US Army Corps of Engineers ®
Walla Walla District
BUILDING STRONG®

Water Resource and Development Act of 1999, as Amended Section 595

CITY OF LEWISTON WATER SYSTEM IMPROVEMENTS PROJECT
NEZ PERCE COUNTY, IDAHO

Lower Granite Lock and Dam
Clearwater River

ENVIRONMENTAL ASSESSMENT

In compliance with the
National Environmental Policy Act of 1970

ADMINISTRATIVE RECORD – DO NOT DESTROY

PROJECT FILE NUMBER: PPL-C-2019-0085

April 2025

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Acronyms

°F	Degrees Fahrenheit
BEGPA	Bald and Golden Eagle Protection Act
CAP	Corrective Action Plan
CFR	Code of Federal Regulations
CHSU	Clearwater River Critical Habitat Subunit
Clearwater P&P	Clearwater Pulp & Paper
Corps	U.S. Army Corps of Engineers Walla Walla District
CWA	Clean Water Act
DPS	Distinct Population Segment
EA	Environmental Assessment
EFH	Essential Fish Habitat
ESA	Endangered Species Act
ESU	Evolutionary Significant Unit
FWCA	Fish and Wildlife Coordination Act
GPM	Gallons Per Minute
ID	Inside Diameter
IDEQ	Idaho Department of Environmental Quality
IDPA	Idaho Administrative Procedure Act
IST	Inclined-Shaft Submersible Turbine
MBTA	Migratory Bird Treaty Act
MGD	Million Gallons Per Day
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MTBM	Micro-Tunnel Boring Machine
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NRHP	National Register of Historic Places
OD	Outside Diameter
PLC	Programmable Logic Controller
PWS	Public Drinking Water Systems
RM	River Mile
SHPO	State Historic Preservation Officer
SLR	Surface Loading Rates
SRB	Snake River Basin
SRF	Snake River fall-run Chinook
TDH	Total Dynamic Head
USFWS	U.S. Fish and Wildlife Service
WRDA	Water Resource and Development Act
WTP	Water Treatment Plant

1 - Project Description

1.1 Project Name

City of Lewiston Water System Improvements Project, Nez Perce County, Idaho.

1.2 References

a. ER 200-2-2 (33 Code of Federal Regulations (CFR) 230) Environmental Quality Procedures for Implementing the National Environmental Policy Act.
b. 40 CFR 1500-1508 Regulations for the Procedural Provisions of the National Environmental Policy Act.
c. Public Law 106–53 (Water Resources Development Act of 1999) Section 595.

1.3 Project Location

The City of Lewiston (City) has water intakes located along the north shore of Clearwater River around River Mile (RM) 5.14, Lewiston, Idaho (Figure 1-1). Nez Perce County, Idaho. Section 27, Township 36 North, Range 5 West, Lewiston Orchards North, Idaho Quadrangle. U.S. Army Corps of Engineers tract 1723.

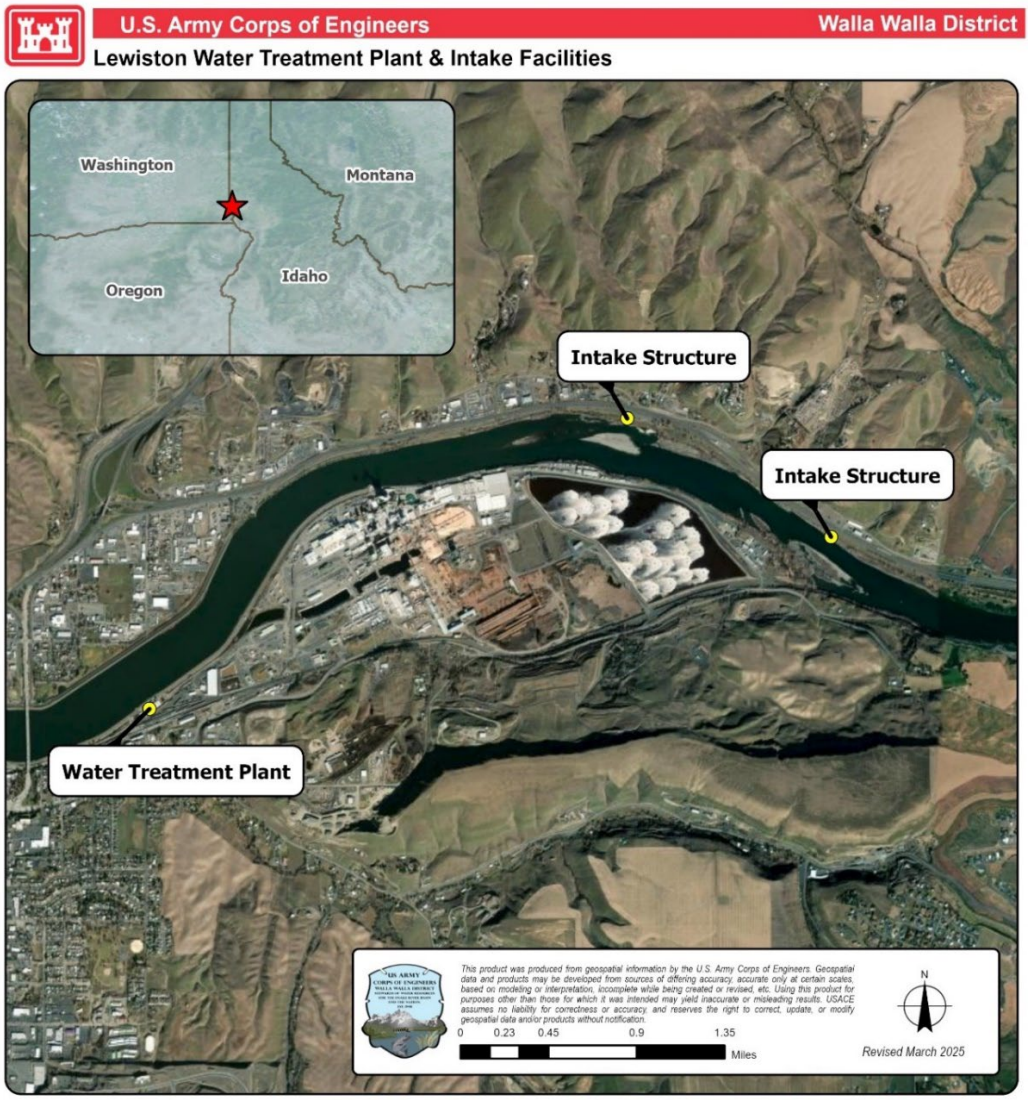

Figure 1-1. Project location in Lewiston, Idaho.

1.4 Project Description

The City plans to rehabilitate the existing water intake system or construct a new water intake system. The work would occur in two phases: in-water work and on-land work. The in-water work would consist of the rehabilitation of the existing water intake pipes or the construction of new water intake pipes. The in-water work would also include test bores to determine the geologic suitability of the sites currently in use or new potential sites. The second phase is the on-land rehabilitation or construction work. The USACE proposes to cost-share the construction in-water work portion of the project with the City.

The City established the following water supply design criteria for the selected Clearwater River surface water intake facility:

- Provide a new intake screen system and raw water conveyance pipeline that can properly supply up to 15 million gallons per day (mgd) of water flow to the

Lewiston Water Treatment Plant (WTP), which would account for future growth and increases in water demand.
- Provide ability to pump up to at least 10 mgd of flow from the pump station with one pump in standby mode.
- Provide for the ability to pump at least 15 mgd momentarily (up to 1-day) to exercise the City's current water right at the intake, understood to be about 15 mgd.
- Try to provide low water demand flows as low as 2.5 to 3 mgd during low water demand periods.

1.4.1 Background Information

The City of Lewiston's public drinking water system (PWS No. ID2350014) serves approximately 6,000 residential and commercial customers and operates a conventional surface water treatment plant constructed in 1924. The system is aging, with increasing maintenance costs, equipment failures, and water main leaks. The WTP has long experienced operational issues related to its raw water intake from the Clearwater River. The original intake, located near the WTP on the south shore, was removed in 1973 during construction of Lower Granite Dam by USACE.

To replace it, the City constructed a temporary intake on the north shore, which has remained in continuous use for over 50 years despite being intended only as a short-term solution. A permanent intake was constructed between 1976 and 1978, but it faced persistent operational challenges, including excessive sediment accumulation and ineffective backflushing, which led to its decommissioning after about a year. Another intake constructed under a Corrective Action Plan in the late 1990s also failed shortly after commissioning due to pump issues and sediment buildup. That system has been abandoned since 1998 (Figure 1-2).

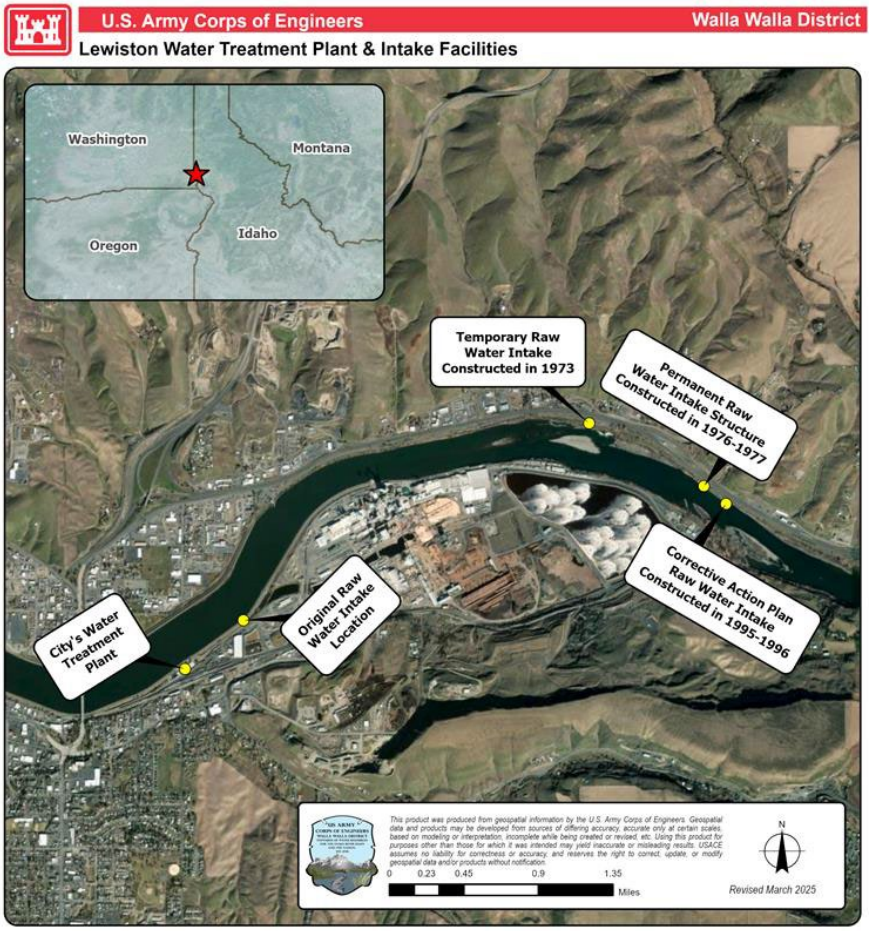

Figure 1-2. Location of Wastewater Treatment Plant and Surface Water Intake Structures along the Clearwater River.

Since then, the City has relied solely on the temporary intake, which presents numerous challenges. It is located in a shallow, low-velocity cove susceptible to sedimentation and vegetation growth. The intake channel frequently fills with debris, requiring dredging every 3 to 5 years under permits from USACE. On at least two occasions, the City experienced disruptions in water withdrawal due to complete channel blockage. The site is also potentially at risk from industrial contamination, as it sits across from the Clearwater Pulp & Paper facility's wastewater park.

Despite regular maintenance and minor upgrades, the temporary intake is not a sustainable long-term solution. Its location, design limitations, and vulnerability to river conditions make the City's drinking water supply increasingly unreliable.

1.4.2 Authority

Section 595 of the Water Resource and Development Act (WRDA) of 1999 authorized the USACE to participate in environmental infrastructure projects in rural Nevada and Montana. Public Law 108-7 (February 20, 2003) amended this legislation to include the State of Idaho.

This Environmental Assessment (EA) has been prepared to determine whether the action proposed by the U.S. Army Corps of Engineers (USACE) constitutes a "…major federal action significantly affecting the quality of the human environment…" pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S.C. §§ 4321–4347), and whether preparation of an Environmental Impact Statement (EIS) is required. This EA was prepared in accordance with the NEPA statute, the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 Code of Federal Regulations [CFR] §§ 1500–1508), and the USACE's NEPA implementation procedures at 33 CFR Part 230 and Engineering Regulation (ER) 200-2-2 (USACE 1988). Although the CEQ were rescinded on April 14, 2025, this EA was initiated and mostly completed under the CEQ regulations. Accordingly, this EA and the associated FONSI used the CEQ regulations as guidance when preparing the EA and FONSI.

The EA evaluates the potential environmental effects of the proposed federal action to assist the City in upgrading its wastewater system. NEPA is a procedural statute intended to ensure environmental considerations are integrated into federal agency decision-making. It is also a full disclosure law, providing opportunities for public involvement. All persons and organizations with an interest in major federal actions—including the public, federal agencies, Tribal governments, state and local agencies, and other stakeholders—are encouraged to participate in the NEPA process.

1.5 Purpose and Need

The purpose of the proposed action is to identify and implement a long-term, sustainable solution to ensure the City's public water system can continue to provide a safe and reliable drinking water supply. The action seeks to address limitations associated with the City's existing raw water intake infrastructure, which has operated well beyond its intended temporary use. The overarching goal is to support the City's growing population and safeguard public health by securing a dependable water source through improved system performance and resiliency.

An action is needed to address the long-standing deficiencies associated with the City utilizing a temporary intake structure as its main source of drinking water supply. These problems include a lack of sufficient sediment control, periodic blockages of the intake, and no natural sweeping water velocity to maintain water quality. Historical attempts to implement permanent intake solutions have failed due to technical issues, such as pump failures and excessive sedimentation, leaving the City reliant on an outdated and vulnerable system. Without a new, functional intake and pump station, the City remains at risk of water supply disruptions and noncompliance with public health and safety standards, particularly as infrastructure continues to age and demand increases.

1.6 Timeline

Construction will be performed by a contractor and is anticipated to begin in March 2025. In-water work will occur during the summer in-water work window from 15 July to 31 August 2025.

2 - Alternatives

Five Alternatives are evaluated in this Environmental Assessment (EA) including the No Action Alternative and four Alternatives for water intakes on the north shore. These Alternatives were originally developed within the City of Lewiston's Facility plan, drafted by Mountain Waterworks in 2019 (Appendix A).

The No Action Alternative does not satisfy the project's purpose and need, but the National Environmental Policy Act (NEPA) requires analysis of the No Action Alternative to set the baseline from which to compare other Alternatives. No Action does not mean there would be no environmental impacts from this Alternative.

The Idaho Department of Environmental Quality (IDEQ) and the City have required that any new intake sites be located upstream of the existing Clearwater P&P aeration ponds. This constrains project Alternatives in two ways: 1) any potential new intake site on the south shore must start three RMs upstream of current WTP site, and 2) any permanent intake structure on the north shore needs to be located no further downstream than the current permanent water intake locations.

The Clearwater P&P site has some large aeration lagoons on the south shore of the Clearwater River, upstream of the City's WTP site where the site's industrial wastewater is aerated. The aeration ponds are reported to be lined and contained on their north side (i.e. riverbank) with man-made dikes / embankments. The facility is known to have some level of leakage, and such is allowed in their discharge permits with IDEQ. The City has not historically monitored water quality upstream or downstream of the pond dike system to try to quantify any water quality degradation caused by the ponds, so no water quality data is actually known by the City to indicate how the aeration ponds and their leakage affects Clearwater River water quality.

No suitable locations were identified on the south shore. Therefore, all Alternatives considered were on the north shore of the Clearwater River.

2.1 Alternative 1: No Action

Under the No Action Alternative, the USACE would not cost-share water intake and pump house modifications with the City. The City would not replace, upgrade, or construct water intake facilities as a single, large project. Instead, ongoing maintenance would be conducted to replace or upgrade aging individual components or groups of components of the temporary intake facility as needed based on available funding. This Alternative is essentially to continue operating and maintaining the existing intake facility located on the north shore of the river.

2.2 Alternative 2: Retrofit Permanent Intake Facility

Under this alternative, the existing intake facility's concrete superstructure and upper pump slab would be demolished to access the wet well. All mechanical components—pumps, pump columns, inlet gate, frame, and ladder—would be removed. Precast concrete manhole rings (approximately 7 feet tall and 43,000 lbs each) would be

stacked to form a new wet well substructure with a 12-foot inside diameter and 14-foot outside diameter. The 0.5-foot annular space would be filled with concrete or controlled low-strength material.

A suspended floor slab atop the rings would support three identical vertical mixed-flow pumps rated at 5 mgd each (40–60 ft TDH). Stainless-steel divider baffles would extend into the well to suppress vortices, and variable frequency drives would allow each pump to throttle down to about 3 mgd.

A pre-engineered metal building (approximately 40 × 30 ft) would enclose the pumps and electrical equipment.

For the in-river intake, the existing 50-ft, 60-in CMP bypass pipe would be retained, and submerged fish screens would be installed in nearby deep pools, protected by flow diversion structures (Figure 2-1). Screens would meet NMFS criteria—approach velocity < 0.4 ft/s, slot openings of 0.069 in, length-to-diameter ratio < 1.55—and would not exceed 36 in in diameter to suit shallow water (≈ 11 ft) (Figure 2-2).

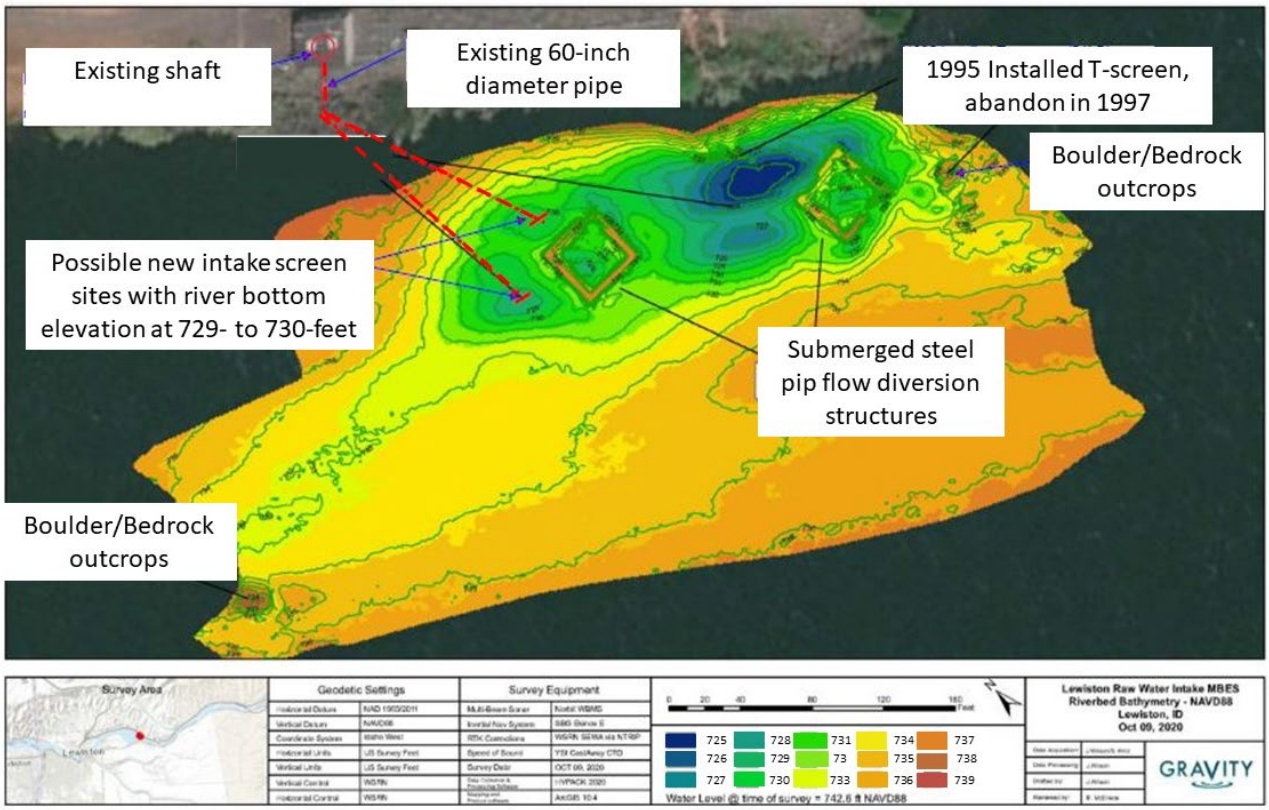

Figure 2-1. 2020 Bathymetry Contour Map
Taken from McMillen Jacobs and Associates (2021)

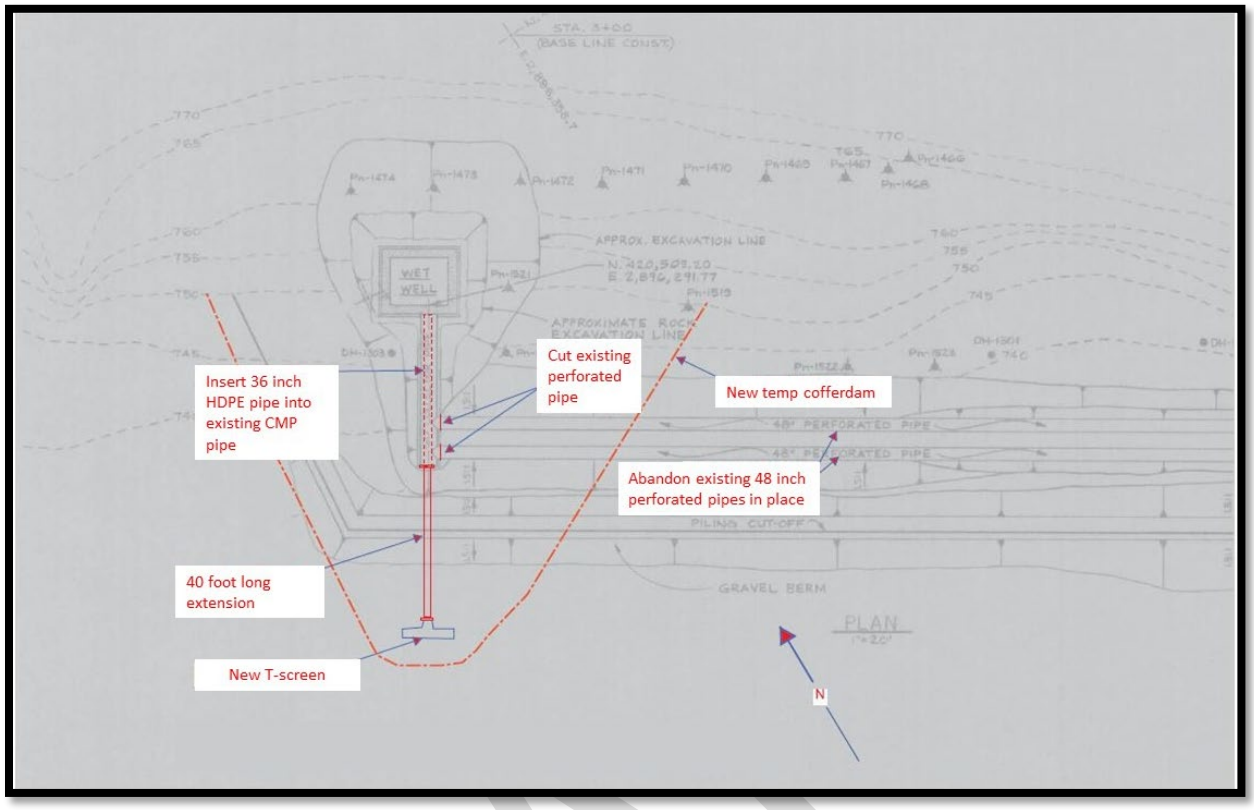

Figure 2-2. Design Modifications to the Permanent Intake Structure.
Taken from Mountain Waterworks 2018.

The raw-water pipeline could be installed by open-trench work behind a temporary cofferdam or by trenchless horizontal drilling of two 18-in boreholes. Drilling would require removing the top 12–14 ft of soil at a 2:1 slope and cutting the upper 18-in wet well wall to accommodate casings.

A two-segment Tee-screen system could split flow, so each segment handles about 65% of capacity, allowing one segment to remain in service during maintenance. All screens and supports would be stainless steel and feature an active brush-cleaning system driven by submerged electric or hydraulic motors. Complete details of this alternative are available in the McMillen Jacobs Technical Memorandum No. 3 (TM-3) dated March 2021, where this alternative is identified as Option Number 1.

2.3 Alternative 3: Upgrade the Corrective Action Intake Facility

Alternative 3 would address the major design deficiencies identified in the 1995-constructed Corrective Action Intake Project (CAP) facility. The 1995 design employed submersible turbine pumps mounted at an inclined angle within an intake environment heavily loaded with silt and sand, a configuration that has been determined to be unsuitable for the pump and bearing assemblies. A more reliable design would compensate for these conditions by utilizing vertical turbine pumps in an onshore, vertical wet well environment, where sand and silt inflow from the intakes could be minimized and managed with proper wet well and pump intake design. Additionally, new

pump motors, electrical starters, and associated components would be designed and installed.

2.4 Alternative 4: Construct a New Wet Well Shaft and Pump Station Using a Trenchless Drive to Install a New Water Pipeline (Preferred Alternative)

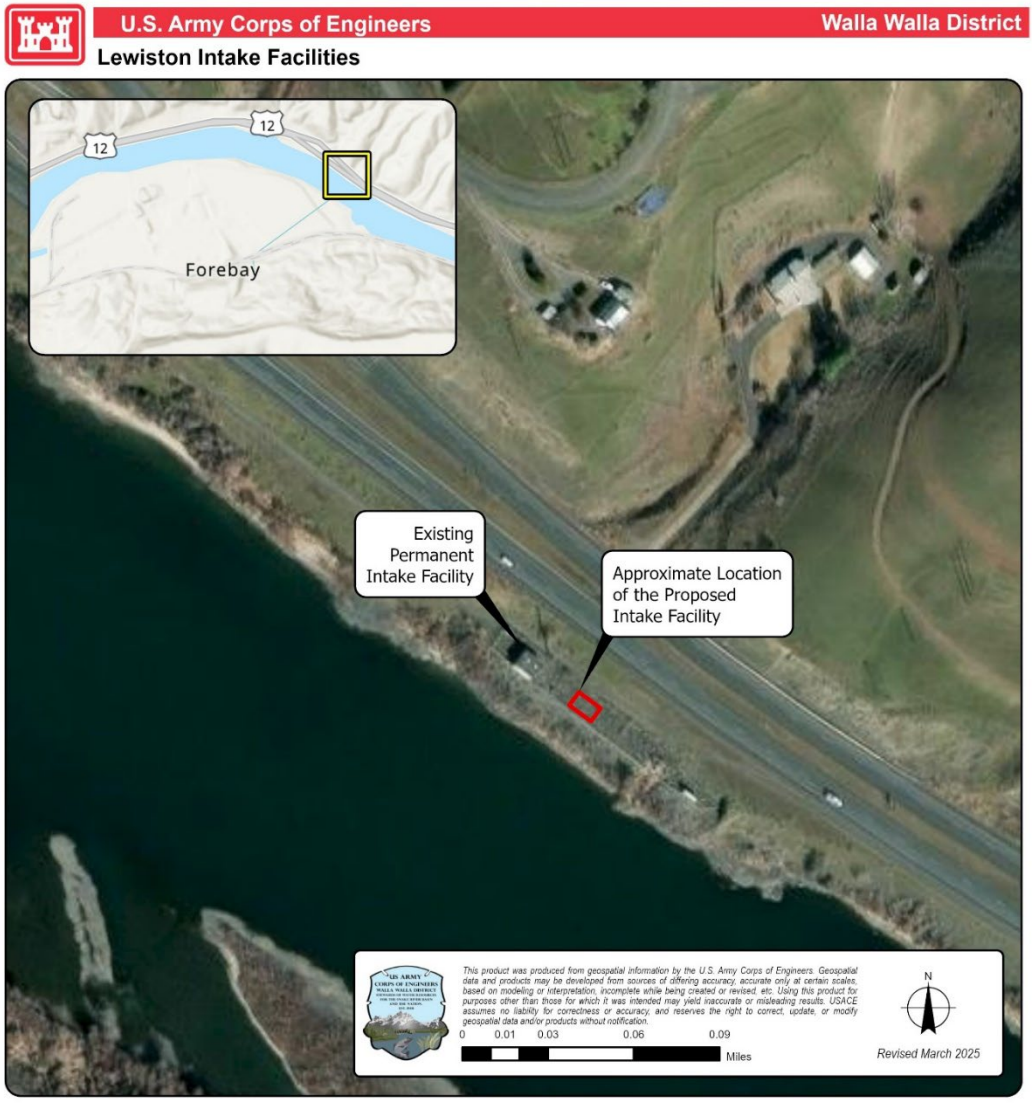

Figure 2-3. New Lewiston Intake Location

Under this alternative, the City would construct a new wet well shaft and a 30-by-30-foot pump house, powered via conduit from an existing transformer (see Figure 2-3). The wet well would be formed by secant piles about 19 feet in inside diameter and installed roughly 49 feet below ground, with a concrete liner at its base.

A trenchless boring method would install a 30-inch raw water pipeline from the new shaft to the intake screen site (Figure 2-4). Pre-construction geotechnical borings—one on land to 65 feet depth and two in the riverbed to 30–35 feet below the river bottom—would confirm subsurface conditions. The drive length of approximately 100–130 feet

would eliminate the need for large cofferdams and reduce in-water impacts. A 6-foot-deep trench from the pump house would connect the new pipeline to existing yard piping.

Pump and intake screen equipment would follow the design concepts presented in Alternative 2, while detailed specifications appear as Option 2 in McMillen Jacobs TM-3 (March 2021).

This work would require a Real Estate License for Temporary Construction to support test borings. The existing outgrant (DACW68-2-80-20) for the pump plant would be amended once final design plans are submitted.

Figure 2-4. Proposed Location of the New Intake Facility.

2.5 Alternative 5: Construct a New Wet Well Shaft and Pump Station with an Above-Ground Low-Head Siphon System

This alternative is identified as Option 3 in McMillen Jacobs TM-3. It would construct a new secant pile shaft approximately 15 feet in inside diameter on the existing level bench near the 1995 Corrective Action Intake facilities, about 200 feet east of the permanent intake pump station (Figure 2-6). The project would include two new intake screens and 24-inch low-head siphon pipelines to convey raw water from the river to a new onshore wet well shaft.

The shaft would be drilled to a depth of about 42 feet using concrete secant piles, with a floor slab at elevation 729.5 and a finished floor at elevation 730. Siphon pipelines would exit at elevation 754.5 (roughly 12 feet below ground). The shaft diameter would

accommodate a sand deposition pit and space for three mixed-flow vertical pumps, as in Alternative 2. Aboveground pump station housing and electrical systems would match those described for Alternative 4.

Intake pipelines would be steel spiral-welded pipe arranged in parallel and spaced about 15 feet apart. All joints would be airtight and pressure-tested to prevent leakage.

Pump operations and controls would follow the same programmable logic described in Alternative 4.

2.6 Alternative Selection

Alternatives were screened to find the best solution to meet the City's drinking water requirements. The selected Alternatives must be technically feasible, cost-effective, environmentally feasible, and provide a long-term drinking water supply solution for the City. To be technically feasible, the Alternative must be consistent with existing USACE authority and must consistently provide drinking water to the City. To be cost-effective the Alternative must be economically feasible and not increase routine operation, maintenance, or dredging cycles. To be environmentally feasible the Alternative must not cause irreversible or unmitigable adverse effects to the human or natural environment to include fish and wildlife habitat, water quality, known cultural resources, and socioeconomics. The project needs to meet the City's needs for at least the next 50-years to be considered a long-term solution (Table 2-1).

Table 2-1. Alternative Screening Matrix

Alternatives	Technically Feasible?	Cost-effective?	Environmentally Feasible?	Provides Long-term solution?
Alternative 1: No Action	Y	N	N	N
Alternative 2: Retrofit Permanent Intake Facility	Y	N	Y, marginal due to cofferdam construction	Y
Alternative 3: Upgrade the Corrective Action Intake Facility	N	N	Y, marginal due to cofferdam construction	Y
Alternative 4: Construct New Wet Well Shaft and Pump Station with New Raw Using a Trenchless Drive to install a new Water Pipeline	Y	Y	Y	Y
Alternative 5: Construct a New Wet Well Shaft and Pump Station with an Above-Ground Low-Head Siphon System	Y	Y	Y	N

Alternative 4 was selected by the City as the alternative to provide the reliable, cost-effective, and long-term intake facility for the City and will be carried forward as the

preferred alternative. Alternative 4 is referred to as Preferred Alternative or proposed project in the rest of the document. The reasons for eliminating the other alternatives are discussed below.

Alternative 1 would not meet the purpose and need to provide a long-term option to provide drinking water to the City of Lewiston and has been ruled out for consideration but will be carried forward through environmental analysis for a baseline comparison. The current intake screens exhibit poor sweeping velocities, and during ten-year low flows on the Clearwater River the system can nearly lose its entire water supply. In addition, the man-made inlet channel that feeds the intake often becomes overgrown with cattails and other vegetation, requiring periodic in-channel dredging to maintain flow. Finally, the existing pump station lacks sufficient space to house the necessary mechanical and electrical equipment or to accommodate future pump expansion needed to support the City's growing water demand.

Alternative 2 was eliminated after a formal structural analysis revealed it would require extensive and costly retrofits to ensure safe reuse, making it an unreliable long-term solution. Rehabilitating the existing structure to meet current code would also necessitate building a large cofferdam in the river—adding expense and creating potential environmental impacts.

For example, the wet well floor would have to be lowered by about four feet so drilling equipment could clear the existing 48-inch collector pipes and operate on a flat grade. Deepening the well is impractical: riprap and soil on the south side would need to be removed and salvaged, creating a hazardous "work-in-a-hole" environment that would drive up drilling costs. Crane access would be restricted farther from the shaft, and the existing transformer would have to be moved or demolished to excavate the upper 12 feet of soil around the wet well.

A 2021 desktop evaluation by McMillen Jacobs Associates also found that the concrete's compressive strength, the steel's yield strength, and the original soil-loading assumptions all fall short of today's standards. Inadequate detailing of horizontal and vertical reinforcement—reflecting the looser codes in effect when the structure was built—further undermines its integrity. Together, these factors make Alternative 2 neither safe nor cost-effective.

Alternative 3 offers no real benefit as a future primary intake and is neither economically nor technically feasible. It would require enlarging both wet wells and designing and installing entirely new pump motors (see Section 2.3) yet provides no practical method to tie the abandoned in-river intake screens to the onshore shaft. Because almost none of the existing infrastructure could be reused, the project would incur high costs for demolition, bespoke piping connections, and specialized equipment. In short, the extensive structural modifications and complex hydraulic tie-ins would drive expenses far beyond what is justifiable and introduce technical uncertainties that undercut its reliability.

Alternative 5, which relies on low-head siphons to convey raw water to the new pump shaft, would carry significant operational and maintenance risks over a 50-year service

life. Although the design incorporates two independent siphon lines in parallel—so that one could serve as a standby if the other loses vacuum—siphon systems inherently depend on maintaining a perfect seal. Any air ingress or seal failure would interrupt flow, and repeated maintenance to restore vacuum could prove costly and disruptive. Even with dual lines, the potential for unplanned outages and intensive upkeep means this option would not deliver the consistent, long-term reliability expected of a major intake facility.

3 - Affected Environment and Environmental Effects

This section describes the existing affected environment (existing condition of resources) and evaluates potential environmental effects on those resources for each Alternative. Although only relevant resource areas are specifically evaluated for impacts, the USACE did consider all resources in the proposed project area. The following resource areas were evaluated: Geologic Features and Soils, Water Quality, Aquatic Resources, Terrestrial Environment, Threatened and Endangered Species, Historic and Cultural Resources, and Socioeconomics. The USACE determined was determined that it was not necessary to conduct an in-depth impacts analysis on Aesthetics/Visual Quality, Land Use, Noise, Recreation, nor Air Quality as implementation of the Preferred Alternative would have no or negligible effects on these resources (Table 3-1).

Table 3-1. Environmental resources not evaluated further.

Environmental Component	Explanation
Aesthetics/Visual Quality	The Preferred Alternative would be located within a previously disturbed area already occupied by the existing pumphouse and perimeter fencing, in an industrial setting along the river. The new structure would be consistent with existing infrastructure and partially screened by vegetation and topography. As a result, aesthetic impacts would be negligible and do not warrant further environmental analysis.
Land Use	Land use would not change because of the proposed alternative. The new intake structure would be constructed next to the existing permanent intake structure in an area generally off limits to the public.
Noise	The project area is located near a heavily used highway. There are no residential facilities or recreational facilities near the project area. Construction noise would come from equipment such as trucks, cranes, and tools. The construction would likely elevate noise above background levels, but any impacts would be negligible and temporary.
Recreation	The Preferred Alternative would not disrupt recreational access either during construction or after the project is complete. Although recreational boaters and anglers use this stretch of the river, there are no formal public facilities at the intake site itself. Air-burst cleaning systems, which release bursts of air beneath the water surface, can briefly create unstable conditions for small craft. However, these systems operate infrequently, run for only short durations, and can be

Environmental Component	Explanation
	scheduled outside of peak recreational hours. As a result, any impact on the recreating public would be negligible.
Air Quality	The project area meets Idaho State's ambient air quality standards and is in "attainment." Air quality would be negligibly impacted by the Preferred Alternative by the exhaust from construction equipment. In addition, the action is not anticipated to emit levels of atmospheric pollutants that would influence regional or global changes in weather patterns to any measurable or meaningful extent.

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

- No or Negligible Impact: The action would result in no effect, or the effect 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, the effect would not be 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.
- Significant Impact: The effect to the resource would be perceptible and severe. The impact would result in an overall change in resource character. The determination of significant impact to any resource would require the completion of an Environmental Impact Statement.

3.1 GEOLOGIC FEATURES, SOILS, AND SEDIMENT

3.1.1 Affected Environment

Geologic Features and Soils

The Clearwater River flows through the Lewiston/Clarkston Valley at the bottom of the Hells Canyon. The project area is located on a terrace between Highway 12 and the Clearwater River. The terrace consists primarily of a sandy loam called Wistona very fine sandy loam. Wistona very fine sandy loam is a well-drained with a depth to restrictive feature greater than 80-inches in the project area. Wistona very fine sandy loam is considered prime farmland in all areas; however, there would be no loss of farmland from the construction of the proposed Alternative, because the physical characteristics of the terrace and the current land use would not be suitable for farming (NRCS 2021).

The floodplains below the terrace contain hydric soils called the Riverwash-aquents complex. The top 2-inches of the soil are very cobbly very fine sandy loam while the rest of the soil profile down to 60-inches is extremely cobbly sand. This soil type does not drain well and has a depth to restrictive feature of greater than 80-inches (NRCS 2021).

Sediment Transport

Sediments are carried to the river through erosion. Erosion on land is caused by processes such as wind, rainfall, snowmelt, and runoff. The river channel itself may also erode and transport fine (silt and clay) to coarse (sand and gravel) sediment by channel migration and by landslides and mass-wasting debris. Most coarse sediment is derived from the actual erosive force of the river channels and their tributaries and from mass-wasting and landslides in the vicinity of the rivers.

Eroded sediment in the Clearwater River moves when the moving water that contains it reaches a certain flow velocity. The fraction of sediment that is composed of larger particles, or the coarser-grained sediment, moves very slowly through the river system (years, decades, or centuries). The finer-grained sediment fraction is more mobile and moves quickly through the river systems (days, months, or years). Most fine sediment that enters the tributaries of the Clearwater River through erosion is transported into the Snake River. Sediment that settles in low velocity areas near the project area that would need to be periodically dredged to keep the water intake clear to supply drinking water.

3.1.2 Environmental Consequences

3.1.2.1 Alternative 1: No Action Alternative

There would be no change in impacts to geologic features, soils, nor sediment in the Clearwater River around the temporary intake facility under the No Action Alternative. The City will continue dredging the shallow cove containing the temporary intake screens every three to five years to clear sediment. The temporary intake structure would require routine and intensive upgrades and maintenance to remain the City's sole surface water source to the WTP. There would be minor and temporary impacts to the geologic features, soils, and sediment from maintenance activities, which is no different from the current conditions. Overall, the without action, there would be no significant impacts to geological features.

3.1.2.2 Alternative 4: Preferred Alternative – Construct a New Wet Well Shaft and Pump Station Using a Trenchless Drive to Install a New Water Pipeline

Most of the new wet well and raw-water intake pipeline would be installed using drilled secant-pile shafts and microtunneling rather than by open excavation. The drilling and micro tunneling would have minor impacts to the geologic features, soils, and sediments in the project area, because although there would be perceptible changes to the soils and geologic features, there would be very little ground disturbance required to complete the construction of the proposed project.

Placing a prefabricated or newly constructed pump house atop the new wet well would not affect underlying geologic features or undisturbed soils. Trenching to install yard piping and electrical conduits would cause only minor, temporary soil disturbance. Since the soil in this area is already disturbed, all trenches would be backfilled immediately after the piping and conduits are installed, restoring the surface to its prior condition. Boring tests would include one 4-inch diameter borehole on land to a depth of about 65-feet bgs and up to two 4-inch diameter boreholes in water to a depth of about 30- to 35-feet bgs (which would be the river bottom). There were boring tests completed in the project are in 1975. These new boring tests would have negligible impacts to the geologic features in the proposed project area.

There are serval 60-inch diameter steel pipes located in the river between 130- to 230-feet upstream from the proposed project area. Much like having a large boulder outcrop in the river, these steel flow deflectors are essentially causing the hydraulic streamlines in the river to accelerate over the top of the structures creating somewhat predictable "scour-holes." The new intake screen(s) would be located directly over the middle of one of these scour holes a to maintain the minimum coverage of 5-feet of water depth over the screens during low water events. This would reduce or eliminate the amount of maintenance dredging required to keep the water intake running, thus resulting in a minor benefit due to a reduction in the amount of problematic sediment accumulation at the intake.

Overall, implementation of the Preferred Alternative would result in minor adverse impacts during construction through the bore holes and micro tunneling, but these activities are not anticipated to result in any meaningful impacts to the form and function of geological features within the action area. The impacts to this resource would remain less than significant.

3.2 WATER QUALITY

3.2.1 Affected Environment

Water quality in the Clearwater River in the vicinity of the intake is generally good. Data collected by the USACE in 2008-2010 confirms that water quality in the lower Clearwater River portion of Lower Granite reservoir meets Idaho state water quality standards (USACE 2014). In the Idaho Water Quality Standards (Idaho Administrative Procedure Act (IDPA) 58.01.02), the Clearwater River in Lower Granite reservoir is described as protected for the designated beneficial uses of cold-water aquatic life, primary contact recreation, and domestic water supply.

The City's PWS rated in the low category for the inorganic chemicals, volatile organic chemicals, synthetic organic chemicals, and microbial contamination based on the clean source of water from the Clearwater River. Raw water quality is generally good with turbidity below 10 Nephelometric Turbidity Units. The water does not have any significant aesthetic issues associated with taste, odor, or color. The City's surface water intake has not encountered water quality problems and the most recent testing at Lewiston's surface water intake indicates that the source is very clean (IDEQ 2002).

3.2.2 Environmental Consequences

3.2.2.1 Alternative 1: No Action Alternative

There would be no change to water quality in the Clearwater River under the No Action Alternative. However, the current location of the raw water intake poses threats to the quality of the water entering the PWS.

The system's intake is particularly vulnerable to contamination due to potential accidental spills of a variety of contaminants, including hazardous materials, being transported along Highway 12. Depending on the nature of the contaminant, a spill within a short distance upstream of the intake could result in serious consequences for Lewiston water users. The system's vulnerability is enhanced due to the position of the intake at water level on the Clearwater River with no natural or man-made filtering system present.

The current water intake is in an inlet that requires routine maintenance dredging which increases water turbidity that requires mitigative measures such as silt screens at the mouth of the inlet. Additionally, the water intake is also directly across from the Clearwater P&P which poses a potential contamination affect if the man-made dikes or embankments fail.

Without action, there would be no direct impacts to water quality, however, the need for frequent maintenance dredging would indirectly result in periodic increases in turbidity. These actions have taken place routinely in the past, and although are adverse effects to water quality, the effect would be temporary and localized. Therefore, the alterative would remain less than significant.

3.2.2.1 Alternative 4: Preferred Alternative – Construct a New Wet Well Shaft and Pump Station Using a Trenchless Drive to Install a New Water Pipeline

The Preferred Alternative is expected to have minimal temporary impacts on water quality during construction. The installation of the new raw water pipeline using a trenchless drive will produce only small amounts of turbidity due to resuspended sediments from the vibration of the drilling. Similarly, the in-water boring tests will also create small turbidity plumes, but these are expected to dissipate quickly and remain within background turbidity levels. Sediment plumes expected during construction at the intake location are anticipated to be minimal because the basalt at the tunnel break-out is material that would settle quickly. In addition, the slurry that would be used for micro-tunnelling is heavier than water, which also settles quickly. Moreover, a turbidity curtain would be installed to minimize any sediment plumes to move beyond the construction area. The location of the proposed water intake, situated above the sediment deposition zone in a scour hole, further reduces the need for routine dredging. This reduction in dredging would result in a long-term minor benefit to water quality by decreasing the frequency and intensity of turbidity caused by dredging activities.

The wet well for the proposed water intake structure is located beneath the pump station, allowing for pump placement at low river water surface elevations, which helps

mitigate potential water contamination risks. Additionally, the proposed intake structure is upstream of the Clearwater P&P, further lowering the vulnerability of the system to surface water contamination. These features would reduce the frequency of surface water intake shutdowns, which currently require the City to rely on groundwater wells. Since approximately 73% of the City's drinking water comes from the surface water intake, the Preferred Alternative would provide a moderate direct benefit to both drinking water quality and groundwater conservation by reducing the burden on groundwater supplies during surface water intake shutdowns.

Overall, the implementation of the Preferred Alternative would directly result in minor adverse impacts to water quality through increases in turbidity from in-water construction activities. These activities would be minimized through the implementation of BMPs, such as those outlined in Section 4.3. Indirectly, the Alternative would reduce the need for consistent and future in-water work, thus resulting in a beneficial solution when compared to the No Action Alternative. Regardless, the impacts to water quality would remain less than significant.

3.3 AQUATIC RESOURCES INCLUDING THREATENED AND ENDANGERED AQUATIC SPECIES

3.3.1 Affected Environment

In general, the substrate in this reach of the Clearwater River is mostly sand with silted in cobble supporting a limited diversity of benthic organisms. There is sparse riparian vegetation on the shoreline to provide shading for aquatic organisms. Riprap armoring on the levee offers hard substrate that provides so habitat for aquatic insects and hiding cover for rearing juvenile anadromous fish and provides some habitat for the resident fish, primarily bass. Anadromous fish primarily use this reach of the clearwater River as a migratory corridor.

Anadromous fish species that are found in the area include steelhead (*Oncorhynchus mykiss*), Chinook salmon (*O. tshawytscha*), and hatchery-origin Coho salmon (*O. kisutch*). Populations of spring/summer Chinook salmon in the Clearwater drainage were eliminated or severely depressed by the Lewiston dam in the 1950s. The Idaho portion of the Snake River Spring/summer Chinook salmon Evolutionary Significant Unit (ESU) consists of all the Salmon River drainage and the Snake River drainage upstream to Hells Canyon Dam. The Clearwater drainage was not included in the ESU due to loss of this population in the 1950s.

Steelhead and Snake River fall-run (SRF) Chinook salmon are both listed as threatened by the NMFS under the Endangered Species Act (ESA) (Table 3-3). The Clearwater River from its confluence with the Snake River upstream to its confluence with Lolo Creek is critical habitat for SRF Chinook salmon and Snake River steelhead.

Table 3-2. Aquatic Endangered Species Act listed species that may occur in the area potentially affected by this action.

Species	Listing Status	Critical Habitat
National Marine Fisheries Service		

Species	Listing Status	Critical Habitat
Snake River fall-run Chinook salmon (*Oncorhynchus tshawytscha)*	Threatened: 4/14/2014; 79 FR 20802	Yes, 12/28/1993; 58 FR 68543
Snake River Basin steelhead (*O. mykiss*)	Threatened: 8/18/1997; 79 FR 20802	Yes, 9/02/2005; 70 FR 52630
U.S. Fish and Wildlife Service		
Bull trout (*Salvelinus confluentus*)*	Threatened:06/10/1998; 63 FR 31647 31674	Yes, 10/18/2010; 75 FR 63898

* USFWS Consultation Code 01EIFW00-2021-SLI-1769 obtained on July 30, 2021 (Appendix B)

SRF Chinook salmon spawning and rearing occurs only in larger, mainstem rivers such as the Salmon, Snake, and Clearwater Rivers. Currently, the vast majority of SRF Chinook natural spawning in the Clearwater River occurs downstream from Lolo Creek to the U.S. Highway 95 bridge at Spalding which is about 4 miles upstream from the permanent intake structure. Approximately 34 percent of the fall Chinook salmon redds counted in 2010 upstream of Lower Granite Reservoir were observed in the Clearwater River. Within the Clearwater River watershed, there were 1,924 redds total, with 1,632 in the mainstem Clearwater in the lower 41 miles, below the North Fork Clearwater River (Garcia et al. 2005).

Wild juvenile SRF Chinook salmon typically pass through the Clearwater river from mid-June through September, with double peaks in mid-July and some lingering portion of the annual migration lasting until December. Many of the juvenile SRF Chinook salmon out-migrating from the Clearwater and Snake Rivers spend time in shoreline areas (less than 3 meters [9.8 feet] in depth) (Bennett et al. 1997).

Cold-water releases from Dworshak Dam, aimed at augmenting flows for adult migration, may cause stunted growth rates in juveniles in the late summer and early fall, causing these fish to overwinter. Connor et al. (2005) describes SRF Chinook salmon in the Snake River Basin (SRB) exhibiting one of two life histories they called ocean-type and reservoir-type. The reservoir-type life history is one where juveniles overwinter in the pools created by the dams prior to migrating out of the Snake River. The reservoir-type life history is likely a response to early development in cooler temperatures, which prevents juveniles from reaching a suitable size to migrate out of the Snake River.

Tiffan and Connor (2012) found that reservoir-type juvenile SRF Chinook numbers in Lower Granite reservoir, just downstream of the project area, was highest in October and lowest in February. Tiffan and Connor (2012) also found that only 3 percent of the juveniles they found in the winter (November through March) in Lower Granite reservoir were in water less than 20 feet deep and only 7 percent were within 80 feet of shore for short times (less than an hour) indicating the likelihood of impacting juvenile reservoir-type juvenile SRF Chinook during in-water construction outside of the in-water work window (July 1 – August 14) is low.

The SRB steelhead distinct population segment (DPS) includes all naturally spawned steelhead populations below natural and manmade impassable barriers in streams in the SRB of southeast Washington, northeast Oregon, and Idaho. SRB steelhead are

generally classified as summer run, based on their adult run timing pattern. SRB steelhead enter fresh water from June to October, and after holding over the winter, spawn during the following spring from March to May. SRB steelhead usually smolt as 2- or 3-year-olds. Outmigration occurs during the spring and early summer periods, coinciding with snowmelt in the upper drainages.

A-run populations of SRB steelhead are found in the tributaries to the lower Clearwater River and possibly the Snake River's mainstem tributaries below Hells Canyon Dam. B-run populations of SRB steelhead occupy four major subbasins, including two on the Clearwater River (Lochsa and Selway) and two on the Salmon River (Middle Fork and South Fork Salmon); areas that are, for the most part, not occupied by A-run steelhead. Some natural B-run steelhead are also produced in parts of the mainstem Clearwater and its major tributaries. Adult steelhead hold in the mainstem Clearwater River for extended periods (months) prior to spawning and some are likely to be in the river adjacent to the action area during the proposed work window (Bjornn et al. 2000).

Some sockeye (*O. nerka*) salmon and spring/summer Chinook salmon, while not part of the ESUs in the Clearwater drainage system, may incidentally occupy the area at times as they migrate upstream in the Snake River. Other anadromous fish use this area as a migration corridor but may also use the area for rearing and overwintering at other times of the year.

The mainstem Clearwater River serves as a primary migration route for adult Pacific lamprey (*Entosphenus tridentatus*) to access upstream spawning areas, and as a rearing area for ammocoetes (larval lamprey). Spawning in the Clearwater River drainages occurs from late May to early July in slow riffles or runs with adequate gravel and cobble substrates (IDFG 2011). It's unclear if adults spawn in the mainstem Clearwater River or if the presence of juveniles is a result of their downstream migration from drainages upstream. Young adult lamprey may start their migration to the Pacific Ocean in the fall, however, strong pulses of migration have been documented in Idaho streams from late winter months to early summer, and it is believed that in Idaho streams downstream migration primarily occurs between February and June (IDFG 2011). As long as there is lamprey production in Clearwater River tributaries, the mainstem Clearwater River will continue to serve as a rearing area for juveniles that have migrated downstream.

Some notable resident fish species found in the Clearwater River include Northern pikeminnow (*Ptychocheilus oregonensis*), rainbow trout (*O. mykiss*), largemouth bass (*Micropterus salmoides*), smallmouth bass (*Micropterus dolomieu*), carp (*Cyprinus carpio*). White sturgeon (*Acipenser transmontanus*) and bull trout (*Salvelinus confluentus*) are two resident fish species of note in the project area. One of the two viable populations of white sturgeon is located from Hells Canyon Dam downstream to Lower Granite Dam. A recent estimate of the number of fish over 0.6 meters (2 feet.) in length in this reach was 3,600 fish (IDFG 2005).

Bull trout are currently listed throughout their range in the U.S. and the Clearwater River, adjacent to the project area, is designated as bull trout critical habitat. The proposed project is in the Middle - Lower Clearwater River Critical Habitat Subunit

(CHSU). This CHSU is essential to bull trout conservation because the Clearwater River and Middle Fork Clearwater River primarily serve as migratory corridor, connecting local bull trout populations within the Clearwater River Critical Habitat Unit as well as maintaining connectivity to other Mid-Columbia River bull trout populations. The main river reaches also provide important foraging and overwintering areas for sub adult and adult bull trout that originate in upstream CHSU's.

The Clearwater River is designated as foraging, migration, and overwintering habitat from its confluence with the Snake River upstream 74.3 miles to its confluence with South Fork Clearwater River (USFWS 2010). Bull trout use of the lower Clearwater River is for feeding, migrating, and overwintering. Near the permanent water intake structure such use by bull trout is not expected during the proposed construction time period and no bull trout spawning or early rearing occurs in the lower Clearwater River.

3.3.2 Environmental Consequences

3.3.2.1 Alternative 1: No Action Alternative

The inlet where the temporary water intake is located requires regular dredging. The dredging disrupts benthic organisms and requires screening the mouth of the inlet. The block screens are installed with room at the bottom to allow mobile aquatic organisms the chance to escape the dredge, but there's still the risk of injury or mortality.

Additionally, the screen at the end of the intake pipe does not meet the NMFS fish passage design criteria (NMFS 2011). There is no sweeping velocity to remove debris from the screen surface and the screen is in an area where sediment build-up impacts screen operations. There would be no change of impacts to aquatic resources under the No Action Alternative, however there is a minor negative impact to aquatic organisms from the maintenance and function of the temporary water intake. Overall, the Alternative would result in less than significant impacts.

3.3.2.2 Alternative 4: Preferred Alternative – Construct a New Wet Well Shaft and Pump Station Using a Trenchless Drive to Install a New Water Pipeline

The Preferred Alternative is expected to have minor temporary impacts on fish during construction activities. In-water construction would occur during the in-water work window (July 1 - August 14), when most anadromous fish have migrated through the project area. However, some juvenile fish may still be present in the pool where the intake screen would be installed. The micro-tunneling process will cause vibrations in the sediment, which may cause fish to move away from the construction area. Similarly, the installation of the intake screens is likely to cause fish to move away from the construction site. These activities are anticipated to result in minor temporary disruptions to fish within the action area, however these disruptions would be temporary and minor.

Test boring may occur outside of the in-water work window, as these tests need to be conducted prior to construction. The boring process would be carried out from a pontoon boat and involve drilling into the riverbed. The vibration from the boring

activities may cause fish to temporarily move away from the area, but impacts would be negligible and unlikely to cause any significant disturbance to fish populations. Incorporating biological conservation measures as a result of ESA consultation would further minimize impacts to aquatic ESA-listed species (Section 4.3 of EA). These measures, such as specific timing restrictions, habitat protection, and monitoring protocols, would not only benefit ESA-listed species but would also reduce impacts to general aquatic species by maintaining the integrity of aquatic habitats during construction.

Once the new intake structures are in place, the need for dredging would be reduced, resulting in a long-term minor benefit to benthic organisms due to less disturbance of the riverbed. Additionally, the intake screens would be designed in compliance with NMFS fish passage criteria, providing a minor long-term benefit to fish by improving their passage through the area.

Overall, the implementation of the Preferred Alternative would result in minor adverse impacts to fish during construction, with temporary displacement due to vibration from construction activities. Long-term benefits to both fish passage and benthic organisms would result from reduced dredging and the compliance with fish passage criteria. The inclusion of ESA-related biological conservation measures would further minimize impacts to aquatic species during construction. The impacts from the implementation of this Alternative would remain less than significant.

3.4 TERRESTRIAL ENVIRONMENT INCLUDING THREATENED AND ENDANGERED AQUATIC SPECIES

3.4.1 Affected Environment

The USACE developed the shoreline in the vicinity of the project area when constructing levees as part of Lower Granite Dam project. The shoreline is completely armored with riprap and no natural shoreline exists at the project area. There are a few shrubs along the shoreline near the project area, mostly willows under 15 feet in height (Figure 2-2 above).

The surrounding uplands consists of sparse grasses and non-native weeds. There is rabbitbrush (*Ericameria nauseosa*) growing within the fenced area around the proposed construction site (Figures 2-2 and 2-5 above). The forage value of rabbitbrush varies greatly. In some locations, it can be an important browse species for mule deer during fall and winter. Rabbitbrush also provides cover for mammals and small nesting birds. Highway 12 runs north of the intake site with non-native weeds and grasses growing roadside.

Spalding’s catchfly was identified on a species list obtained from the USFWS Official Species Report (Information for Planning and Consultation (IPaC)) report as being located in the vicinity of the project area (Table 3-3). Spalding's catchfly *(Silene spaldingii*), a plant in the carnation family, is listed as threatened under ESA and by the state of Idaho (State of Idaho 2019). The species is endemic to the Palouse region of southeast Washington and adjacent Oregon and Idaho. This species is found

predominantly in the Pacific Northwest bunchgrass grasslands and sagebrush-steppe at locations above 1,900 feet in elevation (USDA Forest Service. 2009).

No Spalding's catchfly were found upstream of the confluence of the Snake and Clearwater Rivers to RM 8.2 on the Clearwater during a 2008 vascular plant survey on Corps lands along the Snake River (Bailey 2008a, 2008b). There are no known local populations of Spalding's catchfly in the project area.

In addition, monarch butterfly and suckley's cuckoo bumble bee were identified on the USFWS Species Report as well. These species are considered proposed threatened and proposed endangered respectively. However, the action area does not contain critical habitat for either of these species.

Monarch butterflies (*Danaus plexippus*) form two main migratory populations. The western population—including those seen in Idaho—overwinters in coastal groves in California. Monarchs depend on milkweed (Asclepias spp.) as the only host plant for their caterpillars and rely on a variety of nectar-rich flowers for adult energy, especially during migration. Suitable breeding and foraging habitats receive at least six hours of sunlight per day, feature well-drained soils, and remain free of pesticide drift. In Idaho, monarchs have been documented through migration studies and tagging programs; they use prairies, meadows, riparian corridors, and even urban green spaces when these conditions are met. During rest and shelter, they seek out woodlands and, in winter, the dense canopy of California's coastal groves.

Suckley's cuckoo bumble bee (*Bombus suckleyi*) is a parasitic species found throughout northern North America, including Idaho, inhabiting prairies, grasslands, and meadows. Unlike other bumble bees, it does not build its own nests but instead relies on the nests of host species, such as the western bumble bee (*B. occidentalis*), to rear its offspring. The habitat requirements for Suckley's cuckoo bumble bee are closely tied to the availability of its host species and suitable floral resources. Ideal habitats include areas with abundant wildflowers for foraging and undisturbed grounds that support host nests, often utilizing abandoned rodent burrows or natural hollows. While the species has been documented in Idaho, its presence is closely linked to the distribution of its host species.

Table 3-3. Terrestrial Endangered Species Act listed species that may occur in the area potentially affected by this action.

Species	Listing Status	Critical Habitat
USFWS		
Spalding's catchfly (*Silene spaldingii*)*	Threatened	Not Applicable
Monarch Butterfly (*Danaus plexippus*)	Proposed Threatened	Not Applicable
Suckley's Cuckoo Bumble Bee (*Bombus suckleyi*)	Proposed Endangered	Not Applicable

*USFWS Consultation Code 2025-0075408 obtained on March 27, 2025 (Appendix B).

Small mammals, such as rats and mice are most likely present on-site at the intake facility. Larger mammals would be excluded from the project area by the boundary fence and would most likely avoid this area anyway due to the urban/industrial setting

and the location of highway 12. Songbirds, great blue herons, and egrets may occasionally use the riprap area or shrubs along the levee near the permanent intake. Additionally, Canada geese (*Branta canadensis*) and various ducks may occur in or fly over the project area.

3.4.2 Environmental Consequences

3.4.2.1 Alternative 1: No Action Alternative

The No Action Alternative would not change the terrestrial environment or existing use of riparian habitat. The area around the existing pumphouse is previously disturbed and offers limited habitat to terrestrial wildlife. Without action, No Actions would be taken that would result in vegetation removal, ground disturbance, soil compaction, or otherwise noise related disturbances. The Alternative would result in periodic disturbances associated with the maintenance dredging associated with the existing intake. These disturbances would occur periodically into the foreseeable future. However, these indirect impacts would be temporary and localized to the intake structure. Overall, the Alternative would result in less than significant impacts.

3.4.2.2 Alternative 4: Preferred Alternative – Construct a New Wet Well Shaft and Pump Station Using a Trenchless Drive to Install a New Water Pipeline

The Preferred Alternative would result in minor temporary impacts to terrestrial resources. Approximately 0.5 acres of rabbitbrush within the project footprint and 0.03 acres of shrubs along the rip-rap on the levees would be removed to facilitate access to the river shoreline. This disturbance would affect less than an acre of vegetation. However, the shrubs along the rip-rap are expected to regrow within a couple of growing seasons after construction. The loss of rabbitbrush, which provides wildlife cover, would have a negligible impact on available cover, and would not meaningfully affect forage availability in this area of relatively low productivity. The removal of shrubs along the rip-rap could have a minor short-term impact on birds and small mammals that rely on them for cover. Noise generated from construction would temporarily disturb wildlife, causing short-term avoidance of the construction zone, but it would not result in long-term displacement.

Best Management Practices (BMPs) outlined in Section 4.3 of the EA would be employed to minimize impacts to terrestrial resources. These BMPs could include re-vegetation and erosion control measures, such as planting native species or installing temporary cover to stabilize disturbed areas and promote habitat recovery. These actions would help mitigate potential impacts and promote the restoration of impacted vegetation.

Overall, the Preferred Alternative would result in minor adverse impacts to terrestrial resources due to the temporary loss of vegetation and short-term disturbance from noise. These impacts would be less than significant, as the vegetation is expected to recover and the disturbance would not have long-term effects on wildlife in the area. The use of BMPs would further reduce the impacts, resulting in a less than significant impact to terrestrial resources.

3.5 HISTORIC/CULTURAL RESOURCES

3.5.1 Affected Environment

USACE archaeologists conducted a cultural resources review for the proposed action and the Area of Potential Effects (APE) to identify any archaeological resources, historic properties, Traditional Cultural Properties (TCPs), and Tribal Trust Resources within the APE. One historic property, a portion of the Lewis and Clark National Trail System, was identified adjacent to the APE. USACE has an obligation to document and evaluate archaeological sites, historic buildings, structures, objects, and districts for listing on the National Register of Historic Places (NRHP). The existing pumphouse within the APE was determined to be not eligible for listing in the NRHP, and no other historic properties were identified within the APE. No archaeological resources were identified within the APE.

Traditional Cultural Properties (TCPs) are places of religious and historical significance to Indian tribes, often tied to cultural beliefs, customs, and practices of a living community. No TCPs were identified within the APE. However, the Nez Perce Tribe has protected treaty resources in the action are, which include access to fisheries, water resources, wildlife, plants, and traditional sites that are vital to the tribe's cultural, spiritual, and historic heritage. Treaty-protected fisheries include access to historically significant species such as salmon, steelhead, lamprey, and other native fish. Water resources are necessary to support fish populations and other traditional uses. Wildlife resources include species significant for hunting and traditional use. Traditional plants are used for food, medicine, and cultural practices. Historic sites include areas of religious significance, burial sites, and traditional fishing locations.

3.5.2 Environmental Consequences

3.5.2.1 Alternative 1: No Action Alternative

Under the No Action Alternative, no ground disturbance or in-water construction would occur, there would be no potential to impact historic properties, archaeological resources, or Traditional Cultural Properties (TCPs) within the Area of Potential Effects (APE).

No historic properties or archaeological resources have been identified within the APE, and the existing pumphouse has been determined not eligible for listing in the National Register of Historic Places (NRHP). Therefore, no direct or indirect impacts to historic properties or archaeological sites would occur under this alternative.

Although no TCPs were identified within the APE, the broader action area contains Tribal Treaty resources of cultural, spiritual, and subsistence importance to the Nez Perce Tribe, including access to fisheries, traditional plants, wildlife, and water resources. The No Action Alternative would not result in any new disturbance that would interfere with access to or the availability of these resources. However, without implementation of the Preferred Alternative, existing conditions—such as reduced water

access reliability or sediment-related maintenance at intake locations—may continue to affect habitat conditions for culturally significant fish and aquatic species. Periodic maintenance dredging would result in negligible impacts to historic properties, archaeological resources, and TCPs. However, this activity would result in temporary minor adverse impacts to Tribal Treaty resources through in-water work.

Overall, the No Action Alternative would result in no direct or indirect impacts to identified historic properties, archaeological resources, or TCPs. Impacts to Tribal Treaty resources would also be negligible, despite the periodic maintenance dredging, as conditions would remain consistent with the current baseline. Therefore, the implementation of the No Action Alternative would result in less than significant impacts to historic and cultural resources.

3.5.2.2 Alternative 4: Preferred Alternative – Construct a New Wet Well Shaft and Pump Station Using a Trenchless Drive to Install a New Water Pipeline

The Preferred Alternative would result in no direct or indirect impacts to historic or cultural resources, including historic properties and any archaeological resources within the affected environment. However, the proposed in-water work has the potential to affect Tribal Treaty resources, specifically traditionally coveted species such as salmon, steelhead, lamprey, and other native fish. These species are culturally significant to tribes and are integral to their heritage and way of life.

While the action has the potential to impact these resources, the implementation of conservation measures, including those identified through consultation with the relevant tribes, would reduce the potential for adverse impacts. The effects would be localized to the action area and would not result in any meaningful adverse effects to the existence or access to these resources.

Overall, the Preferred Alternative would result in no significant impacts to historic or cultural resources. The potential impacts to Tribal Treaty resources would be negligible to minor, and the implementation of conservation measures would ensure that the impacts remain less than significant.

3.6 SOCIOECONOMICS

3.6.1 Affected Environment

Population

The population of Lewiston is currently about 32,820 based on estimates provided by the U.S. Census Bureau (2017). The population has increased by 926 since the 2010 census, which equates to an average growth rate of about 0.4 percent per year. The population estimates shown in Table 3-3 include the population of the Lewiston Orchards Irrigation District, which is a separate PWS that provides irrigation and potable water service to approximately 16,000 of the City's residents (Mountain Waterworks 2018).

Table 3-4. City of Lewiston Population Estimates

2010	2011	2012	2013	2014	2015	2016	2017
31,929	31,970	32,008	32,254	32,303	32,460	32,596	32,820

Utility Use

The City's Utility Billing Department subdivides the water system customer base into 11 user categories, as shown in Table 3-5. The PWS served approximately 5,916 active customer connections as of the end of December 2017. The majority of customer connections are single family homes, which account for about 73 percent of active connections. Commercial zones, hotels and motels, and multi-family homes account for most non-single-family connections, with the remaining user categories making up the remainder (Mountain Waterworks 2018).

Table 3-5. Active Service Connections by Customer Category as of December 2017 (Mountain Waterworks 2018).

Service Code	Total System Connections	Percent of Total Active Connections
City Parks	43	0.73%
Large Commercial	366	6.19%
Commercial	664	11.22%
Hotel/Motel	9	0.15%
Home Business	10	0.17%
Multi-Family Homes	404	6.83%
Mobile Home Parks	4	0.07%
Nursing Homes	6	1.10%
Single Family Homes	4,350	73.53%
Rooming House	1	0.02%
Schools	59	1.00%
Total	5,916	100.00%

Most of the known water demand growth in Lewiston is anticipated to occur primarily in the Southeast, South Central, Low, North Low, and High Service Levels (Figure 3-1). Current water demand is over 9 MGD. Water demand is expected to increase to over 12 MGD in the next 10 to 20 years (Mountain Waterworks 2018).

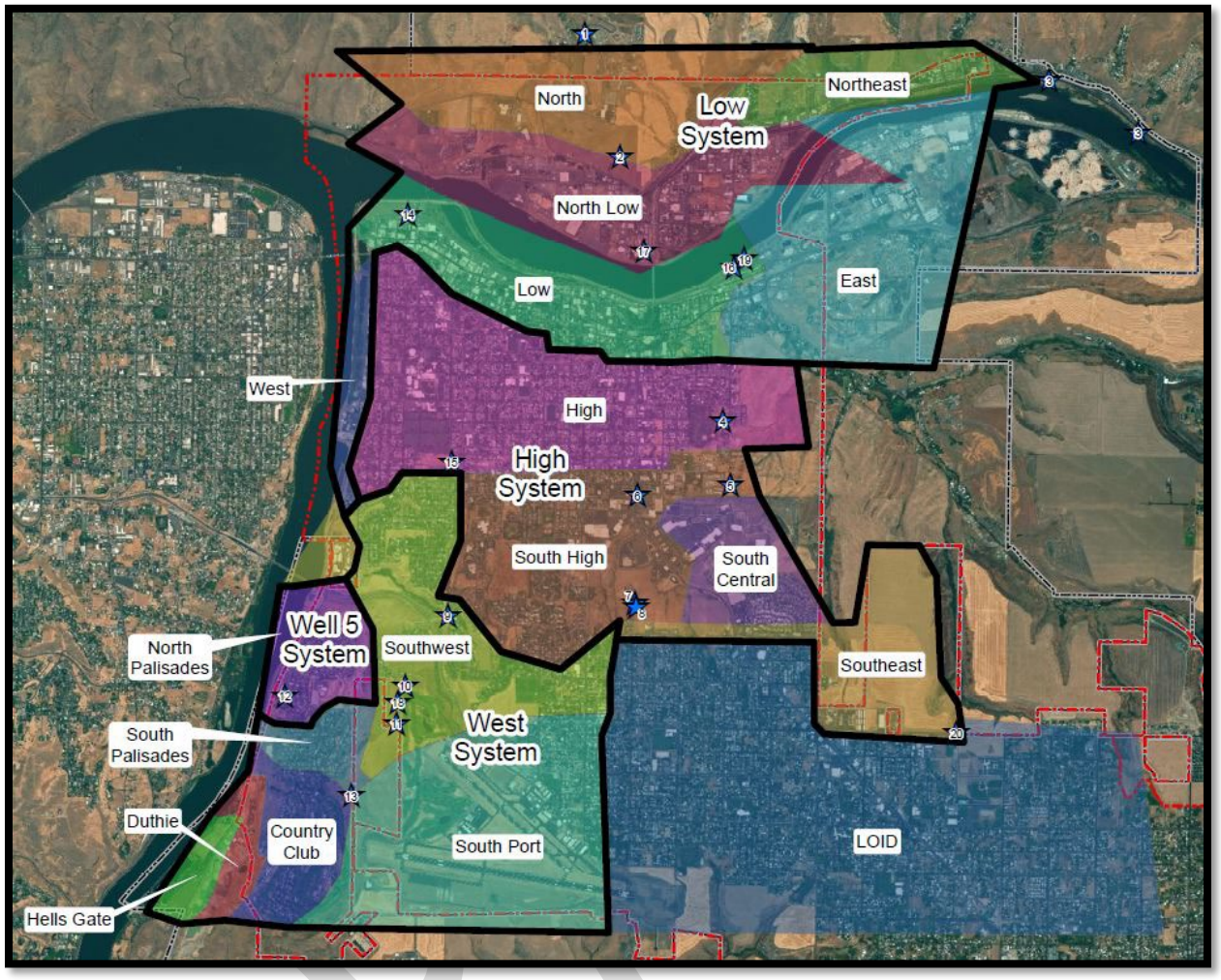

Figure 3-1. Water System Facilities in the City of Lewiston, Idaho.
Taken from Mountain Waterworks 2018.

Existing demand in the Southeast Service Level is currently low, but it is poised to rise sharply with the opening of the new Lewiston Senior High School, the Lewis-Clark State College Career and Technical Education Center, and upcoming Community Park development, which together could add as much as 760 gpm over the next few years.

The South-Central Service Level serves roughly 300 residential units—ranging from single-family homes to large apartment buildings—alongside several major retail stores, hotels, and a manufacturing facility. Once the Nez Perce Drive extension is complete, six to eight new commercial connections are expected to come online, boosting demand by about 200 gpm within five years.

Downtown Lewiston, the Port of Lewiston, and the Snake River Avenue commercial district fall within the Low Service Level, which also includes all customers north of the Clearwater River. Although this area hosts a concentration of commercial accounts, limited irrigated landscaping keeps its share of system-wide demand at only about 15 percent. Demand growth here is projected to be modest—around 40 gpm.

By contrast, the High Service Level accounts for most of the system's current demand and will see the greatest near-term growth. Expanded water use at St. Joseph Regional Medical Center and Lewis-Clark State College is expected to drive a combined increase of approximately 50 gpm (Mountain Waterworks 2018).

Income Distribution

Household income is an important consideration to determine whether low-income populations would experience disproportionately adverse effects as a result. The distribution of income is related to important aspects of economic well-being. Table 3-6 shows a bulge in the middle in the middle of the table between 35,000 and 199,000 indication Lewiston is largely a middle-class population.

Table 3-6. Population Percentages by Household Income

Income	Percent of Total Lewiston, Idaho	Percent of Total United States
Less than $10,000	6.9	6.0
$10,000 to $14,999	4.4	4.3
$15,000 to $24,999	10.8	8.9
$25,000 to $34,999	9.0	8.9
$35,000 to $49,999	14.0	12.3
$50,000 to $74,999	18.5	17.2
$75,000 to $99,999	14.6	12.7
$100,000 to $149,999	13.7	15.1
$150,000 to $199,999	13.7	15.1
$200,000 or more	3.1	7.7

Ethnic Demographics

The City is less diverse than the United States as a whole, the exception is the higher percentage of American Indians within the City as compared to the rest of the United States (Table 3-7). It is important to consider whether the proposed alternative could a have disproportionately high and adverse effect on minority populations (Headwaters Economics 2021).

Table 3-7. Percent race and ethnicity present in Lewiston, ID. Total Population = 32,644 in 2019.

Race	Percent in Lewiston, Idaho	Percent in the United States
White	94.4	72.5
Black	0.4	12.7
American Indian	1.5	0.8
Asian	0.8	5.5
Hispanic	4.1	18.0

Poverty

Poverty is an important indicator of economic well-being. Understanding the extent of poverty is important for several reasons. For example, people with limited income may have different needs and values. The proposed alternative needs to be analyzed in the

context of whether people who are economically disadvantaged could experience disproportionately adverse effects.

Currently 13.1 percent of the City's population is below the poverty line in the City and 7.8 families; the national average it 13.4 percent individual and 9.5 families. The city matches the national average for people below the poverty line, but is slightly below the national average for families below the poverty line (Figure 3-2) (Headwaters Economics 2021).

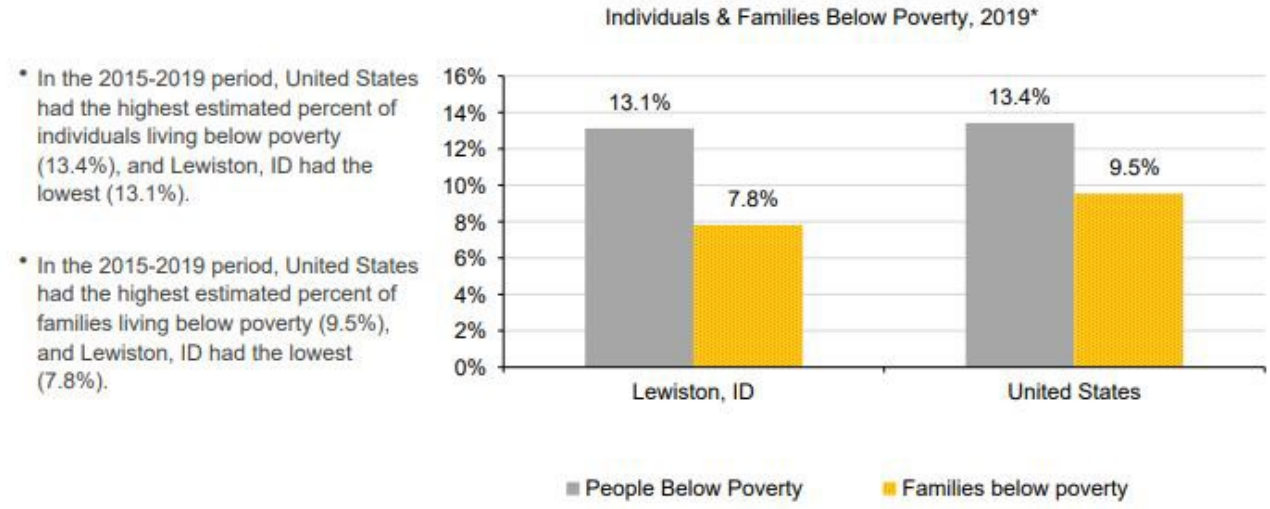

Figure 3-2. Comparison chart of poverty between the City of Lewiston and the United States.
* American Community Survey 5-year estimates used. 2019 represents average characteristics from 2015-2019.

Education

Education is one of the most important indicators of the potential for economic success, and lack of education is closely linked to poverty. Studies show that areas with a higher-than-average-educated workforce grow faster, have higher incomes, and suffer less during economic downturns than other areas. In 2017, the Bureau of Labor Statistics reported that the higher the rate of educational achievement, the lower the unemployment rate and the higher the wages. Understanding differences in education levels can highlight whether certain people might be disproportionately impacted by policies, plans, and management actions, and can inform communication and outreach efforts (Headwaters Economics 2021).

Overall, the City has a high percentage of the population with high school degrees or higher. The City has a lower percentage of people with no high school degree compared to the population of the United States as a whole (Table 3-9).

Table 3-8. Education levels for the City of Lewiston, Idaho compared to the United States, 2019.

Education level	Percent in Lewiston, Idaho	Percent in the United States
No High school Degree	7.8	12.0
High School Graduate	92.2	88.0
Bachelor's or Higher	23.0	32.1
Graduate or Professional	5.8	12.4

In summary, the City is predominately and middle-class white community with poverty levels low and matching the national averages for individual and family. Education levels are high in the City with only 7.8% of the population without any type of degree.

3.6.2 Environmental Consequences

3.6.2.1 Alternative 1: No Action Alternative

The WTP has the capacity to process 15 MGD of water. The temporary water intake structure produces a maximum daily volume in the range of 11 to 12 MGD limited by the filters ability to consistently remove turbidity. Without a backup intake the City must rely on ground water (currently provides 27% of water demand) and storage reservoirs to supply water to users.

There are four ground wells that supply 8 MGD of drinking water and six storage reservoirs with a combined storage volume of 59 MGD. The water demand during peak season is 9 MGD. Storage reservoirs would meet water use demand for approximately six and a half days; any shut down of the sole surface water intake would be supplied from ground reservoirs. There have already been two occasions where the surface water intake had been shut down due to sedimentation in the intake inlet.

There would be no change to socioeconomics under the No Action Alternative, but the temporary water intake has an inadequate capacity and there is no back up facility if the intake pump is shutdown.

The current meter rates and a water consumption charge rates are shown in Table 3-10 were passed by the City Council in Resolution 2020- 31 and took effect on October 1, 2018. The Utility Assistance Program is applicable to customers meeting the home ownership and low-income requirements for property tax reduction set by the Idaho State Tax Commission. These rates have increased since 2018 in the range of $1 per month for the 0.75-inch meter to $21 per month for the 4-inch meter. It is largely up to the City to develop a rate structure that will provide sufficient income to meet the revenue required to remain self-supporting in accordance with Idaho Code §50-1032, but rates would likely continue to increase as the intake structure ages requires more maintenance to remain operational. There would be no change to existing impacts to disadvantaged communities associated with the No Action Alternative. Current impacts are negligible, because the City strives to maintain affordable and comparable water rates and offers a utilities assistance program.

Table 3-9. Monthly Meter Rates (FY 21)

Meter Size (inches)	Monthly Meter Rates	Monthly Meter Rates (Utility Assistance Program)	Consumptive Rater (per 100 cubic feet)
0.75	$30.99	$23.24	$2.85
1	$37.4	$28.04	$2.85
1.5	$80.13	$60.09	$2.85
2	$133.54	$100.16	$2.85
3	$235.02	$176.27	$2.85
4	$341.85	-	$2.85

3.6.2.2 Alternative 4: Preferred Alternative – Construct a New Wet Well Shaft and Pump Station Using a Trenchless Drive to Install a New Water Pipeline

The construction of the proposed project would meet current and future City water demands. Both intake pipes would be designed to withdraw about 65 percent of the total design flow to allow for taking one half of the Tee-screen system out of service for maintenance while the other half remained in-service for water production. Additionally, the temporary water intake facility would serve as a backup system in case of an emergency shutdown of the permanent water intake facility. There would be direct moderate impacts to socioeconomic from the Preferred Alternative.

Construction of the proposed project would be funded through a Drinking Water State Revolving Loan issued by the IDEQ, WRDA Section 595 funding cost shared between the Corps and the City (75 percent Federal and 25 percent City), and rate increases. The amount the rate could increase to generate the needed revenue is calculated by the City by summing the 1) operation and maintenance cost, 2) debt service, usually consisting of a loan principal and interest payment and a debt reserve, and 3) the depreciation cost of all assets owned and operated by the utility.

Rates are already shown to increase under the No Action Alternative and it's not expected construction of the proposed project would cause the rates to increase to a level that would cause significant impacts to disadvantaged or minority populations. Any rate increases because of the construction of proposed project would have negligible impacts to disadvantaged communities. Construction of the proposed project would provide a reliable source of clean drinking water to all PWS customers resulting in the fair distribution of environmental benefits. Overall, the Alternative would result in less than significant impacts.

4 – Compliance with Applicable Environmental Laws and Regulations

4.1 Federal Statues

4.1.1 National Environmental Policy Act

This EA was prepared pursuant to regulations implementing NEPA, (42 United States Code 4321 et seq.). NEPA provides a commitment that Federal agencies will consider the environmental effects of their Preferred Alternatives prior to implementing those actions. Completion of this EA and signing of a Finding of No Significant Impact (FONSI), if applicable, fulfills the requirements of NEPA. The draft EA, FONSI, and supporting appendices will be made available for a 15-day public comment and review period, set to begin on or around May 02, 2025. The documents would be made available via the USACE's public facing website. Any comments received during this public review period would be addressed within the final version of the EA.

4.1.2 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 USFWS and NMFS (the Services), 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 (BA) of the potential effects of major actions on listed species and critical habitat.

USACE biologists drafted a Biological Assessment (BA), which considered the Preferred Alternative's activities and analyzed the potential impacts to ESA-listed species within the area of potential effect. Through this analysis, USACE determined that the Preferred Alternative could result in adverse impacts to ESA-listed species and that formal consultation with the Services was required. The BA determined there would be "No Effect" to Spalding's Catchfly, however, due to the proposed in-water work, the action "May Affect, Is Likely to Adversely Affect" determination for ESA-listed salmonids, more specifically Snake River populations of Chinook salmon, steelhead, and bull trout. Refer to the BA for a detailed effects analysis.

The USACE initiated informal consultation with the USFWS on November 22, 2024, and formal consultation with the NMFS on October 29, 2024. The USACE received a Letter of Concurrence from the USFWS on January 02, 2025. An updated Official Species List was generated on March 27, 2025, which included Monarch Butterfly (*Danaus plexippus*) and Suckley's Cuckoo Bumble Bee (*Bombus suckleyi*) in addition to Spalding's Catchfly (*Silene spaldingii*). The USACE biologists determined re-initiation of consultation with the USFWS was un-necessary because the action would result in "No Effect" to these species or their critical habitat, as discussed in Section 3.4. There is no designated or proposed critical habitat for these species within or near the action area.

Furthermore, the USACE received a Biological Opinion (BO) from the NMFS, dated April 15, 2025, which determined that the Preferred Alternative is not likely to jeopardize the continued existence of identified ESA-listed species or destroy or adversely modify their designated critical habitat, contingent upon the implementation of the requirements outlined within the “Reasonable and Prudent Measures” and the “Terms and Conditions” sections.

The BA, correspondence record, Letter of Concurrence, BO, and other associated documentation are located within Appendix B.

4.1.3 Magnuson-Stevens Act - Essential Fish Habitat

The consultation requirement of section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) directs Federal agencies to consult with NMFS on all actions, or Preferred Alternatives that may adversely affect Essential Fish Habitat (EFH). Adverse effects include the direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components, if such modifications reduce the quality or quantity of EFH. Adverse effects to EFH may result from actions occurring within EFH or outside EFH, and may include site-specific or EFH-wide impacts, including individual, cumulative, or synergistic consequences of actions (50 CFR 600.810).

The APE includes areas designated as EFH for various life-history stages of Chinook and/ or coho salmon. However, USACE determined that the Preferred Alternative would result in No Adverse Effects to EFH, with this determination supported by the critical habitat analysis located within Section 4.2 of the BA. Within the BO provided by NMFS, adverse effects on EFH are identified and conservation recommendations to avoid, minimize, mitigate, or otherwise offset these affects are proposed. Consultation with the NMFS is on-going, as the USACE plans to respond to these conservation measures within the 30-day framework pursuant to the MSA. The results of the on-going consultation would be fully documented within the final version of this EA. For all biological documentation and correspondence, refer to Appendix B.

4.1.4 Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (FWCA) authorizes the USFWS to evaluate the impacts to fish and wildlife species from proposed Federal water resource development projects that could result in the control or modification of a natural stream or body of water that might have effects on the fish and wildlife resources that depend on that body of water or its associated habitats.

The intake channel is not considered a natural waterbody, and was constructed in the mid-1970’s. The intake has been maintenance dredged periodically as needed. Since the action is considered maintenance of the existing facility, the FWCA does not apply to this project.

4.1.5 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.

The Preferred Alternative could have minor impacts to migratory birds from noise disturbance. The operation of equipment is likely to deter some birds from foraging or seeking refuge in the immediate work area, which is already highly disturbed and with little refuge available. However, the Preferred Alternative is not expected to deter most birds from foraging or seeking refuge upstream or downstream from the work area.

Construction will be performed by a contractor and is anticipated to begin in March 2025. In-water work will occur during the summer in-water work window from 15 July to 31 August 2025. Because the construction would take place within the migratory bird nesting season (April 1- August 15), the USACE would check for nesting birds prior to the start of construction activities to confirm there are no active nests. The USACE would leave a buffer zone around any active nest until the nestlings have fledged. To avoid construction impacts shrubs should be removed before April 1 if possible.

Although there could be some minor disturbance, no take of migratory birds will occur. Therefore, the USACE has determined that there will be no take of migratory birds because of the Preferred Alternative.

4.1.6 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) prohibits the taking or possession of and commerce in bald and golden eagles, with limited exceptions, primarily for Native American Tribes. Take under the BGEPA includes both direct taking of individuals and take due to disturbance. Disturbance is further defined in 50 CFR 22.3.

While eagles and nesting sites have been documented within the extended area around Lewiston, Idaho, and Clarkston, Washington, no known nests, roosting sites, nor significant eagle activities, are located near enough to the project area to be affected by the action.

Roosting or foraging eagles may be present near the action area during the proposed work; however, construction activities are not expected to adversely affect eagles or disturb forage activities as the work area already contains significant human and vehicular activity. Eagles that may occupy this area frequently would be accustomed to the daily activities and related noise levels already present. Construction related noise and activities will be short-termed. In addition, suitable foraging habitat is available in adjacent areas.

Because the Preferred Alternatives will take place in a highly disturbed and developed area and because there are ample Alternative roosting or foraging sites in the area, the

USACE has determined there will be no disturbance or take of eagles as a result of the Preferred Alternative.

4.1.7 National Historic Preservation Act

The National Historic Preservation Act (NHPA) of 1966 as amended directs federal agencies to assume responsibility for all cultural resources under their jurisdiction. Section 106 of 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.

USACE archaeologists analyzed the Preferred Alternative's potential impacts to any historic properties within the APE and determined that the action would result in No Adverse Effects to historic properties. The existing pumphouse within the APE was determined to be not eligible for listing in the NRHP, and no other historic properties were identified within the APE. One historic property was identified adjacent to the APE, that being a portion of the Lewis and Clark National Trail System. USACE contacted the National Park Service on 22 April 2022 and received a concurrence response from them on 03 May 2022. USACE sent letters and their reported Section 106 findings to the Idaho SHPO and Nez Perce Tribe. Concurrence responses were received from the Idaho SHPO on 06 May 2022. No response was received from the Nez Perce Tribe. Cultural resources correspondence documentation is located within Appendix C.

4.1.8 Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA) (25 USC 3001 et seq.) addresses the discovery, identification, treatment, and repatriation of Native American human remains, associated funerary objects, unassociated funerary objects, sacred objects, and objects of cultural patrimony. This Act also establishes fines and penalties for the sale, use, and transport of Native American cultural items.
If human remains or associated objects are discovered, all work will stop, and the USACE would notify Native American Tribes and comply with the requirements of NAGPRA, USACE guidance, and any applicable state laws.

4.1.9 Clean Water Act

The Clean Water Act (CWA) of 1972 establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. Section 401 of the federal Clean Water Act requires that any federal activity that may result in a discharge to waters of the United States must first receive a water quality certification from the state in which the activity will occur. Section 404 of the Clean Water Act established a program to regulate the discharge of dredged or fill material into waters of the United States.

Section 404 compliance would be met with using Nationwide Permit 58 – Utility Line Activities for Water and Other Substances. The Idaho Department of Environmental Quality has approved Section 401 coverage for NWP 58 provided that the Preferred Alternative permitted activities are carried out in compliance with the limitations and associated requirements of the 2021 NWPs, Regional Conditions, General Conditions, and conditions of this water quality certification.

Regional Conditions:

1. **Watersheds Requiring Pre-Construction Notification (PCN)**:
   Pre-construction notification (PCN) will be required for all 2021 Nationwide Permits (NWPs) in specified watersheds that support anadromous fish, as outlined in Figure 1 (dated January 6, 2021).

2. **Vegetation Preservation and Replanting**:
   To minimize impacts to aquatic habitats and reduce sedimentation and erosion, permittees must avoid and minimize the removal of vegetation in waters of the U.S. to the greatest extent practicable. Areas temporarily disturbed by vegetation removal during construction must be replanted with appropriate native species by the end of the first growing season, unless otherwise conditioned. If replanted vegetation fails to survive the first growing season, it must be replanted by the end of the next growing season. Replanting should continue until desired vegetation densities are reached, with densities based on reference conditions. The introduction of noxious or invasive plant species is prohibited.

3. **De-watering and Re-watering (if applicable)**:
   Cofferdams used for dewatering must be constructed from non-erosive materials such as concrete jersey barriers, bulk bags, water bladders, sheet piles, or other similar devices. Cofferdams cannot be built by using mechanized equipment to push streambed material through flowing water. Diversion channels built to bypass water flow must be lined with materials such as plastic, large rocks, or pipe to protect from erosion before water is released into or through the diversion. Water removed from the dewatered area must be pumped to a sediment basin or treated to remove suspended sediments before being returned to the waterway. To prevent the passage of state or federally protected fish, water pipe intakes must be screened with openings measuring less than 3/32 inch. If fish are present within coffered areas, coordination with the Idaho Department of Fish and Game (IDFG) is required for fish removal or salvage. If electrofishing is used, National Marine Fisheries Service (NMFS) guidelines must be followed unless otherwise conditioned. Stream channels that have been dewatered must be re-watered slowly to avoid lateral or vertical erosion of the channel, damage to recently reclaimed areas, or harm to permitted work. Temporary stockpiles within waters of the U.S. must be completely removed to prevent formation of berms or levees that could restrict water flow or floodplain access.

4. **In-Water Structures and Complexes**:
   Pre-construction notification (PCN) in accordance with General Condition 32 is

required for all non-federal applicants using gabion baskets placed below the ordinary high-water mark (OHWM). In-water structures such as stream meanders, riffle and pool complexes, pool stream structures, rock/log barbs, J-hooks, drop structures, sills, engineered log jams, or similar features must be designed by a qualified professional with expertise in hydrology or fluvial geomorphology, based on site-specific conditions.

5. **Temporary Sidecasting**:
   Materials from exploratory trenching and utility line installation may be sidecast temporarily into a dewatered/coffered area for up to 30 days, but not within flowing waters. In wetlands, sidecasting is allowed for up to 30 days.

6. **Suitability of Sediments for Open Water Disposal and Use as Fill**:
   Sediment sampling to determine the suitability of materials for open water disposal or use as fill must comply with the Sediment Evaluation Framework (SEF) for the Pacific Northwest.

7. **Avoidance and Minimization**:
   In addition to the information required under General Condition 32(b), applicants must provide details on any previous discharges of fill material into waters of the U.S. within the project area, applicable only to non-federal applicants where a PCN is required. Discharges of dredged or fill material into waters of the U.S. for the sole purpose of meeting setback requirements are not authorized under NWPs.

8. **Erosion Control**:
   Erosion control materials used in or adjacent to waters of the U.S. must be biodegradable unless otherwise conditioned. If applicants propose non-biodegradable materials, they must demonstrate that their use will not harm fish, wildlife, or public safety.

9. **Reporting Requirement for Federal Permittees**:
   Federal agencies with projects requiring compensatory mitigation for the loss of waters of the U.S. and who purchase credits from an approved wetland and/or stream mitigation bank must provide proof of purchase within 30 days. The purchase must comply with the relevant Mitigation Banking Instrument of Record.

In addition, the Preferred Alternative would be required to abide by the General Conditions as outlined for the 2021 Nationwide Permits. Regional additions to these General Conditions are as follows:

Regional Additions to the General Conditions

1. **General Condition 4. Migratory Bird Breeding Areas**:
   For additional information regarding migratory bird breeding areas, please contact the U.S. Fish and Wildlife Service at the following field offices:
   - State Office (Boise): (208) 387-5243
   - Northern Idaho Field Office (Spokane): (509) 891-6839

- Eastern Idaho Field Office (Chubbuck): (208) 237-6975
  US Fish and Wildlife Service Idaho Website

2. **General Condition 6. Suitable Material**:
   Erosion control blankets or fabric used in or adjacent to waters of the U.S. must be made from biodegradable material to ensure proper decomposition and reduce the risk to fish, wildlife, and public safety, unless otherwise conditioned. If applicants propose the use of non-biodegradable materials, they must demonstrate how these materials will not cause harm to fish, wildlife, or public safety.

3. **General Condition 9. Management of Water Flows**:
   To obtain information on the State of Idaho's definition of high water, refer to the Idaho Department of Water Resources (IDAPA 37.03.07. Rule 62.03.04.a). For culverts or bridges located in a community qualifying for the national flood insurance program, the minimum size of the culvert must accommodate the 100-year flood design flow frequency (IDAPA 37.03.07. Rule 62.03.04.c).

4. **General Condition 12. Soil Erosion and Sediment Controls**:
   For additional information on soil erosion and sediment control measures, refer to the Idaho Department of Environmental Quality (DEQ) Catalog of Stormwater Best Management Practices for Idaho Cities and Counties, available online at: Idaho DEQ Stormwater Guidance.

5. **General Condition 18. Endangered Species**:
   For additional information on ESA-listed species in northern Idaho, contact the U.S. Fish and Wildlife Service (USFWS) Northern Idaho Field Office (Spokane) at (509) 893-8009. For all other counties in Idaho, contact the USFWS State Office (Boise) at (208) 378-5388.

6. **General Condition 20. Historic Properties**:
   A property is generally considered "historic" if it is at least 50 years old and is not limited to buildings. For additional information on the potential for cultural resources in proximity to the project site, contact the Idaho State Historic Preservation Office at (208) 334-3847, located in Boise, Idaho.

For the State of Idaho, Individual Water Quality Certification is issued for actions that meet the General and Regional Conditions for the use of NWP #58, with exception for any activities that may result in a discharge to an “outstanding resource water”. An Outstanding Resource Water (ORW) is a waterway designated for special protection due to its exceptional ecological, recreational, or cultural value, as defined by the Idaho Department of Environmental Quality (IDEQ). The Clearwater River, as it flows through Lewiston, does not meet the IDEQ’s criteria for ORW status due to its current water quality and the impacts of urban development and infrastructure. While it supports important fish populations, it lacks the unique conditions required for ORW designation. Therefore, the Clearwater River in this area is not considered an ORW. Because the Preferred Alternative is pre-certified through the use of NWP #58, the USACE would send authorization information to the applicant and to DEQ upon request.

Section 402 of the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) program, pertains to discharge of pollutants. No pollutants would be discharged into waters of the United States by activities associated with the Preferred Alternative; therefore, a NPDES permit would not be needed.

Construction associated with the Preferred Alternative is expected to result is 0.8 acres of ground disturbance. If implementation of the Preferred Alternative would result in more than one acre of ground disturbance with potential for stormwater runoff into the Clearwater River, the contractor would be required to apply for a Construction General Permit by filling out an electronic Notice of Intent on the EPA website, in compliance with Section 402. A stormwater pollution prevention plan would also need to be prepared by the contractor and submitted to the USACE for approval.

4.2 Executive Orders

4.2.1 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 change floodplain function or increase floodplain development in the action area. Medium size rip rap (approximately 15 to 30 inches in size) was placed along the north shore of the river when Lower Granite Lock and Dam was constructed to protect the riverbank and the pump station building from flood waters.

4.2.2 Executive Order 11990, Protection of Wetlands

Executive Order 11990, Protection of Wetlands, May 24, 1977, encourages 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.

There are no wetlands in the project area. The USACE determined that the Preferred Alternative would comply with this Executive Order.

4.2.3 Executive Order 13007, Native American Sacred Sites

Executive Order 13007, *Indian Sacred Sites* (May 24, 1996), directs Federal land-managing agencies to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and to avoid adversely affecting the physical integrity of such sites.

The USACE complies with the requirements of Executive Order 13007 by considering potential effects to sacred sites during project planning and environmental review

processes and by maintaining open communication with Tribal representatives. For the proposed action, no sacred sites were identified, and the USACE did not receive any comments from Tribes during consultation or public review. The action is not anticipated to result in adverse effects to Native American sacred sites.

4.3 Conservation Measures & Best Management Practices (BMPs)

4.3.1 Biological Conservation Measures

As part of the ESA consultation process, the following conservation measures were developed to avoid, minimize, or reduce adverse effects to ESA-listed species and their designated critical habitats within the project's area of potential effect. These measures are mandatory for ESA compliance and are designed to ensure that the proposed action does not jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. The conservation measures will be incorporated into the project's Real Estate instrument and enforced during construction and implementation phases.

- In-water construction would be completed during the summer in-water work window of 15 July through 15 August to minimize exposing fishes to turbidity and noise.
- Maintenance every 5 years will also take place during the summer in-water work window.
- Turbidity monitoring will be done to ensure IDEQ water quality standards are not exceeded during construction.
- NMFS approved, actively cleaned cylindrical intake fish screens would be used on the water intake pipe to ensure only water is drawn into the drinking facility.
- To minimize the potential for introducing hazardous material to the aquatic system, a spill prevention and control countermeasures plan will be prepared by the construction contractor.

In addition to these measures, implementation of the "Reasonable and Prudent Measures" and the "Terms and Conditions", outlined within the NMFS Biological Opinion, shall be incorporated into the implementation of the Preferred Alternative.

Reasonable and Prudent Measures:

The "reasonable and prudent measures" listed below are measures that are necessary or appropriate to minimize and/or monitor the impact of the amount or extent of incidental take (50 CFR 402.02).

The USACE shall:

1. Minimize incidental take from the proposed removal of old intake structures, installation of a new intake structure, and the ongoing operation and maintenance of the intake structure.

2. Monitor the proposed action to ensure that the proposed action was carried out in the manner described in the BA and that the extent of take is not exceeded. implementation of the requirements outlined within the “Reasonable and Prudent Measures” and the “Terms and Conditions” sections.

Terms and Conditions:

In order to be exempt from the prohibitions of section 9 of the ESA, the federal action agency must comply (or must ensure that any applicant complies) with the following terms and conditions. The USACE or any applicant has a continuing duty to monitor the impacts of incidental take and must report the progress of the action and its impact on the species as specified in this ITS (50 CFR 402.14).

1. To implement RPM 1 the USACE or the City shall ensure that:

a. The silt curtain will be left in place until turbidity levels inside the enclosed area returns to background levels in the Clearwater River.

b. Turbidity during any in water work will not exceed 50 NTU above background, or a visible turbidity plume extend more than 500 feet downstream, for greater than two hours, from any work generating turbidity.

2. To implement RPM 2 (monitoring and reporting), the USACE or the City shall:

a. Within 2 months of completing Phase 1, and again after completing Phase 2, submit a completion of project report to the NMFS Boise office by email (nmfswcr.srbo@noaa.gov with NMFS’ consultation number “WCRO-2024-02386” in the subject line. The completion report shall include, at a minimum, the following:

i. Starting and ending dates of each phase, with in water workdays specified.

ii. Results of the turbidity monitoring, including the magnitude and duration of instream turbidity (NTUs) and downstream extent (feet) of the turbidity plumes.

iii. Fish observed as healthy, injured, or killed inside the turbidity curtain.

b. If the amount or extent of take is exceeded, the USACE shall stop project activities and notify NMFS immediately using the contact information at the end of this consultation.

Reference, the USACE BA, USFWS Letter of Concurrence, NMFS Biological Opinion (Appendix B).

4.3.2 Construction BMPs

Best Management Practices (BMPs) are voluntary measures designed to reduce, minimize, or prevent potential environmental impacts associated with construction

activities. While not mandatory, implementation of BMPs supports environmentally responsible project execution by protecting water quality, habitat, and sensitive resources. The following BMPs are recommended for use during construction to help avoid unintended effects to the surrounding environment.

- When appropriate, fiber wattles and/or silt fence will be placed adjacent to or below disturbance areas to prevent sediment transport into any waterway.
- Idaho State Water Quality Standards will be met during construction operations.
- To minimize the potential for introducing hazardous material to the aquatic system, a spill prevention and control countermeasures plan will be prepared by the construction contractor.
- All equipment staging, fueling, and storage areas will be located away and adequately buffered from riparian zones, concentrated flows of stormwater, drainage courses, and inlets.
- Disturbed areas within riparian zones will be reclaimed with riparian vegetation similar to the existing plant communities.
- Park equipment over drip pans or absorbent pads. Use plastic sheeting or equivalent, if necessary, but plastic sheeting should not be a substitute for drip pans or absorbent pads.
- Borrow and fill areas shall be located outside of the 100-year floodplain or greater than 300 ft. from fish-bearing streams.
- To reduce the potential for the invasion and/or expansion of noxious weeds, all earth disturbing equipment used on projects shall be cleaned of all plant materials, dirt and material that may carry noxious weed seeds prior to use on the project.
- Prior to arriving at the construction site, construction equipment shall be washed and treated to remove seeds, plants, and plant fragments. Use of a high-pressure washing system is recommended to remove all seeds, plants, plant fragments dirt, and debris from the construction equipment taking care to wash the sides, tops, and undercarriages.
- The contractor shall provide the engineer with an opportunity to inspect the equipment prior to unloading the equipment at the construction site. If upon inspection, dirt, debris, and seeds are visible, the equipment shall be immediately removed and rewashed. The equipment shall then be re-inspected at the site to ensure the equipment is clean.

Best Management Practices (BMPs) must be designed, implemented, and maintained by the permittee to fully protect and maintain the beneficial uses and ambient water quality of waters of the state and to prevent exceedances of WQS. Approved BMPs for specific activities are codified in Idaho Administrative Code (IDAPA) 58.01.02.350.

If no visible sediment plume is present, it is reasonable to assume that there is no potential violation of the water quality criteria for turbidity (IDAPA 58.01.02.250.02.e). Therefore, turbidity monitoring is only required when activities cause a visible sediment plume. The following steps should be followed to ensure compliance with the turbidity standard:

1. If a visible plume is observed, collect turbidity measurements at 1) an upstream location; and, 2) from within the plume, and compare the results to Idaho's instantaneous numeric turbidity criterion (50 NTU over background).
2. If turbidity in the plume is less than 50 NTU instantaneously over the background turbidity continue monitoring as long as the plume is visible. If turbidity exceeds background turbidity by more than 50 NTU instantaneously then stop all earth disturbing construction activities immediately and proceed to Step 3. If turbidity exceeds background turbidity by more than 25 NTU, or if a visible plume is observed for more than 10 consecutive days, then stop all earth disturbing construction activities and proceed to Step 3.
3. Notify the appropriate DEQ regional office within 24 hours of any turbidity criteria exceedance. Take action to address the cause of the exceedance. That may include inspecting the condition of project BMPs. If the BMPs are functioning to their fullest capability, then the permittee must modify project activities and/or BMPs to correct the exceedance.
4. Earth disturbing activities may continue once turbidity readings return to within 50 NTU over background instantaneously; or, if turbidity has exceeded 25 NTU over background for more than ten consecutive days, once turbidity readings have no longer exceeded 25 NTU over background for at least 24 consecutive hours.

Section 5 – Consultation, Coordination and Public Involvement

In accordance with the USACE supplemental NEPA regulations (33 CFR §230.11), the USACE will provide Notice of Availability of the EA and the FONSI (if/when signed) to concerned agencies, organizations, and the interested public through a news release issued to all area newspapers. The EA and signed FONSI would also be posted to the USACE website at http://www.nww.usace.army.mil/Missions/Environmental-Compliance/.

Section 6 – References

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Appendices

Appendix A: Facility Report & 60% Design
Appendix B: Biological Documentation
Appendix C: Cultural Correspondence