actions may directly or indirectly cause alterations in the character or use of historic properties. The APE for this Proposed Action includes the area that could be physically affected by any of the proposed project alternatives (the maximum limit of disturbance).

Certus Environmental Solutions, LLC (Certus), conducted a Class I literature review and a Class III cultural resource inventory for the APE, as defined and analyzed for the Proposed Action Alternative.

In accordance with 36 CFR Section 800.4, cultural resources within the Project APE were evaluated for significance in terms of NRHP eligibility. The significance criteria applied to evaluate cultural resources are defined in 36 CFR Section 60.4 as follows:

> The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and that
>
> A. are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> B. are associated with the lives of persons significant in our past; or
>
> C. embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> D. have yielded, or may be likely to yield, information important in prehistory or history.

Cultural resource inventory reports were completed by Certus in March 2020 (Certus 2020a, 2020b).

Certus identified one isolated occurrence (IO-01) and seven archaeological sites in the Project APE. These sites are listed in Table 3. The isolated occurrence was determined to be ineligible for inclusion in the NRHP. As shown in Table 3, two of the archaeological sites (Davis-Weber Canal 42DV120 and residential property remains 42DV200) had previously been identified and evaluated for NRHP eligibility. The Davis-Weber Canal 42DV120 was determined eligible for inclusion in the NRHP, and the residential property remains 42DV200 were determined ineligible for inclusion in the NRHP with concurrence from the Utah State Historic Preservation Officer (SHPO). The other five sites were newly documented. One of these five archaeological sites (Davis Aqueduct 42DV213) has been recommended as eligible for inclusion in the NRHP.

Table 3. Archaeological Sites in the Project APE

Site/Resource	NRHP Eligibility	New Site or Previously Documented?
Isolated occurrence IO-01	Ineligible	Newly documented
42DV120 Davis-Weber Canal	Eligible (Criterion A)	Previously identified and evaluated for NRHP eligibility
42DV200 Residential property remains	Ineligible	Previously identified and evaluated for NRHP eligibility
42DV211 Historical road and gravel pit	Ineligible	Newly documented
42DV212 Historical road site	Ineligible	Newly documented
42DV213 Davis Aqueduct	Eligible (Criteria A and C)	Newly documented
42DV216 Historical local road	Ineligible	Newly documented
42DV217 Unnamed historical road and pond/wetland feature	Ineligible	Newly documented

Certus identified a total of four historical structures in the Project APE. Certus also evaluated the Weber Basin Job Corps site at 7400 S. Cornia Drive as a cultural resource district. A small section of the Weber Basin Job Corps site is part of the Project APE. These historic structures are described in Table 4. The four historical structures were previously evaluated as part of UDOT's U.S. 89 State Environmental Study project (UDOT 2018). Based on previous reports, two historical structures (3245 N. U.S. 89 and 7618 S. U.S. 89) were previously determined to be eligible for inclusion in the NRHP under Criterion A, and two (3221 N. U.S. 89 and 7692 S. Cornia Dr.) had previously been determined to be ineligible. Certus identified four eligible buildings, an eligible historic cistern, and an eligible historic stairway on the Weber Basin Job Corps site (7400 S. Cornia Drive) that are adjacent to the Project APE.

Table 4. Historical Structures in or adjacent to the Project APE

Site/Resource	NRHP Eligibility	Utah SHPO Rating	New Site or Previously Documented?
7692 S. Cornia Dr.	Ineligible	Ineligible/NC (noncontributing)	Previously identified and evaluated for NRHP eligibility
Weber Basin Job Corps, 7400 S. Cornia Dr.	Eligible (Criterion A)[a]	EC (Eligible/Contributing)[a]	Newly documented
7618 S. U.S. 89	Eligible (Criterion A)	EC (Eligible/Contributing)	Previously identified and evaluated for NRHP eligibility
3245 N. U.S. 89	Eligible (Criterion A)	EC (Eligible/Contributing)	Previously identified and evaluated for NRHP eligibility
3221 N. U.S. 89	Ineligible	Ineligible/NC (noncontributing)	Previously identified and evaluated for NRHP eligibility

[a] These ratings apply only to buildings 13, 15, 27, 28; a cistern; and a stairway on the Weber Basin Job Corps site. All of these features are adjacent to the Project APE. Other structures on the site were determined ineligible.

The sites that were previously recorded were revisited to assess current condition as part of the cultural resources review for this Project. The newly identified archaeological sites and historic structures were also recorded as part of the cultural resources review for this Project.

3.3.9.1 No Action Alternative

The No Action Alternative would have **no effect** on cultural resources.

3.3.9.2 Proposed Action Alternative

Reclamation determined that the Proposed Action Alternative would have **no adverse effect** on cultural resources. Sites 42DV120 Davis-Weber Canal and 42DV213 Davis Aqueduct were determined eligible and the Proposed Action Alternative would have **no adverse effect** on the historic properties. The Proposed Action Alternative would also have **no adverse effect** on historic structures 7618 S. U.S. 89 and 3245 N. U.S. 89. Reclamation submitted the Determinations of Eligibility and Findings of Effect to the Utah SHPO on May 13, 2020. The Utah SHPO concurred with the Determinations of Eligibility and Findings of Effect in a letter received on May 14, 2020.

Table 5 summarizes the determinations of eligibility and findings of effect for the two eligible archaeological resources in the Project area.

Table 5. Determinations of Eligibility and Findings of Effect for Archaeological Resources

Site	NRHP Eligibility	Finding of Effect	Description of Effect
42DV120 Davis-Weber Canal	Eligible (Criterion A)	**No adverse effect**	The Proposed Action Alternative's new pipeline would cross under the Davis-Weber Canal twice; one location would be on the west side of the Weber Basin Job Corps site, and the second location would be on the east side of U.S. 89. Each crossing would temporarily impact about 80 linear feet of the Davis-Weber Canal. One section of the Davis-Weber Canal where the crossing would occur was relined in 2011. The Davis-Weber Counties Canal Company will allow open-cut construction during October to April outside the irrigation season. The western crossing east of U.S. 89 would require removal of up to 40 feet of the Davis-Weber Canal liner and the installation of a 24 inch intake pipe in the bottom of the canal. The Proposed Action Alternative would also build a new diversion box with a fly box in this location. The Davis-Weber Canal would be restored to its previous condition after the pipeline crossings and installation of the new intake pipe and diversion box are constructed. No permanent impacts to the Davis-Weber Canal would occur from construction or operation.
42DV213 Davis Aqueduct	Eligible (Criteria A and C)	**No adverse effect**	The Proposed Action Alternative's new pipeline would be open-cut and would cross the DA just west of the bifurcation structure. The width of the crossing would be about 80 feet. The Proposed Action would also remove the existing valve vault and install a new valve vault next to the bifurcation structure. The new valve vault would be no taller than two feet above existing grade and there would be no visible modifications to the bifurcation

Site	NRHP Eligibility	Finding of Effect	Description of Effect
			structure. The Proposed Action Alternative would also construct a new connection to the DA near 3025 North in Layton at the south end of the R2 Extension. The R2 Extension might not be constructed concurrently with the new pipe. There would be no significant, permanent impacts to the DA from construction or operation. The DA would be restored to its previous condition after construction.

Table 6 summarizes the determinations of eligibility and findings of effect for eligible historic structures within the Project area.

Table 6. Determinations of Eligibility and Findings of Effect for Historic Structures

Address	NRHP Eligibility	Finding of Effect	Description of Effect
7618 S. U.S. 89	Eligible (Criterion A) Eligible/Contributing (EC) under Utah SHPO rating system	**No adverse effect**	The Proposed Action Alternative would impact 0.74 acre (out of a total of 1.54 acres) of the west side of the parcel on which the historic structure is located. WBWCD would purchase an easement for the impacted area. There would not be any impacts to the historic structure, only the property.
3245 N. U.S. 89	Eligible (Criterion A) Eligible/Contributing (EC) under Utah SHPO rating system	**No adverse effect**	The Proposed Action Alternative would impact 2.0 acres (out of a total of 9.75 acres) of the parcel on which the historic structure is located. WBWCD would purchase an easement for the impacted area. There would not be any impacts to the historic structure, only the property.
Weber Basin Job Corps, 7400 S. Cornia Dr.	Eligible (Criterion A) Eligible/Contributing (EC) under Utah SHPO rating system Note that these ratings apply only to four buildings, a cistern, and a stairway on the site.	**No historic properties affected**	The Proposed Action Alternative would cross the Weber Basin Job Corps site but would not have any impacts to the four eligible historic structures, the eligible historic cistern, or the eligible historic stairway.

In compliance with 36 CFR Section 800.4 and 36 CFR Section 800.11(e), Reclamation submitted a copy of the cultural resource inventory reports and Findings of Effect for consultation to the Utah SHPO and to tribes that might attach religious or cultural significance to the historic properties that could possibly be affected by the Proposed Action for consultation. Reclamation will also provide these documents to other interested parties.

Construction activities could discover previous, unknown cultural resources and Native American artifacts. In the event of a discovery, construction activity in the vicinity would be suspended. WBWCD and Reclamation would develop a treatment plan, and coordination with the Utah SHPO would occur immediately (see the environmental commitments in Chapter 4, Environmental Commitments).

3.3.10 Socioeconomics, NFS Lands, and Private Properties

The Project area is located in Davis County, Utah, on land that is part of the incorporated jurisdictions of South Weber, Utah, and Layton, Utah. Davis County has the third-largest population in Utah (estimated at 352,805 people in 2018). Davis County has a diverse economy. In 2019, the county's top five employment sectors were government (federal, state, and local); trade, transportation, and utilities; educational and health services; professional and business services; and leisure and hospitality services (Utah Department of Workforce Services, no date).

The Project area contains a mix of public and private properties. Public properties are owned by the federal government (NFS lands administered by the USFS), UDOT, and Weber State University. Reclamation also owns properties and easements around the DA. The NFS lands are properties associated with the Weber Basin Job Corps site and properties south and east of the Project area. WBWCD owns properties and easements in the Project area.

In the Project area, private properties are located on the north and south sides of Cornia Drive, on 7825 South, and on the west side of U.S. 89. The private properties on Cornia Drive are all industrial except for one residential property. The private properties on 7825 South and west of U.S. 89 are all residential properties.

There are also several utility lines, including water lines, sewer lines, storm drains, fiber optic lines, petroleum pipelines, gas lines, and power lines, in the Project area. Most of these utility lines are located on the east or west side of U.S. 89.

3.3.10.1 No Action Alternative

The No Action Alternative would have no effect on socioeconomics or land ownership.

3.3.10.2 Proposed Action Alternative

The Proposed Action Alternative would have no effect on the population or general economic conditions of Davis County.

The Proposed Action Alternative would require WBWCD to purchase one property owned by Weber State University and two properties owned by UDOT on the west side of U.S. 89 north of the DNWTP. Both Weber State University and UDOT are willing sellers for these properties. The total acreage of the properties that would be purchased is 16.80 acres.

The Proposed Action Alternative would also require WBWCD to purchase permanent easements from UDOT and five private property owners. WBWCD would provide compensation to impacted property owners pursuant to the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and the Utah Relocation Assistance Act (Utah Code Annotated Section 57-12-1 et seq.). A figure showing the impacted properties is included in Appendix A.

One residential property, located at 7692 S. Cornia Drive, would have a residential structure impacted by the Proposed Action Alternative. For the impacted residential property at 7692 S. Cornia Drive, WBWCD has agreed to provide compensation to the property owners to build a new residential structure on the same parcel so that the owners would not need to be relocated to a new parcel. WBWCD would also provide compensation for the easement needed on the back part of the parcel.

WBWCD would need to obtain a USFS special use authorization for the area where the Proposed Action Alternative would cross the Weber Basin Job Corps site, adjacent NFS lands, and any areas that would be impacted during construction. The estimated acreage of NFS lands that would be impacted by the Proposed Action Alternative is 17.3 acres (Figure 5). The Proposed Action Alternative would have short-term impacts to the Weber Basin Job Corps facility's sports fields and two access roads during construction. The sports fields and access roads either would be unavailable or would have limited use during construction in areas impacted by the Proposed Action Alternative. WBWCD would coordinate with the Job Corps to ensure that adequate access is provided during construction to maintain all operations at the Job Corps facility. After construction, all disturbed areas would be regraded and revegetated, and all access roads would be restored to preconstruction conditions. No long-term impacts to the Job Corps facility are anticipated by Reclamation from the Project.

Mitigation required during construction through the Weber Basin Job Corps and on adjacent NFS lands includes:

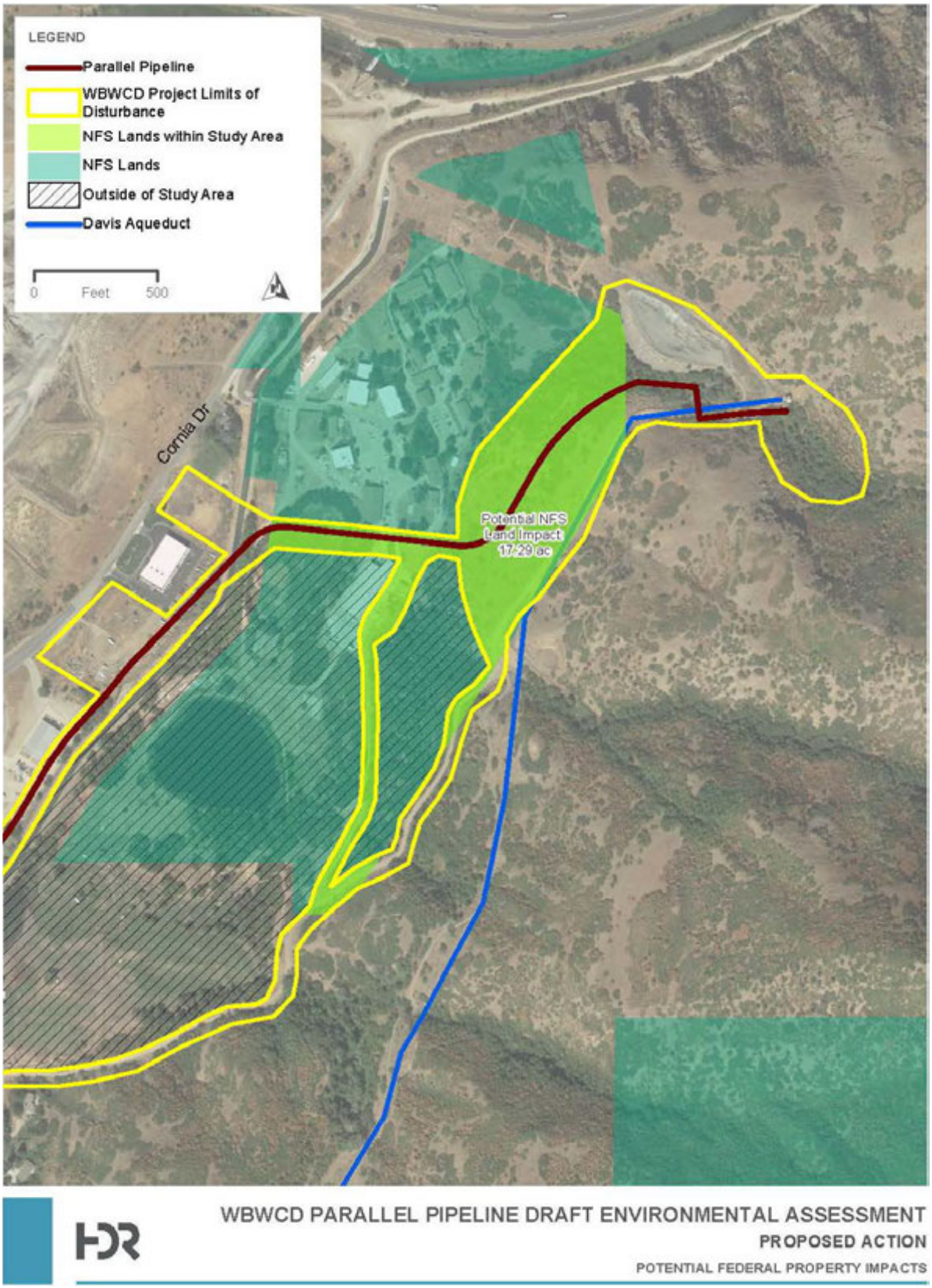
- Recurring dust abatement. Fugitive dust from the construction area must be abated at a frequency determined by the contractor and approved by the USFS, including dust arising from excavated materials, or material stockpile sites.
- Construction contractor must coordinate with the Weber Basin Job Corps Center Director to provide daily access for center activities at the construction trades buildings, USFS Fire Module facility and sports fields.
- No construction before 7:00 am or after 6:00 pm is permitted at the Weber Basin Job Corps.
- No construction equipment or vehicle traffic is allowed outside of the proposed construction right-of-way or on any roads/parking areas within the Weber Basin Job Corps property without prior approval.
- EMS/ Fire will need to be able to access lower half of center 24 hours a day from main access of center. They will not be able to respond quickly if they must use dirt road South of Center.
- Vehicle access to lower half of center must be available from main access of center 24 hours a day.

- Pedestrian access to and from lower half of center must be opened 24 hrs. If a pedestrian bridge needs to be built to accommodate, this needs to be discussed.
- All center utilities and underground water distribution lines must be kept active during construction.
- All center grounds must be kept up and returned to like condition before construction.

Appendix A includes a figure that shows and lists the impacted properties.

The Proposed Action Alternative would cross many utility lines near U.S. 89. WBWCD would be required to relocate any utility lines that could not be avoided with sufficient clearance.

Figure 5. Potential National Forest System Impacts from the Proposed Action Alternative



3.3.11 Environmental Justice

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, directs all federal agencies to develop strategies for considering environmental justice in their programs, policies, and activities. Additionally, the Council on Environmental Quality has issued the *Environmental Justice Guidance under the National Environmental Policy Act (NEPA)* to further assist federal agencies with their procedures under NEPA. Environmental justice is defined as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no groups of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations of the execution of federal, state, local, and tribal programs and policies.

Demographic information for Davis County and the state of Utah are provided in Table 7 and Table 8. Davis County has fewer minority populations and lower poverty rates compared to Utah overall. There are no environmental justice populations in the Project area. Therefore, implementation of the No Action or Proposed Action Alternative would have no adverse or disproportionate effects on minority or low-income populations or Native American tribes.

Table 7. Demographics of Davis County and Utah in 2018

	Davis County	Utah
Total population	**352,805**	**3,166,646**
White alone	294,619 (83.5%)	2,470,348 (78%)
Black or African American alone	4,248 (1.2%)	36,371 (1.1%)
American Indian or Alaska Native alone	1,450 (0.4%)	29,962 (0.9%)
Asian alone	6,932 (2.0%)	81,499 (2.6%)
Native Hawaiian or other Pacific Islander alone	2,587 (0.7%)	30,878 (1.0%)
Hispanic	35,066 (9.9%)	451,007 (14.2%)
Two or more races	7,903 (2.2%)	66,582 (2.1%)

Source: University of Utah Kem C. Gardner Policy Institute 2019

Table 8. Poverty by Race in Davis County and Utah in 2017

	Davis County	Utah
Total population in poverty	**20,775 (6.2%)**	**324,856 (11.0%)**
White alone	16,376 (5.5%)	248,083 (9.7%)
Black or African American alone	977 (22.8%)	8,585 (26.6%)
American Indian or Alaska Native alone	179 (13.3%)	9,261 (29.7%)
Asian alone	430 (7.0%)	9,914 (15.0%)
Native Hawaiian or other Pacific Islander alone	664 (32.3%)	4,035 (15.3%)
Hispanic	4,159 (13.6%)	82,053 (20.4%)
Some other race	1,083 (11.8%)	33,538 (22.7%)
Two or more races	1,046 (9.4%)	11,440 (14.1%)

Source: U.S. Census Bureau 2017

3.3.12 Health, Safety, Air Quality, and Noise

The Project area is located in an urban area. Because the existing DA Reach 1 is in a buried pipe, the current operations have no effect on health, safety, air quality, or noise in the surrounding communities.

The Utah Division of Environmental Response and Remediation lists six underground storage tanks as having been located in or adjacent to the Project area (UDEQ 2019). According to records provided by the Division, all of these underground storage tanks have been removed.

3.3.12.1 No Action Alternative

The No Action Alternative would have no effect on health, safety, air quality, or noise.

3.3.12.2 Proposed Action Alternative

The Proposed Action Alternative would have short-term effects on air quality and noise during construction. Noise levels would temporarily increase during pipeline installation due to heavy equipment and truck traffic. Air quality could temporarily be reduced during construction of the parallel pipeline. Fugitive dust could increase during pipeline construction; however, dust-suppressing measures would be used to help reduce the increased short-term impacts. The selected contractor would prepare and follow a dust-control plan. Management of hazardous substances such as fuels or oils will be described in the Stormwater Pollution Prevention Plan (SWPPP) required for the UPDES permit.

Reclamation does not anticipate that the Proposed Action Alternative would affect any sites with hazardous materials. If hazardous materials are discovered during construction, WBWCD or the contractor would contact the Utah Division of Environmental Response and Remediation.

3.3.13 Access and Transportation

U.S. 89, South Weber Drive/Cornia Drive, and S.R. 193 are the major arterials in the Project area. U.S. 89 is a federal highway. UDOT owns the underlying property for U.S. 89 and S.R. 193 and is responsible for operations and maintenance on both of these facilities.

Residential access on the east side of the Project area is provided from 2725 East, which is accessed from Cornia Drive. Residential access on the west side of the Project area is from either U.S. 89 or 2700 East.

3.3.13.1 No Action Alternative

The No Action Alternative would have no effect on access and transportation.

3.3.13.2 Proposed Action Alternative

The Proposed Action Alternative would have short-term impacts to access and transportation during the construction of the new pipeline where it crosses 7825 South, 2725 East, U.S. 89, and 2700 East. Short-term impacts could include lane closures and travel delays in the areas where the new pipeline would be installed underneath the roads.

For the Proposed Action Alternative, WBWCD would coordinate with and obtain permits from UDOT for any lane closures needed on U.S. 89 during construction. WBWCD would coordinate with South Weber City for any lane closures needed on 7825 South, 2725 East, or 2700 East during construction.

3.3.14 Visual Resources

This section evaluates the extent to which the Proposed Action Alternative would change the visual character and quality of the environment of the Project area. The Project area includes primarily residential and institutional land uses. Views from the inhabited areas in the Project area include the Wasatch Mountains to the east and Weber Canyon to the north. The existing visual environment includes U.S. 89 and I-84.

3.3.14.1 No Action Alternative

The No Action Alternative would have no effect on visual resources.

3.3.14.2 Proposed Action Alternative

The Proposed Action Alternative would have short-term visual impacts during construction when the new 72-inch pipeline is installed using an open-trench technique. Because the Proposed Action Alternative would install a buried pipe, once construction is complete, there would be no permanent adverse impacts to visual resources. The Proposed Action Alternative's pump station at 7692 S. U.S. 89 would be no taller than 20 feet, which is consistent with the commercial and industrial zoning requirements for the area. Reclamation does not expect any impacts to visual resources from the Proposed Action Alternative's new pump station.

3.3.15 Cumulative Effects

In addition to Project-specific impacts, Reclamation analyzed the potential for significant cumulative impacts to resources affected by the Project and by other past, present, and reasonably foreseeable activities in the Weber Basin watershed. According to the Council on Environmental Quality's regulations for implementing NEPA (50 CFR Section 1508.7), a "cumulative impact" is an impact on the environment that results from the incremental impact of the proposed action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

This section focuses on whether the Proposed Action, considered together with any known or reasonably foreseeable actions by Reclamation, other federal or state agencies, or some other entity, would combine to cause an effect. There is no defined area for analyzing cumulative effects.

Other foreseeable future actions near the Project area would include UDOT's U.S. 89 widening project; WBWCD's construction of a second 72-inch pipeline within the same Project area and easements discussed in this EA; and maintenance and repair activities on the new system, including the pipeline, turnouts, and appurtenances.

UDOT's U.S. 89 project proposes to add one lane in each direction on U.S. 89 between S.R. 193 and South Weber Drive. The impacts of UDOT's U.S. 89 project would be contained within UDOT's existing right-of-way. This project would not have notable adverse effects on any resources near the Project area (UDOT 2018, 2020).

The impacts of WBWCD's construction of a second 72-inch pipeline would occur within the same Project area and easements discussed in this EA. Any impacts from WBWCD's construction of a second 72-inch pipeline would be similar to the impacts described in Section 3.3, Description of Relevant Affected Issues and Resources, for the Proposed Action Alternative. Most impacts would be temporary and would occur during the construction and installation of the new pipeline.

The cumulative effects of the maintenance and repair activities on the new system, including the pipeline, turnouts, and appurtenances, would be infrequent and short-term. Any maintenance activities would occur in previously disturbed areas. Reclamation does not anticipate that the impacts of the Proposed Action Alternative, when combined with the impacts of other reasonably foreseeable future actions, would increase the potential for prospective land development.

Therefore, based on the resource specialists' review of the Proposed Action Alternative, Reclamation has determined that the Proposed Action would not have a significant adverse cumulative effect on any resource.

3.4 Summary of Environmental Effects

The table below summarizes the environmental effects of the No Action and Proposed Action Alternatives. Impacts to NFS lands with the Proposed Action Alternative are also summarized in Table 9.

Table 9. Summary of Environmental Effects

Resource	No Action Alternative	Proposed Action Alternative	Impacts to NFS Lands with Proposed Action Alternative
Paleontological Resources	No effect	No effect	No effect
Wilderness and Wild and Scenic Rivers	No effect	No effect	No effect
Prime and Unique Farmland	No effect	No effect	No effect
Threatened or Endangered Species	No effect	No effect	No effect
Recreation	No effect	No effect	No effect
Water Rights	No effect	No effect	No effect
Hydrology and System Operations	Existing DA would continue to be hydraulically deficient.	No effect on Weber River hydrology. The drainage below North Military Springs would receive less water compared to existing conditions. Beneficial impacts to DA system operations by increasing hydraulic capacity.	The drainage below North Military Springs crosses NFS lands. WBWCD will coordinate with the USFS during the special use authorization process to determine whether instream flow determinations are needed for this drainage below Military Springs.
Water Quality	No effect	Short-term impacts to surrounding or adjacent waters during construction.	No effect

Table 9. Summary of Environmental Effects

Resource	No Action Alternative	Proposed Action Alternative	Impacts to NFS Lands with Proposed Action Alternative
Geology and Soils Resources	Existing DA would remain located in areas with high debris flow, multiple fault line crossings, the potential for liquefaction, and high landslide hazards.	Proposed Action Alternative was designed to minimize geological hazards in the Project area. Temporary impacts to soils during construction. Disturbed areas would have the topsoil and vegetation removed during construction and then replaced.	Temporary impacts to soils during construction. Disturbed areas would have the topsoil and vegetation removed during construction and then replaced.
Floodplains	No effect	A new overflow line and Reach 2 of the DA would cross the floodplain of the North Fork of Kays Creek and have temporary impacts during construction. The new overflow line and Reach 2 pipe would be buried, and constructing the lines would not permanently impact the floodplain associated with the North Fork of Kays Creek.	No effect

Table 9. Summary of Environmental Effects

Resource	No Action Alternative	Proposed Action Alternative	Impacts to NFS Lands with Proposed Action Alternative
Waters of the United States	No effect	Permanently fill 0.854 acre of wetlands, 0.092 acre of open waters, and 0.045 acre (325 linear feet) of perennial streams. Temporarily impact 0.306 acre of wetlands, 0.011 to 0.013 acre of perennial streams (depending on which option is used for crossing the North Fork of Kays Creek), and 0.016 acre of an unnamed drainage.	No effect
Riparian Areas and Existing Vegetation	Temporary impacts to riparian habitat or existing vegetation when repairs on existing DA are necessary.	Permanent impacts to 0.034 acre of riparian area and temporary impacts to 0.008 acre of riparian area. Temporary impacts to existing vegetation in all areas where there would be excavation, grading, or staging activities.	Temporary impacts to existing vegetation where there would be excavation or grading activities.
Wildlife Resources	Temporary impacts to wildlife habitat when repairs on existing DA are necessary.	Temporary impacts to existing wildlife habitat in all areas where there would be excavation, grading, or staging activities. No major, long-term negative impacts to wildlife, including the 5 USFS and 5 state sensitive species with potentially suitable habitat in the study area.	NFS lands in the study area that would be temporarily impacted by the Proposed Action Alternative would not have potentially suitable habitat for any of the 5 USFS sensitive species.
Indian Trust Assets	No effect	No effect	No effect

Table 9. Summary of Environmental Effects

Cultural Resources	No effect	**No adverse effect** on two archaeological resources (42DV120 Davis-Weber Canal and 42DV213 Davis Aqueduct) and two historic structures (7618 S. U.S. 89 and 3245 N. U.S. 89).	No historic properties affected on NFS lands.
Socioeconomics, NFS Lands, and Private Properties	No effect	WBWCD would purchase one property owned by Weber State University and two properties owned by UDOT on the west side of U.S. 89 that total 16.80 acres. WBWCD would purchase permanent easements from UDOT and five private property owners. For the impacted residential property at 7692 S. Cornia Drive, WBWCD has agreed to provide compensation to the property owners to build a new residential structure on the same parcel so that the owners would not need to be relocated to a new parcel.	WBWCD would need to obtain a USFS special use authorization for the area where the Proposed Action Alternative would cross the Weber Basin Job Corps site, adjacent NFS lands, and any areas that would be impacted during construction. The estimated acreage of NFS lands that would be impacted by the Proposed Action Alternative is 17.3 acres. Short-term impacts to the Weber Basin Job Corps facility's sports fields and two access roads during construction. No long-term impacts to the Job Corps facility.
Environmental Justice	No effect	No adverse human health or environmental effects on minority or low-income populations or Native American tribes.	No effect
Health, Safety, Air Quality, and Noise	No effect	Short-term effects on air quality and noise during construction.	Short-term effects on air quality and noise during construction.

Table 9. Summary of Environmental Effects

Resource	No Action Alternative	Proposed Action Alternative	Impacts to NFS Lands with Proposed Action Alternative
Access and Transportation	No effect	Short-term impacts to access and transportation during the construction of the new pipeline where it crosses 7825 South, 2725 East, U.S. 89, and 2700 East.	Short-term impacts to access at the Weber Basin Job Corps site during the construction of the new pipeline where it crosses the Weber Basin Job Corps site.
Visual Resources	No effect	Short-term visual impacts during construction when the new 72-inch pipeline is installed using an open-trench technique.	Short-term visual impacts during construction when the new 72-inch pipeline is installed using an open-trench technique.

4 Environmental Commitments

Following are the environmental commitments (Conservation Measures) that will be carried out as part of this Project. Reclamation will follow commitments that are derived from the USACE Clean Water Act Section 404 permit, Stream Alteration Permit, USFS special use authorizations, and UPDES permit, along with other best management practices (BMPs) and commitments related to air quality, cultural resources, migratory birds, and transportation and access.

- The contractor will follow all general and special permit conditions included in the Clean Water Act Section 404 permit and Stream Alteration Permit. Impacts to wetlands and waters would not occur outside areas included in the Section 404 permit and Stream Alteration Permit.
- A UPDES permit will be required from the State of Utah before any discharges of water occur, if such water is to be discharged as a point source into a regulated water body. WBWCD and their contractor will take appropriate measures to ensure that construction-related sediments will not enter any streams or other water bodies during or after construction. WBWCD and their contractor will construct settlement ponds and intercepting ditches for capturing sediments, and WBWCD and their contractor will haul the sediment and other contents collected off the site for appropriate disposal upon completion of the Project.
- The Utah Division of Air Quality regulates fugitive dust from construction sites and requires compliance with rules for sites disturbing greater than 0.25 acre. Utah Administrative Code Rule R307-205-5 requires steps be taken by WBWCD and their contractor to minimize fugitive dust from construction activities. Sensitive receptors include those individuals working at the site or motorists who could be affected by changes in air quality due to emissions from the construction activity.
- If any cultural resources, either on the surface or in the subsurface, are discovered during construction, WBWCD will notify Reclamation's Provo Area Office archaeologist, and construction in the area of the inadvertent discovery will stop until a professional archaeologist can assess the resource and make recommendations for further work.
- If a person knows or has reason to know that she or he has inadvertently discovered possible human remains on federal land, she or he must immediately notify Reclamation's Provo Area Office archaeologist by telephone about the discovery. Work will stop until the proper authorities are able to assess the situation on site. This action will promptly be followed by written confirmation from WBWCD to the responsible federal agency official with respect to federal land. The Utah SHPO and interested Native American tribal representatives will be promptly notified by WBWCD. Consultation will begin immediately. This requirement is prescribed under the Native American Graves Protection and Repatriation Act (43 CFR Part 10) and the Archaeological Resources Protection Act of 1979 (16 USC Section 470).
- If vertebrate fossils are encountered by the proponent during ground-disturbing actions, construction will be suspended until WBWCD can contact the Reclamation Provo Area Office archaeologist and a qualified paleontologist can assess the find.

- Raptor protection measures will be implemented by WBWCD to provide full compliance with environmental laws. Raptor surveys will be developed by WBWCD using the *Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances* (USFWS 2002) to ensure that the Proposed Action Alternative will avoid adverse impacts to raptors, including bald and golden eagles. Locations of existing raptor nests and eagle roosting areas will be identified by WBWCD before project activities begin. Appropriate spatial buffer zones of inactivity will be established by WBWCD during breeding, nesting, and roosting periods. Arrival at nesting sites can occur as early as December for certain raptor species. Nesting and fledging can continue through August. Wintering bald eagles can roost from November through March.
- Standard Reclamation BMPs will be applied by WBWCD and their contractor during construction activities to minimize environmental effects. Such practices or construction specifications include but are not limited to erosion control (for example, silt fencing), a traffic-control plan with notice of closures, dust and water pollution abatement, and waste material disposal.
- The proposed Project construction area will be located in primarily previously disturbed areas, areas adjacent to highways, and areas with industrial or institutional land uses. Some work will occur in previously undisturbed areas or areas that have not been recently disturbed. All impacts on previously disturbed sites and in areas that have not been recently disturbed will be minimized as much as possible.
- Staging areas will be located where they will minimize new disturbance of area soils and vegetation.
- Ground disturbance will be minimized to the extent possible.
- Only certified weed-free hay, straw or mulch will be used as an erosion-control measure.
- In order to control the spread of any noxious weeds, the following procedures will be listed in the construction specifications. Earth-moving construction equipment will be cleaned with a high-pressure water-blasting method off-site prior to use on the Project. To control the identified weed species, any existing noxious weeds will be treated with commercially available herbicides at least 10 days before starting earthwork operations. The disturbed area will be reconstructed by using native topsoil and native seeds collected from grubbing and by replacing organic matter.
- Construction vehicles and equipment will be inspected and cleaned prior to entry into the Project area to ensure that they are free of weed seeds.
- Newly disturbed sites will be monitored for impacts to native vegetation.
- Stockpiling of materials will be limited to those areas approved and cleared in advance.

- Mitigation required during construction through the Weber Basin Job Corps and on adjacent NFS lands includes:
    - Recurring dust abatement. Fugitive dust from the construction area must be abated at a frequency determined by the contractor and approved by the USFS, including dust arising from excavated materials, or material stockpile sites.
    - Construction contractor must coordinate with the Weber Basin Job Corps Center Director to provide daily access for center activities at the construction trades buildings, USFS Fire Module facility and sports fields.
    - No construction before 7:00 am or after 6:00 pm is permitted at the Weber Basin Job Corps.
    - No construction equipment or vehicle traffic is allowed outside of the proposed construction right-of-way or on any roads/parking areas within the Weber Basin Job Corps property without prior approval.
    - EMS/ Fire will need to be able to access lower half of center 24 hours a day from main access of center. They will not be able to respond quickly if they must use dirt road South of Center.
    - Vehicle access to lower half of center must be available from the main access of center 24 hours a day.
    - Pedestrian access to and from lower half of center must be opened 24 hours. If a pedestrian bridge needs to be built to accommodate, this needs to be discussed.
    - All center utilities and underground water distribution lines must be kept active during construction.
    - All center grounds must be kept up and returned to like condition before construction.
- According to Forestwide Standards and Guidelines, disruptive management activities should be avoided on deer, elk, mountain goat, and bighorn sheep winter range from November 15 through April 30 (USFS 2003). This mitigation commitment would apply only to suitable deer, elk, mountain goat, and bighorn sheep winter range on NFS lands in the project area. Reclamation proposes these commitments (Conservation Measures) to minimize or avoid the adverse effects of implementing the Proposed Action.

5 Consultation and Coordination

During the development of the Project, WBWCD has met with property owners whose properties would be directly impacted by the Proposed Action Alternative.

The USFS is a cooperating agency for this project through jurisdiction by law and special expertise. The USFS decision is whether or not to issue a special use permit to authorize the construction and operation of a pipeline across NFS lands. The USFS was provided a preliminary draft of the EA to review.

Reclamation will conduct Native American consultation throughout the public involvement process. Tribal consultation letters for the Draft EA were sent out to the Northwestern Band of the Shoshone Nation, the Eastern Shoshone Tribe of the Wind River Reservation, and the Shoshone-Bannock Tribes of the Fort Hall Reservation. A cultural resources consultation letter with a determination of No Adverse Effect to Historic Properties and a copy of the Cultural Resources Inventory reports were sent to the above tribes on May 13, 2020. All consultation was conducted in compliance with 36 CFR 800.2(c)(2) on a government-to-government basis. Through this effort, each Tribe was given a reasonable opportunity to identify any concerns about historic properties; to advise on the identification and evaluation of ITAs and historic properties, including those of traditional religious and cultural importance; to express their views on the effects of the Proposed Action on such properties; and to participate in the resolution of adverse effects.

Copies of the archaeological survey reports, historic architecture reports, and a determination of historic properties affected for the Proposed Action Alternative were submitted to the Utah SHPO for review in coordination with the USFS. A copy of the SHPO concurrence letter is included in Appendix B.

USACE and the USFS were also notified of the Proposed Action Alternative and were invited to review and provide comments during the 30-day public comment period on the Draft EA. No comments on the Draft EA were received from USACE or USFS.

Reclamation notified all property owners located within 0.25 mile of the Proposed Action Alternative, as well as interested state and federal agencies, of the Proposed Action Alternative and invited them to participate in a 30-day public comment period on the Draft EA that ended on August 9, 2020. Six comments were received during the comment period. All comments were considered and addressed in the preparation of this Final EA.

6 List of Preparers

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