US Army Corps of Engineers ®
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CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION AND THE CITY OF UMATILLA JOINT PUMP AND PIPELINE PROJECT

McNary Lock and Dam Project, Umatilla County, Oregon

EAXX-202-00-G4P- 1732201767

In compliance with the
National Environmental Policy Act of 1970

ADMINISTRATIVE RECORD – DO NOT DESTROY

PROJECT FILE NUMBER: PPL-C-2025-0011

March 2025

Executive Summary

This Environmental Assessment (EA) examines the potential environmental impacts associated with the City of Umatilla (COU) and Confederated Tribes of the Umatilla Indian Reservation's (CTUIR) joint venture to upgrade and replace their existing water conveyance infrastructure. The joint pump and pipeline project is located on and near the south bank of the Columbia River, north of Highway 730 approximately 5 miles east of Umatilla, Oregon, in Umatilla County. The CTUIR currently own and operate a pump station, in the same location, that diverts water to an approximately 1,200-foot pipeline, which empties into a 4,400-foot unlined earthen ditch that delivers water to the 2,817-acre Wanaket Wildlife Area (WWA). The WWA was acquired under the Columbia River Basin Wildlife Program by the Bonneville Power Administration in 1993 and the CTUIR assumed management responsibilities. These facilities are located on lands owned by the U.S. Army Corps of Engineers (USACE), Bureau of Indian Affairs (BIA), the City of Umatilla, and private owners.

The COU and CTUIR have entered into a written agreement to develop and construct a new pump station, a new water pipeline to the COU Water Treatment Facility, a new pipeline to the WWA, and a connection to the COU water system delivering raw and treated water to the CTUIR Wanapa Industrial Site and other COU customers. The Proposed Action represents an improvement over the existing infrastructure, increasing the reliability and conveyance capacity to the benefit of economic development and wildlife conservation.

Proposed Action

The U.S. Army Corps of Engineers (USACE) Walla Walla District, as the lead agency, proposes to issue the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and the City of Umatilla (City) a 2-year construction license and corresponding 50-year easement for the construction, operation, and maintenance of a new water pump station and improved conveyance infrastructure on USACE property. Although, the issuance of a temporary construction license and easement would only pertain to project components on USACE property, the scope of the environmental analysis was expanded to include interconnect and dependent project components that impact would impact resources within the action area. This would include construction of the new approximately 3,460-foot-long water pipeline to the COU Water Treatment Facility, the new 4,550-foot-long water pipeline to the WWA, and a connection to the COU water system for the purposes of delivering raw and treated water to the CTUIR Wanapa Industrial Site and to other COU customers.

Purpose of and Need for the Proposed Action

The Proposed Action is needed because the existing facilities are outdated and inefficient, causing excessive water losses and limiting the ability to meet growing demands for wildlife habitat, residential, commercial, and industrial uses. The facilities, in operation for 60 years, show significant aging, require increased maintenance, and incur higher costs, making them an inefficient use of CTUIR water resources and funds. To ensure effective, reliable, and environmentally responsible water delivery for wildlife,

economic development, and municipal needs, the existing infrastructure must be replaced and upgraded.

The purpose of the Proposed Action is to develop an efficient, reliable, and adequate water delivery system to address infrastructure inefficiencies and meet future demands. Objectives include replacing the existing CTUIR pump station with a modernized facility to improve diversion capacity, enhance fish screening, and minimize environmental impacts. The project also seeks to replace the deteriorating water conveyance infrastructure with a system that reduces water losses, ensures effective delivery to the Wanaket Wildlife Area, and supports economic development, including enhanced water supply for the CTUIR Wanapa Industrial Site. Additionally, the modernized system aims to improve operational efficiency, reduce energy consumption, and incorporate environmental improvements, such as fish-friendly intake screens and eliminating the open ditch.

Alternatives Considered

Alternatives considered for evaluation are the following:

Alternative: 1 No Action

Under this alternative, the USACE would not issue the COU and CTUIR a 2-year temporary construction license and 50-year easement for the implementation, operation, and maintenance of a new pump station, and associated conveyance infrastructure, on USACE property. The existing outdated pump station and conveyance infrastructure would remain in its current state, and there would be no actions undertaken to improve its operational capacity or efficiency. Without action, the area would remain consistent existing operations and baseline conditions.

Alternative 2: New Pump Station and Pipeline

Under this alternative, USACE would issue the COU and CTUIR a 2-year temporary construction license and 50-year easement for the implementation, operation, and maintenance of a new pump station, and associated conveyance infrastructure, on USACE property. In addition, scope of analysis would include construction of the new approximately 3,460-foot-long water pipeline to the COU Water Treatment Facility, the new 4,550-foot-long water pipeline to the WWA, and a connection to the COU water system for the purposes of delivering raw and treated water to the CTUIR Wanapa Industrial Site and to other COU customers.

Summary of Environmental Resources Evaluated

The National Environmental Policy Act and the Council on Environmental Quality’s implementing regulations specify that an environmental analysis should address those resource areas potentially subject to impacts. In addition, the level of analysis should be commensurate with the anticipated level of environmental impact.

The following resource areas have been addressed in this Environmental Assessment (EA): Geology and Soils, Noise, Water Quality, Terrestrial Resources, Fish and Aquatic Resources, Treaty and Historic Resources, Visual Resources, Social Effects, Atmospheric Pollutants and Changes to Long-term Weather Patterns, and cumulative effects.

The potential impacts to the following human environment resource areas were considered to be negligible or non-existent so they were not analyzed in detail in this draft EA: Air Quality, Land Use, Recreation, Socioeconomics, and Health and Human Safety.

Based on the environmental analysis conducted within the draft EA, the Alternative 2 (New Pump Station and Pipeline) was selected as the Preferred Alternative, as it best meets the project purpose and need while minimizing adverse environmental impacts.

Summary of Potential Environmental Consequences of the Preferred Alternative

The Preferred Alternative would result in less than significant effects to the all the resources considered for environmental analysis. The following table provides a tabular summary of the potential impacts to the resources associated with the Proposed Action.

Resource	Less than significant effects	Insignificant effects as a result of mitigation	Resource unaffected by action
Geology and Soils	X	-	-
Noise	X	-	-
Water Quality	X	-	-
Terrestrial Resources	X	-	-
Fish and Aquatic Resources	X	-	-
Treaty and Historic Resources	X	-	-
Visual Resources	X	-	-
Social Effects	X	-	-
Atmospheric Pollutants (APs) and Long-term Weather Patterns	X	-	-
Cumulative Impacts	X	-	-

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Acronyms

°C	degrees Celsius
°F	degrees Fahrenheit
BA	Biological Assessment
BIA	Bureau of Indian Affairs
BMP	Best Management Practice
CFR	Code of Federal Regulations
COU	City of Umatilla
CTUIR	Confederated Tribes of the Umatilla Indian Reservation
CWA	Clean Water Act
cy	cubic yards
EA	Environmental Assessment
EM	Engineer Manual
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
FWCA	Fish and Wildlife Coordination Act
MBTA	Migratory Bird Treaty Act
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NRHP	National Register of Historic Places
NTU	Nephelometric Turbidity Units
NWP	Nationwide Permit
ODEQ	Oregon Department of Environmental Quality
PSMP	Programmatic Sediment Management Plan
Regulatory	U.S Army Corps of Engineers, Portland District, Regulatory Division
RM	River Mile
SHPO	State Historic Preservation Officer
SPCC	Spill Prevention, Control, and Countermeasures
TCP	Traditional Historic Property
USACE	U.S Army Corps of Engineers
U.S.C.	United States Code
USFWS	U.S. Fish and Wildlife Service
WOTUS	Waters of the United States

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1 Introduction

1.1 Introduction and Background

The Confederated Tribes of the Umatilla Indian Reservation (CTUIR) own and operate a pump station along the south bank of the Columbia River, north of U.S. Highway 730, about 3.3 miles upstream of the McNary Lock and Dam. The pump station has two 150-horsepower Fairbanks More horizontal pump motors that are not used at the same time. The pumps run from April through October to take water under CTUIR's two water rights: Certificate No. 90790 (for wildlife, wetland maintenance, and stock use) and Certificate No. 90765 (for wildlife and wetland maintenance). Together, these water rights allow a maximum flow rate of 7,200 gallons per minute.

The current water pipeline is about 1,200 feet long and carries water up and over an earthen embankment with an elevation gain of about 175 feet. It then flows through an open, unlined earthen ditch that is about 4,400 feet long and delivers water under CTUIR rights to the 2,817-acre Wanaket Wildlife Area (WWA). The WWA was acquired by the Bonneville Power Administration under the Columbia River Basin Wildlife Program in 1993, and CTUIR now manages the area. The existing water facilities have operated for over 60 years but no longer meet capacity needs. This creates challenges for current and future demands for wildlife habitat as well as residential, commercial, and industrial uses.

The City of Umatilla (COU) has made an agreement with CTUIR to build a new, modern facility next to the existing pump station. The new facility would increase diversion capacity and feature improved fish screening, along with upgrading the associated water conveyance infrastructure. These improvements aim to enhance water delivery efficiency to support the Wanaket Wildlife Area and other designated uses. The project will involve construction on lands owned by private, municipal, and federal entities, including the U.S. Army Corps of Engineers (USACE), the Bureau of Indian Affairs (BIA), COU, and private owners.

The construction activities located on USACE owned lands would be authorized by the issuance of a 2-year temporary construction license and 50-year easement right of way for operation and maintenance. However, this Environmental Assessment (EA) would consider the potential direct and indirect environmental impacts associated with the entirety of the COU and CTUIR's proposed project, to include the components of work that impact resources within the jurisdiction of USACE Portland District Regulatory and fall outside of the geographic bounds of USACE owned lands.

In compliance with the National Environmental Policy Act (NEPA), this EA identifies, considers, and analyzes the potential environmental effects associated with the proposed pump station and pipeline replacement project and the No Action alternative. This EA was prepared in accordance with the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA) (Title 40 of the CFR Parts 1500-1508, May 20, 2022) and 33 CFR 230, Procedures for Implementing NEPA (July 1, 2023).

USACE's objective in preparing this EA is to determine if Proposed Action would result in environmental effects that could be in significant, individually, or cumulatively. If such environmental effects are determined to be less than significant a Finding of No

Significant Impact (FONSI) would be issued, and USACE would proceed with authorizing the proposed project on USACE owned lands. If any environmental effects are determined to be significant according to the USACE analysis, either mitigation would be employed to ensure effects are reduced below significant levels, or an Environmental Impact Statement (EIS) would be prepared before a decision is reached regarding implementation of the Proposed Action. If mitigation is employed to ensure effects are less than significant a mitigated FONSI would be issued.

USACE Walla Walla District is considered the lead agency and is responsible for conducting impacts analysis as well as authorization for components of the proposed project which occur on USACE owned lands.

1.2 Proposed Action Location

The Proposed Action is located within McNary Lock and Dam Project, Umatilla County, Oregon (Figure 1). More specifically, the action would take place along the river left (as one faces downstream) of the Columbia River, approximately 2 RM upstream of the McNary Lock & Dam. The Proposed Action would take place within Sections 07, 11 &12, Township 05N, Range 28 & 29 E, Willamette Meridian.

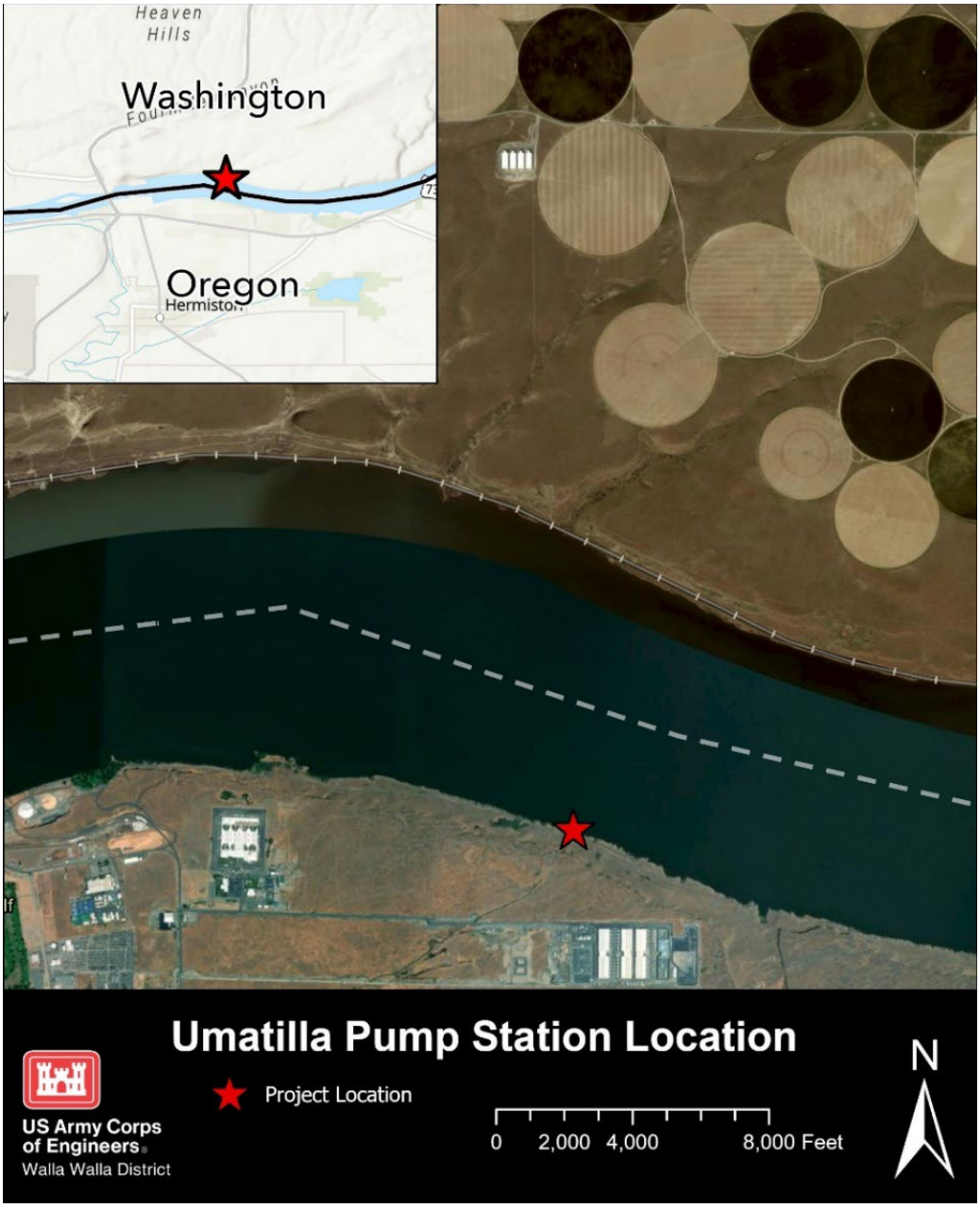

Figure 1. Project Location

1.3 Purpose of and Need for Action

The Proposed Action is needed because the existing facilities are outdated and inefficient, causing excessive water losses and limiting the ability to meet growing demands for wildlife habitat, residential, commercial, and industrial uses. The facilities, in operation for 60 years, show significant aging, require increased maintenance, and incur higher costs, making them an inefficient use of CTUIR water resources and funds. To ensure effective, reliable, and environmentally responsible water delivery for wildlife, economic development, and municipal needs, the existing infrastructure must be replaced and upgraded.

The purpose of the Proposed Action is to develop an efficient, reliable, and adequate water delivery system to address infrastructure inefficiencies and meet future demands. Objectives include replacing the existing CTUIR pump station with a modernized facility to improve diversion capacity, enhance fish screening, and minimize environmental impacts. The project also seeks to replace the deteriorating water conveyance infrastructure with a system that reduces water losses, ensures effective delivery to the Wanaket Wildlife Area, and supports economic development, including enhanced water supply for the CTUIR Wanapa Industrial Site. Additionally, the modernized system aims to improve operational efficiency, reduce energy consumption, and incorporate environmental improvements, such as fish-friendly intake screens and eliminating the open ditch.

1.4 Authority and NEPA History

The USACE authority for Walla Walla District, Real Estate Division, to issue construction licenses, leases, and easement to outside entities, to utilize USACE-administered lands is 10 U.S.C 2667. USACE would comply with ER 405-1-12, when administering these real estate actions, to ensure activities are consistent with federal laws and USACE project purposes, while balancing the public interest and environmental impacts. The proposed new pump station and pipeline project would not impair the function and usefulness of the McNary Lock and Dam Project. Therefore, a Section 408 (33 USC 408) permission is not required. The construction and modification of federal and Is being authorized by real estate out grant (I.e., temporary construction license), in accordance with Engineer Regulation 1130-2-550 (Chapter 17), which would address any operational concerns prior to issuance.

There is no prior NEPA documentation pertaining to the Proposed Action.

1.5 Permits

USACE has prepared this EA based upon an evaluation of federal, state, and local laws, statutes, regulations, and policies pertinent to the implementation of the Proposed Action, as described in Chapter 6.

Construction-related environmental permits relevant to the action include:

- Temporary Construction License, USACE Walla Walla District Real Estate Division.
- Construction General Permit, Oregon Department of Environmental Quality
- National Pollutant Discharge Elimination System Permit, Oregon Department of Environmental Quality
- Clean Water Act Section 404 Permit, USACE Portland District Regulatory Division
- Section 10 Permit, USACE Portland District Regulatory Division

Operational environmental permits relevant to the action include:

- Easement, USACE Walla Walla District Real Estate Division.

2.1 Proposed Action

The U.S. Army Corps of Engineers (USACE) Walla Walla District, as the lead agency, proposes to issue the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and the City of Umatilla (City) a 2-year construction license and corresponding 50-year easement for the construction, operation, and maintenance of a new water pump station and improved conveyance infrastructure on USACE property. Once the new pump station and conveyance infrastructure are adequately function tested, the existing pump station would be de-commissioned and demolished. Although USACE's issuance of a temporary construction license and easement would only impact project components on USACE property, the scope of analysis was expanded to include resources potentially impacted with the project action area, which would geographically extend beyond the bounds of USACE property. This would include the de-commission and fill of the existing open-air ditch, the re-alignment and construction of the new 3,460-foot-long water pipeline to the COU Water Treatment Facility, the new 4,550-foot-long water pipeline to the WWA, and a connection to the COU water system for the purposes of delivering raw and treated water to the CTUIR Wanapa Industrial Site and to other COU customers.

2.2 Alternatives Carried Forward for Analysis

The range of alternatives considered in an Environmental Assessment (EA) is not held to the same rigorous standard as that of an Environmental Impact Statement (EIS); an EA requires only a reasonable range of alternatives sufficient to support a Finding of No Significant Impact (FONSI), whereas an EIS mandates a more detailed and exhaustive evaluation of all reasonable alternatives.

Therefore, only two alternatives were considered and carried forwards for consideration and environmental analysis. These alternatives include the No Action and Proposed Action Alternatives. The No Action Alternative sets the baseline from which other alternatives are compared. Although the No Action Alternative is named as such, that does not mean there would be no impacts from the implementation of this alternative. The Proposed Action Alternative would represent the USACE's decision to issue the CTUIR and the COU a 2-year construction license and 50-year easement for the replacement of an existing water pump station and conveyance infrastructure, while considering the environmental implications of the project components outside of USACE property.

- Alternative 1: No Action
- Alternative 2: New Pump Station and Pipeline

2.3 Alternative 1: No Action

Under the No Action Alternative, no changes or alterations would be made to the existing conditions within the project area. No actions would be undertaken to replace

aging infrastructure, to include the existing pump station and the associated water conveyance system. Existing inefficiencies and operational reliability would continue.

The No Action Alternative would not meet the purpose of and need for the Proposed Action; however, as required by NEPA, the No Action Alternative is carried forward for analysis in this EA. The No Action Alternative is used to analyze the consequences of not undertaking the Proposed Action and serves to establish a comparative baseline for environmental analysis.

2.4 Alternative 2: New Pump Station and Pipeline

Under this alternative, USACE would issue the CTUIR and the COU a 2-year construction license to implement components of their proposed project on USACE owned lands. The alternative would include the construction of a new pump station (and corresponding features), staging of materials and vegetation removal, expansion of the existing gravel parking lot, placement of concrete working pads, construction of a small portion of the new water pipeline (leading to the WWA), and decommission and demolition of the existing pump station. The new pump station and water facilities would be constructed in the same general location along the Columbia River, adjacent to existing facilities (Figure 2 & 3).

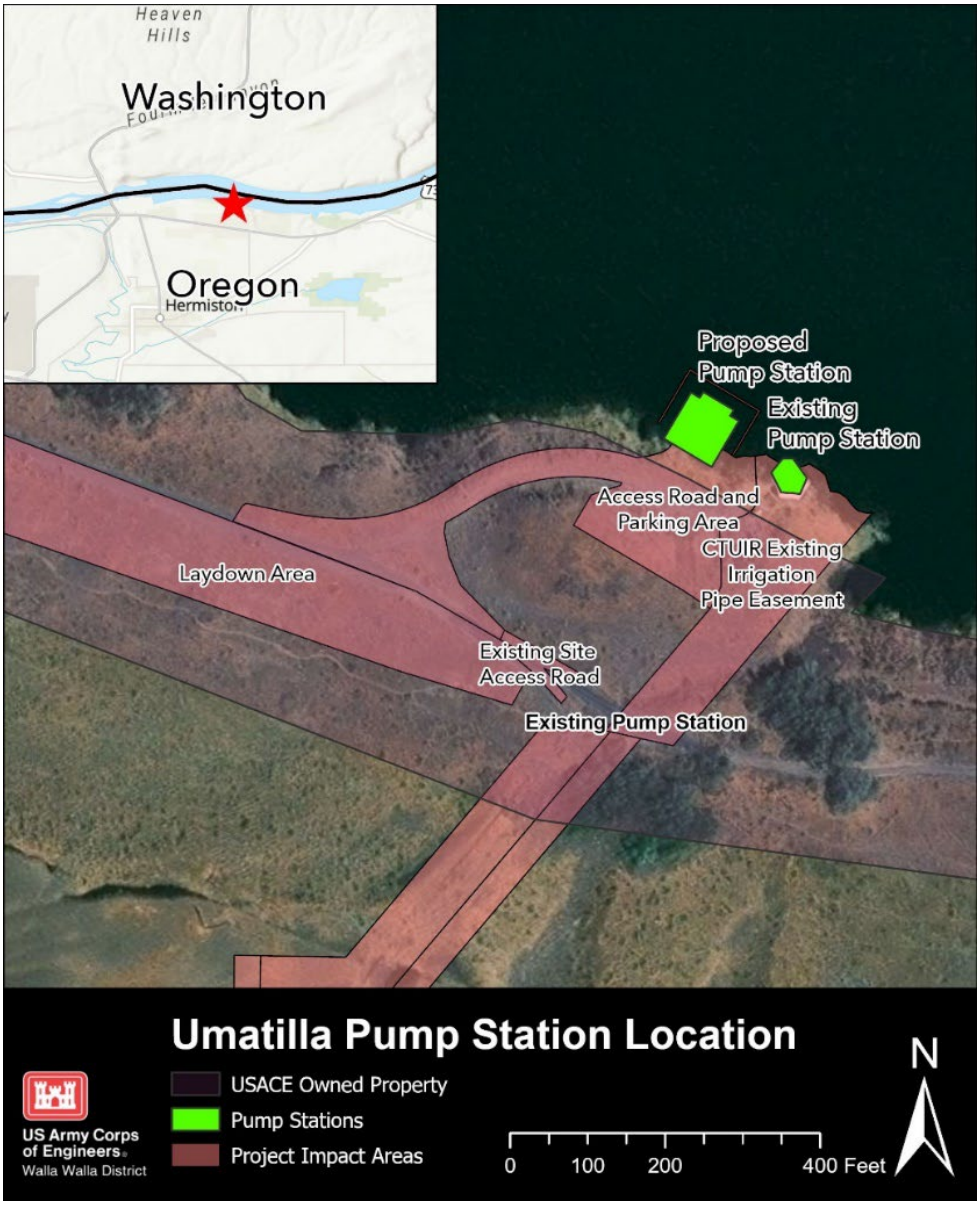

Figure 2. Proposed Action Overview.

Upon completion, the new water facilities would provide an operational improvement over the existing facilities through the elimination of existing inefficiencies and maintenance costs and enhancing the conveyance reliability and capacity. The new pump station would replace the existing station, once function tests are completed, and continue to support wildlife habitat, residential, commercial, and industrial needs. Once completed, USACE would issue an easement for right-of-way for the CTUIR and COU to operate and maintain the newly constructed water faclities and conveyance infrastructure.

Figure 3. Proposed Action Overview Continued.

Project construction would require temporary laydown (staging) areas. Two laydown areas would be designated on USACE property, along the Columbia River. Both areas are located west of the existing CTUIR pump station and on the landward side of the Lewis and Clark Commemorative Trail. The first laydown area would have a surface area of approximately 1 acre and would be used for materials staging. The second laydown area would have a surface area of approximately 1.6 acres and would be located approximately 0.45 miles west of the existing CTUIR pump station. This area would be used as a secondary staging area, primarily for equipment.

Two additional laydown areas would be designated on BIA lands are north of the Wanapa Road, along the utility corridor across Tax Lot 1000. The first would be approximately 0.9 acres, approximately 1,250 feet north of Wanapa Road, and

immediately east of the utility corridor. The second would be 4.6 acres, immediately north of Wanapa Road and west of the utility corridor.

Vegetation removal, minor excavation, and grading would be required at all laydown areas. Equipment for brush removal, excavation, and grading will include standard industry tools such as hand tools, dump trucks, excavators, and graders.

The new pump station's intended service life is expected to be 75+ years, and would include a river intake structure, fish exclusion screens, a concrete wet well structure with multiple pump bays, and pumps (Figure 4). The pump station facility would measure approximately 48 feet long and 50 feet wide covering an area of approximately 2,400 square feet. The station would feature a 33-foot-long by 38-foot-wide concrete masonry unit building housing the pumps on an operating deck approximately 17 feet above the ordinary highwater mark (OHWM). The station would extend approximately 29 feet from the OHWM at an average depth of approximately 8.2 feet. Additional components would include concrete pads for an emergency electrical generator and fuel storage, as well as an expanded gravel parking area. The concrete wet well would house multiple pump bays to ensure efficient water withdrawal, and the station's overall footprint would cover approximately 2,400 square feet. The permanent footprint below the OHWM would be up to approximately 0.027 acres.

Construction would begin with in-water work, necessitating a cofferdam to isolate the work area from the Columbia River. The U-shaped cofferdam would be comprised of sheet pile cells secured in place by drilling and grouting anchors and/ or piles below the OHWM into the substrate and wall framing above the OWHM. After the cofferdam has been sealed, water would be pumped out (approximately 359,000 gallons). This cofferdam would be operational during the Oregon Department of Fish and Wildlife in-water work window from December 1, 2023, and March 31, 2025. Once the cofferdam is functional, approximately 0.027 acre (221 cubic yards) of rock and soil overburden would be excavated, and the area graded for the new pump station. A concrete slab would be poured as a foundation below the OWHM, and the new pump station would be constructed above the concrete slab. The permanent footprint of the new pump station would extend parallel to 36 linear feet of shoreline, extend 33 feet perpendicular to the shoreline, and an average depth of 5 feet below the OWHM. Dump trucks would transport excavated materials offsite or to designated disposal areas, while concrete mixers would pour the wet well and other structural elements. Finally, concrete pads would be included to support an emergency electrical generator and fuel storage. The concrete pads would measure approximately 300 square feet. The Proposed Action is anticipated to result in a total of 0.97 acres of additional impervious services over the baseline to include the construction of the new pump station, concrete pads, access road, parking area, and the gravel pipeline access road (Figure 4).

A brush-cleaned, retrievable, cylindrical screen system is proposed for the water intakes. The river intake structure would be equipped with fish exclusion screen that complies with the National Marine Fisheries Service (NMFS) standards. The fish exclusion screen system would consist of two complete screen, track, and control systems and one track for future installation of a third screen. Each screen would include a 36-inch diameter rotating wedge wire cylinder, at least 48 inches long, with

external and internal brushes. The screens would be sized for a maximum approach velocity of 0.4 feet per second (fps) and a maximum slot size of 1.75 millimeters (mm). Rotation of the wedge wire screen against the brushes for cleaning would be triggered by a programable schedule, differential pressure across the screen of greater than 6 inches, and operator command. Each screen would be designed to travel independently along a vertical retrieval track to enable the screen to be removed from the water for inspection, maintenance, or storage.

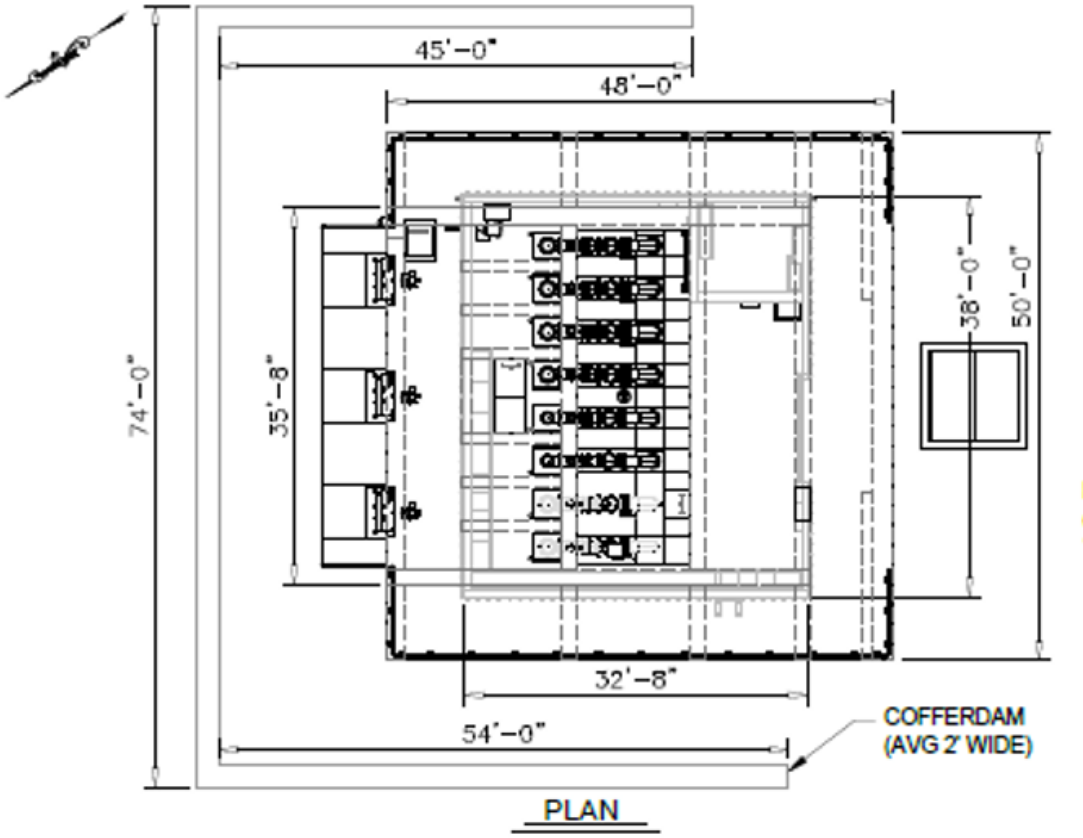

Figure 4. Overhead View of New Pump Station (Kleinschmidt 2024).

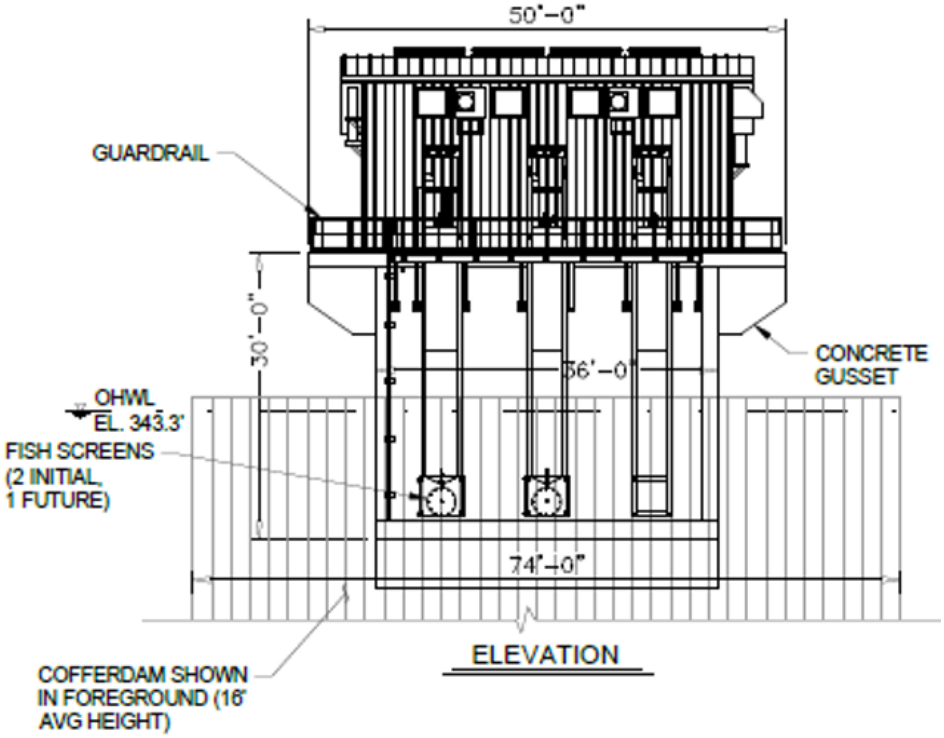

Figure 5. Front/ Vertical View of New Pump Station (Kleinschmidt 2024).

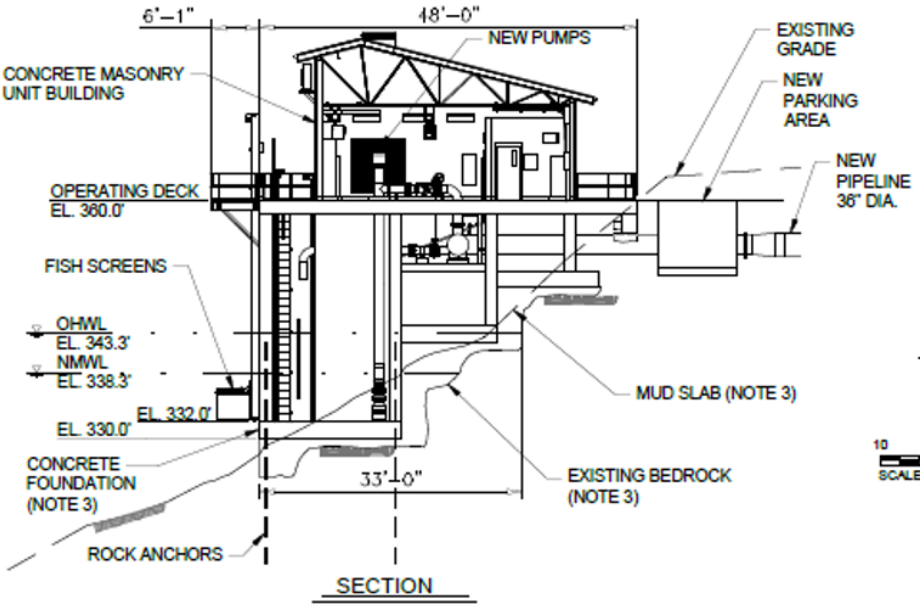

Figure 6. Side Profile View of New Pump Station (Kleinschmidt 2024).

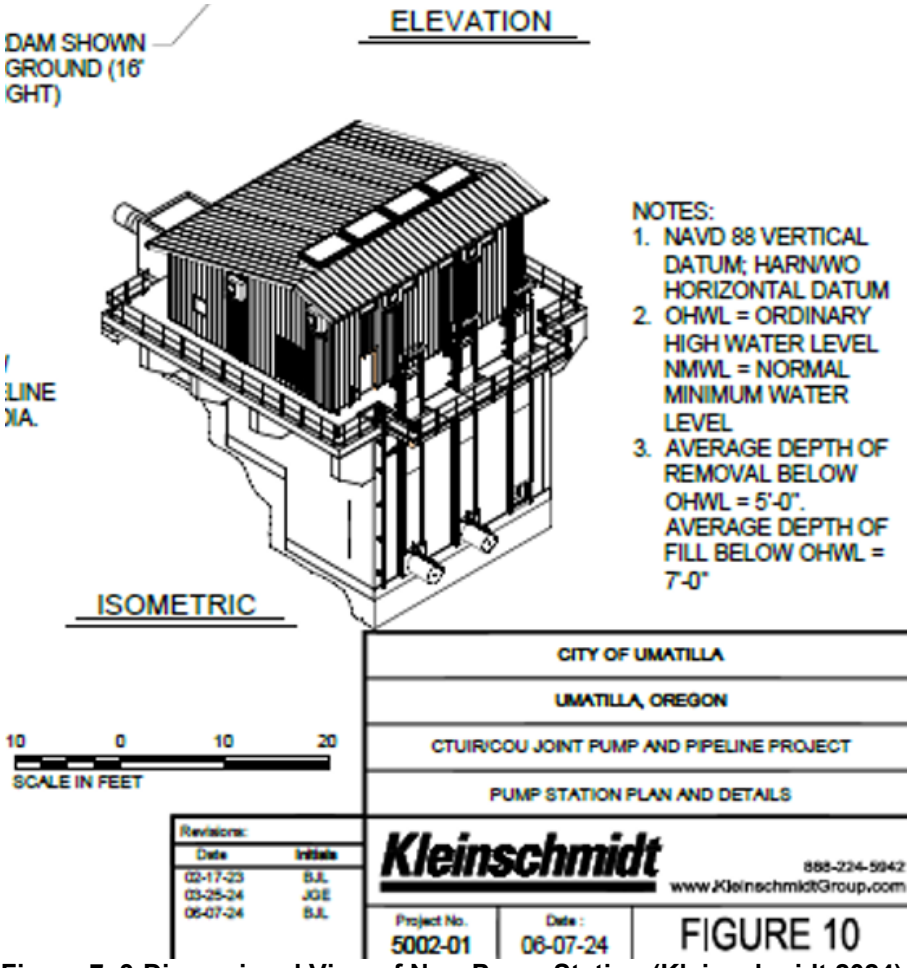

Figure 7. 3-Dimensional View of New Pump Station (Kleinschmidt 2024).

Once the foundation is prepared, crews would install the intake structure and pump station components, including piping, electrical systems, and control panels. The station would feature an emergency generator and fuel storage for reliability during outages. An expanded parking area, concrete pads, and improved access roads would facilitate ease of maintenance and operation. The newly completed pump station would deliver water to a new 4,550-foot-long water pipeline, located primarily on BIA and State of Oregon lands. The new water pipeline would be constructed along a new alignment that will replace the entire length of the existing water pipeline and the open, unlined earthen ditch to deliver water more efficiently to the WWA (Figures 4,5,6 & 7).

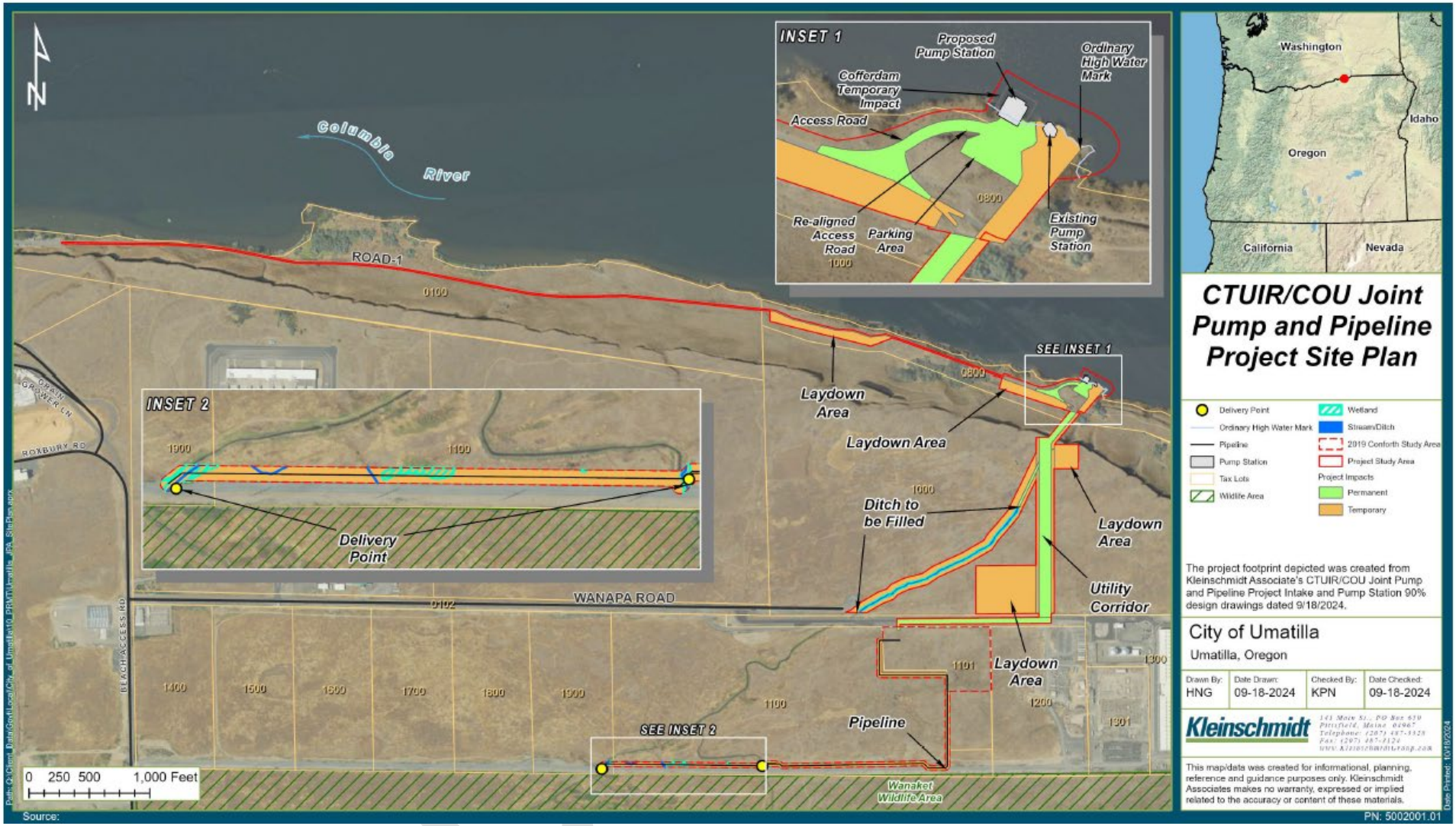

Figure 8. Pump Station and Pipeline Project Overview (Kleinschmidt 2024).

Installation of the new water pipeline would occur in phases using best management practices (BMPs) outline in Section 2.5. The existing 1,200-foot-long water pipeline would be removed, and the existing open, unlined earthen ditch in Tax Lot 1000 would be backfilled; this will be followed by restoration of the affected areas. Back filling would be completed with an excavator or bulldozer, initially using adjacent spoils that line the ditch which would have been removed during construction and dredging. Additional fill would be needed to match surrounding elevations; this material would be sourced from an established commercial site. A temporary water pipe would be used for approximately 1-year before the ditch is filled and restored. The new water pipelines to the COU Water Treatment Facility and from the Water Treatment Facility to the WWA would be installed in trenches using excavators or trenchers. Once complete, the new pipeline would aid in conveying water to the Wanaket Wildlife Area (WWA) at approximately 8.57 cubic feet per second.

Installing the intake structure and pump station components would typically require a combination of specialized equipment. A crane would lift and place the intake structure, piping, and heavy components like the emergency generator and fuel storage tanks. Excavators would assist in trenching for the piping and conduits, while compactors would backfill and stabilize the soil around installations. Bucket trucks and mobile lifts would enable crews to install electrical systems and control panels safely. Graders and rollers would be used to construct and improve the access roads and parking area, ensuring a stable surface for ongoing maintenance. Throughout the process, stormwater management systems and erosion control tools would be installed to mitigate construction impacts on water quality.

Following completion of the new pump station and conveyance infrastructure, the existing pump station would be decommissioned. The overhead electrical wires, power poles, and transformer would be removed and hauled off-site to a landfill or recycling center. All areas disturbed by implementation of the Proposed Action would be revegetated with a native grass mix. For restoration, hydro seeders or broadcast seeders would distribute native plant seeds, supported by mulchers to protect soil and promote revegetation. All demolition materials would be managed and disposed of in accordance with state and federal regulations. All Proposed Action related debris would be removed, and roadways would be swept.

Environmental safeguards would be integral throughout the project. Erosion and sediment control measures, such as silt fences and stabilized construction entrances, would be implemented at all work sites. Air pollution, noise, and water quality impacts would be minimized through compliance with applicable laws and best management practices. In-water work would include fish salvage operations to relocate aquatic species from the work area.

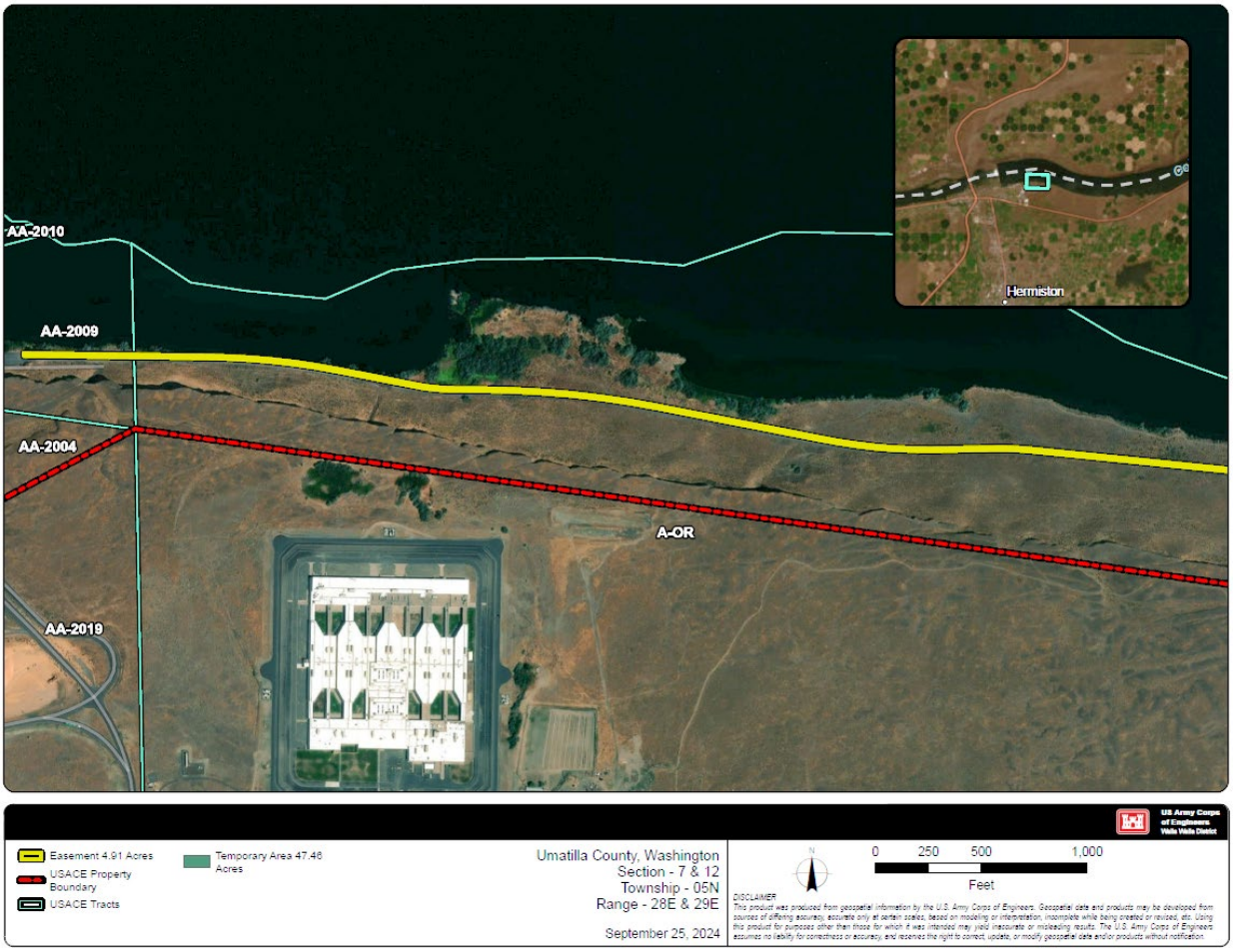

Figure 9. Planned USACE Easement Area.

Easements across lands managed by the U.S. Army Corps of Engineers (USACE), would be secured for the project. USACE would issue a 50-year easement for the operation and maintenance of the newly constructed pump station and conveyance infrastructures. The total easement acreage would amount to approximately 4.91 acres. The easement would follow the access roadway along the Columbia River, leading to the pump station location (Figure 9 & 10).

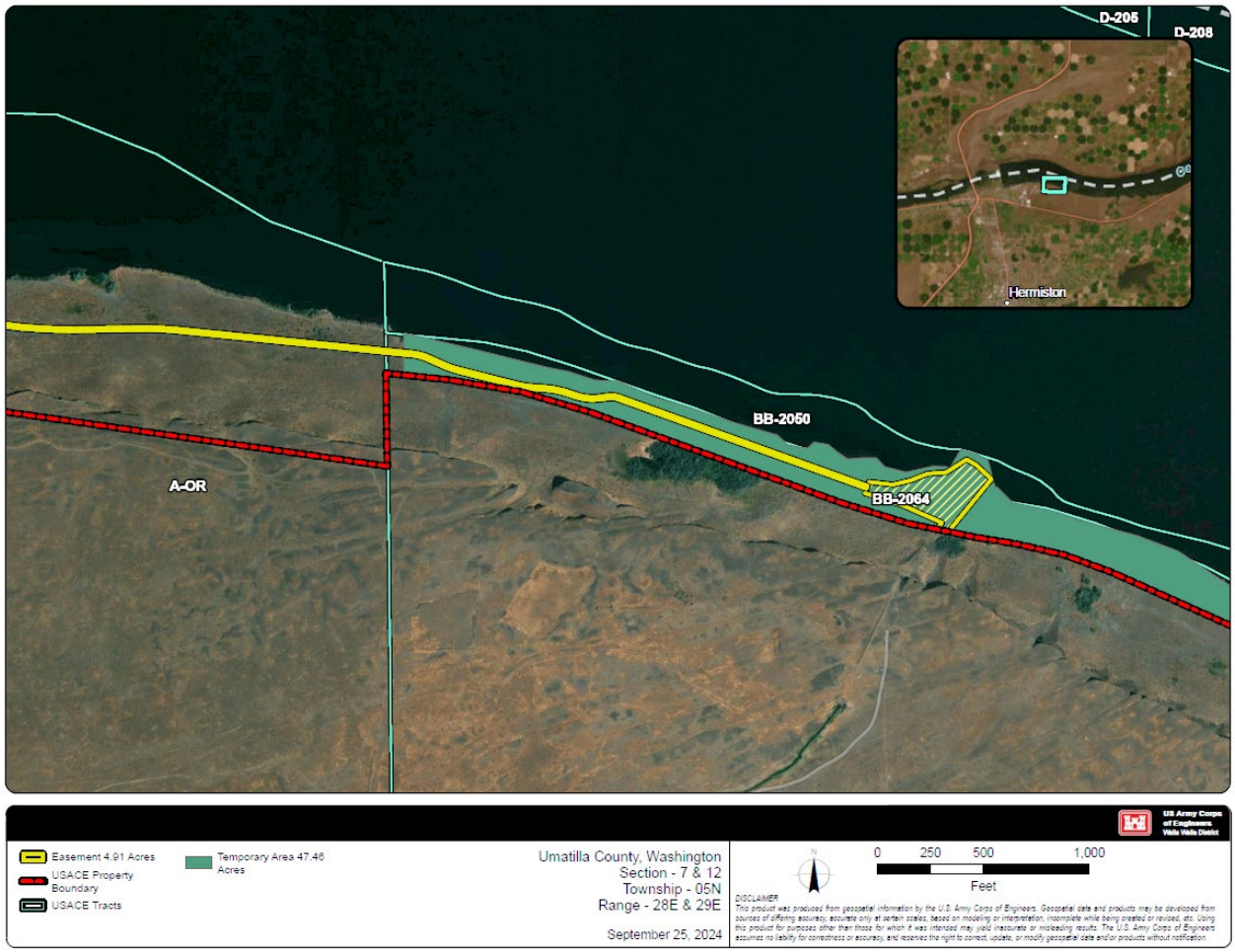

Figure 10. USACE Easement Access Area to New Pump Station Location.

Pre-construction work would begin in December 2025, pending permit approval, aligning with the December 1 in-water work period. The construction of the cofferdam is estimated to be completed by March 31, 2026. The construction of the new pump station would begin in April 2026. The cofferdam would be removed starting December 1, 2026, and the area would be restored to pre-construction condition by March 31, 2027. Post-construction activities would include daily operation of the new water facilities, as well as any future maintenance activities. Once again, the intended service life for the newly constructed pump station and conveyance infrastructure is anticipated to be 75+ years.

2.5 Best Management Practices Included in Proposed Action

This section presents an overview of the BMPs that are incorporated into the Proposed Action in this document. BMPs are existing policies, practices, and measures that USACE would recommend to the application to reduce the environmental impacts of designated activities, functions, or processes.

Although BMPs mitigate potential impacts by avoiding, minimizing, reducing, or eliminating impacts, BMPs are distinguished from potential mitigation measures

because BMPs are (1) existing requirements for the Proposed Action, (2) ongoing, regularly occurring practices, or (3) not unique to this Proposed Action. In other words, the BMPs identified in this document are part of the Proposed Action and are not potential mitigation measures proposed as a function of the NEPA environmental review process for the Proposed Action. Mitigation measures are discussed separately in Chapter 3.

BMPs include actions required by federal or state law or regulation.

Table 2-1. BMPs Included in the Proposed Action.

BMP Name	Description
In-Water Work Restrictions	Fish Exclusion During In-Water Work: Use fish exclusion screens to protect ESA-listed fish species. Follow NMFS guidelines and design fish screens to prevent fish entrainment.
	Seasonal In-Water Work Windows: Limit in-water construction to Dec. 1 - March 31, adhering to in-water work restrictions for fish and water quality protection per USACE and NMFS standards.
Water Quality Protection	Sediment Control and Erosion Prevention: Employ turbidity curtains, silt fences, and sediment traps around work areas to minimize sedimentation in the Columbia River. Monitor water quality regularly during construction to ensure compliance with state and federal standards.
	Stormwater Management Systems: Implement best practices for managing runoff, such as sediment basins, filter socks, and silt fences, following the USACE's Construction Stormwater General Permit requirements.
Historic and Ecological Resource Protection	Historic Resource Coordination: Work with local tribes (e.g., Confederated Tribes of the Umatilla Indian Reservation) to ensure protection of archaeological and historic sites. Implement monitoring during excavation as per Section 106 requirements.
	Riparian Habitat Protection: Minimize impact to riparian zones by marking sensitive areas and restoring vegetation with native species post-construction, in compliance with USACE guidelines for wetlands and riparian habitat restoration.
Aquatic and Wildlife Habitat Protection	Fish and Wildlife Habitat Protection: Follow USACE and state guidelines to avoid disturbing critical fish habitats, especially for ESA-listed species like salmon and steelhead. Use fish screens on the intake structure to ensure compliance with NMFS guidelines.

	Flow Regulation and Wildlife Habitat: Implement a flow distribution structure to manage water allocation to the Wanaket Wildlife Area (WWA) and other users, ensuring it does not adversely impact wildlife habitat.
Sediment and Soil Management	Erosion Control in Sensitive Areas: Install erosion control measures like coir logs, erosion blankets, and geotextiles to stabilize soils, particularly in areas of high wind or riverbank exposure in the Umatilla region.
	Soil Restoration: Use native plant species to revegetate disturbed areas in accordance with USACE's native vegetation restoration practices to support long-term ecological recovery.
Equipment and Construction Management	Trenchless Construction Techniques: Utilize trenchless methods, such as horizontal directional drilling (HDD), to minimize soil disturbance and preserve environmentally sensitive areas, as per USACE's commitment to minimizing land disturbance.
	Dust Control Measures: Apply water or dust control agents on active construction sites, especially in dry, wind-prone areas, in compliance with local air quality standards.
Wildlife and Species Protection	Endangered Species Protection: Implement protocols for avoiding or minimizing impacts to ESA-listed species. Follow USACE's Section 7 consultation requirements and implement actions for species protection.
	Invasive Species Control: Ensure equipment is cleaned before entering work zones to prevent the spread of invasive species, following USACE invasive species management protocols.
Fire Risk and Safety	Wildfire Risk Mitigation: Adhere to USACE's fire prevention protocols, including keeping fire safety equipment on-site, restricting fire-prone activities during high-risk periods, and training workers in emergency fire response.
Hydrology and Floodplain Management	Floodplain Function Protection: Follow USACE guidance for floodplain management to ensure that construction activities do not disrupt natural floodplain functions. Use designs that allow for natural water flow and minimize obstructions.
	River Hydrodynamic Monitoring: Monitor hydrological conditions during cofferdam installation and other in-water work to ensure they do not interfere with river hydrodynamics, following USACE hydrology standards.

Groundwater and Spill Management	Fuel and Chemical Spill Prevention: Implement secondary containment systems for fuel and chemicals and train personnel on spill response procedures as outlined in USACE spill prevention and response protocols. Conduct regular inspections of storage areas to ensure compliance.
Local Environmental Considerations	Shallow Aquifer Protection: Avoid construction activities near vulnerable groundwater areas or use appropriate barriers to prevent contamination. Follow USACE guidelines for managing construction-related impacts on shallow aquifers in sensitive areas like Umatilla.
	Sediment Control and Restoration: Implement erosion control measures and soil stabilization practices consistent with USACE guidelines for minimizing sediment runoff and restoring disturbed areas with native vegetation.

3 Affected Environment and Environmental Consequences

This chapter presents a description of the environmental resources and baseline conditions that could be affected from implementing any of the alternatives and includes an analysis of the potential direct and indirect effects of each alternative.

All potentially relevant environmental resource areas were initially considered for analysis in this EA. In compliance with NEPA and CEQ's regulations, the discussion of the affected environment focuses only on those resource areas potentially subject to impacts. Additionally, the level of detail used in describing a resource is commensurate with the anticipated level of potential environmental impact.

This section includes Geology and Soils, Noise, Water Quality, Terrestrial Resources, Fish and Aquatic Resources, Treaty and Historic Resources, Aesthetic/ Visual Resources, Disadvantaged Populations, and Long-term Weather Patterns.

The potential impacts to the following resource areas are negligible or non-existent so they were not analyzed in detail in this EA: Air Quality, Land Use, Recreation, Socioeconomics, and Health and Human Safety.

Table 3-1. Environmental Resources Not Evaluated Further.

Resource	Explanation
Air Quality	The project area meets Oregon State's ambient air quality standards and is in "attainment". No Statement of Conformity is needed in attainment areas. Air quality would be negligibly affected by implementation of the Proposed Action alternative.
Land Use	The Proposed Action would result in no change to the land use classifications of the area.
Recreation	Implementation of the Proposed Action would result in a temporary closure of a section of the Lewis and Clark Commemorative Trail. Recreational access to the trail would promptly be restored upon completion of work, and overall would represent a negligible impact to recreation.
Socioeconomics	The Proposed Action would not result in the socioeconomic factors such as employment, population, or housing availability of nearby communities.
Health and Human Safety	The Proposed Action does not have the potential to impact health and human safety due the nature of the action and its spatial extent from nearby residential areas.

The following descriptors are used in the body of this chapter for consistency in describing impact intensity.

- No or Negligible Impact: The action would result in no impact, or the impact would not change the resource condition in a perceptible way. Negligible is defined as of such little consequences as to not require additional consideration or mitigation.
- Minor Impact: The effect to the resource would be perceptible; however, not major, and unlikely to result in an overall change in resource character.

- Moderate Impact: The effect to the resource would be perceptible and may result in an overall change in resource character. Moderate impacts are not significant due to their limited context (the geographic, biophysical, and social context in which the effects would occur) or intensity (the severity of the impact, in whatever context it occurs).
- Significant Impact: The effect to the resource would be perceptible and severe, or the effect would be unlawful or unpermitted. The effect would result in an adverse change in resource character and require the completion of an Environmental Impact Statement.
- Direct Impacts: Direct effects are caused by the action and occur at the same time and place. Activities that occur from implementation of the Proposed Action would directly effect a change, and initial effects would be immediately evident.
- Indirect Impacts: Indirect effects are caused by the action but are later in time or farther removed in distance but are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems. Activities that occur from implementation of the Proposed Action would not effect this change, but would enable change to occur, or change would occur later in time, or farther in distance than the actions.
- Cumulative Impacts: Cumulative impact is the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

A clear statement regarding significance is presented at the beginning and end of each resource evaluation.

3.1 Geology and Soils

3.1.1 Affected Environment

This discussion of geological resources includes topography, geology, and soils of a given area. Topography is typically described with respect to the elevation, slope, and surface features found within a given area. The geology of an area may include bedrock materials, mineral deposits, and fossil remains. The principal geological factors influencing the stability of structures are soil stability and seismic properties. Soil refers to unconsolidated earthen materials overlying bedrock or other parent material. Soil structure, elasticity, strength, shrink-swell potential, and erodibility determine the ability for the ground to support structures and facilities. Soils are typically described in terms of their type, slope, physical characteristics, and relative compatibility or limitations with regard to particular construction activities and types of land use.

The geology of the Proposed Action area is shaped by the Columbia River Basalt Group, a series of Miocene-era basalt flows that dominate the regions subsurface.

These basalt formations underlie the area and contribute to the rugged terrain and prominent rock outcrops visible in the landscape. Overlying these basalt flows are alluvial deposits near the Columbia River, reflecting historical sediment transport and deposition processes.

The topography of the site transitions from relatively flat lowlands adjacent to the river to steeper upland slopes. The action area includes moderate to steep slopes (10–70%) characteristic of the rock outcrop Xeric Torriorthents complex (85F) and gentle slopes (0–5%) typical of the Starbuck-rock outcrop complex (94A). This variation influences runoff patterns, with steeper areas being more prone to erosion and sediment transport.

Soils within the action area are predominantly shallow and well-drained, with limited organic material and a high rock content. The Xeric Torriorthents complex is found on steeper slopes and is characterized by shallow, rocky soils with low fertility and high erosion potential when vegetation is disturbed. In contrast, the Starbuck-rock outcrop complex occupies flatter areas and includes a mix of finer-textured soils and exposed rock, which provides slightly better stability but still has moderate susceptibility to erosion under certain conditions. Approximately 12% of the area consists of water, representing the Columbia River, where sediment dynamics are influenced by both natural and anthropogenic processes (Figures 11, 12, & 13).

Sediments in the Columbia River and its nearshore environments are primarily fine-grained sands and silts transported by fluvial processes. Construction activities that disturb soils near the riverbank could result in increased sediment loading into the river, particularly if erosion control measures are inadequate. The steep slopes associated with the Xeric Torriorthents complex and the proximity of the site to the river exacerbate this risk.

Overall, the geology and topography of the area provide a stable framework, but the thin, rocky soils are highly susceptible to erosion, especially on steeper slopes. Construction-related disturbances, including vegetation removal and soil compaction, could increase the likelihood of soil displacement and sediment transport into the Columbia River. Proper site management, including erosion control measures, is essential to minimize these impacts and maintain soil stability during and after construction.

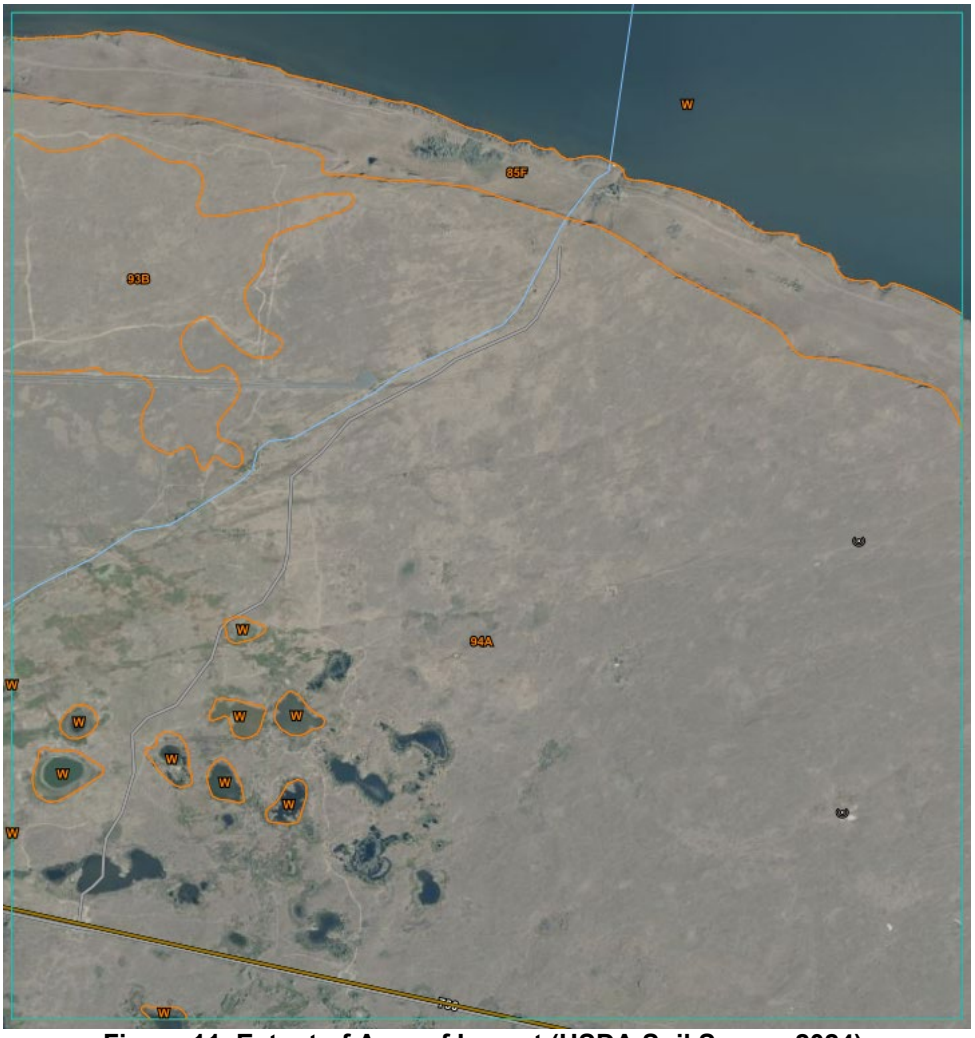

Figure 11. Extent of Area of Impact (USDA Soil Survey 2024).

Figure 12. Extent of New Pump Station (USDA Soil Survey 2024).

Umatilla County Area, Oregon (OR667)

Umatilla County Area, Oregon (OR667)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
85F	Rock outcrop-Xeric Torriorthents complex, 10 to 70 percent slopes	115.7	7.7%
93B	Starbuck very fine sandy loam, 2 to 20 percent slopes	92.3	6.1%
94A	Starbuck-Rock outcrop complex, 0 to 5 percent slopes	1,087.1	72.2%
W	Water	211.1	14.0%
Totals for Area of Interest		**1,506.1**	**100.0%**

Figure 13. New Pump Station Area of Impact Soil Composition (USDA Soil Survey 2024).

3.1.2 Environmental Consequences

Geological resources are analyzed in terms of drainage, erosion, prime farmland, land subsidence, beach stability and erosion, and seismic activity. The analysis of topography and soils focuses on the area of soils that would be disturbed, the potential for erosion of soils from construction areas, and the potential for eroded soils to become pollutants in downstream surface water during storm events. The analysis also examines potential impacts related to seismic events. The potentially affected environment for geological resources is limited to lands that would be disturbed by any proposed facility development or demolition.

Significant impacts would occur if proposed activities would permanently and substantially alter the geology and soil features present within the action area, thus modifying the landscape to the extent that the action area no longer exhibits the resource characteristics and functions consistent with baseline conditions for the action area and surrounding environment; if activities would substantially alter soil drainage characteristics; induce widespread erosion; meaningfully or substantively impact prime

farmland or land subsistence practices; or induce seismic activity potentially threatening human health and wellbeing.

3.1.2.1 Alternative 1: No Action Alternative

Under the No Action Alternative, USACE would not issue the COU and CTUIR a temporary construction license to implement their Proposed Action components on USACE owned lands. The action area, where the existing pump station and pipeline system would remain in its current condition. Without project implementation, existing soil and geological resources in the action area would not experience direct disturbances such as excavation, trenching, vegetation removal, or compaction. Current conditions, including natural drainage patterns and soil permeability, would remain unchanged. There would not be any direct impacts associated with alternative.

Indirect impacts may arise from the continued operation of inefficient infrastructure, which could lead to localized soil compaction and increased erosion from maintenance activities. Furthermore, the lack of proactive restoration measures, such as revegetation or grading, would limit opportunities to stabilize soils and enhance the geological stability of the area. The intensity of these impacts would be minor and would not substantially alter the geology, and soil features present within the action area.

Overall, under the No Action Alternative, there would be no new construction-related soil disturbances. The potential for negligible to minor indirect adverse effects to geology from erosion caused by on-going maintenance activities would occur. These impacts would not substantially alter the action area's resource characteristics, or impact prime farmland. Therefore, implementation of the alternative would result in less than significant impacts to soil and geological resources.

3.1.2.2 Alternative 2: New Pump Station and Pipeline

Under this alternative, USACE would issue the COU and CTUIR a temporary construction license to construct a new pump station and improve existing conveyance infrastructure on USACE owned lands. Furthermore, re-alignment and excavation of the new pipeline would occur on BIA lands, along with the de-commissioning of the existing pipeline along the old alignment and back-filling of the existing open-air ditch to the WWA. Implementation of the Proposed Action would result in direct impacts during construction and restoration activities. The action would involve soil disturbances from excavation, grading, and vegetation removal, primarily at four temporary laydown areas—two on USACE lands and two on BIA lands. The removal of vegetation within laydown areas and construction zones could increase the vulnerability of soils to erosion. Additionally, excavation for the pump station foundation, intake structure, and pipeline trenching may temporarily alter soil drainage characteristics. Construction traffic would use the existing Lewis and Clark Commemorative Trail, with a new access road built to the pump station and the existing road removed and restored. The trail would be temporarily closed for public safety, with signage and restricted access for construction vehicles. A Blasting Plan would be developed and approved by EPA and ODEQ, ensuring compliance with all relevant regulations.

Construction of the pump station (approximately 2,400 square feet), concrete pads, and access roads would permanently disturb approximately 0.97 acres of soil, reducing permeability, potentially altering drainage patterns, and increasing runoff potential. Sedimentation may occur during precipitation events before vegetation is reestablished. Excavation for the pump station foundation and wet well structure would displace soils, exposing them to short-term erosion risks during construction. Grading and gravel placement for parking areas and roads would compact soils, further limiting their infiltration capacity and reducing long-term soil productivity in these areas.

Decommissioning of the existing pump station may also directly disturb soils. However, grading and revegetation with native species would provide long-term benefits by stabilizing soils and reducing erosion potential. Indirect impacts may include temporary disruption of soil recovery and vegetation regrowth during restoration. However, these changes are confined to the project footprint and would not substantially alter the overall drainage characteristics of the action area.

Construction equipment use, such as excavators and graders, would exacerbate soil compaction across work areas, potentially affecting soil structure and health. While short-term erosion risks are expected, the implementation of erosion control measures such as silt fences and stabilized entrances would reduce sediment transport. Post-construction restoration, including revegetation with native grasses, would address both direct and indirect soil impacts, stabilizing disturbed areas and mitigating erosion over the long term. The project's permanent impacts are confined to areas converted to impervious surfaces, while BMPs and restoration efforts would help limit broader effects on terrestrial soils.

Indirect impacts include potential sediment transport from disturbed areas into the Columbia River during storm events, potentially impacting water quality and sediment dynamics. Additionally, soil compaction from construction equipment may alter subsurface drainage and increase runoff in adjacent areas. Restoration activities, including regrading and revegetation with native plants, are expected to minimize these indirect effects over time. Native vegetation would stabilize soils, reduce erosion risk, and restore drainage characteristics to conditions similar to the baseline.

The direct and indirect impacts would range from minor to moderate in intensity. The adverse impacts of construction activities would be minimized through the application of BMPs, and restoration activities outlined within Section 2.5. These measures would ensure the landscape retains its baseline resource characteristics and functions over time.

Overall, implementation of the proposed project would result in minor to moderate adverse direct and indirect impacts to soils and geology through ground disturbance during construction and restoration activities. The Proposed Action would result in localized impacts to soils and geology, including permanent disturbance to approximately 0.97 acres and temporary erosion risks during construction. However, these impacts would not substantially alter the action area's resource characteristics, as minimization measures, BMPs, and restoration efforts would ensure consistency with baseline conditions and prevent widespread or long-term effects. Therefore, implementation of the Proposed Action alternative would result in less than significant impacts to soils and geology.

3.2 Noise

3.2.1 Affected Environment

Ambient noise sources for the Proposed Action area would include the Columbia River shoreline, nearby vegetation, and any emitters within a one-mile radius. Ambient noise levels in the area are low to moderate, characteristic of rural and semi-industrial zones near water bodies, with primary sources including natural sounds (wind, water flow, and wildlife), occasional recreational activities, and operational noise from McNary Lock and Dam. The nearest noise-sensitive receptors include recreational users of the Lewis and Clark Commemorative Trail, located approximately 500 feet from the project site, and wildlife species inhabiting the adjacent terrestrial and aquatic environments. Residential areas are located more than a mile from the site, reducing the likelihood of human noise disturbance from project activities. Existing noise levels along the shoreline are influenced by sporadic human activities and distant industrial operations, but they generally support sensitive wildlife species accustomed to quiet environments. The Columbia River serves as a habitat for various aquatic and avian species that may be susceptible to increased noise levels, particularly during construction. Noise attenuation in the area is affected by natural features, such as vegetation and topography, which help buffer sound transmission to distant receptors. These features contribute to maintaining the low-noise environment critical for wildlife and recreational experiences. Overall, the baseline noise environment in the action area supports a mix of human and ecological uses, with limited industrial noise intrusion.

3.2.2 Environmental Consequences

Significant impacts would occur if generated noise were permanently intrusive to nearby sensitive receptors; if it exceeds applicable noise limit thresholds; or if it causes harm or injury to people or communities.

3.2.2.1 Alternative 1: No Action

Under the No Action Alternative, USACE would not issue the COU and CTUIR a construction license to implement their Proposed Action components on USACE owned lands. The existing conditions for noise would remain the same. No new noise sources would be introduced to the action area. Existing ambient noise conditions, characterized as low to moderate and influenced by natural sounds (e.g., wind, water flow, and wildlife) and occasional recreational activities, would remain unchanged. The nearest sensitive receptors, including recreational users of the Lewis and Clark Commemorative Trail and wildlife species in adjacent terrestrial and aquatic environments, would continue to experience current noise levels without disruption. Residential areas located over a mile away would remain unaffected by project-related noise.

The absence of construction activities would eliminate the potential for short-term increases in noise levels from equipment such as excavators, cranes, concrete mixers, and other machinery. Additionally, there would be no need for temporary staging areas or access roads, further preventing localized noise impacts. Wildlife species sensitive to

noise disturbances, particularly those in the Columbia River and its shoreline habitat, would not experience stress or behavioral changes associated with construction-related noise.

Without implementation of the Proposed Action, the existing infrastructure, including the aging pump station and open conveyance ditch, would remain operational. Occasional maintenance activities for this infrastructure would continue to generate intermittent, low-level noise, consistent with current conditions. However, the lack of modernized, efficient infrastructure may necessitate more frequent maintenance intervals over time, potentially resulting in minor, localized noise impacts.

Overall, under the No Action Alternative, noise levels in the action area would remain consistent with current conditions, with no new sources of noise introduced. Impacts to sensitive receptors, including recreational users and wildlife, would remain negligible. Consequently, the No Action Alternative would result in less than significant impacts from noise.

3.2.2.2 Alternative 2: New Pump Station and Pipeline

Under this alternative, USACE would issue the COU and CTUIR a temporary construction license to construct a new pump station and improve existing conveyance infrastructure on USACE owned lands. Furthermore, re-alignment and excavation of the new pipeline would occur on BIA lands, along with the de-commissioning of the existing pipeline along the old alignment and back-filling of the existing open-air ditch to the WWA. Implementation of the Proposed Action would directly contribute to new noise sources within the action area. During construction, temporary noise impacts would result from equipment operation, such as excavators, cranes, concrete mixers, and other heavy machinery. Noise levels would be highest during in-water work for the intake structure, which requires the use of a cofferdam and associated equipment like vibratory hammers. This activity would occur during the in-water work window (December 1, 2023, to March 31, 2025), minimizing potential impacts to aquatic species during sensitive life stages. Implementation of erosion control measures, staging areas, and access road improvements would contribute to intermittent noise increases in the area.

Noise-sensitive receptors include recreational users of the Lewis and Clark Commemorative Trail, located approximately 500 feet from the project site, and wildlife species inhabiting the adjacent terrestrial and aquatic environments. The trail’s proximity to construction activities could result in temporary disturbances for recreational users, with noise attenuated to some extent by natural features such as vegetation and topography, and spatial distance. Wildlife species, particularly those in the Columbia River, may experience altered behavior during construction due to increased noise levels. Aquatic species are expected to be affected minimally due to compliance with National Marine Fisheries Service guidelines and in-water work window restrictions.

Post-construction, operational noise from the pump station and pipeline would include low-level sounds generated by pumps, the emergency generator, and associated

equipment. These noise levels would likely be moderate and consistent with semi-industrial zones near water bodies. The pump station noise levels would remain in compliance with applicable local and state noise thresholds. Wildlife species and recreational users are expected to acclimate to the new noise sources over time.

Maintenance activities, such as equipment servicing or occasional pipeline inspections, would generate intermittent noise, consistent with existing conditions. The expanded gravel parking area and improved access roads would facilitate more efficient maintenance operations, reducing the frequency and duration of these activities.

Implementation of the Proposed Action would directly introduce minor temporary, construction-related noise impacts and indirectly result in minor long-term noise increases associated with pump station operation. These impacts are anticipated to be localized, short-term, and below significance thresholds for sensitive receptors. Noise minimization measures, including compliance with best management practices and timing restrictions, would ensure that noise impacts to recreational users, wildlife, and aquatic species are minimal. Overall, implementation of the alternative would result in a less than significant impact from noise generation.

3.3 Water Quality

3.3.1 Affected Environment

This discussion of water resources includes groundwater, surface water, marine waters, wetlands, floodplains, and shorelines. This section also discusses the physical characteristics of marine waters, wetlands, etc.; Aquatic wildlife and vegetation are addressed in Section 3.5, Fish and Aquatic Resources.

Groundwater is water that flows or seeps downward and saturates soil or rock, supplying springs and wells. Groundwater is used for water consumption, agricultural irrigation, and industrial applications. Groundwater properties are often described in terms of depth to aquifer, aquifer or well capacity, water quality, and surrounding geologic composition. Sole source aquifer designation provides limited protection of groundwater resources which serve as drinking water supplies.

Surface water resources generally consist of wetlands, lakes, rivers, and streams. Surface water is important for its contributions to the economic, ecological, recreational, and human health of a community or locale. A Total Maximum Daily Load (TMDL) is the maximum amount of a substance that can be assimilated by a water body without causing impairment. A water body can be deemed impaired if water quality analyses conclude that exceedances of water quality standards occur.

Jurisdictional wetlands are jointly defined by USEPA and USACE as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.” Defined by the 2023 Supreme Court ruling in *Sackett v. EPA*, is a wetland that has a continuous surface connection to

a navigable water, such that it is "indistinguishable" from that water. This means the wetland must have a direct, unbroken physical connection to waters traditionally under federal jurisdiction.

Floodplains are areas of low-level ground present along rivers, stream channels, large wetlands, or coastal waters. Floodplain ecosystem functions include natural moderation of floods, flood storage and conveyance, groundwater recharge, and nutrient cycling. Floodplains also help to maintain water quality and are often home to a diverse array of plants and animals. In their natural vegetated state, floodplains slow the rate at which the incoming overland flow reaches the main water body. Floodplain boundaries are most often defined in terms of frequency of inundation, that is, the 100-year and 500-year flood. Floodplain delineation maps are produced by the Federal Emergency Management Agency and provide a basis for comparing the locale of the Proposed Action to the floodplains.

Shorelines can be located along marine waters, brackish estuaries, or freshwater bodies. Physical dynamics of shorelines include tidal influences, channel movement and hydrological systems, flooding or storm surge areas, erosion and sedimentation, water quality and temperature, presence of nutrients and pathogens, and sites with potential for protection or restoration. Shoreline ecosystems are vital habitat for multiple life stages of many fish, birds, reptiles, amphibians, and invertebrates. Different shore zones provide different kinds and levels of habitat, and when aggregated, can significantly influence life. Organic matter that is washed onto the shore, or “wrack,” is an important component of shoreline ecosystems, providing habitat for invertebrates, and nutrients to upland terrestrial communities and aquatic ecosystems.

Groundwater is protected through many federal laws that control and limit pollution into groundwater. These include but are not limited to: the Safe Drinking Water Act (SDWA) (42 U.S.C. section 300f et seq.); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 U.S.C. 9601 et seq.); Resource Conservation and Recovery Act (RCRA) (42 U.S.C. section 6901 et seq.); and Clean Water Act (CWA) (33 U.S.C. section 1251 et seq.). Groundwater is also regulated by a combination of appropriation systems, pollution statutes, and land ownership rights that vary by state. Though groundwater is often connected to surface water, most states regulate surface water and groundwater separately.

The SDWA is the federal law that protects public drinking water supplies throughout the nation. Under the SDWA, the USEPA sets standards for drinking water quality. Groundwater quality and quantity are regulated under several statutes and regulations, including the SDWA.

Through the National Pollutant Discharge Elimination System (NPDES) program, the CWA establishes federal limits on the amounts of specific pollutants that can be discharged into surface waters. The NPDES program regulates the discharge of point (i.e., end of pipe) and nonpoint sources (i.e., stormwater) of water pollution. Most states are authorized to administer NPDES permit programs. There are two types of NPDES permits: Individual and General. Individual permits are specifically tailored to an

individual facility based on the type of activity, nature of the discharge and receiving water quality.

Construction site operators engaged in clearing, grading, and excavating activities that disturb one acre or more can obtain a NPDES Construction General Permit for stormwater discharges with development of a Stormwater Pollution Prevention Plan (SWPPP) and when other conditions are met.

The USACE regulates the discharge of dredge or fill material into “waters of the United States” (WOTUS), including wetlands, under Section 404 of the CWA. Section 404 of the CWA authorizes the Secretary of the Army, acting through the Chief of Engineers, to issue permits for the discharge of dredge or fill material into wetlands and other WOTUS. Waters of the United States may include (1) the territorial seas and traditional navigable waters, (2) tributaries, (3) certain lakes ponds, and impoundments, and (4) adjacent wetlands, and are regulated by USEPA and the USACE.

Section 10 of the Rivers and Harbors Act (33 U.S.C. section 401 et seq.) provides for USACE permitting for any in-water construction in navigable waters. States may also require a permit for any in-water construction.

The National Wild and Scenic Rivers System preserves certain rivers with outstanding natural, historic, and recreational values in a free-flowing condition for the enjoyment of present and future generations.

Executive Order 11990, Protection of Wetlands, requires that federal agencies adopt a policy to avoid, to the extent possible, long- and short-term adverse impacts associated with destruction and modification of wetlands and to avoid the direct and indirect support of new construction in wetlands whenever there is a practicable alternative.

Executive Order 11988, Floodplain Management, requires federal agencies to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development unless it is the only practicable alternative. Flood potential of a site is usually determined by the 100-year floodplain, which is defined as the area that has a one percent chance of inundation by a flood event each year.

This section provides an overview of the quality water present in the project area. Water quality resources include groundwater, surface water, marine waters, wetlands, floodplains, and shorelines.

3.3.1.1 Groundwater

The action area does not contain known groundwater resources that could be directly impacted. Based on existing hydrologic and geologic data for the region, groundwater in this area is either absent, inaccessible, or not utilized for significant agricultural industrial, or municipal applications. The regional geology, which primarily consists of sedimentary deposits overlying basalt formations, suggests limited groundwater availability or connectivity within the immediate project vicinity.

Furthermore, no Sole Source Aquifer designation is present within the action area, indicating that the area's groundwater is not a critical resource for drinking water supplies under the Safe Drinking Water Act. While deeper aquifers may exist regionally, there is no evidence of a hydraulic connection between these groundwater systems and the surface features within the action area, such as the Columbia River or adjacent wetlands.

3.3.1.2 Surface Water

The action area is located adjacent to the Columbia River, a major surface water resource of regional and national importance. The Columbia River serves as a vital ecological, economic, and recreational asset. It provides critical habitat for fish and wildlife, supports agricultural irrigation and municipal water supply, and facilitates recreational opportunities such as boating, fishing, and wildlife observation. Riparian zones along the river contribute to its ecological integrity by stabilizing banks, filtering runoff, and providing habitat.

Figure 14. OHWM New Pump Station (Kleinschmidt 2024)

Water quality in the Columbia River is influenced by natural processes, land use, and regulatory measures aimed at maintaining its designated beneficial uses. Total

Maximum Daily Loads (TMDLs) have been established for various pollutants, including temperature, nutrients, and sediment, to ensure compliance with state and federal water quality standards. While the Columbia River generally meets water quality standards for most parameters, certain segments, including areas near the action area, are sensitive to changes in sedimentation and temperature.

The existing open-air ditch conveys water from the existing pump station to the WWA. During periods of conveyance, this ditch would be considered an intermittent surface water feature, essentially serving as a man-made perennial stream. The partially buried water transmissions pipeline in the norther section of the stud area would not be considered state waters, and since the water is pumped from the Columbia River, it is not WOTUS.

Furthermore, the WWA contains artificially created surface water features such as small lakes and ponds. There are no publicly available data resources for the water quality of these surface waters available. These surface water features have been identified as resources within jurisdiction of the Clean Water Act and subject to regulation.

3.3.1.3 Wetlands

According to the National Wetlands Inventory (NWI), there are no identified wetlands within the vicinity of the new pump station, however, the potential for intermittent freshwater emergent wetlands near the existing open-air ditch exist (Figure 6). A *Wetlands and Waters Delineation Report* was produced by Kleinschmidt Associates, on behalf of the COU and CTUIR, dated February 2021 (Appendix A). This report summarized the findings of field and desktop review of the action area.

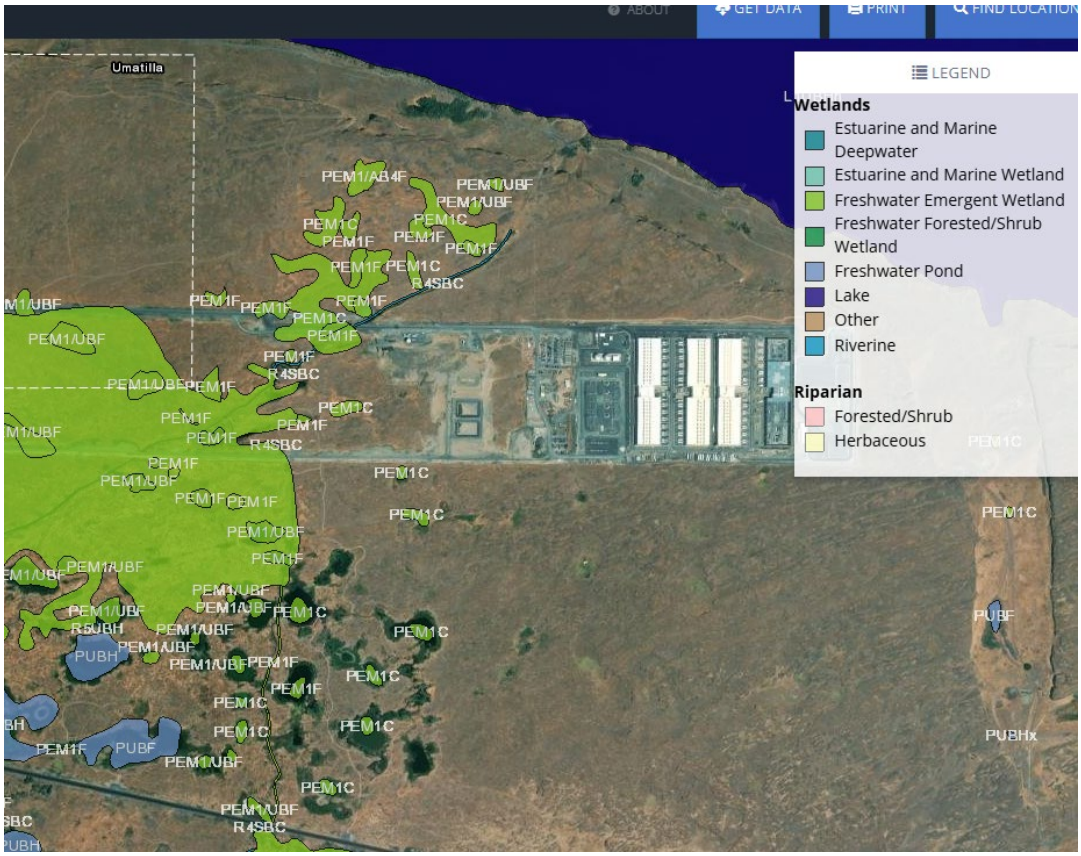

Figure 15. National Wetland Inventory Overview of Project Area (NWI 2024).

One jurisdictional water was identified and delineated within the study area, that being the Columbia River by the new and existing pump station. The existing open-air ditch and associated wetlands found within the study were determined to be manmade features, without a continuous surface connection to a WOTUS. Therefore, these surface water features were determined to not meet the criteria for a jurisdictional resource (Figures 15 & 16). However, the ditch and associated wetlands would be considered waters of the state, under the regulatory authority of Oregon Department of State Lands (ODSL) on private land or other non-tribal lands.

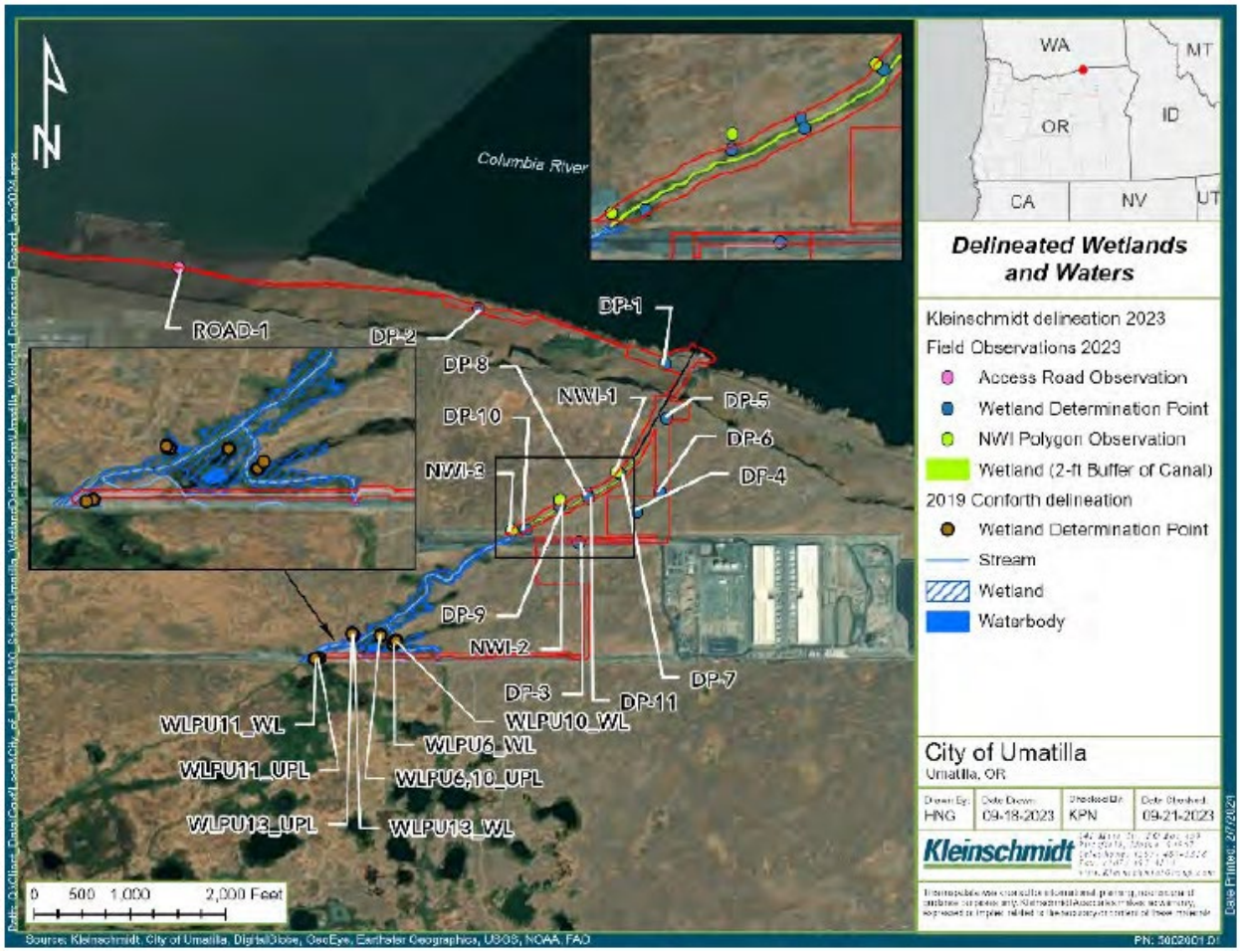

Figure 16. Identified Water Resources (Kleinschmidt 2024).

3.3.1.4 Floodplains

The Columbia River floodplain encompasses the new pump station. FEMA floodplain delineation maps identify portions of the action area as being located within Zone D or “Areas of Unconfirmed Flood Hazard). Zone D indicates a risk of flooding; however, the level of risk is unknown. The new pump station more than likely existing within both the 100-year and 500-year floodplains, which correspond to areas with a 1% and 0.2% annual chance of flooding, respectively. However, this is not confirmed by the existing FEMA floodplain mapping (Figure 14).

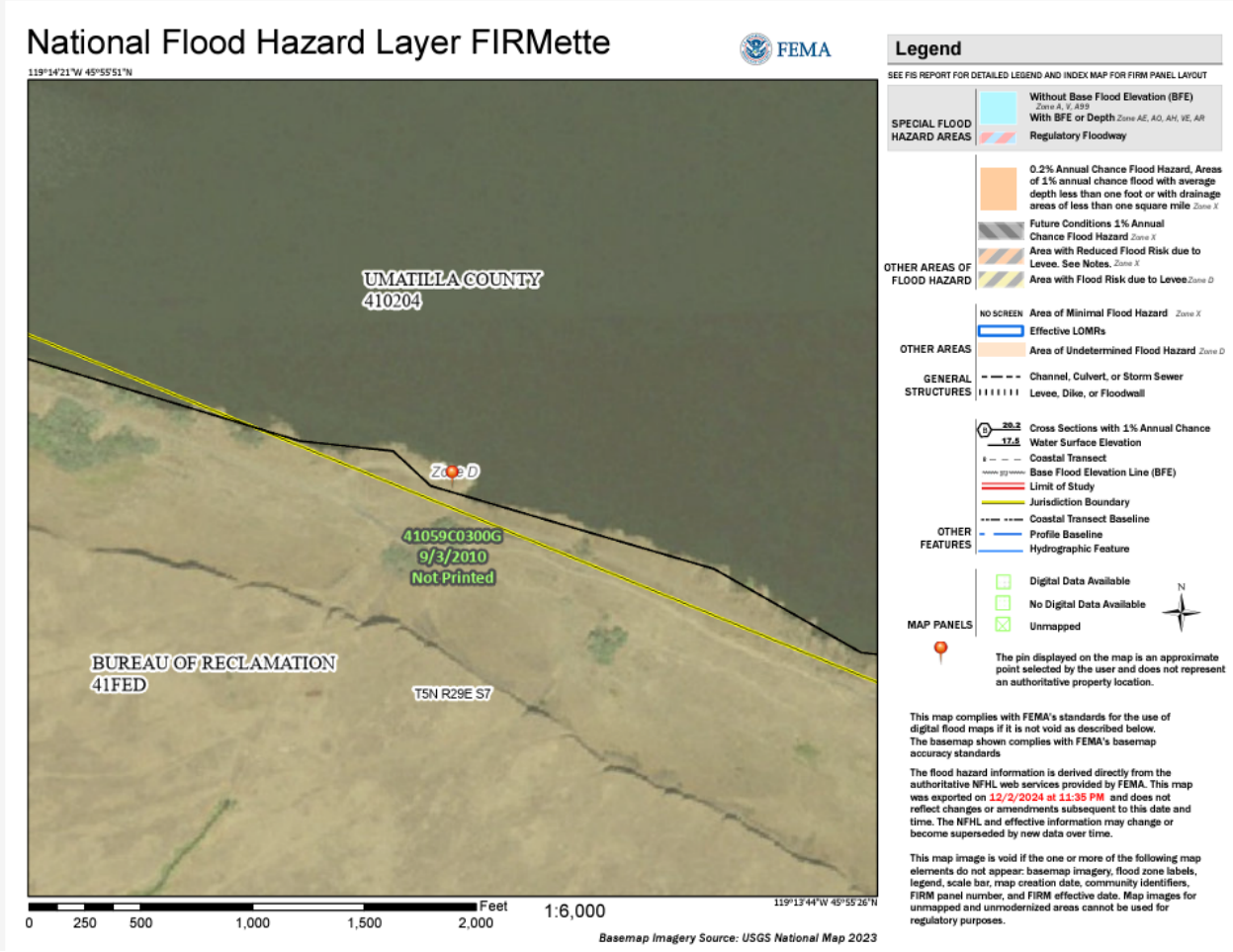

Figure 12. FEMA FIRM map (FEMA 2024).

3.3.1.5 Shorelines

The shorelines within the action area are located along the Columbia River, a large freshwater body with shorelines primarily characterized by modified and managed landscapes. The shoreline resources in this area include a combination of natural features and human-made structures. Vegetation along the shorelines is limited, consisting of grasses, shrubs, and occasional riparian plants, with little to no presence of mature trees or intact riparian forests. These resources are shaped by regulated hydrology from upstream dams and are influenced by river flow variations.
Shorelines in the action area provide important ecological functions, including stabilizing sediments, filtering runoff, and offering limited habitat for wildlife. These areas support aquatic and terrestrial species, including fish and bird species that rely on the Columbia River for migration and foraging. The physical dynamics of the shoreline, such as sediment transport and water flow, are heavily influenced by hydrological management. While natural processes like erosion and sedimentation occur, they are moderated by the river's-controlled flow regime.

The shorelines are utilized for maintenance and operation of existing facilities and infrastructure, as well as for recreational purposes. Organic material, such as wrack, is minimally present due to the modified nature of the shoreline but contributes to nutrient

cycling and microhabitats where it occurs. The physical characteristics of the shoreline, including its composition and vegetation, support basic ecological functions but reflect the influence of human activities in the area.

While the shorelines in the action area have been modified, they remain a critical interface between the aquatic and terrestrial environments, contributing to the ecological integrity of the Columbia River. This baseline condition sets the context for evaluating potential impacts from Proposed Actions.

3.3.2 Environmental Consequences

In this EA, the analysis of water resources looks at the potential impacts on groundwater, surface water, wetlands, floodplains, and shorelines.

Significant impacts would occur if proposed activities resulted in an exceedance of established water quality thresholds; substantially increase the amount of stormwater entering surface waters; substantially affect groundwater quantity or quality; or induce flooding in occupied areas.

3.3.2.1 Alternative 1: No Action Alternative

Under the No Action Alternative, USACE would not issue the COU and CTUIR a construction license to implement their Proposed Action components on USACE owned lands. The action area, where the existing pump station and pipeline system would remain in its current condition. The water resources within the ditch and associated wetlands would not be impacted.

The action area lacks known groundwater resources that could be directly impacted. Regional geological conditions, including sedimentary deposits overlying basalt formations, suggest limited groundwater availability and no hydraulic connection to surface features such as the Columbia River.

The Columbia River, a major surface water resource, is adjacent to the action area. It supports ecological, recreational, and economic uses and is subject to regulatory measures, including Total Maximum Daily Loads (TMDLs), to protect its water quality. The No Action Alternative would not introduce new sources of sedimentation, pollutants, or temperature changes to the river. Existing runoff patterns from surrounding upland areas and riparian zones would remain unchanged. Indirectly, the lack of infrastructure updates or enhancements could perpetuate minor, ongoing effects from current operational practices, but these are expected to have no affect the Columbia River’s compliance with water quality standards.

Without action, there would be no direct impacts to the manmade surface water and wetland areas located along the alignment of the existing open-air ditch. The characteristics of these resources are expected remain unchanged. However, without action, the existing pump station and conveyance infrastructure would remain limited to existing conveyance and operational capacity. These have been deemed insufficient to meet current and future demands, ultimately presenting a potential minor adverse

indirect impact to wetland resources located off site. This would include with the wetland habitats within the WWA.

The action area is located within the 100-year and 500-year floodplains of the Columbia River. Current floodplain functions, such as flood storage and conveyance, are already influenced by levees, dams, and other flood control measures. The No Action Alternative would not introduce new structures or activities that could impede these functions or alter the frequency or extent of floodplain inundation. The continued presence of existing infrastructure and operational practices would have minimal and indirect effects on floodplain integrity, with no substantial alteration of natural floodplain functions.

The Columbia River shorelines within the action area are shaped by regulated hydrology and include both natural and modified features. These areas provide basic ecological functions, including sediment stabilization, runoff filtration, and limited wildlife habitat. The No Action Alternative would not modify the shoreline's physical or ecological characteristics, nor would it introduce activities that could exacerbate erosion, sedimentation, or nutrient loading. Current maintenance activities along the shoreline would continue with minimal and localized effects. Indirectly, the lack of shoreline restoration or improvement under this alternative could limit opportunities to enhance existing ecological functions.

Overall, the No Action Alternative would have minor impacts on water quality within the action area. Direct effects on groundwater, surface waters, floodplains, or shorelines are anticipated to be negligible to minor. Without action, indirect minor adverse effects to wetland areas dependent on the operational reliability of the existing facility may be impacted. Overall, there would be no substantial changes to existing environmental conditions for water quality. Therefore, the alternative would not result in an exceedance of established water quality thresholds, nor increase stormwater runoff, nor induce flooding in occupied areas. Consequently, impacts to water quality under the No Action Alternative would be less than significant.

3.3.2.2 Alternative 2: New Pump Station and Pipeline

Under this alternative, USACE would issue the COU and CTUIR a temporary construction license to construct a new pump station and improve existing conveyance infrastructure on USACE owned lands. Furthermore, re-alignment and excavation of the new pipeline would occur on BIA lands, along with the de-commissioning of the existing pipeline along the old alignment and the backfilling of the existing open-air ditch to the WWA. Implementation of the proposed project would directly result in unavoidable adverse impacts to the water quality of surface water, shoreline, and some wetland features.

Groundwater resources in the action area are not utilized, and there are no Sole Source Aquifer designations or evidence of a hydraulic connection between surface features and deeper aquifers. As such, the construction and operation of the proposed facilities would not directly or indirectly impact groundwater quality or availability.

The primary surface water resource in the action area is the Columbia River, which provides critical water resources for both human and ecological needs. Construction of

the new pump station would directly result in minor adverse impacts to the shoreline and mainstem Columbia through the potential for increased turbidity and potential erosion and sedimentation near the water. Construction activities would involve the BMPs outlined in Section 2.5, to minimize the effects of impacts to water quality and shoreline of the Columbia River. This would include the use of turbidity curtains/ cofferdams, silt fences, and sediment traps around work areas to minimize sedimentation in the Columbia River. Water quality would be regularly monitored during construction to ensure compliance with state and federal standards.

Upon competition, the indirect impacts to Columbia River water quality would be negligible to minor, as operation and maintenance activities may require periodic in-water work. These activities would be on-going throughout the life of the project but would not meaningfully impact water quality. In addition, the construction, repair, and renovation activities, while potentially disruptive during implementation, would ultimately enhance water management within the area, leading to potential long-term ecological improvements.

The backfilling of the existing ditch and related restoration activities for the open-air ditch would directly and indirectly cause permanent adverse impacts to this manmade surface water feature. These impacts include damage to the ditch and the associated wetland resources along its current alignment. Because of the new construction, the realignment of the pipeline, and the shift to a new water conveyance system, these impacts would be unavoidable. However, the project would benefit the local wetland systems by supporting reliable conveyance with sufficient capacity to wetland areas within the WWA. Introducing controlled water flows would improve the wetlands' hydrological function, enhance their ecological integrity, and support biodiversity by creating better habitat for waterfowl and other species. In addition, reduced sedimentation and improved nutrient cycling from the restored water delivery system would help maintain the natural processes essential for healthy wetland ecosystems.

The action area is located within both the 100-year and 500-year floodplains of the Columbia River. While construction activities would not directly impact the floodplain, the construction of impervious material may have a minor impact on floodplain characteristics in that area. These permanently constructed features would include the new pump station and concrete working pad, along with the expanded roadway. These impacts would be offset to some extent, from the demolition of the existing pump station and restoration of the area which would reduce impermeable surfaces and promote natural infiltration.

Shoreline resources along the Columbia River may be impacted through the construction of the new pump station and intake. This project component would result in the permanent displacement of shoreline to support a portion of the facility and intake structure. Likewise, these permanent displacements would be offset by the removal of the existing pump station and intake structure, and this area would be restored. Through planting and restoration efforts in this area, shoreline integrity would be enhanced, promoting habitat for aquatic and terrestrial species. The project would also help reduce runoff and prevent further degradation of the shoreline, contributing to improved water quality and ecological health.

Overall, the implementation of the alternative would directly result in minor to moderate impacts to water quality of surface water, wetland, shoreline, and floodplain features

within the action area. There would be no impacts to ground water resources. The Proposed Action would result in unavoidable permanent impacts to surface water resources along the alignment of the existing open-air ditch, as well as direct adverse impacts to the shoreline and mainstem Columbia River. This would be offset and minimized by the benefits provided to the surface water features within the Wanaket Wildlife Area, and the implementation of BMPs during construction. BMPs would ensure that sedimentation and pollutants do not enter the Columbia River or the surrounding ecosystem. Other long-term minor impacts to floodplains and shorelines would occur, through the construction of new pump station. These impacts would be offset through the demolition of the existing pump station and restoration of the area. Overall, the Proposed Action would not substantially impact the water quality characteristics of existing resources. Therefore, there implementation of the alternative would result in less than significant impacts to water quality resources.

3.4 Terrestrial Resources

3.4.1 Affected Environment

Terrestrial resources include living, native, or naturalized plant and animal species and the habitats within which they occur. Plant associations are referred to generally as vegetation, and animal species are referred to generally as wildlife. Habitat can be defined as the resources and conditions present in an area that support a plant or animal.

Within this EA, terrestrial resources are divided into terrestrial vegetation and terrestrial wildlife. Threatened, endangered, and other special status terrestrial species are discussed in their respective categories.

Special-status species, for the purposes of this assessment, are those species listed as threatened or endangered under the Endangered Species Act (ESA) (16 U.S.C. section 1531 et seq.) and species afforded federal protection under the Migratory Bird Treaty Act (MBTA) (16 U.S.C. section 703 et seq.), or Bald and Golden Eagle Protection Act (16 U.S.C. section 668 et seq.).

The purpose of the ESA is to conserve the ecosystems upon which threatened and endangered species depend and to conserve and recover listed species. Section 7 of the ESA requires action proponents to consult with the U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS) to ensure that their actions are not likely to jeopardize the continued existence of federally listed threatened and endangered species or result in the destruction or adverse modification of designated critical habitat.

Birds, both migratory and most native-resident bird species, are protected under the MBTA, and their conservation by federal agencies is mandated by EO 13186 (Migratory Bird Conservation). Under the MBTA it is unlawful by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, or possess migratory birds or their nests or eggs at any time, unless permitted by regulation.

Bald and golden eagles are protected by the Bald and Golden Eagle Protection Act. This act prohibits anyone, without a permit issued by the Secretary of the Interior, from

taking bald eagles, including their parts, nests, or eggs. The Act defines “take” as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb.

The following discussions provide a description of the existing conditions for each of the categories under biological resources at the Proposed Action Area. Threatened and endangered species are discussed in each respective section below with a composite list applicable to the Proposed Action provided in Table 3-2.

3.4.1.1 Threatened and Endangered Terrestrial Species

Table 3-2 lists species designated as threatened or endangered under the ESA that could occur on lands surrounding the Proposed Action Area.

Table 3-2. Threatened and Endangered Terrestrial Species Potentially Occurring in the Proposed Action Area.

Species	Listing Status	Critical Habitat Present?
Gray Wolf (*Canis lupus*)	Endangered	No
Monarch Butterfly (*Danaus Plexippus*)	Proposed Threatened	No
Suckley’s Cuckoo Bumble Bee (*Bombus suckleyi*)	Proposed Endangered	No

The above terrestrial Threatened and Endangered species have been identified by the U.S Fish and Wildlife Information for Planning and Consultation (IPaC) report, generated January 30, 2025 (Appendix B). The IPaC report identifies species that could exist within a given area; however, these species would likely not be present in the action area for the following reasons:

Gray Wolf: This species occupies expansive territories, through a diverse set of landscapes. They require adequate prey bases, typically where large ungulate populations and smaller mammals exist. Furthermore, this species requires areas with minimal human disturbances. The Proposed Action is located within a cultivated and developed landscape and does not provide habitat for gray wolves. Gray wolves require forested areas, prey availability (e.g. elk, deer), low human presence, and low road density (ODFW 2019). The closest known gray wolf activity occurs in northeastern Oregon (ODFW 2024, Figure 2-1). There are no known gray wolf packs in the vicinity of the proposed project area and required habitat and prey are lacking. Wolf activity in Umatilla County is limited to the Blue Mountains and foothills. These habitat conditions are not present at or surrounding the action areas.

Monarch Butterfly: Monarch butterflies have the potential to be present within the action area during certain times of the year. This species relies on specific habitats for breeding, foraging, and migration. Their primary habitat requirements include open areas with abundant milkweed species (*Asclepias* spp.) for larval development, as milkweed is the sole host plant for monarch caterpillars. Adult monarchs require diverse nectar sources from native flowering plants to sustain energy, particularly during their fall migration south to overwintering sites in central Mexico. Key nectar plants in the region include species like showy milkweed (*Asclepias speciosa*), goldenrod (*Solidago* spp.), and asters (*Symphyotrichum* spp.). These habitat conditions are not present at the proposed project area.

Suckley's Cuckoo Bumble Bee: Suckley's Cuckoo Bumble Bee rely on healthy populations of host bumble bee species, particularly *Bombus occidentalis* (the western bumble bee), for its survival. As an obligate social parasite, *B. suckleyi* does not establish its own colonies but infiltrates the nests of host species to lay its eggs. Habitat requirements include diverse, flower-rich environments that support both the cuckoo bumble bee and its hosts, with access to abundant nectar and pollen sources from native flowering plants and undisturbed areas suitable for nesting and overwintering. These resources are not present within the action area.

3.4.1.2 Vegetation

This region supports a mix of terrestrial vegetation types, including grassland, shrubland, and riparian transitional zones. Native plant communities in the action area are limited but include species such as sagebrush (Artemisia spp.), rabbitbrush (Ericameria spp.), bunchgrasses (Poa spp. and Festuca spp.), and perennial forbs. Riparian transitional areas closer to the Columbia River feature native cottonwoods (Populus spp.), willows (Salix spp.), and Woods' Rose (Rosa woodsii), which provide ecological functions such as soil stabilization, wildlife habitat, and shading for aquatic and terrestrial ecosystems. Native riparian vegetation is present but fragmented along the Columbia River shoreline in the action area. Dominant native species include cottonwoods (Populus spp.) and willows (Salix spp.), which provide shade that helps regulate water temperatures critical for aquatic species. Other native understory species, such as Woods' Rose (Rosa woodsii) and currants (Ribes spp.), offer habitat for insects, birds, and small mammals. These riparian plants contribute to ecosystem functions by stabilizing the riverbank, filtering runoff, and serving as a corridor for wildlife movement.

3.4.1.3 Wildlife

Mammals such as mule deer, coyotes, raccoons, and small rodents utilize the area for foraging and movement corridors, while amphibians like Pacific tree frogs and reptiles such as western fence lizards are present in riparian and upland zones. Bird species, including red-winged blackbirds, yellow warblers, and great blue herons, rely on riparian habitats, while upland areas host grassland birds like western meadowlarks and Brewer's sparrows. Raptors, such as bald eagles and red-tailed hawks, are common along the Columbia River.

The area also supports pollinators, including native bees and butterflies, which are vital for maintaining ecological health. However, habitat quality is reduced by invasive plant species, fragmentation, and historical land uses, limiting biodiversity and wildlife movement. While the APE supports common species, special status species, such as western burrowing owls and Washington ground squirrels, may occasionally use the upland habitats, depending on disturbance levels and habitat suitability.

Riparian and upland zones provide essential foraging, nesting, and migration opportunities, but connectivity between habitats is restricted by degraded conditions. Despite these challenges, the APE continues to serve as a critical wildlife area due to its

proximity to the Columbia River and diverse habitat types. Restoration efforts could significantly enhance habitat quality and resilience for terrestrial wildlife.

3.4.2 Environmental Consequences

This analysis focuses on wildlife or vegetation types that are important to the function of the ecosystem or are protected under federal or state law or statute.

Significant impacts would occur if proposed activities resulted in substantial permanent loss or degradation of terrestrial habitat; result in unpermitted “take” of federally listed species; or violate regulations concerning special status species.

3.4.2.1 Alternative 1: No Action Alternative

Under the No Action Alternative, USACE would not issue the COU and CTUIR a construction license to implement their proposed project components on USACE owned lands. The existing conditions for terrestrial resources within the action area would continue un-changed. For terrestrial Threatened and Endangered species, the applicant prepared BA determined (insert). However, without implementation, there would be no direct or indirect impacts to these species, or any other terrestrial resources.

Impacts to vegetation and terrestrial wildlife would remain consistent with baseline conditions. Upland vegetation, including sagebrush and bunchgrasses, would remain subject to existing fragmentation and competition from invasive species. Similarly, impacts to wildlife would also remain minor and indirect. Current operations have limited influence on wildlife species, such as mule deer, coyotes, birds, and pollinators.

The No Action Alternative would result in negligible, long-term indirect impacts to terrestrial resources. These impacts would not meet the thresholds for significance, as they would not cause substantial habitat degradation, unpermitted "take" of listed species, or violations of regulations protecting special-status species. While some minor adverse conditions, such as erosion and invasive species presence, would persist, they are not expected to worsen significantly or result in irreversible effects. The ecological functions of the area would remain intact. Therefore, implementation of the alternative would result in less than significant impacts to terrestrial resources.

3.4.2.2 Alternative 2: New Pump Station and Pipeline

Under this alternative, USACE would issue the COU and CTUIR a temporary construction license to construct a new pump station and improve existing conveyance infrastructure on USACE owned lands. Furthermore, re-alignment and excavation of the new pipeline would occur on BIA lands, along with the de-commissioning of the existing pipeline along the old alignment and back-filling of the existing open-air ditch to the WWA. Direct adverse impacts to terrestrial resources are expected from construction and restoration activities. These activities would include the construction of the new pump station, pipeline, and staging areas. In addition, it would include the de-commissioning of the existing open-air ditch and existing pump station, and the corresponding restoration activities.

Approximately 4.91 acres would be impacted, including riparian and upland habitats. Riparian vegetation impacted consists largely of shoreline vegetation, such as shrubs. These may be removed or disturbed in localized areas during the installation of the intake structure and pipeline. Upland vegetation, including sagebrush and bunchgrasses, would also be removed during construction of the new pipeline alignment and at laydown areas. These impacts would be mitigated through restoration activities, including reseeding with native vegetation.

Direct impacts to wildlife would include habitat disturbance and temporary displacement of species due to construction noise and activity. Small mammals, birds, and reptiles may vacate the area temporarily, while amphibians in riparian zones could be impacted by soil and vegetation removal. The use of erosion control measures would minimize sedimentation that could affect adjacent habitats.

Direct impacts to terrestrial threatened and endangered species would not occur, as species such as the gray wolf are unlikely to inhabit or utilize the action area due to its lack of suitable habitat and the presence of ongoing human activity. Similarly, there would be no effect to monarch butterflies and Suckley’s cuckoo bumble bees because the habitat conditions within the Proposed Action area does not meet the habitat requirements for these species.

Indirect impacts to vegetation would include the potential for invasive species establishment in disturbed areas during construction. Post-construction restoration efforts, including reseeding with native species, would reduce this risk over time. The permanent footprint of the pump station and related infrastructure (0.97 acres of impervious surfaces) would represent a long-term loss of vegetated habitat. The impacts of which would be reduced through the demolition and restoration of the area around the existing pump station.

Indirect impacts to wildlife would include reduced habitat connectivity due to the presence of new infrastructure, which may create minor barriers for species movement, particularly in riparian zones. Additionally, increased human activity and noise from the operation of the pump station may deter some species from utilizing nearby habitats. However, the long-term displacement of wildlife is expected to be minimal given the current level of habitat fragmentation and human activity in the action area.

The Proposed Action Alternative would result in short-term, minor to moderate adverse impacts to terrestrial resources during construction due to vegetation removal, habitat disturbance, and wildlife displacement. Long-term impacts would be minor, primarily due to the permanent loss of less than one acre of vegetated habitat and potential barriers to habitat connectivity.

These impacts would not reach a level of significance, as they would not result in substantial degradation of terrestrial habitats, unpermitted "take" of ESA listed terrestrial species, or violations of regulations protecting special-status species. Restoration efforts and mitigation measures, such as reseeding native vegetation and erosion control, would minimize adverse effects, ensuring that ecological functions in the area remain intact. Therefore, implementation of the alternative would result in less than significant impacts to terrestrial resources.

3.5 Fish and Aquatic Resources

3.5.1 Affected Environment

Aquatic resources include living, native, or naturalized aquatic plant and animal species and the habitats within which they occur. Habitat can be defined as the resources and conditions present in an area that support a plant or animal.

Within this EA, aquatic resources are divided into anadromous fish, resident fish, and other aquatic resources. Threatened, endangered, and other special status species are discussed in their respective categories.

Special-status species, for the purposes of this assessment, are those species listed as threatened or endangered under the Endangered Species Act (ESA) (16 U.S.C. section 1531 et seq.) and species afforded federal protection under the Marine Mammal Protection Act (MMPA) (16 U.S.C. section 1361 et seq.) or the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. section 1801 et seq.).

The purpose of the ESA is to conserve the ecosystems upon which threatened and endangered species depend and to conserve and recover listed species. Section 7 of the ESA requires action proponents to consult with the U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS) to ensure that their actions are not likely to jeopardize the continued existence of federally listed threatened and endangered species or result in the destruction or adverse modification of designated critical habitat.

All marine mammals are protected under the provisions of the MMPA. The MMPA prohibits any person or vessel from “taking” marine mammals in the United States or the high seas without authorization. The MMPA defines “take” to mean “to harass, hunt, capture, or kill or attempt to harass, hunt, capture, or kill any marine mammal.”

The Magnuson-Stevens Fishery Conservation and Management Act provides for the conservation and management of the fisheries. Under the Act, essential fish habitat (EFH) consists of the waters and substrate needed by fish to spawn, breed, feed, or grow to maturity.

The following discussions provide a description of the existing conditions for each of the categories under aquatic resources at the Proposed Action Area. Threatened and endangered species are discussed below with a composite list applicable to the Proposed Action provided in Table 3-3.

3.5.1.1 Threatened and Endangered Terrestrial Species

Table 3-3 lists species designated as threatened or endangered under the ESA that could occur on lands surrounding the Proposed Action Area.

Table 3-3. Threatened and Endangered Aquatic Species Potentially Occurring in the Proposed Action Area.

Species	Current Listed Status and Reference	Critical Habitat
NMFS		
Chinook Salmon (*Oncorhynchus tshawtytscha*)		

Upper Columbia River Spring-run ESU	E: 6/28/05; 70 FR 37159	Yes: 9/2/05; 70 FR 52629
Snake River Spring/Summer-run ESU	T: 6/28/05; 70 FR 37159	Yes: 12/28/93; 58 FR 68543
Snake River Fall-run ESU	T: 6/28/05; 70 FR 37159	Yes: 12/28/93; 58 FR 68543
Sockeye Salmon (*Oncorhynchus nerka*)		
Snake River ESU	E 6/28/05; 70 FR 37159	Yes: 12/28/93; 58 FR 68543
Steelhead (*Oncorhynchus mykiss*)		
Upper Columbia River DPS	T: 1/5/06; 71 FR 833	Yes: 9/2/05; 70 FR 52630
Middle Columbia River DPS	T: 1/5/06; 71 FR 833	Yes: 7/10/00; 65 FR 42422
Snake River DPS	T: 1/5/06; 71 FR 833	Yes: 7/10/00; 65 FR 42422
USFWS		
Bull Trout (*Salvelinus confluentus*)		
Bull Trout Columbia River DPS	T: 6/10/98; 63 FR 31647	Yes: 9/2/05; 70 FR 56211; 10/18/10; 75 FR 63898

The U.S Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) have determined that all the sub-populations of salmonids (to include Bull trout) are considered threatened and endangered species under ESA. All of the above species are present within the Columbia River at various times of the year, and the Columbia River is considered designated Final Critical Habitat for all the above species.

The anadromous nature of these species is outlined below.

3.5.1.2 Anadromous Fish

The Columbia River system supports several species of anadromous fish species. Anadromous species are unique in that they are born in freshwater, migrate to the ocean to grow and mature, and then return to freshwater to spawn. Pacific salmon species typically die after a single spawning event; however, steelhead can return to the ocean after spawning in freshwater and have the potential for multiple spawning events. This anadromous life cycle allows these species to take advantage of the abundant food resources in the ocean, while using rivers and streams as safe environments for reproduction.

Spring Chinook salmon migrate through this stretch from March to May, utilizing the Columbia River to access upper tributaries for spawning. These fish often pass through during high flow periods, taking advantage of increased water volumes to navigate upriver. Similarly, fall Chinook migrate in late summer and fall, with their larger size and preference for mainstem habitats making the Columbia an essential pathway for their journey to spawning grounds.

Coho salmon, migrating in the fall, rely on the river and its tributaries to reach smaller streams and side channels that provide protective cover for their spawning and egg development. Steelhead trout, a keystone species in the region, have both summer and

winter runs. Summer steelhead migrate from July through October, spawning in late winter to early spring, while winter steelhead migrate from December to March, with spawning also occurring in the spring. These steelhead runs rely on the Columbia River as a vital corridor to reach their diverse spawning habitats.

Sockeye salmon are another significant species in the action area, migrating from July through September to reach lakes and tributaries, such as those connected to the upper Columbia River. These fish depend on the lake and river systems to complete their spawning and rearing cycles. Pacific lamprey, an ancient anadromous species, also migrate through the Columbia River during the spring and early summer. They use the river's clean gravel beds for spawning, playing an important role in the ecosystem by contributing marine-derived nutrients to freshwater habitats.

The action area's location along the Columbia River provides critical migratory and staging habitat for these species, supporting their lifecycle needs as they journey to and from spawning and rearing areas further upriver.

3.5.1.3 Resident Fish

Resident fish present within the Columbia River near the action area, approximately two miles upstream of McNary Lock and Dam, include native species such as rainbow trout (*Oncorhynchus mykiss*), northern pikeminnow (*Ptychocheilus oregonensis*), largescale sucker (*Catostomus macrocheilus*), three-spined stickleback (*Gasterosteus aculeatus*), sand roller (*Percopsis transmontana*), chiselmouth (*Acrocheilus alutaceus*), and sculpin (*Cottus* spp.). These species generally inhabit cooler waters within the Columbia River and nearby tributaries. In addition, invasive, non-native resident fish also occupy the action area. These include American shad (*Alosa sapidissima*), largemouth bass (*Micropterus salmoides*), smallmouth bass (*Micropterus dolomieu*), walleye (*Sander vitreus*), and channel catfish (*Ictalurus punctatus*). Many invasive species feed on out-migrating salmonid smolts, including steelhead, Chinook, sockeye, and coho salmon, particularly during the spring migration period.

Smallmouth bass are of particular concern in the Columbia River near the McNary Pool. Research has shown that smallmouth bass heavily predate on salmonids, with Chinook being the most common prey, followed by coho and steelhead during the spring and summer months (Fritts and Pearsons 2006). Smallmouth bass can consume salmonids up to 56.6% of their fork length and move between the Columbia River and its tributaries, with peak abundance in late spring. Other non-native species found near the action area include alligator gar, recently identified in the McNary Pool, and Asian clams, which have been documented within the Columbia River.

The action area is important for bull trout (Salvelinus confluentus), a coldwater fish listed as "Threatened" under the Endangered Species Act (ESA). Bull trout have three life history types: they live in streams (fluvial), in lakes (adfluvial), or sometimes migrate between freshwater and the ocean (anadromous). A portion of the bull trout population migrates through the Columbia River and its tributaries. The lower Columbia River, including the action area, serves as a migratory and overwintering habitat, providing key feeding and resting areas. The mainstem Columbia River is designated as critical habitat, supporting the recovery and continued survival of this ESA-listed species.

3.5.1.4 Other Aquatic Resources

Aquatic Invasive Species:

Aquatic invasive species within the Columbia River include flowering rush (*Butomus umbellatus*), Eurasian watermilfoil (*Myriophyllum spicatum*), and water stargrass (*Heteranthera dubia*). Shallow areas along the river and near backwater habitats support patches of water stargrass and flowering rush. Recent improvements in water clarity within this section of the Columbia River have increased sunlight penetration, allowing these invasive species to colonize deeper waters. Water stargrass is particularly dominant in the lower reaches of the river and backwater areas near the McNary Pool. The pervasive expansion of aquatic invasive species in the action area negatively affects ecological functions by altering streamflow, reducing dissolved oxygen levels, increasing sedimentation, and providing ambush habitat for predatory non-native fish species. These impacts can degrade habitat quality for native aquatic species, particularly out-migrating salmonid smolts and other sensitive fish populations.

3.5.2 Environmental Consequences

This analysis focuses on aquatic species that are important to the function of the ecosystem or are protected under federal or state law or statute.

Significant impacts would occur if proposed activities resulted in substantial permanent loss or degradation of aquatic habitat; result in unpermitted “take” of federally listed aquatic species or designated critical habitat; or violate regulations concerning special status species.

3.5.2.1 Alternative 1: No Action Alternative

Under the No Action Alternative, USACE would not issue the COU and CTUIR a construction license to implement their proposed project components on USACE owned lands. Without action, no new construction or disturbance to aquatic habitats would occur. There would be no anticipated direct adverse impacts to the aquatic environment and therefore no direct anticipated impacts to fish and aquatic species. Indirect impacts would be limited to existing operation and maintenance activities. These impacts would be minor in intensity and would not represent a meaningful impact on the aquatic resources, to include aquatic species. The alternative would not result in the substantial permanent or temporary loss or degradation of the aquatic habitat or result in the “take” of federally listed species or designated critical habitat, or otherwise violate regulation concerning species status species.

Overall, implementation of the alternative would result in no change to the baseline conditions for the aquatic environment and aquatic species. Therefore, the implementation of the alternative would represent a less than significant impact to fish and aquatic resources.

3.5.2.2 Alternative 2: New Pump Station and Pipeline

Under this alternative, USACE would issue the COU and CTUIR a temporary construction license to construct a new pump station and improve existing conveyance infrastructure on USACE owned lands. Furthermore, re-alignment and excavation of the new pipeline would occur on BIA lands, along with the de-commissioning of the existing pipeline along the old alignment and back-filling of the existing open-air ditch to the WWA. Implementation of the alternative would result in both short-term and long-term effects on fish and aquatic species within the action area.

Direct impacts to fish and aquatic resources would result from construction-related in-water work and work near the OHWM of the Columbia River. Temporary impacts include the potential for increased turbidity and sedimentation from excavation, cofferdam installation, and other in-water activities. These effects could reduce water quality, disrupt foraging, and impair fish mobility and visibility in the immediate vicinity of the work area. Fish salvage operations would be conducted to relocate species from the work area, reducing the likelihood of direct harm to individuals, including ESA-listed species such as bull trout, Chinook salmon, and steelhead. Additionally, erosion and sediment control measures, outlined in Section 2.5, would be employed to minimize sediment runoff into the Columbia River. In-water work would occur within the designated fish windows to avoid potential impacts to ESA-listed fish. Furthermore, all in-water activities would adhere to the terms and conditions specified in the applicable biological opinions to ensure ESA-listed populations are not jeopardized.

The new intake structure, equipped with fish exclusion screens, would reduce the risks of fish entrainment and impingement during operations, providing a substantial improvement over the current infrastructure. However, the installation of the intake structure and associated permanent infrastructure would result in a permanent minor loss of aquatic habitat, totaling 0.027 acres below the OHWM. While this loss is not expected to substantially impact local fish populations, it represents a permanent change to the aquatic environment in the action area.

Restoration efforts, including revegetation with native species, would help prevent erosions and promote infiltration, resulting in improved water quality conditions. This would result in indirect minor beneficial impacts to fish. Once completed, operation of the new pump station and conveyance infrastructure is unlikely to affect water quality or aquatic habitats to any meaningful extent. Maintenance activities, such as periodic dredging or cleaning of intake structures, may temporarily disturb aquatic species, but these activities would be limited in scope and frequency.

The Proposed Action also includes temporary access roads, staging areas, and expanded gravel parking lots to facilitate construction and maintenance. While these elements increase the project's overall impervious surface area, stormwater management systems would mitigate potential runoff impacts to water quality. The permanent impervious area, totaling 0.97 acres, is not anticipated to have adverse effects on aquatic species or their habitats.

Overall, the Proposed Action is expected to have minor, temporary adverse effects on aquatic species during construction, primarily due to habitat disturbance and short-term impacts in water quality. These impacts would be minimized best management practices, fish salvage operations, and adherence to regulatory standards. In the long

term, the action is not expected to present any meaningful adverse impacts to fish and aquatic species through operation and maintenance activities. Restorative efforts from the removal of the existing pump station may offer minor beneficial impacts to the resource from reduced potential for erosion and native plantings within the proximity to the Columbia River. Therefore, the projects impact on fish and aquatic species are anticipated to be less than significant.

3.6 Treaty and Historic Resources

3.6.1 Affected Environment

This discussion of historic resources include tribal treaty resources, archaeological resources, historic items, Indian sacred sites, historic properties, architectural resources and other properties of historic significance.

Treaties are legally binding contracts between sovereign nations that establish those nations' political and property relations. Treaties between Native American Tribes and the United States confirm each nation's rights and privileges. In most of these treaties, the Tribes ceded title to vast amounts of land to the United States but reserved certain lands (reservations) and rights for themselves and their future generations. It is important to be clear that "the rights of sovereign Indian Tribes pre-existed their treaties; they were not granted them by treaties or by the United States government. Rather, the treaties gave their rights legal recognition" (Hunn et al. 2015:58). Like other treaty obligations of the United States, Indian treaties are "the supreme law of the land," and they are the foundation upon which Federal Indian law and the Federal Indian trust relationship is based.

Treaties with area Tribes, including Treaties with the Nez Perce (Treaty of June 11, 1855, Treaty with the Nez Perces, 12 Stat. 957 (1859); Treaty of June 9, 1863, Treaty with the Nez Perces, 14 Stats.647 (1867)), the Confederated Tribes of the Umatilla Indian Reservation (Treaty of June 9, 1855 with the Walla Walla, Cayuse, etc, 12 Stat. 945 (1859)), and the Confederated Tribes and Bands of the Yakama Nation (Treaty of June 9, 1855, Treaty with the Yakama, 12 Stat. 951) established reservations and explicitly reserved unto the Tribes certain rights, including the exclusive right to take fish in streams running through or bordering reservations, the right to take fish at all usual and accustomed places in common with citizens of the territory, and the right of erecting temporary buildings for curing, together with the privilege of hunting, gathering roots and berries, and pasturing their horses and cattle upon open and unclaimed lands. These reserved rights include the right to fish within identified geographical areas.

Historic resources are governed by federal laws and Executive Orders, including, but not limited to, the National Historic Preservation Act (NHPA) (16 U.S.C. 470 et seq.) and the Archeological and Historic Preservation Act (AHPA) (54 U.S.C. 312501-312508). For the purposes of this analysis, the term "historic resource" refers to all resources of historic importance protected by these Federal laws and Executive Orders applicable to the Proposed Action.

NHPA is the nation's primary historic preservation law, which defines the legal responsibilities of Federal agencies for the identification, management, and stewardship of historic properties. Section 106 requires Federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. Through consultation with interested parties, the Federal agency identifies historic properties potentially affected by the undertaking, assesses effects, and seeks ways to avoid, minimize, or mitigate any adverse effects on historic properties.

AHPA requires that Federal agencies provide for the preservation of historical and archaeological data (including relics and specimens) which might otherwise be irreparably lost or destroyed as the result of any alteration of the terrain caused as a result of any Federal action.

In compliance with the NHPA, USACE will consult with regulators, Indian tribes and other interested parties to identify historic properties and other historic resources that may be impacted by the Proposed Action. Per NHPA, historic properties are defined as any district, site, building, structure, or object listed in, or eligible for listing in, the National Register of Historic Places (NRHP). For the purposes of this analysis, historic properties can be divided into the following categories:

- Archaeological resources (prehistoric and historic) include the place or places where the remnants of a past culture survive in a physical context that allows for the interpretation of these material remains.
- Traditional historic properties include properties associated with historic practices and beliefs of a living community that are (a) rooted in the community's history and (b) important to maintaining the continuing historic identity of the community.
- Tribal treaty resources include treaty-guaranteed rights and resources associated with ceded Tribal lands, including Tribal treaty hunting, fishing, and gathering rights.
- Architectural resources include standing buildings, structures, landscapes, and other built-environment resources of historic or aesthetic significance.

3.6.1.1 Archaeological Resources

As appropriate, USACE consults with federally recognized Indian tribes on actions with the potential to significantly affect archaeological resources of interest or significance to Indian tribes.

USACE conducted a literature review of previously conducted historic resources reviews within vicinity of the APE. Based on this desktop review, a total of 27 archaeological sites were recorded within a 2-mile radius of the APE, and only 2 potential resources were identified within a buffered APE.

3.6.1.2 Traditional Historic Properties

Traditional Historic Properties (TCPs), which include Historic Properties of Religious and Historic Significance to Indian Tribes, are areas tied to beliefs, customs, and practices of a living community. One TCP was identified within the APE, and another was identified within a 2-mile radius of the APE.

3.6.1.3 Tribal Trust Resources

USACE consulted with federally recognized Tribes on actions with the potential to significantly affect protected tribal resources, reserved treaty rights, or tribal lands. The Confederated Tribes of the Umatilla Indian Reservation (CTUIR) have protected treaty resources in the Proposed Action Area.

Treaty resources could include access to fisheries, water resources, wildlife, plants, and traditional sites. Fisheries includes access to historically significant species such as salmon, steelhead, lamprey, and other native fish species. Water resources include waters to support fish populations and other traditional uses. Wildlife includes species significant for hunting and use for historic resources. Traditional plants used for food, medicines, and historic practices. Historic sites include historically significant areas for religious practices, burial sites, and traditional fishing locations, which are vital for to the tribes spiritual and historic heritage.

3.6.1.4 Historic Properties

The USACE has a responsibility to document and evaluate archaeological sites, historic building, structures, objects, and districts for listing on the NRHP. USACE archaeologists conducted a record search of Oregon Department of Archaeological and Historical Preservation's (DAHP) online Oregon Information System for Architectural and Archeological Records Data (WISAARD). USACE determined that the existing CTUIR Columbia River Pump Station and the Wanaket Wildlife Area would not be eligible for the NRHP, and the various canal segments of the Wanaket Wildlife Area Irrigation System are also not eligible for listing. No other properties were identified within the APE.

3.6.2 Environmental Consequences

Analysis of potential impacts to historic resources considers both direct and indirect impacts. Direct impacts may be the result of physically altering, damaging, or destroying all or part of a resource, altering characteristics of the surrounding environment that contribute to the importance of the resource, introducing visual, atmospheric, or audible elements that are out of character for the period the resource represents (thereby altering the setting), or neglecting the resource to the extent that it deteriorates or is destroyed. Indirect effects to historic properties are those caused by the undertaking that are later in time or farther removed in distance but are still reasonably foreseeable. Significant impacts would occur if the integrity of a historic properties is diminished such that it would no longer be eligible for listing in the (NRHP); if archaeological or historic

resources are permanently altered or impacted to a meaningful extent; if historic viewsheds would be substantially altered; or if significant tribal resources (to include sacred sites) are permanently compromised.

3.6.2.1 Alternative 1: No Action Alternative

Under the No Action Alternative, USACE would not issue the COU and CTUIR a construction license to implement their proposed project components on USACE owned lands. Without action, there would be no change to the existing baseline condition and therefore no anticipated direct or indirect adverse impacts to historic resources within the APE.

Implementation of the alternative would not result in the ineligibility for any resources to be listed within the NRHP, or any direct or indirect effects to archaeological, historic resources, historic viewsheds, or tribal resources (to include sacred sites). Therefore, implementation of the alternative would result in less than significant impacts.

3.6.2.2 Alternative 2: New Pump Station and Pipeline

Under this alternative, USACE would issue the COU and CTUIR a temporary construction license to construct a new pump station and improve existing conveyance infrastructure on USACE owned lands. Furthermore, re-alignment and excavation of the new pipeline would occur on BIA lands, along with the de-commissioning of the existing pipeline along the old alignment and back-filling of the existing open-air ditch to the WWA.

There were no resources identified by USACE that would be eligible for listing within the NRHP. In addition, the identified archaeological resources were not determined to be within the vicinity of Proposed Action activities. Therefore, the Proposed Action would not result in any direct or indirect effects to these resources. Furthermore, the construction of the new pump station and associated conveyance infrastructure was determined to not result in any adverse changes to the visual or audible characteristics of any historic viewsheds. Direct adverse impacts to Tribal Trust resources would be minor and minimized through the implementation of BMPs. It is anticipated that the Proposed Action would result in negligible indirect impacts and potential beneficial impacts to the Wanaket Wildlife Area and the Wanapa Industrial Site through the improved conveyance reliability and capacity of the newly constructed infrastructure.

Overall, this alternative would not result in the ineligibility for any resources to be listed within the NRHP, or any direct or indirect effects to archaeological, historic resources, historic viewsheds, or tribal resources (to include sacred sites). Therefore, implementation of the alternative would result in less than significant impacts.

3.7 Visual Resources

3.7.1 Affected Environment

Visual resources include landforms, vegetation, water, color, adjacent scenery, and human-made modifications and any other aesthetic and scenic aspects of the environment that are visible to the human eye. Evaluating the visual qualities of an area, or viewshed, is a process that acknowledges the value that an observer places on a specific feature varies depending on their perspective and judgment. A qualitative visual resource assessment was conducted to assess the baseline visual environment and determine whether alterations associated with the alternatives would alter the visual environment. Accordingly, this section evaluates changes to the viewshed from the considered alternatives based on changes in visual qualities such as color, vegetation, and landforms, and how these changes affect different viewer types.

The action area is located along the Columbia River within a landscape characterized by a mix of natural and modified features. The viewshed includes open river vistas, riparian zones with scattered vegetation, and nearby upland areas transitioning to shrub-steppe terrain. The area's aesthetic character is defined by its expansive water body, juxtaposed with relatively undeveloped shorelines and occasional infrastructure, such as access roads and agricultural fields.

Critical Public Views are primarily from the Lewis and Clark Commemorative Trail, which runs along the river and offers recreational users scenic views of the Columbia River and its surrounding environment. While the area lacks dense vegetation, scattered shrubs, smaller plants, and occasional trees contribute to a semi-natural aesthetic.

Nearby industrial and municipal developments, including water conveyance infrastructure and existing pump stations, introduce moderate visual alterations to the landscape. These existing structures blend into the surroundings to some degree due to their small size and utilitarian design.

Overall, the viewshed is a mix of natural and human-altered landscapes, with the Columbia River serving as the dominant visual feature.

3.7.2 Environmental Consequences

The effects to visual resources are analyzed by systematically measuring the degree of change created by a proposed alternative. This is done by comparing the basic elements of line, form, color, and texture within the existing viewshed to those introduced by the alternative. Factors that need to be considered are distance, viewing times, relative size and scale, season of use and light conditions, recovery time, spatial relationships, as well as noise and motion.

Impacts to the viewer are determined by analytically measuring the sensitivity of differing viewer groups. Sensitivity attaches relative importance values to differing landscapes based on perceived user expectations and activities. Tribal members and recreationalists are among the most sensitive of all viewing groups. Additionally, viewers are divided into two types: static and non-static. Static viewers include residents, reservoir and project employees, recreation management agencies, tribal members, and recreation visitors to an area. Non-static viewers are mainly defined as people traveling through area or along access roads and may have limited views of the viewshed. The sensitivity of the different types of viewers varies based on their

perceptions of the area and the importance they place on the landscape, or how they interpret visual quality. Casual observers are typically engaged in other activities so they may not notice landscape changes. Sensitive viewers actively view the landscape and have a deeper connection to the visual environment. Recreationalists and tribal members have the highest sensitivity level. Even small visual changes may affect the experience for tribal members engaging in historic activities or practices.

Significant impacts would occur if there were a permanent adverse alteration of the existing viewshed.

3.7.2.1 Alternative 1: No Action Alternative

Under the No Action Alternative, USACE would not issue the COU and CTUIR a construction license to implement their proposed project components on USACE owned lands. The visual environment, characterized by the Columbia River, nearby shrubs, occasional trees, open grasslands, and human-made modifications such as the existing pump station, would remain in its baseline condition.

Direct effects on visual resources would be negligible since the existing facilities would remain unaltered. The current pump station, which is small in scale and minimally intrusive, would continue to be a visible feature within the viewshed but would not substantially impact the dominant natural elements such as the Columbia River and surrounding vegetation. This is true for the existing pipeline and open-air ditch as well.

Indirect effects could include gradual aesthetic degradation of the viewshed over time due to aging infrastructure. Without maintenance or upgrades, the pump station could exhibit rust, discoloration, or wear, potentially making it more visually prominent or detracting from the area's overall appeal. Additionally, the continued presence of aging infrastructure would preclude opportunities for visual improvements or better integration with the natural environment.

Critical views include those from public vantage points along the Columbia River, recreational areas, and nearby trails, where viewers often have moderate to high sensitivity to changes in visual quality. While the pump station is visible to recreational users and tourists who value the natural aesthetics of the area, its existing presence is an established part of the landscape and does not substantially detract from the visual experience.

Overall, the impacts of the No Action Alternative on visual resources would be minor. The continued presence of existing infrastructure would not substantially alter the aesthetic qualities of the landforms, vegetation, or water. Although some incremental degradation of the facility’s visual appeal may occur, these changes would not permanently or substantially affect the viewshed. Therefore, the No Action Alternative would not result in substantial adverse impacts on the visual environment and thus be less than significant.

3.7.2.2 Alternative 2: New Pump Station and Pipeline

Under this alternative, USACE would issue the COU and CTUIR a temporary construction license to construct a new pump station and improve existing conveyance

infrastructure on USACE owned lands. Furthermore, re-alignment and excavation of the new pipeline would occur on BIA lands, along with the de-commissioning of the existing pipeline along the old alignment and back-filling of the existing open-air ditch to the WWA. Implementation of the alternative would result in temporary and long-term impacts on aesthetic resources within the action area. These impacts would vary in intensity based on the phase of the project and the sensitivity of viewers in the area.

During construction, temporary visual disturbances would occur due to the presence of heavy machinery, staging areas, and increased human activity. Soil disturbance, the removal of low-growing vegetation, and the installation of temporary structures such as cofferdams and erosion control measures would introduce industrial elements into the landscape. These changes would create moderate, short-term impacts for recreational users and others sensitive to changes in the viewshed. BMPs, including turbidity curtains, stabilized construction entrances, and the careful placement of staging areas away from critical views, would be implemented to minimize these effects. Construction related adverse impacts would be short-term in duration.

Demolition activities, including the removal of the existing pump station and open-air ditch, would also create temporary visual impacts such as visible debris and ground disturbance. These impacts would be mitigated through grading and native vegetation planting, which would restore the site to a more natural state, ultimately enhancing the visual quality in those areas.

The operational phase would introduce a larger, modern pump station into the landscape, with a footprint of approximately 2,400 square feet and a height of 30 feet. Although the structure's industrial appearance would result in a moderate, long-term impact, its placement avoids tree removal, and existing vegetation would provide partial screening. BMPs such as the use of non-reflective building materials and earth-tone colors could help the facility blend into the surrounding environment. While visible from critical viewpoints along the Columbia River, recreational trails, and nearby public lands, the new facility would only slightly alter the visual quality of the viewshed and would not detract from the broader landscape or viewed experience.

Routine maintenance activities, such as equipment servicing and vegetation management, would have negligible, long-term impacts on visual resources. These activities would be infrequent and would not substantially disrupt the viewshed.

Critical views from the Columbia River, recreational trails, and adjacent public lands would experience localized changes due to the new pump station, but these changes would be minimized through design and BMPs. Viewer sensitivity is generally high in these areas due to the natural aesthetics, but the broader visual landscape would remain largely unaffected.

In summary, the alternative would result in moderate, short-term impacts during construction and minor, long-term impacts during operation. Restorative actions and BMPs would minimize these effects, ensuring that the viewshed retains its overall character. The changes would result in permanent alterations; however, these alterations would not substantially and adversely impact the existing viewshed. Therefore, implementation of the alternative would result in less than significant impacts of aesthetic resources.

3.8 Social Effects

3.8.1 Affected Environment

Agencies should consider the composition of the affected area, to determine whether low-income populations or Indian Tribes are present in the area affected by the Proposed Action, and if so whether there may be disproportionately high and adverse human health or environmental effects on low-income populations, or Indian tribes. Effects would constitute economic, environmental, social, historical/ traditional, or health-related impacts whether direct, indirect or cumulative.

The Proposed Action area was analyzed for communities that are marginalized, underserved, and overburdened by pollution. Census tracts in the Proposed Action area that exceeded both an environmental burden threshold and an associated economic threshold, as shown in Table 3-4.

Table 3-3. Environmental Burdens and Associated Economic Burdens in the Proposed Action Area.

Census Tract	Category	Environmental Burden	Socioeconomic Burden
41059950800	Transportation	Transportation Barriers	Low Income
41059950900	Legacy Pollution	Proximity to Risk Management Plan Facilities	Low Income
41059951000	Workforce Development	Unemployment	High school Education Percentile

Three disadvantaged census tracts were identified in and around the Proposed Action area. The action falls within census tract #41059950800, which is considered disadvantaged based on transportation criteria, which involves the intersectionality between transportation barriers and low income. Census tract #'s 41059950900 and 41059951000, are adjacent to the project area, and are considered disadvantaged based on intersectionality between legacy pollution and workforce development categories, and low income and high school education percentile respectively.

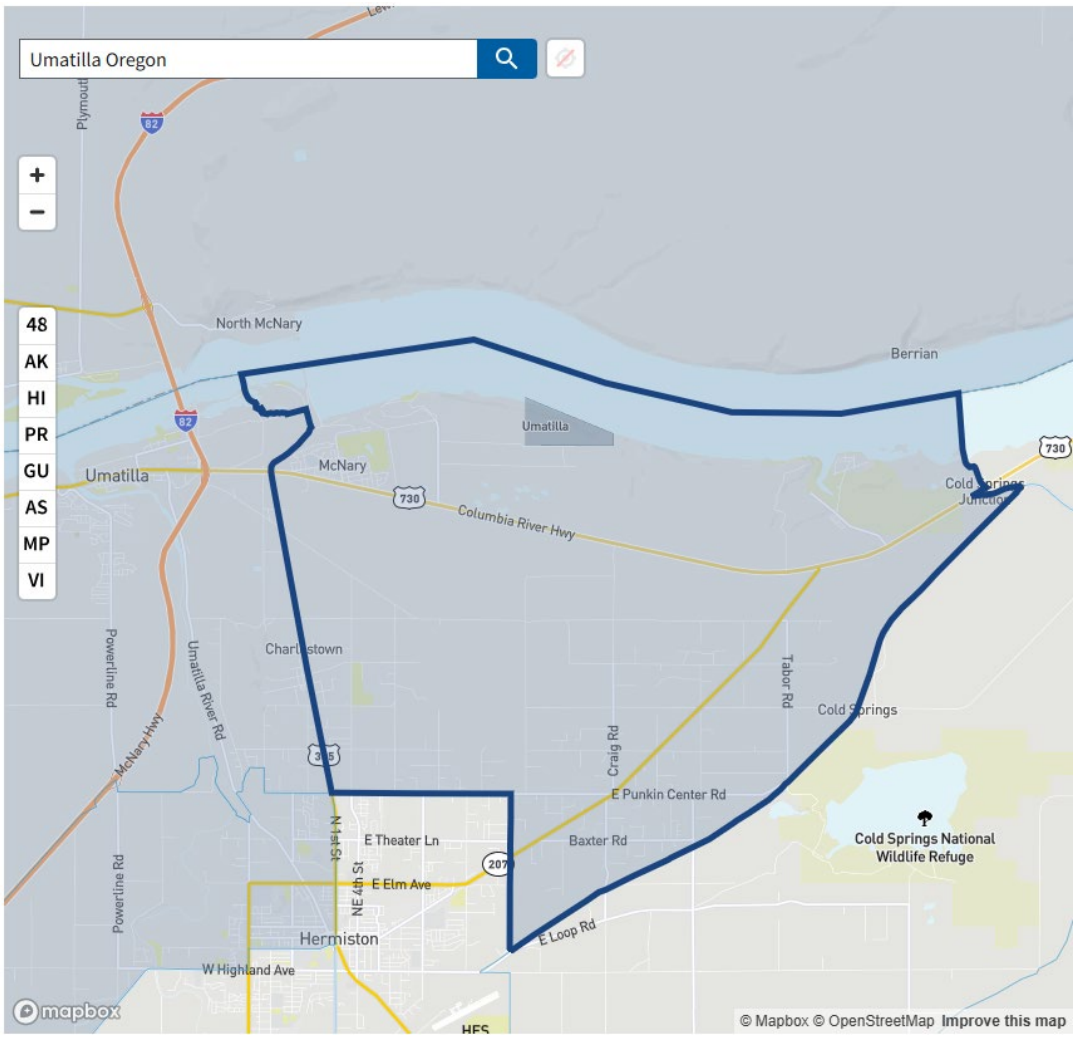

Figure 13. Census Tract Map (2024).

The Proposed Action area was further examined by demographic to determine the intersectionality between low income and environmental indicators. Notable discrepancies between the state and national percentiles are for ozone and nitrogen dioxide levels, and superfund proximity.

Table 3-5 Community Report Indexes

Environmental Index	State Percentile	National Percentile
Ozone	78	27
Nitrogen Dioxide	63	54
Superfund Proximity	80	71

3.8.1.1 Identification of Tribes

Federally Recognized Tribes, including Alaska Native Villages, are also considered disadvantaged communities. The Proposed Action is not located on a Federally Recognized Tribal Reservation; however, the Proposed Action is located on the ceded lands of the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), and the

proposed pipeline passes through Tribal Trust lands of the CTUIR, administered by the Bureau of Indian Affairs (BIA). Furthermore, the CTUIR currently own and operate the existing pump station which pumps water rights for the purpose of wildlife and economic services.

3.8.2 Environmental Consequences

This analysis focuses on the potential for a disproportionate and adverse exposure of specific population groups to any potential adverse consequences.

Significant impacts would occur if disadvantaged communities (to include Federally Recognized Tribes) are disproportionately adversely affected.

3.8.2.1 Alternative 1: No Action Alternative

Under the No Action Alternative, USACE would not issue the COU and CTUIR a construction license to implement their Proposed Action components on USACE owned lands. No new construction or modification of infrastructure would occur, and disadvantaged communities within the action area would remain un-impacted.

The No Action Alternative would have minimal direct or indirect impacts on identified disadvantaged census tracts. Disadvantaged census tract #41059950800, identified under the transportation criteria, would not experience additional burdens related to infrastructure or access, as no changes to the pump station would occur. Similarly, adjacent census tracts #41059950900 and #41059951000, which are disadvantaged due to legacy pollution, workforce development disparities, low income, and high school education attainment levels, would not be disproportionately affected by the continued operation of the existing facility.

Indirect effects would be limited to maintaining current conditions, with no new activities or releases introduced into the area. The No Action Alternative would not address existing environmental exposures, such as elevated ozone and nitrogen dioxide levels or proximity to superfund sites. However, these exposures are unrelated to the continued operation of the pump station and pipeline and are instead associated with broader regional factors. As such, the facility’s continued operation is not anticipated to exacerbate these conditions.

Potential avenues of burden, such as transportation challenges or environmental exposures, would not be intensified under the No Action Alternative. The continued operation and maintenance of the facility and conveyance infrastructure would avoid new impacts on disadvantaged communities, and existing health, economic, and environmental conditions would remain unchanged. Although opportunities for modernization and improvement of local infrastructure would not be realized, this lack of action does not introduce new or disproportionate effects on disadvantaged populations.

Furthermore, tribal communities would not directly experience environmental burdens, however, without a more reliable and efficient conveyance of water delivery the Wanaket Wildlife Area, CTUIR managed resources may indirectly be adversely impacted. The CTUIR manages these lands in accordance with tribal environmental stewardship goals, and the existing facilities are incapable of meeting current and future

water demands to support this resource. This would present a potentially moderate impact for this tribal resource, which would persist long-term.

In summary, the No Action Alternative would have minimal impacts on disadvantaged communities. While it does not address existing inequities, it does not contribute to additional adverse and disproportionate impacts to disadvantaged communities. However, the alternative could potentially impact natural tribal resources from which the existing pump station and conveyance infrastructure is unable to meet current and future water demands. This could potentially result in a long-term, moderate adverse effect on this tribally managed resource. However, overall, the alternative would not result in substantial and disproportionate adverse impacts to disadvantaged census tracts, tribal communities, or children's health and safety. The alternative represents a continuation of current conditions without introducing new social effects, and therefore, would result in a less than significant impact.

3.8.2.2 Alternative 2: New Pump Station and Pipeline

Under this alternative, USACE would issue the COU and CTUIR a temporary construction license to construct a new pump station and improve existing conveyance infrastructure on USACE owned lands. Furthermore, re-alignment and excavation of the new pipeline would occur on BIA lands, along with the de-commissioning of the existing pipeline along the old alignment and back-filling of the existing open-air ditch to the WWA. The project area includes census tract #41059950800, which is designated as disadvantaged under transportation criteria, and adjacent tracts #41059950900 and #41059951000, which are disadvantaged due to legacy pollution, workforce development, low income, and high school education percentile criteria.

During construction, direct impacts to disadvantaged communities would include localized noise, air releases, temporary visual disturbances, and minor traffic disruptions. Noise and air quality impacts would primarily result from construction equipment operation and vehicular traffic for material deliveries. However, these effects would be temporary, minor in intensity, and confined to the immediate project vicinity. BMPs, including dust suppression, proper maintenance of construction equipment to minimize releases, and adherence to local noise ordinances, would be implemented to reduce these impacts further. Construction-related traffic disruptions, although minimal, would be managed through coordination with local authorities and public notification of schedules to minimize inconvenience.

Indirect impacts, such as temporary increases in vehicular releases or minor detours, are not expected to burden disadvantaged communities due to their limited scope and short duration. Construction activities would not exacerbate regional environmental burdens, including elevated indices for ozone, nitrogen dioxide, and Superfund proximity. These indices reflect broader regional conditions rather than impacts specific to the project, and BMPs such as using low-release equipment and careful activity scheduling would ensure no contribution to these existing concerns.

Once operational, the new pump station and new pipeline would not impose any direct or indirect burdens on disadvantaged communities. Routine operation and maintenance activities, such as equipment servicing or minor repairs, would generate negligible noise, releases, or traffic disruptions. The upgraded infrastructure would improve

operational efficiency and reliability without increasing activity levels or introducing new environmental stressors. Indirectly, the improved pump station would support regional water management, enhancing infrastructure resilience in a manner that may benefit surrounding communities, including disadvantaged populations.

The Proposed Action Alternative would deliver water to the WWA, which would provide both environmental and cultural benefits to the CTUIR. The WWA, located on CTUIR ceded lands, is an important resource for preserving cultural traditions and promoting ecological stewardship in alignment with tribal values. Direct benefits to tribal communities include the restoration of culturally significant landscapes and the reinforcement of ecological stewardship practices central to CTUIR heritage. Indirect effects, such as enhanced opportunities for environmental education, cultural preservation, and traditional resource use, further contribute to the positive impacts of the project.

In summary, the Proposed Action Alternative would have negligible to minor impacts on disadvantaged communities within and near the action area. Construction-related impacts would be minor, temporary, and localized, with BMPs ensuring further mitigation. Operational impacts would be negligible, and the action would not exacerbate existing regional burdens or create new ones. The project would avoid disproportionate adverse effects on vulnerable populations while contributing to improved infrastructure reliability and functionality. The Proposed Action Alternative would result in direct and indirect benefits to tribal communities by improving the ecological health of the WWA, a resource located on ceded CTUIR lands. Consequently, the Proposed Action is not expected to result in significant impacts to disadvantaged communities.

3.9 Atmospheric Pollution and Long-term Weather Patterns

3.9.1 Affected Environment

Atmospheric pollutants trap heat in the Earth's atmosphere, contributing to the warming of the planet and shifting long-term weather patterns. Some atmospheric pollutants occur naturally in the atmosphere, such as water vapor, carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O), though human activities (such as the burning of fossil fuels for energy) increase their abundance. Other atmospheric pollutants, such as fluorocarbons, are synthetic. Atmospheric pollutants are often measured in terms of their relative carbon dioxide equivalent (CO2e). CO2e communicates the relative contribution of a unit of a particular atmospheric pollutant to long-term weather pattern change. It is a measure of the radiative forcing of an atmospheric pollutant relative to CO_2.

This calculation allows for comparison in like terms of the relative effects of various atmospheric pollutant releases. It also allows for releases of multiple types of atmospheric pollutants to be summed and expressed in total.

Changes in long-term weather patterns have regional impacts in the Pacific Northwest, the objective of atmospheric pollutant release reduction targets is to broadly reduce global atmospheric pollutant concentrations. At a national level, the primary source of atmospheric pollutant release is fossil fuel combustion for electricity generation and

transportation. However, due to the prevalence of hydropower in the Pacific Northwest, regional atmospheric pollutant releases from electric power generation are relatively low compared to the rest of the nation.

Atmospheric pollutants are regulated under the Clean Air Act (CAA). New sources or modifications to existing sources that have the potential to increase atmospheric pollutant releases by more than 100,000 tons CO_2e per year may be subject to New Source Review or Prevention of Significant Deterioration requirements, as well as Title V requirements for operational permits, provided they are also otherwise subject to these requirements. Additionally, the U.S. Environmental Protection Agency's (USEPA) Mandatory Reporting Rule (40 CFR 98) requires sources in specific industrial sectors to report their atmospheric pollutant releases, if they emit more than 25,000 metric tons CO_2e per year. The Proposed Action would not likely be subject to these permitting and reporting requirements.

Numerous studies document the recent trend of rising atmospheric concentrations of CO_2. The longest continuous record of atmospheric carbon dioxide monitoring extends back to 1958 (Keeling 1960; Scripps 2020). These data show that atmospheric CO_2 levels have risen an average of 1.5 parts per million (ppm) per year over the last 60 years, with the growth rate accelerating from around 1 ppm per year in the 1960s to 2 ppm per year in the 2000s (NOAA 2020). The global atmospheric CO_2 concentration has now passed 400 ppm, a level that last occurred about 3 million years ago when both global average temperature and sea level were significantly higher than today (USGCRP 2017). Rising atmospheric concentrations of CO_2 and other atmospheric pollutants have been identified as the primary driver behind significant changes to global long-term weather pattern patterns. Observed changes to global long-term weather patterns include rising average temperatures, shrinking glaciers and sea ice, rising sea levels, increased drought and wildfires, increased flooding and other severe weather events, thawing permafrost, a lengthened growing season, and shifts in plant and animal ranges. International and national organizations independently confirm these findings and predict that these trends are likely to continue into the foreseeable future unless action is taken to reduce global atmospheric pollutant releases (IPCC 2018; USGCRP 2017).

Releases in the Pacific Northwest are low compared to other states and national averages (EIA 2018c). This is in large part because of the abundance of hydropower in the region, which does not create atmospheric pollutant releases when generating power (EIA 2017b). As such, electric power generation is not the largest atmospheric pollutant -emitting sector in the region as it is nationally. Transportation accounts for the greatest share of atmospheric pollutant releases in Idaho, Oregon, and Washington. Electric power generation is, however, associated with the greatest share of releases in Montana where coal generation is relatively prominent (EIA 2018c).

Each Pacific Northwest state has developed at least one atmospheric pollutant releases inventory, which are described below. The state inventories described below use consumption-based accounting for the electricity sector, meaning electricity use is calculated based on where the electricity is consumed, not produced.

Oregon and Washington inventories report atmospheric pollutant releases, most recently in 2017 and 2013, respectively. Both inventories are created by state

environmental agencies and evaluate multiple atmospheric pollutants, which are then converted to CO2e for comparison by sector.

Oregon's total atmospheric pollutant releases have declined from 70 million metric tons of CO2 e (MMT CO2 e) in 2000 to 65 MMT CO2 e in 2017 (Oregon Department of Environmental Quality [ODEQ] 2018a). In 2016, transportation (39 percent) and electricity use (26 percent) together account for the majority of releases (ODEQ 2018a). Transportation releases have stayed constant in Oregon at or around 24 MMT CO2 e since 2000, while electricity releases fluctuated but have declined to about 16 MMT CO2 e from 23 MMT CO2 e since 2000.

Within Umatilla County, there are a total of 3 facility level producers of atmospheric pollutant releases that meet the EPA's reporting threshold of 25,000 metric tons of CO2e. Together, these facilities emit approximately 2,799,677 metric tons of CO2e annually. Roughly 50% of total U.S Releases are reported by large emitting facilities subject to reporting. The remaining percentage of contributing releases would be consistent with an urbanized environment adjacent to large areas of land utilized for agricultural practices. Releases sources are typically produced from transportation, use of industrial facilities, residential and commercial buildings, waste management, crop production, and commercial ranching practices.

3.9.2 Environmental Consequences

This section evaluates how the considered alternatives may affect air quality and atmospheric pollutant releases. This section also identifies expected effects from continued long-term weather pattern change to the considered alternatives impacts to other environmental resources.

Significant impacts would occur if proposed project activities produced quantities of atmospheric pollutant releases that would prevent the federal reduction goals from being met.

3.9.2.1 Alternative 1: No Action Alternative

Under the No Action Alternative, the Umatilla Pump Station would not be relocated or replaced, and existing conditions, including continued operation and maintenance of the current facility, would persist. No new construction or modification of infrastructure would occur. Atmospheric pollutant releases would be representative of current baseline conditions for operation and maintenance of the existing facility. Without additional atmospheric pollutant releases, there would be no need to quantify releases or the economic effects of those releases. Furthermore, implementation of this alternative would have no impact on established federal or state atmospheric pollutant releases target goals, and no measurable impact to local, regional, or global long-term weather pattern change. Therefore, the proposed project would result in less than significant impacts to atmospheric pollutants and long-term weather patterns.

3.9.2.2 Alternative 2: New Pump Station and Pipeline

Under this alternative, USACE would issue the COU and CTUIR a temporary construction license to construct a new pump station and improve existing conveyance infrastructure on USACE owned lands. Furthermore, re-alignment and excavation of the new pipeline would occur on BIA lands, along with the de-commissioning of the existing pipeline along the old alignment and back-filling of the existing open-air ditch to the WWA. Implementation of the alternative would directly result in negligible releases of atmospheric pollutants into the atmosphere. Releases would occur directly from the implementation of construction activities, and indirectly from operation and maintenance activities. The temporal scope of analysis was a 50-year timeframe. A full in-depth analysis of the Proposed Action's releases is detailed within the *Atmospheric Pollution Analysis: Umatilla New Pump Station and Pipeline (*Appendix D). This analysis outlines the quantification of atmospheric pollutant releases for the proposed pump station, and components of work occurring on USACE owned lands. Atmospheric pollutant releases (CO2, CH4, and N2O) were quantified through the equipment type, estimated hours of equipment operation, average fuel consumption rates specific to equipment type, fuel volumes, and appropriate releases factors by fuel volume. Conservative estimates for these variables were utilized during releases calculations, which means figures are likely over estimations. The NEAT model was utilized to calculate net atmospheric pollutant releases. The following figures represent the net releases of the Proposed Action.

Alternative 2						
Pollutant Emissions (Clean Air Act)	**Grams**	**Pounds**	**Metric Tons**	**Grams**	**Pounds**	**Metric Tons**
Reactive Organic Gases aka Volatile Organic Compounds (ROG/VOC)	0	0	0	0	0	0
Carbon Monoxide (CO)	0	0	0	0	0	0
Sulfur Oxides (SOx)	0	0	0	0	0	0
Nitrous Oxides (NOx)	0	0	0	0	0	0
Particulate Matter - 2.5 micron ($PM_{2.5}$)	0	0	0	0	0	0
Particulate Matter - 10 micron (PM_{10})	0	0	0	0	0	0
Lead - (Pb)	0	0	0	0	0	0
Greenhouse Gas Emissions (NEPA)						
Carbon Dioxide (CO_2)	700,408,114	1,544,137	700	700,408,114	1,544,137	700
Methane (CH_4)	22,559	50	0	22,559	50	0
Nitrous Oxide (N_2O)	4,512	10	0	4,512	10	0
Carbon Dioxide Equivalents (CO_2e)	702,316,604	1,548,344	702	702,316,604	1,548,344	702

Figure 14. Net Atmospheric Pollutant Releases for the Proposed Action (O&M Activities Included).

The net releases for the proposed project are estimated to be approximately **702 metric tons** of CO2e. According to the EPA, this quantity of CO2e would equate to approximately 164 gasoline-powered passenger vehicles driven for one year or 1,787,685 miles driven by an average gasoline-powered passenger vehicle (https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator#results). The intensity of direct impact and indirect impacts of the estimated net releases and economic effect were scaled based on comparison to local atmospheric pollutant releases sources. Within Umatilla County, there are a total of 3 facility level producers of atmospheric pollutant releases that meet the EPA's reporting threshold of 25,000 metric tons of CO2e. Together, these facilities emit approximately 2,799,677 metric tons of CO2e annually. Within the State of Oregon, there a total of 48 facility level producers that emitted cumulatively approximately 11,479,917 metric tons of CO2e annually (EPA 2024). Roughly 50% of total U.S Releases are reported by large emitting facilities subject to the atmospheric pollutant.

The releases produced by the proposed project's construction, and operation and maintenance over the course of a 50-year period, would be negligible in comparison to the top facility level emitters within the County, and likely even more so inconsequential when compared to State releases over the same timeframe.

Therefore, it can reasonably be determined that implementation of the proposed project would not meaningfully impact any state or federal reduction goals or measurably impact local, regional, or global long-term weather patterns. Implementation of the Proposed Action would directly result in production of atmospheric pollutant releases, and these releases would be short-term and temporary. The Proposed Action would result indirectly in releases tied to operation and maintenance of the water conveyance facility. Overall, the releases produced would result in less than significant impacts to overall releases of atmospheric pollutants and any change to long-term weather patterns.

4 Cumulative Impacts

This section: (1) defines cumulative impacts, (2) describes past, present, and reasonably foreseeable future actions relevant to cumulative impacts, (3) analyzes the incremental interaction the Proposed Action may have with other actions, and (4) evaluates cumulative impacts potentially resulting from these interactions.

4.1 Definition of Cumulative Impacts

The approach taken in the analysis of cumulative impacts follows the objectives of the NEPA, CEQ regulations, and guidance. Cumulative impacts are defined under 40 CFR § 1508.7 as "the impact on the environment that results from the incremental impact of the action when added to the other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time."

To determine the scope of environmental impact analyses, federal agencies must consider cumulative actions, which when viewed with other Proposed Actions have cumulatively significant impacts and should therefore be discussed in the same impact analysis document.

In addition, CEQ and USEPA have published guidance addressing implementation of cumulative impact analyses—Guidance on the Consideration of Past Actions in Cumulative Effects Analysis (CEQ 2005) and Consideration of Cumulative Impacts in EPA Review of NEPA Documents (USEPA 1999). CEQ guidance entitled Considering Cumulative Impacts Under NEPA (1997) states that cumulative impact analyses should:

"…determine the magnitude and significance of the environmental consequences of the Proposed Action in the context of the cumulative impacts of other past, present, and future actions...identify significant cumulative impacts…[and]…focus on truly meaningful impacts."

Cumulative impacts are most likely to arise when a relationship or synergism exists between a Proposed Action and other actions expected to occur in a similar location or during a similar time period. Actions overlapping with or in close proximity to the Proposed Action would be expected to have more potential for a relationship than those more geographically separated. Similarly, relatively concurrent actions would tend to offer a higher potential for cumulative impacts. To identify cumulative impacts, the analysis needs to address the following three fundamental questions.

- Does a relationship exist such that affected resource areas of the Proposed Action might interact with the affected resource areas of past, present, or reasonably foreseeable actions?
- If one or more of the affected resource areas of the Proposed Action and another action could be expected to interact, would the Proposed Action affect or be affected by impacts of the other action?
- If such a relationship exists, then does an assessment reveal any potentially significant impacts not identified when the Proposed Action is considered alone?

4.2 Scope of Cumulative Impacts Analysis

Guidance for setting appropriate boundaries for a cumulative effect analysis is available from CEQ (1997) and EPA (1999). Generally, the scope of cumulative effects analysis should be broader than the scope of analysis used in assessing direct or indirect effects. “Geographic boundaries and time periods used in cumulative impact analysis should be based on all resources of concern and all of the actions that may contribute, along with the project effects, to cumulative impacts” (EPA 1999). The analysis should delineate appropriate geographic areas including natural ecological boundaries, whenever possible, and should evaluate the time period of the project’s effects. The analysis should also include all potentially significant effects on the resources of concern (EPA 1999).

The term “cumulative impacts area” is used in this section to describe the geographic area analyzed for cumulative impacts for each resource. The geographic area of the cumulative effects analysis can be broader than the Proposed Action area, which was the area defined for the assessment of direct and indirect environmental effects of the plan alternatives and is determined by the characteristics of each resource (CEQ 1997).

The geographic scope of the cumulative effects analysis would range depending on the specific resources analyzed, however, cumulative effects for resources would consider the resources that are impacted from the implementation of the Proposed Action, including areas that transcend the footprint of Proposed Action components. Additionally, the geographic scope for cumulative effects analysis would be expanded to include the Federal Columbia River Power System (dams), agriculture and the associated water diversion and water control activities, the Umatilla Chemical Depot, and urban development that have shaped the landscape and affected resources near the action area.

A temporal or time boundary is the duration that impacts from the proposed project or other actions affecting the resources would last. The boundary can vary per resource. Predicting the effects of future actions can be difficult and highly speculative. The temporal scope of analysis would vary by the resource evaluated. All resources would be evaluated based on direct and indirect impacts during construction. Operation and maintenance activities would result in negligible impacts over time.

4.3 Past, Present, and Reasonably Foreseeable Actions

This section will focus on past, present, and reasonably foreseeable future projects at and near the Proposed Action locale. In determining which projects to include in the cumulative impacts analysis, a preliminary determination was made regarding the past, present, or reasonably foreseeable action. Specifically, using the first fundamental question included in Section 4.1, it was determined if a relationship exists such that the affected resource areas of the Proposed Action might interact with the affected resource area of a past, present, or reasonably foreseeable action.

4.3.1 Past Actions

Past actions would include the considered would include the construction, operation, and maintenance of the existing pump station and conveyance structures. In addition, the development and conservation activities within the WWA as well as the historical water resource projects and dam construction within the region should be considered. Resources to be considered during cumulative effects analysis for these past actions would include geological resources and soils, noise, water quality, terrestrial resources, fish and aquatic resources, historic resources, visual resources, environmental justice, and greenhouse gas and long-term weather pattern change.

4.3.2 Present and Reasonably Foreseeable Actions

Present actions would be consistent with the before mentioned past actions. The same resources would be considered to cumulative effects analysis. As for reasonably foreseeable actions, increasing need for large scale data centers within Umatilla County remains a possibility due to the availability of land, access to hydroelectric power, tax breaks, and more. As of January 2025, Umatilla County, Oregon, hosts approximately 38 data centers. This includes facilities in the cities of Umatilla (16), Hermiston (15), and Boardman (7). Notably, Amazon Web Services (AWS) has a significant presence in the region, with about a dozen data centers in northern Morrow and western Umatilla counties, making Eastern Oregon its largest data center cluster after northern Virginia. Additionally, AWS has announced plans to develop four to five more data centers in the Hermiston area. Sabey Data Centers also plans to build a 100 MW multi-tenant campus in Umatilla, further contributing to the region's data center infrastructure. The proposed Umatilla campus may require water diverted from the proposed new pump station and conveyance infrastructure. Data centers in Umatilla County impact water resources through high cooling water demands and potential discharges, strain energy systems with significant electricity use, and contribute to atmospheric pollutant releases and local air pollution. They may also lead to habitat loss, increased waste generation, and localized noise pollution.

4.4 Cumulative Impact Analysis

The cumulative impacts analysis requires consideration of past and present actions, as well as reasonably foreseeable future ones. It is apparent that for many of the environmental resources covered by this analysis, historic actions have already resulted in significant impacts. The level of impact to a resource from past and present actions has led to the present condition of each resource. However, to evaluate the cumulative impacts, it is also necessary to look forward in time. Future actions and ongoing present actions will continue to affect resources. However, future actions will take place in a dramatically different regulatory and political long-term weather pattern than most historic actions. Future actions are subject to detailed review at the federal, state, and/or local level. As appropriate, this review could include NEPA, ESA, CWA, NHPA, state wetlands and growth management regulations, and local protections for critical resources. Accordingly, unlike historic actions, future actions will be more apt to avoid and minimize detrimental effects to key resources.

4.4.1 Geology and Soils

The geographic scope should focus on the area within the immediate vicinity of the Proposed Action. This would include new 3,460-foot-long water pipeline to the COU Water Treatment Facility and a new 4,5550-foot-long water pipeline delivering water to the Wanaket Wildlife Area (WWA). These interconnected project components pass through federal, state, municipal, and private property.

The temporal scope for geology and soil cumulative analysis should consider recent use of the action area, to extent back to when the original pump station was constructed, and through the proposed life span of the proposed infrastructure (70 years).

4.4.1.1 Alternative 2: New Pump Station and Pipeline

Under this alternative, the cumulative effects to geology and soils would be negligible to minor, and overall, less than significant. Impacts from the implementation of the Proposed Action would be localized to the area of potential effect, to include components of work that fall outside of USACE owned property. Past and present factors influencing the characteristics of geologic and soil resources within the region would include the construction, operation and maintenance of the original pump station and conveyance infrastructure. These past factors establish the baseline conditions for the area. Foreseeable future actions would include the construction, operation, and maintenance of the new pump station and improved conveyance infrastructure. Cumulatively, these actions would not result in substantial changes or adverse impacts to the characteristics of geological or soil resources within the geographic scope of analysis. Therefore, in consideration of past, present, and reasonably foreseeable actions would have negligible to minor impacts to geologic and soil resources.

4.4.2 Noise

The geographic scope should focus on the area within the immediate vicinity of the Proposed Action. This would include new 3,460-foot-long water pipeline to the COU Water Treatment Facility and a new 4,5550-foot-long water pipeline delivering water to the Wanaket Wildlife Area (WWA). These interconnected project components pass through federal, state, municipal, and private property.

The temporal scope for geology and soil cumulative analysis should consider recent use of the action area, to extent back to when the original pump station was constructed, and through the proposed life span of the proposed infrastructure (70 years).

4.4.2.1 Alternative 2: New Pump Station and Pipeline

Under this alternative, the cumulative effects to geology and soils would be negligible to minor, and overall, less than significant. Impacts from the implementation of the Proposed Action would be localized to the area of potential effect, to include components of work that fall outside of USACE owned property. Past and present factors influencing the characteristics of geologic and soil resources within the region would include the construction, operation and maintenance of the original pump station and conveyance infrastructure. These past factors establish the baseline conditions for the area. Foreseeable future actions would include the construction, operation, and maintenance of the new pump station and improved conveyance infrastructure. Cumulatively, these actions would not result in substantial changes or adverse impacts to the characteristics of geological or soil resources within the geographic scope of analysis. Therefore, in consideration of past, present, and reasonably foreseeable actions would have negligible to minor impacts to geologic and soil resources.

4.4.3 Water Quality

The geographic scope should focus on the area within the immediate vicinity of the Proposed Action. This would include new 3,460-foot-long water pipeline to the COU Water Treatment Facility and a new 4,5550-foot-long water pipeline delivering water to the Wanaket Wildlife Area (WWA). In addition, the geographic scope would consider any impacts to the Columbia River.

The temporal scope would consider recent use of the action area, to extent back to when the original pump station was constructed, and through the proposed life span of the proposed infrastructure (70 years).

4.4.3.1 Alternative 2: New Pump Station and Pipeline

Under this alternative, the cumulative effects to water quality would be minor and less than significant. Impacts from the implementation of the Proposed Action would be localized to the area of potential effect. Effects would be temporally limited to periods of construction and during maintenance activities. Past and present factors influencing the water quality of the region would include the construction of McNary Lock & Dam. In addition, it would include the construction, operation and maintenance of the original pump station and conveyance infrastructure. This would set the baseline conditions for the area. Foreseeable future actions would include the construction, operation, and

maintenance of the new pump station and improved conveyance infrastructure. Cumulatively, these actions would result in short-term, moderate, direct adverse effects to water quality of the Columbia River. These impacts would occur largely during construction activities, with the potential for minor periodic impacts during maintenance activities. In consideration of past, present, and reasonably foreseeable actions would not result in substantial changes to or adverse impacts to water quality of surface water resources within the geographic scope of analysis. Therefore, implementation of the alternative would have negligible to minor impacts to water quality.

4.4.4 Terrestrial Resources

The geographic scope should focus on the area within the immediate vicinity of the Proposed Action. This would include new 3,460-foot-long water pipeline to the COU Water Treatment Facility and a new 4,5550-foot-long water pipeline delivering water to the Wanaket Wildlife Area (WWA). These interconnected project components pass through federal, state, municipal, and private property.

The temporal scope for geology and soil cumulative analysis should consider recent use of the action area, to extent back to when the original pump station was constructed, and through the proposed life span of the proposed infrastructure (70 years).

4.4.4.1 Alternative 2: New Pump Station and Pipeline

Under this alternative, the cumulative effects to terrestrial resources would be minor and less than significant. Impacts from the implementation of the Proposed Action would be localized to the area of potential effect. Effects would be temporally limited to periods of construction and potentially during maintenance activities. Past and present factors influencing the terrestrial resources include the construction, operation and maintenance of the original pump station and conveyance infrastructure. In addition, this would include development within region. This would set the baseline conditions for the area. Foreseeable future actions would include the construction, operation, and maintenance of the new pump station and improved conveyance infrastructure. Cumulatively, these actions would result in short-term, moderate, direct adverse effects to terrestrial resources of the Columbia River. These impacts would occur largely during construction activities, with the potential for minor periodic impacts during maintenance activities. In consideration of past, present, and reasonably foreseeable actions would not result in substantial changes to or adverse impacts to terrestrial resources within the geographic scope of analysis. Therefore, implementation of the alternative would have minor impacts to water quality.

4.4.5 Fish and Aquatic Resources

The geographic scope should focus on the aquatic environments within the immediate vicinity of the Proposed Action. This would include new 3,460-foot-long water pipeline to the COU Water Treatment Facility and a new 4,5550-foot-long water pipeline delivering water to the WWA. In addition, it would consider impacts to fish and aquatic species that inhabit the Columbia River.

The temporal scope should consider recent use of the action area, to extent back to when the original pump station was constructed, and through the proposed life span of the proposed infrastructure (70 years).

4.4.5.1 Alternative 2: New Pump Station and Pipeline

Under this alternative, the cumulative effects to fish and aquatic resources would be minor and less than significant. Impacts from the implementation of the Proposed Action would be localized to the area of potential effect. Effects would be temporally limited to periods of construction and potentially during maintenance activities. Past and present factors impacting fish and aquatic resources would include the construction, operation and maintenance of the original pump station and conveyance infrastructure. This would set the baseline conditions for the area. Foreseeable future actions would include the construction, operation, and maintenance of the new pump station and improved conveyance infrastructure. Cumulatively, these actions would result in short-term, moderate, direct adverse effects to aquatic resources of the Columbia River. Indirect effects would be minor and limited to periodic impacts during maintenance activities. In consideration of past, present, and reasonably foreseeable actions would not result in substantial changes to or adverse impacts to fish and aquatic resources within the geographic scope of analysis. Rather, the improvements to the water infrastructure would result in increased flow capacity and reliability to the Wanaket Wildlife Area. This would result in benefits the aquatic resources in that location. Therefore, implementation of the alternative would cumulatively result in minor impacts to fish and aquatic resources.

4.4.6 Treaty and Historic Resources

The geographic scope should focus on the area within the immediate vicinity of the Proposed Action, including areas where the implementation of project components passes through federal, state, municipal, and private property.

The temporal scope should consider recent use of the action area, to extent back to construction of the original infrastructure, and through the proposed life span of the proposed infrastructure (70 years).

4.4.6.1 Alternative 2: New Pump Station and Pipeline

Under this alternative, the cumulative effects to treaty and historic resources would be minor and less than significant. Impacts from the implementation of the Proposed Action would be localized to the area of potential effect. Effects would be temporally limited to periods of construction and potentially during maintenance activities. Past and present factors impacting treaty and historic resources would include the construction, operation and maintenance of the original pump station and conveyance infrastructure. This would set the baseline conditions for the area. Foreseeable future actions would include the construction, operation, and maintenance of the new pump station and improved conveyance infrastructure. Cumulatively, these actions would result in negligible direct or indirect impacts to treaty and historic resources. In consideration of past, present, and reasonably foreseeable actions would not result in substantial changes to or

adverse impacts to treaty and historic resources within the geographic scope of analysis. Rather, the improvements to the water infrastructure would result in increased flow capacity and reliability to the WWA and Wanapa Industrial Site. This would result in benefits the Tribal resources in that location. Therefore, implementation of the alternative would cumulatively result in negligible adverse impacts to treaty and historic resources.

4.4.7 Visual Resources

The geographic scope should focus on the area within the immediate vicinity of the Proposed Action, including areas where the implementation of project components passes through federal, state, municipal, and private property.

The temporal scope should consider recent use of the action area, to extent back to construction of the original infrastructure, and through the proposed life span of the proposed infrastructure (70 years).

4.4.7.1 Alternative 2: New Pump Station and Pipeline

Under this alternative, the cumulative effects to visual resources would be minor and less than significant. Impacts from the implementation of the Proposed Action would be localized to the area of potential effect. Effects would be temporally limited to periods of construction. Past and present factors impacting visual resources would include the construction, operation and maintenance of the original pump station and conveyance infrastructure. This would set the baseline conditions for the area. Foreseeable future actions would include the construction, operation, and maintenance of the new pump station and improved conveyance infrastructure. Cumulatively, these actions would result in short-term, moderate, direct adverse effects to visual resources. Indirect effects would be permanent but minor. In consideration of past, present, and reasonably foreseeable actions would not result in substantial changes to the visual resources within the geographic scope of analysis. Therefore, implementation of the alternative would cumulatively result in minor impacts to visual resources.

4.4.8 Social Effects

The geographic scope should focus on the disadvantaged community within the immediate vicinity of the Proposed Action, including areas where the implementation of project components that pass through federal, state, municipal, and private property.

The temporal scope should consider recent use of the action area, to extent back to construction of the original infrastructure, and through the proposed life span of the proposed infrastructure (70 years).

4.4.8.1 Alternative 2: New Pump Station and Pipeline

Under this alternative, the cumulative effects to visual resources would be minor and less than significant. Impacts from the implementation of the Proposed Action would be localized to the area of potential effect. Effects would be temporally limited to periods of

construction. Past and present factors impacting visual resources would include the construction, operation and maintenance of the original pump station and conveyance infrastructure. This would set the baseline conditions for the area. Foreseeable future actions would include the construction, operation, and maintenance of the new pump station and improved conveyance infrastructure. Cumulatively, these actions would result in short-term, moderate, direct adverse effects to visual resources. Indirect effects would be permanent but minor. In consideration of past, present, and reasonably foreseeable actions would not result in substantial changes to the visual resources within the geographic scope of analysis. Therefore, implementation of the alternative would cumulatively result in minor impacts to visual resources.

4.4.9 Atmospheric Pollutants and Long-term Weather Patterns

The geographic scope should focus on the area within the immediate vicinity of the Proposed Action, including areas where the implementation of project components that pass through federal, state, municipal, and private property.

The temporal scope should consider recent use of the action area, to extent back to construction of the original infrastructure, and through the proposed life span of the proposed infrastructure (70 years).

4.4.9.1 Alternative 2: New Pump Station and Pipeline

Under this alternative, the cumulative effects to atmospheric pollutants and change in long-term weather patterns would be minor and less than significant. Impacts from the implementation of the Proposed Action would be localized to the area of potential effect. Effects would be temporally limited to periods of construction. Past and present factors impacting atmospheric pollutants and long-term weather patterns include the construction, operation and maintenance of the original pump station and conveyance infrastructure. This would set the baseline conditions for the area. Foreseeable future actions would include the construction, operation, and maintenance of the new pump station and improved conveyance infrastructure. Cumulatively, these actions would result in short-term, minor, direct adverse effects to long-term weather patterns. Indirect effects would be permanent but minor. In consideration of past, present, and reasonably foreseeable actions would not result in substantial changes to atmospheric pollution and long-term weather patterns within the geographic scope of analysis. Therefore, implementation of the alternative would cumulatively result in minor impacts.

5 Preferred Alternative

USACE has selected Alternative 2, New Pump Station, as the Preferred Alternative, subject to public review. This alternative best meets the purpose and need for the action.

The Preferred Alternative includes the issuance of a 2-year construction license and corresponding 50-year easement, to the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and the City of Umatilla (City), for the construction, operation, and maintenance of a new water pump station and improved conveyance infrastructure on USACE property. The scope of environmental analysis to inform this decision includes interconnected and dependent activities to include the de-commission and fill of the existing open-air ditch, the re-alignment and construction of the new 3,460-foot-long water pipeline to the COU Water Treatment Facility, the new 4,550-foot-long water pipeline to the WWA, and a connection to the COU water system for the purposes of delivering raw and treated water to the CTUIR Wanapa Industrial Site and to other COU customers.

The environmental impacts of the Preferred Alternative are summarized in Table 5-1.

Table 5-1. Summary of Impacts of the Preferred Alternative.

Resource	Less than significant effects	Insignificant effects as a result of mitigation	Resource unaffected by action
Geology and Soils	X	-	-
Noise	X	-	-
Water Quality	X	-	-
Terrestrial Resources	X	-	-
Fish and Aquatic Resources	X	-	-
Treaty and Historic Resources	X	-	-
Visual Resources	X	-	-
Social Effects	X	-	-
Atmospheric Pollutants and Long-term Weather Patterns	X	-	-
Cumulative Impacts	X	-	-

6 Compliance with Applicable Treaties, Laws, and Executive Orders

6.1 Treaties

Treaties are legally binding contracts between sovereign nations that establish those nations' political and property relations. Treaties between Native American Tribes and the United States confirm each nation's rights and privileges. In most of these treaties, the Tribes ceded title to vast amounts of land to the United States but reserved certain lands (reservations) and rights for themselves and their future generations. It is important to be clear that "the rights of sovereign Indian Tribes pre-existed their treaties; they had not granted them by treaties or by the United States government. Rather, the treaties gave their rights legal recognition" (Hunn et al. 2015:58). Like other treaty obligations of the United States, Indian treaties are "the supreme law of the land," and they are the foundation upon which Federal Indian law and the Federal Indian trust relationship is based.

Treaties with area Tribes, including Treaties with the Nez Perce (Treaty of June 11, 1855, Treaty with the Nez Perces, 12 Stat. 957 (1859); Treaty of June 9, 1863, Treaty with the Nez Perces, 14 Stats.647 (1867)), the Confederated Tribes of the Umatilla Indian Reservation (Treaty of June 9, 1855 with the Walla Walla, Cayuse, etc, 12 Stat. 945 (1859)), and the Confederated Tribes and Bands of the Yakama Nation (Treaty of June 9, 1855, Treaty with the Yakama, 12 Stat. 951) established reservations and explicitly reserved unto the Tribes certain rights, including the exclusive right to take fish in streams running through or bordering reservations, the right to take fish at all usual and accustomed places in common with citizens of the territory, and the right of erecting temporary buildings for curing, together with the privilege of hunting, gathering roots and berries, and pasturing their horses and cattle upon open and unclaimed lands. These reserved rights include the right to fish within identified geographical areas.

The Preferred Alternative is located within the ceded lands of the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), and USACE intends to consult with the Tribes to ensure that Tribal Treaty resources are not significantly and adversely impacted by the implementation of the Preferred Alternative. The Preferred Alternative is not anticipated to adversely affect treaty resources, rights, or obligations. Consultation was initiated on 26 February 2025, and the results of the consultation would be fully documented within the finalized EA and FONSI.

6.2 Federal Laws, Regulations, and Executive Orders

6.2.1 National Environmental Policy Act

The National Environmental Policy Act requires federal agencies to use a systematic interdisciplinary approach to evaluate the environmental effects of a proposed federal action before implementing that action. This is usually accomplished through the preparation of a statement, either an Environmental Impact Statement (EIS) if the action is a major federal action significantly affecting the quality of the human environment, or an Environmental Assessment (EA) if the federal agency has not yet determined the significance of the effects.

This EA is being prepared pursuant to regulations implementing NEPA (42 United States Code [U.S.C.] 4321 et seq. and 87 FR 23453) and identifies and considers the potential environmental effects of the proposed New Pump Station. The draft Finding of No Significant Impact (FONSI), this EA, and all supporting appendices will be made available to other federal and state agencies, Tribes, and the public for a 30-day review and comment period, set to start on or around March 21, 2025, and end on April 19, 2025.

While preparing the EA and during the public review period, USACE will determine whether any impacts would significantly affect the quality of the human environment. Therefore, compliance with NEPA will be achieved upon the signing of the FONSI. If significant impacts are identified during public review, an EIS will be required. Completion of an EIS and the signing of a Record of Decision will then achieve compliance with NEPA.

6.2.2 Clean Water Act

The Federal Water Pollution Control Act (33 U.S.C. §1251 et seq., as amended) is more commonly referred to as the Clean Water Act (CWA). This act is the primary legislative vehicle for federal water pollution control programs and the basic structure for regulating discharges of pollutants into waters of the United States (WOTUS). The act was established to “restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” The CWA sets goals to eliminate discharges of pollutants into navigable water, protect fish and wildlife, and prohibit the discharge of toxic pollutants in quantities that could adversely affect the environment.

Section 404 of the CWA establishes a program to regulate the discharge of dredged or fill material into WOTUS. The Columbia River is considered a navigable WOTUS. The Preferred Alternative, more specifically the new pump station and associated features, would require shoreline and in-water work below the ordinary high-water mark (OHWM) of the Columbia River. The permanent placement of structures within the Columbia River would constitute the placement of fill material within a WOTUS, and therefore would a require the issuance of a Section 404 permit from USACE Portland District Regulatory Division. The acquisition of a 404 permit, by the COU and CTUIR, is required prior to implementation of the Preferred Alternative.

Section 401 requires that any activity that may result in a discharge of pollutants into WOTUS must first receive a water quality certification from the state in which the activity would occur. Typically, actions requiring the issuance of a 404 permit also require 401 Water Quality Certification (WQC) from the state certifying authority. The state certifying authority for the Preferred Alternative would be the Oregon Department of Environmental Quality. The COU and CTUIR would be required to obtain a 401 WQC from ODEQ, which typically requires the submittal of a 404(b)1 Evaluation, Joint Aquatic Resources Permit Application (JARPA), a Biological Assessment (BA), and NEPA document. Depending on the needs of ODEQ to make their certification decision, a water quality monitoring plan and suitability determination would be included within the submittal package.

Section 402 of the CWA establishes the framework for the National Pollutant Discharge Elimination System (NPDES). This section regulates the discharge of pollutants into

WOTUS. The section is triggered if an action results in greater than one acre of ground disturbance and has the potential for stormwater runoff into WOTUS, or if an action results in the discharge (point or non-point source) of pollutants into WOTUS. The Preferred Alternative would require Section 402 compliance because it would require greater than one acre of ground disturbance and would have the potential for stormwater runoff into the Columbia River. However, the Preferred Alternative would not constitute a point or non-point discharge of pollutants into WOTUS. The COU and CTUIR would be required to obtain a Construction General Permit (CGP) from the Oregon Department of Environmental Quality (ODEQ) prior to implementation of their Preferred Alternative. This would typically require the creation of a Storm Water Pollution Prevention Plan (SWPPP) to mitigate and minimize the potential for stormwater runoff into WOTUS. The submission of a Notice of Intent (NOI) to the ODEQ would start the application process. ODEQ would review the application, and make modifications as needed, and issue the CGP and NPDES permit prior to construction.

6.2.3 Rivers and Harbors Act

The Rivers and Harbors Act (RHA) refers to a conglomeration of many pieces of legislation and appropriations passed by Congress since the first such legislation in 1824. The Rivers and Harbors Act of 1899 was the first federal water pollution act in the U.S. It focuses on protecting navigation, protecting waters from pollution, and acted as a precursor to the CWA. Section 10 of the RHA of 1899 regulates the construction of structure, excavation/deposition of materials, and other works affecting the course, location, conditions, or capacity of a waterway. Section 13 prohibits the discharge of reuse into navigable WOTUS. The permitting authority has been effectively subsumed under the EPA's NPDES permitting authority under Section 402 of the CWA. Section 14 mandates obtaining USAE permission for activities impairing the usefulness of a USACE civil works project. Section 408 pertains to the authority of USACE to grant permission for modifications to existing federally constructed projects.

The Preferred Alternative would trigger the requirement for Section 10 of the RHA because it would require the placement of in-water structures, and in-water work, which would alter the characteristics of the Columbia River, a navigable WOTUS. Section 10 compliance is typically handled through a joint permitting process between USACE Portland District Regulatory and Oregon Department of Environmental Quality. The issuance of a Section 10 permit would require compliance with NEPA and associated federal and state environmental laws and regulations. The COU and CTUIR would be required to obtain a Section 10 permit from USACE Portland District Regulatory Division prior to construction of the Preferred Alternative.

6.2.4 Endangered Species Act

The ESA established a national program for the conservation of threatened and endangered fish, wildlife, and plants and the habitat upon which they depend. Section 7(a)(2) of the ESA requires federal agencies to consult with the U.S Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS), as appropriate, to ensure that their actions are not likely to jeopardize the continued existence of

endangered or threatened species or adversely modify or destroy their critical habitats. Section 7(c) of the ESA and the federal regulations on endangered species coordination (50 CFR §402.12) require that federal agencies prepare biological assessments of the potential effects of major actions on listed species and critical habitat.

A Biological Assessment (BA), prepared by Kleinschmidt Associates and prepared on behalf of the COU and CTUIR, was submitted to USACE for review (Appendix B). The species and critical habitat determination made within the applicant produced BA are outlined within the below table:

Table 6-1- Species and Critical Habitat Determinations

Common Name (ESA Status)	Species Determination	Critical Habitat Determination
Upper Columbia River Spring Chinook Salmon (E)	May Affect, Is likely to Adversely Affect	May Affect
Snake River spring/Summer Chinook Salmon (T)	May Affect, Is likely to Adversely Affect	May Affect
Snake River Fall Chinook salmon (T)	May Affect, Is likely to Adversely Affect	May Affect
Snake River Sockeye Salmon (E)	May Affect, Is likely to Adversely Affect	May Affect
Upper Columbia River Steelhead (T)	May Affect, Is likely to Adversely Affect	May Affect
Middle Columbia River steelhead (T)	May Affect, Is likely to Adversely Affect	May Affect
Snake River Steelhead (T)	May Affect, Is likely to Adversely Affect	May Affect
Gray Wolf (E)	No Effect	No Effect
Bull Trout (T)	May Affect, Is likely to Adversely Affect	May Affect
Monarch Butterfly (PT)	No Effect	No Effect
Suckley's Cuckoo Bumble Bee (PE)	No Effect	None Proposed or Designated
MSA	No Adverse Effects	
FWCA	Is Applicable	
MBTA	No Take	
BGEPA	No Take	

USACE biologists reviewed applicant prepared BA and have determined that the information contained therein is accurate and meets USACE's requirements. USACE has accepted this BA and has submitted it to the Services for formal consultation.

Notification of Section 7 consultation was submitted to the Services on 19 February,2025.

The outcome of the consultation between USACE and the Services, to include any biological opinions and stipulations for the Preferred Alternative, would be fully documented within the final version of this EA document.

6.2.5 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act prohibits the taking or possession of and commerce in bald and golden eagles, with limited exceptions, primarily for Native American Tribes. Take under this Act includes both direct taking of individuals and take due to disturbance.

Bald and golden eagles are known to nest throughout USACE managed lands in the Walla Walla District. While all nest sites have not been documented, locations of some are known. None of these known nesting sites are located within vicinity of the Preferred Alternative. Therefore, there would be no effect or take (to include disturbance) of either bald or golden eagles from implementation of the Preferred Alternative.

6.2.6 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 U.S.C. §§ 703-712, as amended) prohibits the taking of and commerce in migratory birds (live or dead), any parts of migratory birds, their feathers, or nests. Take is defined in the MBTA to include by any means or in any manner, any attempt at hunting, pursuing, wounding, killing, possessing, or transporting any migratory bird, nest, egg, or part thereof.

There would be no take of migratory birds from this action because the Preferred Alternative would not result in the direct harm or death of migratory birds. Rather, the Preferred Alternative would contribute to more efficient and reliable conveyance to the Wanaket Wildlife Area, enhancing the habitat within that area. This would indirectly benefit migratory bird species utilizing that area. There would be no effect to birds under the MBTA.

6.2.7 Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (FWCA) of 1934, as amended (16 USC 661 et seq.) requires consultation with USFWS when any water body is impounded, diverted, controlled, or modified for any purpose. The USFWS and state agencies charged with administering wildlife resources are to conduct surveys and investigations to determine the potential damage to wildlife and the mitigation measures that should be taken. The USFWS incorporates the concerns and findings of the state agencies and other federal agencies, including the NMFS, into a report that addresses fish and wildlife factors and provides recommendations for mitigating or enhancing impacts to fish and wildlife affected by a federal project.

The Preferred Alternative would result structures and facilities being placed within the Columbia River. The placement of these structures would result in alterations/

modifications to the Columbia, and therefore would be subject to the FWCA. The coordination pursuant to the FWCA would be conducted concurrently with the ESA consultation for USFWS ESA listed species. USACE requested to coordinate with the USFWS on 19 February 2025 (Appendix B).

The outcome of the coordination between USACE would be documented within the final version of this EA document.

6.2.8 Fishery Conservation Management Act of 1976

The Fishery Conservation and Management Act of 1976 (16 USC 1801-1882; 90 Stat. 331; as amended), also known as the Magnuson-Stevens Fishery Conservation and Management Act, established a 200-mile fishery conservation zone, effective March 1, 1977, and established the Regional Fishery Management Councils consisting of federal and state officials, including the USFWS. The fishery conservation zone was subsequently dropped by amendment and the geographical area of coverage was changed to the Exclusive Economic Zone, with the inner boundary being the seaward boundary of the coastal states. Columbia River salmon and steelhead are found in this zone.

The applicant prepared BA provides an analysis of effects to the habitat elements that make up EFH for anadromous salmonids. USACE has reviewed this effects analysis and has determined it to be adequate and logical. Therefore, the conservation measures described in the BA (see Section 1.7) are considered adequate to prevent and avoid potential adverse effects on EFH for Pacific salmon (EFH area shown in Figure 5-1 of BA). Thus, it was determined that the Preferred Alternative would not adversely affect EFH for Pacific salmon. Documentation with the NMFS for this action, in regard to EFH, would be included within the final version of this EA document.

6.2.9 National Historic Preservation Act

Section 106 of the National Historic Preservation Act (NHPA) requires agencies to consider the potential effect of their actions on properties that are listed, or are eligible for listing, on the National Register of Historic Places (NRHP). The NHPA implementing regulations, 36 CFR Part 800, requires that the federal agency consult with the State Historic Preservation Officer (SHPO), Tribes and interested parties to ensure that all historic properties are adequately identified, evaluated and considered in planning for proposed undertakings. The consulting parties for this undertaking included the Oregon SHPO and the Confederated Tribes of the Umatilla Indian Reservation (CTUIR).

A Historic Resources Review (USACE 2025) was sent to consulting parties on 26 February 2025, for a 30-day review. The Historic Resources Review documents the effects of the Preferred Alternative to any historic properties within the APE. The USACE determined that the Preferred Alternative would result in No Adverse Effect to Historic Properties, and the results of this consultation would be fully documented with the final EA and FONSI. The potential effects of the alternatives on historic resources have been examined in Section 3.6 of this EA.

6.2.10 Executive Order 11988, Floodplain Management

This Executive Order outlines the responsibilities of federal agencies in the role of floodplain management. Each agency must evaluate the potential effects of actions on floodplains and avoid undertaking actions that directly or indirectly induce development in the floodplain or adversely affect natural floodplain values.

The Preferred Alternative would not contribute to the development activities within the floodplain, nor adversely affect the natural floodplain values within the action area. Therefore, the Preferred Alternative would comply with the EO.

6.2.11 Executive Order 11990, Protection of Wetlands

Executive Order 11990 requires federal agencies to take actions to minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands when undertaking federal activities and programs.

The Preferred Alternative would result in direct and indirect impacts to non-jurisdictional wetlands located along the alignment of the existing open-air ditch. The impacts to these manmade wetland resources are unavoidable due to the re-alignment and transfer of operational activities to the new pipeline. The impacts to the intermittent wetlands would be offset through the improved reliability and water conveyance capacity of Tribal water rights to the wetlands located within the WWA.

7.1 Tribal and Agency Consultation and Coordination

7.1.1 Tribal Consultation

Consultation with the CTUIR about the Preferred Alternative's impacts to Tribal resources on 26 February 2025. The result of this consultation would be incorporated into the implementation of the Preferred Alternative and the documented within the final EA.

7.1.2 National Historic Preservation Act Section 106 Coordination

Consultation with the Oregon SHPO and the CTUIR was initiated on 26 February 2025.

7.1.3 Endangered Species Act Consultation:

Pursuant to Section 7 of the Endangered Species Act of 1973, as amended, USACE intends to engage in formal consultation with the Services to minimize the impacts of Preferred Alternative activities on threatened and endangered species within the area of potential affect. The results of consultation would be included within the final version of this EA document.

7.1.4 Clean Water Act Compliance and Coordination:

The COU and CTUIR would be required to obtain the appropriate permits and approvals from USACE Portland District Regulatory Division and the Oregon Department of Environmental Quality prior to implementation of the Preferred Alternative. This would ensure compliance with the Section 402 and 404 of the CWA.

7.1.5 Rivers and Harbors Act:

The Preferred Alternative requires Section 10 of RHA compliance and would require a Section 10 permit from USACE Portland District Regulatory Division prior to implementation of the Preferred Alternative.

7.2 Public Involvement

7.2.1 Public Review – Draft Finding of No Significant Impact and Environmental Assessment

In compliance with NEPA, the draft Finding of No Significant Impact (FONSI), EA, and all supporting appendices were made available for a 30-day review and comment period beginning on March 21, 2025 and concluding on April 19, 2025. Any comments received would be responded to in the finalized version of the EA.

In compliance with and to complete the NEPA process, USACE would sign the FONSI and proceed with issuing the COU and CTUIR a temporary construction license for the proposed new pump station, and associated project components on USACE property. This draft EA and the FONSI and all supporting appendices would be made available on the Walla Walla District Corps of Engineers website at www.nww.usace.army.mil/Missions/Environmental-Compliance.

If significant environmental effects resulting from implementing the Preferred Alternative are identified during the review period, the USACE would proceed to write a Supplemental Environmental Impact Statement, and the Preferred Alternative would be delayed until the USACE completes the NEPA process with the signing of a Record of Decision.

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