# Attachment A: 380 Drainage Improvements
# Environmental Assessment and Appendices

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

# AREA 380 DRAINAGE IMPROVEMENTS ENVIRONMENTAL ASSESSMENT

## East Lewiston Levees

## Nez Perce County, Idaho

**In compliance with the National Environmental Policy Act of 1970**

**ADMINISTRATIVE RECORD – DO NOT DESTROY**

**PROJECT FILE NUMBER: PPL-C-2024-0034**

**June 2024**

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## Acronyms

| | |
|---|---|
| °C | degrees Celsius |
| °F | degrees Fahrenheit |
| ASA CW | Assistant Secretary of the Army Civil Works |
| BA | Biological Assessment |
| BMP | Best Management Practice |
| CFR | Code of Federal Regulations |
| CJEST | Climate and Economic Justice Screening Tool |
| CO2eq | Carbon Dioxide equivalent |
| CWA | Clean Water Act |
| cy | cubic yards |
| DPS | Distinct Population Segment |
| EA | Environmental Assessment |
| EFH | Essential Fish Habitat |
| EIS | Environmental Impact Statement |
| EM | Engineer Manual |
| EO | Executive Order |
| ESA | Endangered Species Act |
| ESU | Evolutionary Significant Unit |
| IDEQ | Idaho Department of Environmental Quality |
| IDPA | Idaho Administrative Procedure Act |
| FONSI | Finding of No Significant Impact |
| FR | Federal Register |
| FWCA | Fish and Wildlife Coordination Act |
| GHG | Greenhouse Gas |
| MBTA | Migratory Bird Treaty Act |
| NAGPRA | Native American Graves Protection and Repatriation Act |
| NEPA | National Environmental Policy Act |
| NHPA | National Historic Preservation Act |
| NMFS | National Marine Fisheries Service |
| NRHP | National Register of Historic Places |
| NTU | Nephelometric Turbidity Units |
| NWP | Nationwide Permit |
| RHA | Rivers and Harbors Act |
| SHPO | State Historic Preservation Officer |
| SPCC | Spill Prevention, Control, and Countermeasures |
| TCP | Traditional Cultural Property |
| USACE | U.S. Army Corps of Engineers, Walla Walla District |
| U.S.C. | United States Code |
| USFWS | U.S. Fish and Wildlife Service |
| WOTUS | Waters of the United States |
| WQC | Water Quality Certification |

# 1 Introduction

## 1.1 Proposed Action, Authority, and Purpose of and Need for Action

### 1.1.1 Proposed Action

The U.S. Army Corps of Engineers, Walla Walla District (USACE) proposes to construct a sediment trap, improve access, and reinforce the shoreline at the USACE-owned East Lewiston Levee Area 380 Drainage culvert intake structure.

In compliance with the National Environmental Policy Act (NEPA), this Environmental Assessment (EA) identifies, considers, and analyzes the potential environmental effects associated with the proposed action and the No Action alternative. This EA was prepared in accordance with the Council on Environmental Quality *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA)* (Title 40 of the CFR Parts 1500-1508) and 33 CFR 230, *Procedures for Implementing NEPA*. The USACE objective in preparing this EA is to determine the potential environmental effects of Area 380 sediment management and any reasonable alternatives. If such environmental effects are determined to be relatively minor, a Finding of No Significant Impact (FONSI) would be issued, and USACE would proceed with the proposed action, subject to availability of funding. If any environmental effects are determined to be significant according to USACE analysis, either mitigation would be employed to ensure effects are reduced below significant levels, or an Environmental Impact Statement (EIS) would be prepared before a decision is reached regarding implementation of the proposed action.

### 1.1.2 Authority

Area 380 is a component of the East Lewiston Levee system, built August 1972 and authorized under the Rivers and Harbors Act of 1945.

### 1.1.3 Purpose of and Need for Action

USACE proposes to construct a maintenance access road, a sediment stilling basin, and approximately 460 linear feet of shoreline revetment at the East Lewiston Levee Area 380 drainage intake structure and channel. The purpose of the proposed action is to improve the function of the Area 380 intake structure and drainage features and to facilitate more efficient future removal of sediment. An action is needed because sediment can and has blocked or reduced flowage capacity at the intake structure allowing the creation of eddies and inundating the Area 380 drainage channel and ravine. The eddies have caused some erosion on the eastern streambank, which needs to be addressed. The Area 380 channel is designed to accommodate flow from an unnamed intermittent stream and stormwater from a portion of the City of Lewiston (City). Continued sedimentation at the intake structure, and further streambank erosion or damage, would increase flood risk and risk damage to property. The proposed action is also needed to improve maintenance access to Area 380, prevent sediment from entering the intake structure and improve sediment removal.

### 1.2 Project Location

The Area 380 drainage culvert is located southeast of Memorial Bridge (Highway 12) in Lewiston, Idaho (Figure 1). The existing drainage consists of a short, channelized reach flowing into a culvert which routes flows under a roadway and railroad to the Clearwater River.


**Figure 1. Vicinity Map for Area 380**

### 1.3 Background

The Area 380 intake structure was built in the early 1970's to convey interior drainage flow from an unnamed stream and stormwater runoff, out of 2.6 square miles of the City on the interior side of the East Lewiston Levee to the Clearwater River. The intake structure catches debris and sediment on the upstream of the levee infrastructure and passes the water beneath the levee infrastructure through three culverts to the Clearwater River (Figure 2).

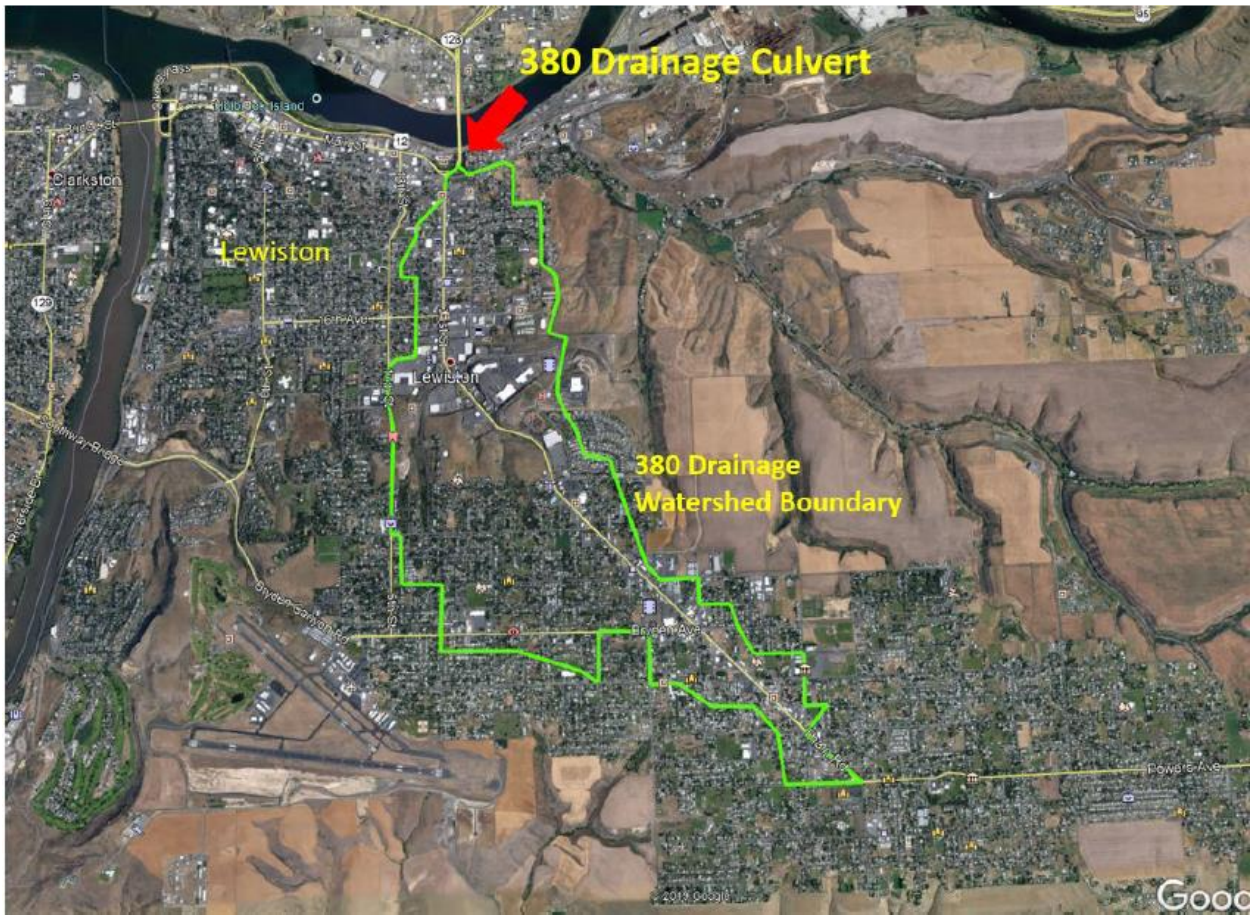


**Figure 2. 380 Drainage Watershed Boundary**

The Area 380 drainage structure consists of an intake structure comprised of three, 54-inch diameter culverts that are buried under the Lewiston Levee System and drain to the Clearwater River. There is no catchment basin in front of the intake structure and all sediment and debris accumulates in front of the intake structure and within the culverts.

**Figure 3. Area 380 Intake Structure with Accumulated Debris**

The original design and present condition of the Area 380 interior drainage culvert system does not include a sediment trap. Therefore, the accumulated sediment and debris within the Area 380 intake structure causes blockages. This obstruction increases the risk of flooding upstream. The intake structure itself is equipped with only two small hatches for accessing the sediment. These hatches allow divers to periodically suction dredge the sediment. However, this process requires frequent coordination with regulatory agencies. It also exposes divers to potential dangers and is difficult, expensive, and inefficient. The structure requires maintenance multiple times per year to keep the existing culvert clear of debris.

As the intake structure becomes blocked, accumulated sediment causes floodwaters to inundate the Area 380 drainage ravine, resulting in the erosion of parts of the streambank slopes. Homes are located on the top of the bank and preventing erosion affects to such adjacent private land is needed (Figure 4). Large portions of the ravine banks have no vegetative cover and are very steep. Flood events have continuously removed the soil from the bank.

**Figure 4. Additional Flood Damages in the Area 380 Drainage**

The USACE accesses the intake structure by driving along the left bank (west side) of the drainage on property owned by Idaho Department of Transportation (ITD), between Highway 12, 22nd Street and Main Street (Figure 5). There is no designated permanent road alignment, and the area is maintained as grass. The ITD property is accessed from 22nd Street. USACE has easement interest for the Area 380 drainage structure which would be utilized (in part) but also requires access permission from ITD.

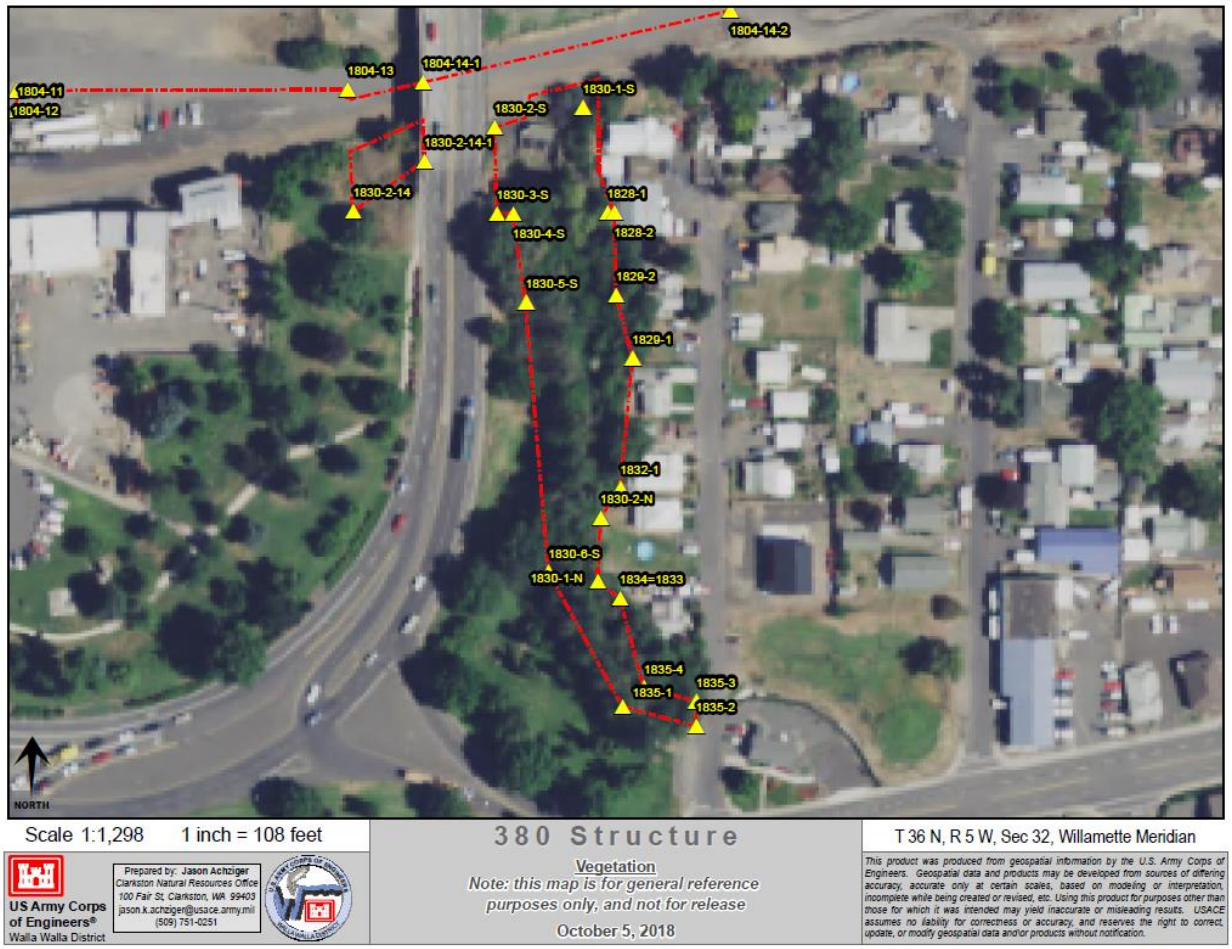


**Figure 5. Area 380 Project Boundary**

# 2 Formulation of Alternatives

The NEPA requires federal agencies to consider a reasonable range of alternatives during the planning process. Alternatives considered under NEPA must include, at least one action alternative (e.g., the Proposed Action) and the “No Action” Alternative which provides a baseline from which to compare other alternatives. In the case of an ongoing operations, the No Action Alternative is no change from the current management direction or level of management intensity.

This section describes three alternatives considered for the Area 380 improvements: the Alternative 1-No Action, Alternative 2-Installation of Stilling Basin and an Access Road.

## 2.1 Alternative 1: No Action

Under the No Action Alternative USACE would not construct the sediment trap, access road, or shoreline revetment. The operations and maintenance of the Area 380 Structure would continue as described in the Section 1.3 Background Information.

This alternative would not meet the purpose and need for the action but is carried forward for analysis as a baseline for comparison.

## 2.2 Alternative 2: Installation of Stilling Basin and An Access Road

Under Alternative 2, USACE would construct a sediment trap and required accessory structures at Area 380 in the City. This alternative would include: 1) construction of a sediment stilling basin in the 380 drainage, 2) construction of a six-foot-high stop-log weir at the culvert inlet, 3) extension of the existing wing walls at the culvert and 4) construction of an access road and ramp or temporary land use for the equivalent access to facilitate construction or maintenance upstream of the proposed drainage structure. These structures would be installed within an unnamed intermittent stream that drains from Area 380 to the Clearwater River.

### The Sediment Stilling Basin

A sediment stilling basin would be built in the 380 drainage upstream of the levee to capture and detain sediment before it enters the intake structure. A sediment stilling basin is a hydraulic structure that allows water to pass through but captures suspended sediments to allow for easier removal. The sediment stilling basin accomplishes this by directing water flow to a comparatively broad and deep basin with a bulkhead at the downstream end. Flowing water enters the basin and loses velocity, or energy. Without the energy of movement, suspended particles and debris gently settle to the bottom of the basin, while clean water flows over the bulkhead and into the intake structure (Figure 6).

The sediment stilling basin would be upstream of the intake structure, and the sedimentation basin would extend upstream approximately 65 feet. The basin would measure approximately 55 feet by 65 feet (3,585 square feet).

To construct the sediment stilling basin, USACE would excavate in front of the intake structure. This area would be sloped towards the intake structure and lined with gravel. Concrete slabs would be placed in the new basin to line the bottom. A retaining wall on the west bank of the ravine would be installed as necessary for the construction of the new access road and ramp. The concrete wingwalls would be extended and raised to

increase capacity of the sediment stilling basin. The west wingwall would be extended roughly sixty feet and the east wingwall would be extended forty feet.

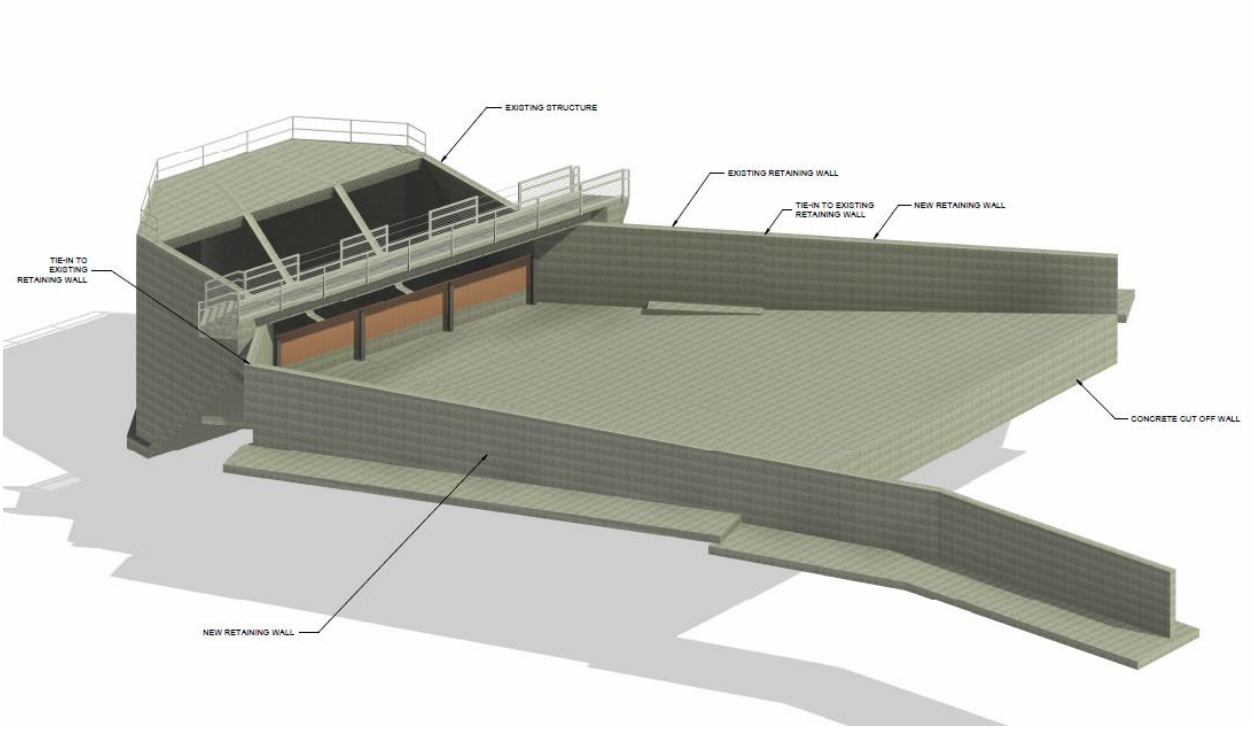


**Figure 6. Conceptual Sediment Stilling Basin**

### The Stop Log Weir

The sediment stilling basin would be fitted with a stop log weir that can be adjusted from two to six feet high (Figure 7). A stop log weir is a type of water control structure built across a river or stream to alter its flow characteristics. The stop log weir would consist of several removable gates composed of steel beams that hold the stop logs in place to form a low head dam at the downstream end of the sedimentation basin. The stop logs are not actual logs but are metal or synthetic boards that slide in and out of the gate channels. In normal operation, the stop logs would be in place and would pool water to have the sediment settle into the basin. An access bridge would be placed above the stop-log weir to assist in dewatering of the sediment stilling basin for maintenance activities.

**Figure 7. An Example of an Aluminum Stop Log Gate Weir, made by the Rodney Hunt Corporation**

### The Access Road

An access road or similar temporary access would be constructed from 22nd street, parallel to US-12 (or equivalent temporary access), and would terminate at the sediment stilling basin (Figure 8). At the sediment stilling basin, USACE would construct an access ramp to allow for vehicles to enter the stilling basin to annually remove accumulated sediment.


**Figure 8. Proposed Access Road**

The ramp would be 11-foot wide and would consist of a gravel base foundation and concrete slabs. A retaining wall would be placed on the west shoreline to stabilize the bank and a 3-foot-wide rock shoulder would be placed on the east shoreline to allow for the road to drain. If temporary, volumes and impacts would be reduced.

### Rock Revetment

Approximately 460 linear feet of shoreline along the eastern side of the ravine would be reinforced using rock to build a revetment. A ravine is a deep, narrow valley with steep sides, typically carved by the erosion of water such as a river or stream. A revetment is a structure or protective facing that is built to absorb the impact of water or erosion and prevent wearing of a slope or embankment (Figure 9). The revetment would reinforce the shoreline to protect it from damage during high flow events.

**Figure 9. Example of a Rock Revetment along a River**

The revetment would be approximately 15 feet high with approximately 2 feet of the toe buried within the intermittent stream. The rip rap would be planted with willow stakes to further provide aesthetic benefits and aquatic resources.

### Construction Activities and Schedule

The contractor would install proper erosion and sediment control measures to prevent sediment from entering areas beyond the work area. Construction materials would be stored in nearby parking lots and any excess material would be disposed of off-site.

The contractor would initiate construction by removing the trees from the ravine. The entire tree and its roots would be removed.

The access road and ramp would be constructed next. This would provide the contractor stable ground to access the site with large equipment.

The contractor would excavate the sediment stilling basin and build the wingwalls. Then build the sediment stilling basin and the bridge over the inlet structure. To perform this work, the contractor would conduct the activities during seasonal low flow conditions (July through December) so work could occur under dry conditions. The flow of the stream would be diverted around the work area.

Finally, the contractor would install the revetment and willow plantings and repair any damage to the access road or damage incurred over a temporary access route.

In summary, the following amounts of excavation and fill of material below the Ordinary High Water Mark is described in Table 1.

**Table 1. Quantities of Excavation and Fill of Material Associated with the Project.**

| Structure | Fill Material (Cubic Yards) | | | Excavation (Cubic Yards) |
|---|---|---|---|---|
| | Rip Rap Rock | Concrete | Soil | Soil |
| **Sediment Stilling Basin** | 0 | 164 | 18 | 165 |
| **Shoreline Revetment** | 343 | 0 | 85 | 289 |
| **Total** | **343** | **164** | **103** | **454** |

The proposed action would excavate approximately 454 cubic yards of soil to create the sediment stilling basin and anchor points for the shoreline revetment. The installation of the sediment stilling basin would need approximately 164 cubic yards of concrete and the shoreline revetment would need approximately 343 cubic yards of rip rap.

### Compensatory Mitigation at Asotin Slough Habitat Management Unit

USACE would plant approximately 500 linear feet of the slough at Asotin Slough Habitat Management Unit to offset the riparian habitat lost at Area 380, see Appendix D. Approximately 30 Black locust trees would be removed from the Area 380 drainage area for the construction of the shoreline revetment and for access of the construction area. Plantings would consist of riparian vegetation, mainly willow, and other native wetland or riparian species.

### Future Routine Sediment Removal (Maintenance)

USACE would annually excavate approximately 150 cubic yards of accumulated sediment in the sediment stilling basin using an excavator. The stop-logs would normally be in place to catch the sediment. The stop-logs can act as a dam to allow the sediment to settle out of the water, while the water trickles over the stop-logs. The trap would be dewatered before sediment removal by channeling the sediment, allowing the sediment to settle, and then removing the stop-log in-line with the channel. This would allow the water to pass through the basin, diverted around the accumulated sediment. The remaining sediment would dry and the USACE would excavate the material using a skid-steer or backhoe.

Sediment and mud would be allowed to dry on-site in an upland location and hauled by dump trucks to another site appropriate disposal/reuse site, likely Tammany Quarry Site. The site is owned by the Army Corps of Engineers on Tammany Creek Road in Lewiston, Idaho (Lat/Long are 46 21’08.90” N and 117 01’24.28” W). The site is about 10 miles south of Area 380. There is an old quarry located on site in which would contain the sediment in uplands with no connection to the aquifer, wetlands, or surface water.

# 3 Affected Environment and Environmental Consequences

The NEPA regulations in 40 CFR 1502.16 describe analysis required to determine the environmental consequences. The Environmental Consequences are the probable effects or impacts of implementing the action alternatives over a 50-year period of analysis. These effects can be either beneficial or adverse.

The probable effects or impacts described in this section may include changes to the affected environment in terms of land use, water quality, air quality, vegetation composition, wildlife populations, habitat quality, cultural resources, and socio-economic conditions. The analysis considers the context and intensity of both short-term and long-term effects, considering the dynamic nature of ecosystems and the potential for cumulative effects over the 50-year period.

The potential effects are typically supported by scientific data, modeling, professional judgment, and other relevant studies conducted during the environmental assessment process. The analysis considers the interactions and trade-offs between different resources and factors to provide a comprehensive understanding of the anticipated effects of each alternative. Effects can be adverse or beneficial and change over time.

The following descriptors are used in the body of this chapter for consistency in describing effect intensity and relative durations in relation to potential significance.

- **No or Negligible Effect:** 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 consequence as to not require additional consideration.
- **Minor Effect:** The effect to the resource would be perceptible; however, not major, and unlikely to result in an overall change in resource character.
- **Moderate Effect:** The effect to the resource would be perceptible and may result in an overall change in resource character. Moderate effects are not significant due to their limited context (the geographic, biophysical, and social context in which the effects would occur) or intensity (the severity of the effect, in whatever context it occurs).
- **Cumulative Effect/Impact:** The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions.
- **Significant Effect:** The effect to the resource would be perceptible and severe. The effect would likely result in an overall change in resource character. The determination of a significant effect to any resource would require the completion of an Environmental Impact Statement unless mitigated to a less than significant.

This information serves as a basis for decision-making and allows decision makers to evaluate the trade-offs and make informed choices regarding the preferred alternative for Area 380. The effects analysis may also mention if the effects are direct, indirect, or subject to a duration or change over time.

Although only relevant resource areas are specifically evaluated for effects, USACE did consider all resources in the proposed project area and decided which ones to evaluate. The following resource areas were evaluated: Geology and Soils, Hydrology, Water Quality, Threatened and Endangered Species, Aquatic Resources, Vegetation, Terrestrial Wildlife, Greenhouse Emissions and Climate Change, Cultural and Historic Resources, and Socioeconomics and Environmental Justice. It was determined that it was not necessary to evaluate Noise, Land Use, Aesthetics/Visual Quality, Air Quality, Recreation, Floodplains, or Hydrology because implementation of the proposed action would have no, or only negligible, effects on those resources (Table 2).

**Table 2. Environmental Resources Not Evaluated Further.**

| Environmental Component | Explanation |
|---|---|
| **Noise** | The proposed action is located within an urban area with many noise sources. Sources may include the barge operations, aircraft, highways, and trains. The proposed action would not create noises greater than background noise. |
| **Land Use** | The proposed action would not change or alter the current land uses surrounding the Area 380 drainage. |
| **Aesthetics/Visual Quality** | The proposed action would take place in a drainage easement located in a ravine and would not be visible to the public. Construction would be temporary and not significantly alter the aesthetics or visual quality of the landscape. |
| **Air Quality** | The proposed action meets ambient air quality standards and is in an “attainment” area in Idaho. The proposed action air emissions would not change air quality or effect air quality standards in any notable way. |
| **Recreation** | There are no recreational benefits associated with Area 380. The project is not in a designated recreational area. Activities would not affect recreational activities as the area is currently used as a staging area for the Memorial Bridge construction. |
| **Floodplains** | According to the Federal Emergency Management Agency (FEMA) Flood Maps (FEMA 2024), there are no regulated floodplains officially delineated within the project area or its vicinity. The entire action area is classified as Zone C which is known as the “Area of Minimal Flood Hazard” and outside of the floodplain. |
| **Hydrology** | The proposed action does contain an intermittent stream. The flow rate to this feature would not change nor would the capacity of the drainage feature change because of the action. |

The previous descriptors are used in the body of this chapter for consistency in describing effect intensity.

## 3.1 Cumulative Effects Analysis

CEQ Regulations implementing NEPA require federal agencies to consider the cumulative effects of their actions. Cumulative effects are defined as “the effects of an action when added to the effects of other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over time” (40 CFR § 1508.7).

USACE conducted a cumulative effects analysis to evaluate the potential effect of each alternative on certain resources in the local and regional area. Cumulative effects were determined for each direct/indirect effect that was minor or greater.

While the proposed action is expected to have a positive long-term effect overall, there may be some short-term negative effects during implementation. The analysis considers several aspects, including the cumulative effect boundary (spatial and temporal) of the resources, their historical condition and effects, their current condition and effects, foreseeable future actions that could affect them, and the effects of the various alternatives when combined with past, present, and future actions.

## 3.2 Scope of Cumulative Effects Analysis

Guidance for setting appropriate boundaries for a cumulative effect analysis is available from the CEQ and the Environmental Protection Agency (EPA). Generally, the scope of a cumulative effects analysis should be broader than the scope of analysis used in assessing direct or indirect effects. The analysis should delineate appropriate geographic areas, including natural effects. Discussed below are the past, present, and reasonably foreseeable future actions considered for the cumulative effects analysis, the effects of the actions on the resources assessed, and a summary of the cumulative effects of the Action Alternative. The geographic boundary for the cumulative effects analysis was the Area 380 watershed shown on Figure 2 in Section 1.3. The temporal boundary was from 1974 to 2034, or from the time of the levee construction to 10 years into the future.

### Past and Reasonably Certain Future Actions

Actions considered in this evaluation include the current operations of the East Lewiston Levees and the Area 380 drainage system. Both were constructed in the early 1970’s to collect and direct stormwater from the City to the Clearwater River. There are no changes anticipated soon to the operations or maintenance of these structures beyond what is described in this Environmental Assessment.

The Memorial Bridge is undergoing construction between 2024 to 2025. The work includes bridge deck widening being conducted using barges and cranes. There is no underwater work associated with this project. The Department of Transportation is also adding stormwater catchment basins along both sides of the Memorial Bridge. This reduces the intensity and extends the duration of stormwater flow into the Area 380 drainage.

There is an anticipated cleanout of the Area 380 outfall for approximately 10 days during the construction window of the Area 380 intake construction. This work is

anticipated to occur between July 15 through August 15, 2024. The bulkheads at the outfall structure would be closed and work would be conducted within the two hatches of the Area 380 structure. A turbidity curtain may be placed around the outfall structure during these construction activities, or similar BMPs would be applied.

Over the next 10 to 20 years, the City is updating pipes throughout their stormwater system for better efficiency and modernization. These improvements include repair and replacement of existing pipes and installing and upsizing of detention basins. The Area 380 drainage is one of the City's priorities.

## 3.3 Geology and Soils

### 3.3.1 Affected Environment

The Area 380 drainage is located within a ravine that is situated on the Clearwater River terrace. This area contains hydric soils called Riverwash-Aquents complex. The top 2-inches of the soil are very cobbly and very fine sandy loam while the rest of the soil profile down to 60-inches is extremely cobbly sand (NRCS 2021). The streambed is primarily cobbles with some large boulder/bedrock outcrops.

*Determination of Significance*

Significant effects to geology or soil resources would be any substantial and lasting changes or damage to geological features or soil characteristics of an area. These effects may include soil erosion, sedimentation, soil compaction, soil contamination, alteration of geological features, and groundwater effects.

None of the alternatives would result in significant changes to the geology and soils of the area. The effects range from minor to moderate as described below.

### 3.3.2 Environmental Effects

#### 3.3.2.1 Alternative 1: No Action

##### Geology and Soil Effects

**Direct Effects and Indirect Effects to Geology and Soils**

The No Action Alternative would have moderate adverse effect over the short and long-term.

The No Action Alternative would have moderate adverse direct short and long-term effects to soils. Blockage of the intake structure by accumulated sediment causes erosive velocities and sloughing of the shoreline in the drainage area. The ravine would continue to downcut due to erosive velocities and eddies during flood events.

#### 3.3.2.2 Alternative 2: Installation of Stilling Basin and An Access Road

##### Geology and Soil Effects

**Direct and Indirect Effects to Geology and Soils**

Alternative 2 would have minor adverse direct effect over the short-term and moderate benefit over the long-term.

In the short term, Alternative 2 would have minor adverse indirect effect during construction. The soil would be disturbed by recontouring the shoreline and placement of the rip rap to stabilize the eastern shoreline and for the placement of concrete slabs to construction the sediment stilling basin. The long-term direct benefit would be moderate as the stream bed and the eastern shoreline would be reinforced with wingwalls and a rock revetment.

The plantings at Asotin Slough Habitat Management Unit would reduce erosion along the shoreline of the Snake River. The roots of the plantings would hold soil in place and accrete sediment.

**Cumulative Effects to Geology and Soils**

Alternative 2 would have minor adverse cumulative effects to geology or soils within the watershed.

During implementation of Alternative 2, USACE would clean the sediment from the Area 380 structure downstream of the proposed action, and the Department of Transportation would install a new deck on the Memorial Bridge. In the short term, it would result in increases to mobilizing sediment from land disturbing activities. Over the long term, these actions would improve the soils because land disturbance activities would cease, and disturbed areas would be stabilized.

Replacing the leaking and undersized stormwater pipes throughout the watershed would moderately improve the soils throughout the Area 380 drainage. Soils tend to erode around leaking pipes and areas that are prone to flooding. Eroded soils can form sinkholes and ravines. Replacing these pipes would reduce the amount of sediment washing into Area 380.

Implementing new stormwater detention basins throughout the Area 380 drainage would have a moderate benefit to the watershed by slowing the velocity and capacity of stormwater flowing to the Area 380 during a storm event. This decreases the likelihood of flooding and erosive velocities that can mobilize sediment.

## 3.4 Water Quality

### 3.4.1 Affected Environment

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

Water quality within the intermittent stream in the Area 380 drainage is comparable to most urban streams in the City. Except during high flows, neither the intermittent stream nor the Clearwater River has a high amount of suspended sediment. The sediment is not expected to contain significant quantities of contaminants based on water quality testing conducted by the City.

*Determination of Significance*

None of the alternatives would result in significant changes to the water quality of the affected environment. The effects range from minor to moderate.

A significant effect to water quality refers to a substantial and noticeable degradation or alteration of the chemical, physical, or biological characteristics of water bodies. This can include the introduction or accumulation of pollutants, contaminants, or harmful substances that exceed acceptable levels and pose risks to human health, aquatic life, and ecosystem integrity.

### 3.4.2 Environmental Effects

#### 3.4.2.1 Alternative 1: No Action

##### Water Quality Effects

**Direct and Indirect Effects to Water Quality**

The No Action Alternative does result in minor direct adverse effects to water quality over the short and long term. Between cleanout cycles, the water quality would be good and would meet water quality standards.

When the culverts undergo periodic cleaning, the Clearwater River may become slightly turbid on a localized level for a short duration. Minor turbidity would be generated by the initial lowering of the outfall bulkheads. Sediment disturbance would be created by the bulkhead lowering onto any deposited sediment on the floor of the structure, which would be an instantaneous event producing an insignificant amount of turbidity. With the bulkheads closed and outlet bays dewatered, any water leakage would be from the river into the structure. It is possible that some water from dewatering the slurry may run down the levee into the river, but this is expected to be an insignificant amount and the silt curtain would be in place to contain it.

Setting and adjusting the silt curtains would disturb substrate by dragging the weighted curtain bottom on the riverbed. This would create minor, temporary turbidity that is also expected to be insignificant. Water quality would recover quickly after construction activities end.

There would be construction equipment near the water that could leak chemicals including petroleum products. These chemicals could enter the intermittent stream or Clearwater River because of the proximity of equipment to water. Equipment that can be away from waters should be placed away from it. Water contamination is highly unlikely to occur because USACE would implement a spill prevention plan to minimize the risk.

#### 3.4.2.2 Alternative 2: Installation of Stilling Basin and An Access Road

##### Water Quality Effects

**Direct and Indirect Effects to Water Quality**

Alternative 2 would have no effect to water quality over the short-term and moderate benefit to water quality over the long-term.

Alternative 2 would divert the streamflow around the work area to work under dry conditions and prevent water quality issues downstream. This would have no effect to water quality over the short-term. The water quality would moderately improve over the long-term because of the reduction of accumulated sediment depositing within the Clearwater River and outfall pipe.

The plantings along the Asotin Slough HMU would reduce erosion along the banks of the slough and Snake River, thereby improving water quality. This river flows into the Clearwater.

**Cumulative Effects to Water Quality**

Alternative 2 would have minor cumulative effects to water quality.

In the short term, cleaning the Area 380 culvert and construction at the Memorial Bridge would cause temporary localized turbidity in the Clearwater River, but water quality would return to a good state over the long term. This effect would be negligible over the short and long term to water quality.

Over the long-term, replacing leaking and undersized stormwater pipes throughout the City would moderately improve the water quality of the Area 380 drainage. New stormwater retention basins located throughout the City and Memorial Bridge would remove sediment from stormwater.

## 3.5 Threatened and Endangered Species

### 3.5.1 Affected Environment

USACE reviewed the list of threatened and endangered species that pertain to the area under the jurisdiction of National Marine Fisheries Service (NMFS) and United States Fish and Wildlife Service (USFWS) on February 14, 2024 (Table 3). USACE determined the action area does not contain suitable habitat or known populations of Spalding’s catchfly (*Silene spaldingii*) and therefore this species is spatially separated from any of the alternatives. This species has not been observed in the Action Area during recent surveys and would not be affected by the proposed action.

**Table 3. Federal Register (FR) Notices and Final Rules that List Threatened and Endangered Species or Designate Critical Habitats.**

| Species | Listing Status and Reference | Critical Habitat |
|---|---|---|
| **NMFS** | | |
| **Chinook Salmon (*Oncorhynchus tshawytscha*)** | | |
| Snake River ESU Spring/Summer Chinook | T: 4/14/2014; 79 FR 20802 | Yes: 9/5/2005, 70 FR 52629 |
| **Chinook Salmon (*O. tshawytscha*)** | | |
| Snake River ESU Fall Chinook | T: 04/14/2014; 79 FR 20802 | Yes: 12/28/1993; 58 FR 68543 |
| **Steelhead (*O. mykiss*)** | | |
| Snake River Basin DPS | T: 03/25/1999; 65 FR 14517 | Yes: 09/2/2005; 70 FR 52630 |
| **USFWS** | | |
| **Bull Trout (*Salvelinus confluentus*)** | | |
| Conterminous U.S. | T: 06/10/98; 63 FR 31647 | Yes: 09/02/05; 70 FR 56211 |
| **Spalding's Catchfly (*Silene spaldingii)*** | | |
| Western U.S. DPS | T: 10/10/01; 66 FR 51597 | Proposed |

Idaho State Consultation Codes 2024-0049332
*T= Threatened; E= Endangered

Chinook, steelhead, and bull trout are known to inhabit the Clearwater River, which is downstream of the action area. The Clearwater River is designated critical habitat for these species. There is a barrier in the intake structure that prevents fish passage. Therefore, there is no fish, including ESA-listed fish within the intermittent stream.

*Determination of Significance*

None of the alternatives would result in significant changes to the threatened or endangered species. There would be no effect from construction due to BMPs incorporated.

A significant effect to endangered species is one that causes changes to the population size or causes habitat degradation and fragmentation for that species that may cause the species to noticeably reduce in numbers or become extinct.

### 3.5.2 Environmental Effects

#### 3.5.2.1 Alternative 1: No Action

**Threatened and Endangered Species Effects**

**Direct and Indirect Effects to Threatened and Endangered Species**

The No Action Alternative would have no effects to ESA-listed species over the short-term and a negligible effect over the long-term.

Under the No Action alternative, a sediment basin would not be constructed but the potential for poorly managed future sediment management could continue which would have the potential for sedimentation into the Clearwater River.

#### 3.5.2.2 Alternative 2: Installation of Stilling Basin and An Access Road

##### Threatened and Endangered Species Effects

**Direct and Indirect Effects to Threatened and Endangered Species**

Alternative 2 would have no effect to ESA-listed species over the short-term or long-term due to the implementation of BMPs detailed in Appendix E. There is the possibility of incidental beneficial effects due to compensatory mitigation for other resources as noted in Appendix D.

The construction and subsequent removal of accumulated sediment from the unnamed stream in Area 380 would be spatially separated from ESA-listed species. The intermittent stream does not support ESA-listed fish. The construction work area would be dewatered prior to construction or the removal of sediment. Any turbidity would be localized to the intermittent stream only as and is not expected to affect the water quality of the Clearwater River as turbidity would be contained in the basin and would remain minimal therein with dewatering the construction area and employment common best management practices to ensure sediment would not escape the construction site. Monitoring would also be employed as an extra measure of assurance.

The mitigation plantings at Asotin Slough Habitat Management Unit (see Appendix D) are primarily proposed to address stream functions and values mitigation but could provide incidental refugia for ESA-listed fish. The effect would be minor benefit for both the short and long-term.

**Cumulative Effects to Threatened and Endangered Species**

Alternative 2 would have no additional adverse cumulative effects to ESA-listed species.

Cleaning the Area 380 culvert and the construction on the Memorial Bridge would cause temporary localized turbidity in the Clearwater River over the short term but water quality would return to a good state over the long term once construction ceases. There would be minor adverse effect to ESA-listed fish over the short-term and negligible effect over the long-term.

Replacing leaking and undersized stormwater pipes throughout the City would moderately improve the water quality of the Area 380 drainage and a localized portion of the Clearwater River. Most pollutants would generally settle in the detention basins, including sediment. This would be a negligible benefit over the long term to ESA-listed fish located in the Clearwater River.

## 3.6 Aquatic Resources and Wetlands

### 3.6.1 Affected Environment

There is little or no large woody debris in the intermittent stream or in the Clearwater River near the proposed action area. The intermittent stream and Clearwater River in the immediate vicinity of the proposed action area lack riffle, run, and pool habitats.

The intermittent stream is piped both upstream of Area 380 and under the levee system blocking fish passage upstream of the intake structure. The intake structure is impassable to fish because the intake structure is at a higher elevation than the culvert. Fish cannot swim upstream because the elevation is too high for passage. Therefore, the intermittent stream does not provide any fish habitat. There are few macroinvertebrate organisms (i.e., mayfly larvae, midge larvae, scuds) upstream of the intake structure because the stream lacks riffles and pools.

There are no wetlands associated with this drainage feature.

*Determination of Significance*

None of the alternatives would result in significant changes to the aquatic resources of the affected environment. The effects range from negligible to moderate.

An effect to aquatic resources would be considered significant if there is a substantial loss in the population or habitat of any native or valuable aquatic species, defined as an unmitigated negative change in population greater than 5 percent than natural variability for a period of 5 years or longer; or the movement or migration of fish is permanently impeded in a way that is unmitigated.

### 3.6.2 Environmental Effects

#### 3.6.2.1 Alternative 1: No Action

**Aquatic Resource Effects**

**Direct and Indirect Effects to Aquatic Resources**

The No Action Alternative would have a minor adverse effect on aquatic resources over the short-term and a negligible effect over the long-term.

The aquatic resources within this intermittent stream are relatively stable and low value. The accumulation of sediment and debris within the stream can have minor adverse effect to the aquatic resources over the short-term by burying macroinvertebrates. Clean out of the channel and culvert would have a minor adverse effect by increasing the turbidity in the channel over the short-term. The effect would be negligible over the long-term.

#### 3.6.2.2 Alternative 2: Installation of Stilling Basin and An Access Road

##### Aquatic Resource Effects

**Direct and Indirect Effects to Aquatic Resources**

Alternative 2 would have minor adverse effects over the short-term and negligible adverse effects over the long-term.

Long-term, the aquatic resources and stream functions and values would persist as the intermittent stream would be impounded and act more as a pond. The aquatic resources within the stream and related functions and values would be temporarily disrupted by the construction activities. This would be a moderate adverse effect over the short-term offset by compensatory mitigation as noted in Appendix D.

Macroinvertebrates would recover soon after construction stops. No measurable effect to fish food sources or foraging is expected.

The plantings at the Asotin Slough Habitat Management Unit would provide leaf litter large woody debris, and detritus needed as food for macroinvertebrate organisms. The effect would be minor over the short and beneficial over the long-term.

**Cumulative Effects to Aquatic Resources**

Alternative 2 would not have additional adverse cumulative effects to aquatic resources.

The Area 380 was originally designed as an intermittent stormwater conveyance but expanded residential development has increased the amount of time the drainage flows throughout the year. The construction of Area 380 intake modified the flows within the intermittent channel. Lower Granite Dam inundated the Clearwater River and complex habitats creating a larger, deeper channel and overall river channel contained within levees.

Replacing leaking and undersized stormwater pipes throughout the City would moderately improve the water quality of the Area 380 drainage which would slightly improve the aquatic habitat. The overall cumulative effect would be negligible. Implementing new stormwater detention basins throughout the Area 380 drainage would increase the aquatic habitat upstream of the Area 380 intake. This could increase the number of macroinvertebrates and other aquatic life that could drift into the intake structure area.

## 3.7 Vegetation

Area 380 contains of approximately 30 trees along the margins of the ravine. These trees are mainly black locust trees (*Robinia pseudoacea*), a non-native species. These trees provide a riparian component for the stream. It provides shade and leaf litter important for macroinvertebrates to feed.

### 3.7.1 Affected Environment

*Determination of Significance*

None of the alternatives would result in significant changes to the vegetation of the affected environment. The effects range from no effect to minor.

Significant effect to vegetation refers to substantial and adverse effects on plant communities, including the composition, structure, and functioning of vegetation within the study area. Significant effects could include large clearing or removal of vegetation such as deforestation, the introduction and spread of invasive plant species, fragmentation of habitats through human activities, pollution from various sources such as air pollution, chemical spills, and poor land management practices.

### 3.7.2 Environmental Effects

#### 3.7.2.1 Alternative 1: No Action

##### Vegetation Effects

**Direct and Indirect Effects to Vegetation**

The No Action Alternative would have no effect on vegetation for the short and long-term.

The ravine would remain a forest vegetated system consisting mainly of black locust trees. The No Action Alternative would have no effect on the vegetation for the short and long-term.

#### 3.7.2.2 Alternative 2: Installation of Stilling Basin and An Access Road

##### Vegetation Effects

**Direct and Indirect Effects to Vegetation**

Alternative 2 would have a minor adverse effect over the short-term and a minor benefit over the long-term.

Over the short-term, approximately 30 trees would be removed for the installation of the sediment stilling basin and to install the shoreline revetment on the eastern side of the ravine. Native willows would be planted in the toe of the rip rap revetment that would provide long-term minor benefit to Area 380. In addition, approximately 500 linear feet of riparian shoreline would be planted at Asotin Slough Habitat Management Unit. These plantings would mitigate for the loss of the black locust trees. Details about this mitigation site is found in Appendix D.

The plantings at Asotin Slough Habitat Management Unit would offset vegetation removal at Area 380 by providing approximately 500 linear feet of plantings of native species, particularly willow species. This would provide riparian habitat along the Snake River and would provide more vegetative cover. This would offset loss of riparian vegetation at the Area 380. The effect would be minor over the long-term.

**Cumulative Effects to Vegetation**

Alternative 2 does not have additional adverse cumulative effects on vegetation.

Over the short term, Alternative 2 would have a negligible cumulative effect on vegetation by removing vegetation from stormwater pipes and the Area 380 drainage. Vegetation is expected to return over the long-term.

## 3.8 Terrestrial Wildlife

### 3.8.1 Affected Environment

The Area 380 drainage consists of a small, forested drainage surrounded by a residential and urban park type setting. The species that would be found in these habitat types include squirrels (*Sciurus sp*.), striped skunks (*Mephitis mephitis*), several bat species, deer mice (*Peroyscus maniculatus*), American mink (*Neovision vison*), and common raccoon (*Procyon lotor*). Occasionally, mule deer (*Odocoileus hemionus*) and river otters (*Lontra canadensis*) are seen.

Several waterfowl and shorebird species are present including Canada goose (*Branta canadensis*), mallard (*Anas platyrhynchos*), and spotted sandpiper (*Actitus macularia*). Raptors including eagles, hawks, ospreys (*Pandion haliaetus*), and owls are occasionally observed. Upland game species are present, including mourning dove (*Zenaida macroura*) and California quail (*Callipepla californica*).

*Determination of Significance*

None of the alternatives would result in significant changes to the wildlife of the affected environment. The effects range from negligible to moderate.

A significant effect to wildlife refers to substantial and noticeable adverse effects on the biological components of ecosystems, including animal populations, species diversity, and ecological interactions. Some examples of significant effect to wildlife include destruction or degradation of habitats used by wildlife, the introduction and spread of non-native invasive species, or disruptions to key ecological interactions.

### 3.8.2 Environmental Effects

#### 3.8.2.1 Alternative 1: No Action

**Terrestrial Wildlife Effects**

**Direct and Indirect Effects to Terrestrial Wildlife**

The No Action Alternative would have no direct or indirect effects to terrestrial wildlife. The effect to wildlife would be negligible both short and long-term. The wildlife would continue to utilize the small, urbanized habitat. Animals such as birds and squirrels would utilize the adjacent trees for roosting, nesting, and foraging.

#### 3.8.2.2 Alternative 2: Installation of Stilling Basin and An Access Road

**Terrestrial Wildlife Effects**

**Direct and Indirect Effects to Terrestrial Wildlife**

Alternative 2 would result in a moderate indirect adverse effect over the short-term and a minor indirect benefit over the long-term. Cutting the 30 trees in the ravine would cause a loss of roosting, nesting, and foraging habitat for birds and squirrels. A wildlife biologist would inspect the trees for nesting birds prior to removal of any vegetation. Trees with active bird nests would be protected until the nest is no longer active. Planting willows along the shoreline revetment would provide a minor benefit to wildlife by providing foraging, nesting, and roosting habitat, predominantly for songbirds.

The plantings at Asotin Slough Habitat Management Unit would provide minor wildlife benefits that would peak at about five to ten years.

### Cumulative Effects to Terrestrial Wildlife

Alternative 2 would have a minor cumulative effect over the short term and a negligible effect over the long term. Replacing leaking and undersized stormwater pipes throughout the City may disrupt wildlife patterns during construction. Wildlife tends to avoid construction activities. The effect would be temporary as wildlife would return to habitats after construction activities cease.

The installation of stormwater detention basins throughout the Area 380 watershed would create some small habitats for wildlife such as ducks and otters.

## 3.9 Greenhouse Gas Emissions and Climate Change

### 3.9.1 Affected Environment

In accordance with the guidance Engineering Construction Bulletin (ECB) 2018-14, Guidance for Incorporating Climate Change Impacts to Inland Hydrology in Civil Works Studies, Designs, and Projects, (revised 19 August 2022), climate change is required to be assessed with a focus on existing and future challenges and risks facing the project due to past and future climatic changes (Refer to Appendix C, GHG Evaluation for Climate Change). In addition, greenhouse gases (GHG), such as CO2, methane (CH4), and nitrous oxide (N2O), contribute to climate change, including alteration of temperatures and precipitation patterns (EPA 2023c). Consistent with EO 13990, Protecting Public health and the Environment and Restoring Science to Tackle the Climate Crisis, CEQ has issued interim National Environmental Policy Act Guidance on consideration of Greenhouse Gas Emissions and Climate Change. This guidance includes direction for agencies to quantify a proposed action's GHG emissions and to disclose and proposed context for a proposed action's GHG emissions and climate effects. For the purposes of this report, GHG and Climate Change are evaluated together.

The proposed project area includes a variety of resources that could be affected by climate change. Within the Inland Northwest, the climate is trending towards warmer temperature and drier conditions.

Predicted changes in temperature and precipitation would continue to decrease snowpack and would affect stream flow and water quality throughout the inland Northwest region. Warmer temperature would result in more winter precipitation falling as rain rather than snow throughout much of the inland Northwest, particularly in mid elevation basins where average winter temperatures are currently near freezing. The predicted changes would result in:

- Less winter snow accumulation
- Higher winter stream flows
- Earlier spring snowmelt
- Earlier peak spring streamflow and lower summer stream flows in rivers that depend on snowmelt (most rivers in the Inland Northwest).

The decline of the region's snowpack is predicted to be greatest at low to middle elevations due to an increase in air temperature and less precipitation falling as snow. The average decline in snowpack in the Cascade Mountains of Washington and Oregon was about 25% in the last 40 to 70 years. Most of the decline is due to an increase in cool season air temperatures of 25 °F over that period. As a result, seasonal stream flow timing is likely shift significantly in sensitive watersheds (Littell et al., 2009).

*Determination of Significance*

None of the alternatives would result in significant changes to the climate of the affected environment nor would climate change have a significant effect on the affected environment. The effects range from negligible to minor.

The effects of the climate on the mitigation site would be considered significant if there were effects that could cause a shift in vegetation composition to more mesic or arid conditions, cause mass extinctions of species, or greatly affect daily life of humans to the point that they shift their behavior. See Appendix C for more details on the climate change analysis.

### 3.9.2 Environmental Effects

#### 3.9.2.1 Alternative 1: No Action

##### Greenhouse Gas Emissions and Climate Change Effects

**Direct and Indirect Effects of Greenhouse Gas Emissions and Climate Change**

The No Action Alternative would result in no additional Greenhouse Gas (GHG) emissions over the long term. Periodic removal of the accumulated sediment from the culvert would result in negligible effect in GHG emissions. Therefore, the No Action Alternative would have negligible effect to climate change.

Climate change has a minor effect on the Area 380 drainage. The drainage may be drier in the summer months because of the hotter, drier climate and more frequent stormwater during the winter months because precipitation would consist of more rain than snowfall. In addition, the snowpack would melt faster with the higher winter temperatures.

#### 3.9.2.2 Alternative 2: Installation of Stilling Basin and An Access Road

##### Greenhouse Gas Emissions and Climate Change Effects

**Direct and Indirect Effects of Greenhouse Gas Emissions and Climate Change**

In Alternative 2, carbon emissions would increase temporarily during construction activities. GHG producing construction activities include the excavation and construction of the sediment stilling basin, construction of the stop log weir, construction of the

access ramp, constructing an access road and laying rip rap for the shoreline revetment. Maintenance activities to remove the sediment would be conducted annually.

Alternative 2 would directly produce approximately 35.87 metric tons of carbon dioxide equivalent (CO2eq). This quantity is well below the 25,000 metric ton reporting requirement and would not have any meaningful effect to climate change. The effect would be negligible over both the short and long term. The effect of climate change on Area 380 would be negligible (see Appendix C).

The plantings at Asotin Slough HMU would provide a small carbon sink. Based on approximately 0.17 acres of plantings, the site would provide an additional 67 metric tons CO2eq would be stored over the next 10 years. The effect of climate change on the Asotin Slough HMU would be negligible.

**Cumulative Effects of Greenhouse Gas Emissions and Climate Change**

The cumulative effect would be minor for the short-term and negligible for the long-term. Replacing leaking and undersized stormwater pipes throughout the City would temporarily increase GHG emissions over the short-term during the construction but there would be no GHG emissions over the long-term.

Implementing stormwater detention basins throughout the Area 380 drainage would create a small GHG sink within the landscape as these features would collect woody debris, leaves, and other organic material that sink to the bottom of these aquatic environments.

The plantings at Asotin Slough would create a small carbon sink as the woody stems grow into shrubs and trees. The cumulative effect of these plantings would be negligible to greenhouse emissions.

## 3.10 Cultural Resources

### 3.10.1 Affected Environment

There is ample evidence that people have lived along the Snake and Clearwater Rivers for thousands of years. These areas not only represent long ago activities, but they are also still of living importance today to affiliated Tribes. Several historic period sites are also present, including those related to agriculture, transportation, industry, and homesteads.

To date, 159 archaeological sites have been documented on USACE lands at Lower Granite Project. Three of those sites Hasotino, Hatwai, and Interior Grain Tramway, have been listed on the National Register of Historic Places (NRHP). One of those sites, Hasotino, is managed by the USACE but is also a contributing site to Nez Perce National Historical Park.

Another ten archaeological sites have been found eligible through concurrence determinations with the State Historic Preservation Officer (SHPO, see Appendix B) but have not been formally nominated to the NRHP. Eight archaeological sites have been found not eligible for the NRHP through concurrence determinations, and 138 sites are unevaluated. Ninety of the unevaluated sites are inundated and have not been

evaluated because limited information is available whether the site retains attributes that make it eligible for the NRHP.

Regarding the Area 380 drainage area, there have been several surveys of the proposed action area conducted (Bonstead 2014, Yu 2021, Calkins and Pearson 2020). The results of those surveys did not yield any cultural or archaeological materials. As it stands, there are no known historic or cultural resources that are located within the footprint of the proposed action. The Lewiston Levee System is a historic resource, however the proposed action will not affect its historic integrity and has been coordinated with SHPO. SHPO concurs that the proposed action would have no adverse effect to historic properties (Appendix B). Several Traditional Cultural Properties were within 1.2 miles of the proposed action area. The Nez Perce Tribe and Confederated Colville Tribes were consulted, and it was determined that the proposed action would not have an adverse effect on these cultural properties.

### 3.10.2 Environmental Effects

#### 3.10.2.1 Alternative 1: No Action

##### Cultural Resource Effects

The No Action alternative would not involve activities which would impact historic or cultural resources. Per the archaeological surveys there are no known historic or cultural resources within the Project's existing footprint. Therefore, implementation of this Alternative would mean the continued operation of the existing intake structure, including the routine maintenance activities, which would not incur any known impacts to historic or cultural resources.

#### 3.10.2.2 Alternative 2: Installation of Stilling Basin and An Access Road

##### Cultural Resource Effects

**Direct and Indirect Effects to Socioeconomic and Environmental Justice**

Implementation of Alternative 2 would involve actions that may impact historic resources, but these impacts would be negligible, and not affect the resource in any meaningful way. A search through USACE records was conducted for the Project's area of potential effect (APE). No cultural sites or traditional cultural properties (TCP) were discovered in the records search that would intersect with the Project's APE. The proposed action area has been previously surveyed and found to be previously disturbed by construction of levees, highways, and other infrastructure. USACE has made the determination that either no historic properties are present because of past disturbance or "for the levee, there would be no adverse effect". Therefore, Alternative 2 would have negligible impacts to historic or cultural resources.

If archaeological remains are found during construction, all work in the area of the discovery will cease (construction can proceed elsewhere), efforts would be made to protect the find, and the District Archaeologist would be contacted immediately.

### Cumulative Effects to Cultural Resources

The cumulative effects may cause some additional impacts to cultural resources throughout the watershed. However, the additional impacts would not be significant. The overall impact would be minor.

The Memorial Bridge construction is a much larger on-going construction project in the vicinity of Area 380. The additive effects of construction at the bridge and cleaning of the culverts does not substantially add to the construction that is on-going at the time of construction of the Area 380 drainage improvements. All three actions can happen simultaneously and not cause significant effects to cultural resources.

## 3.11 Socioeconomics and Environmental Justice

### 3.11.1 Affected Environment

As defined by the 15 March 2022 Assistant Secretary of the Army Civil Works (ASA (CW)) memorandum titled “Implementation of Environmental Justice and the Justice 40 Initiative,” environmental justice is the “fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income regarding the development, implementation and enforcement of environmental laws, regulations, and policies, with no group bearing a disproportionate burden of environmental harms and risks.”

The ASA(CW)-issued Interim Environmental Justice Strategic Plan directs USACE to conduct technical analyses to identify disadvantaged or underserved communities within the study area, followed by development of an outreach strategy to ensure meaningful engagement. This environmental justice evaluation includes identification of disadvantaged and underserved communities, identification of any negative project effect that would disproportionally affect these disadvantaged and underserved communities, and proposed mitigation to offset the projected negative effect.

Utilizing the Climate and Economic Justice Screening Tool (CEJST), indicators of burden can be identified in census tract communities. Federally Recognized Tribes are considered disadvantaged communities. The evaluation of environmental justice issues indicates an identification of climate change, housing, and legacy pollution burden, which includes low-income in the City. The census tract within the project area contains disadvantaged populations that meet more than one burden threshold and the associated socioeconomic threshold. Regarding the climate change burden, the census tract is in the 95th percentile for projected flood risk. These are areas with projected risk to properties from projected floods from tides, rain, riverine, and storm surges within 30 years; and in the 66th percentile for low income – people in households where income is less than or equal to twice the federal poverty level, not including students enrolled in higher education. Housing ranks 93$^{rd}$ percentile where many of the homes in this community lack indoor plumbing or indoor kitchens. Regarding the legacy pollution burden, this community ranks within the 94$^{th}$ percentile as the community is in proximity to Risk Management Plan facilities. The community lacks a risk management plan facility within 5 kilometers.

*Determination of Significance*

None of the alternatives would result in significant changes to the socioeconomics and environmental justice of the affected environment. There would be no effects to

socioeconomics and environmental justice for all the alternatives as the actions do not place a burden on a disadvantaged population.

Significant effects to socioeconomics and environmental justice refer to substantial and noticeable adverse effects on the social, economic, and environmental conditions, particularly for disadvantaged and marginalized communities.

### 3.11.2 Environmental Effects

#### 3.11.2.1 Alternative 1: No Action

**Socioeconomic and Environmental Justice Effects**

**Direct and Indirect Effects to Socioeconomic and Environmental Justice**

The No Action alternative would have no effect on socioeconomics and environmental justice. The No Action Alternative would not disproportionally place a socioeconomic or environmental justice burden on a disadvantaged population. Overall, there would be no effect to environmental justice over the short and long-term.

However, the conditions within the Area 380 drainage would continue to degrade which could cause problems for the adjacent landowners. This effect would be localized to the Area 380 drainage area and would be a minor effect over the short and long term.

#### 3.11.2.2 Alternative 2: Installation of Stilling Basin and An Access Road

**Socioeconomic and Environmental Justice Effects**

**Direct and Indirect Effects to Socioeconomic and Environmental Justice**

Alternative 2 would not induce a disproportionate socioeconomic or environmental justice burden on a disadvantaged population. However, local residences would experience a minor adverse effect over the short-term during construction and a moderate benefit effect over the long-term from stabilizing the eastern shoreline.

Alternative 2 would disrupt traffic patterns on 22$^{nd}$ Street during construction and maintenance activities. This would be a minor adverse effect to the residents over the short-term during construction. Construction would be near these homes and could cause a minor disruption to the daily routine of residents. Construction would be during the seasonally dry time of the year when there is little risk of flood events, and the effect would be temporary. Long-term benefits from stabilizing the eastern shoreline would be a moderate as the shoreline revetment would reduce the risk of further slope degradation.

The mitigation plantings at Asotin Slough Habitat Management Unit would add to public interest in the area by enhancing aesthetics, wildlife, and water quality benefits.

**Cumulative Effects to Socioeconomic and Environmental Justice**

The cumulative effects do not disproportionally place a socioeconomic or environmental justice burden on a disadvantaged population.

The Memorial Bridge construction is a much larger on-going construction project in the vicinity of Area 380. The additive effects of construction at the bridge and cleaning of the culverts does not substantially add to the construction that is on-going at the time of construction of the Area 380 drainage improvements. All three actions can happen

simultaneously and not cause significant effects to socioeconomics or environmental justice.

Replacing leaking and undersized stormwater pipes throughout the City would moderately benefit the larger disadvantaged community throughout the Area 380 drainage system. There are businesses and homes upstream of the ravine that do periodically flood because of the lack of stormwater detention basins, inadequate stormwater pipe sizing, or blocked pipes. The cumulative effect of implementing these features and Alternative 2 would be a moderate benefit for the short and long-term.

### 3.12 Summary of Effects

There is no significant impact from implementation of the action alternative (Table 4). Air Quality, Noise Levels, Floodplain, and Threatened and Endangered species resources would remain unaffected by implementation of the action alternative. The others are range from negligible effect to moderate effect.

**Table 4. Summary of Direct and Indirect Effects to Resources**

| Resource Evaluation Table | Insignificant Effects | Insignificant Effect as a Result of Mitigation | Resource Unaffected by Action |
|---|---|---|---|
| **Air quality** | | | X |
| **Noise Levels** | | | X |
| **Floodplain** | | | X |
| **Threatened/Endangered Species** | | | X |
| **Geologic Features and Soils** | X | | |
| **Water Quality** | X | | |
| **Aquatic Resources/wetlands** | X | | |
| **Vegetation** | X | | |
| **Terrestrial Wildlife** | X | | |
| **Greenhouse Gas Emissions and Climate Change** | X | | |
| **Cultural Resources** | X | | |
| **Socioeconomics and Environmental Justice** | X | | |

There is no known adverse cumulative effect from implementation of the action alternatives. USACE did not identify any moderate and appreciable level effects warranting an in-depth cumulative effects analysis on any resource evaluated. The improvements to Area 380 drainage would not have any long-term negative effects

within the Area 380 watershed. The action alternatives would result in minor short-term construction related effects to soils, water quality, terrestrial habitats, socioeconomics, environmental justice; however, these effects are brief in nature and result in substantial long-term benefits. The action alternatives would not result in significant adverse effects, either individually or cumulatively (Table 5).

**Table 5. Summary of Cumulative Effects**

| Resource | Resource Effects | Additive Effects | Significance |
|---|---|---|---|
| **Geologic Features and Soils** | Minor adverse indirect effect in the short-term and moderate benefit in the long-term. | Minor | Less than significant |
| **Water Quality** | No effect over the short-term and moderate benefit over the long-term. | Minor | Less than significant. |
| **Aquatic Resources/ Wetlands** | Minor adverse effect short-term and negligible adverse effect long-term. | Minor | Less than significant. |
| **Vegetation** | Minor adverse effect over the short-term and minor benefit over the long-term | Minor | Less than significant. |
| **Terrestrial Wildlife** | Moderate adverse effect over the short-term and a minor indirect benefit over the long-term. | Minor | Less than significant. |
| **Greenhouse Gas Emissions and Climate Change** | Negligible over both the short and long term. The effect of climate change on Area 380 would be negligible. | Minor | Less than significant. |
| **Cultural Resources** | Minor adverse effect over the short-term and a moderate benefit over the long term. | Minor | Less than significant. |
| **Socioeconomics and Environmental Justice** | Minor adverse effect over the short-term and a moderate benefit effect over the long-term. | Minor | Less than significant. |

# 4 Preferred Alternative

USACE has selected Alternative 2, Installation of Stilling Basin and An Access Road as the preferred alternative for establishing or enhancing the function of the Area 380 structure to facilitate more efficient future maintenance of accumulated sediment. This alternative best meets the purpose and need for the action.

The Preferred Alternative includes 1) construction of a sediment stilling basin, 2) construction a six foot high stop log weir at the culvert inlet, 3) extension of the existing wing walls at the culvert, and 4) construction of an access road and ramp to facilitate maintenance upstream of the drainage structure associated with Area 380 in the City. These structures would be installed within an unnamed intermittent stream that drains from Area 380 to the Clearwater River.

There would also be mitigation plantings installed within the Asotin Slough Habitat Management Unit (Appendix D).

However, the proposed Alternative may be subject to change because USACE currently does not have the authority to construct a permanent access road within Idaho Department of Transportation right-of-way. Therefore, the final decision may be to build a temporary road for construction use if USACE cannot get permission from Idaho Department of Transportation to construct the permanent road. Alternative 2 with either a permanent or temporary access road would have less than significant impacts.

# 5 Compliance with Applicable Treaties, Laws, and Executive Orders

## 5.1 Treaties

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

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

The project area is located on the ceded lands of the Nez Perce Tribe. The USACE would continue to honor treaty obligations. The USACE notified the Nez Perce Tribe to of this project and invited comments during the public review period. The proposed action is not anticipated to adversely affect treaty resources, rights, or obligations.

## 5.2 Federal Laws, Regulations, and Executive Orders

### 5.2.1 National Environmental Policy Act

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

This EA was prepared pursuant to regulations implementing NEPA, (42 United States Code [U.S.C.] 4321 et seq. and 87 FR 23453) and identifies and considers the potential environmental effects of the proposed construction and operation of Area 380 drainage project. The draft Finding of No Significant Impact (FONSI), this EA, and all supporting appendices were made available to other federal and state agencies, the Nez Perce Tribe, and the public for a 30-day review and comment period from March 30 through

April 30, 2024. While preparing the draft EA, the USACE did not identify any effects that would significantly affect the quality of the human environment. Therefore, compliance with NEPA could be achieved upon the signing of the FONSI, if there are no significant issues identified during the public review process. If significant effect had been identified during public review, an EIS would be required. Completion of an EIS and the signing of a Record of Decision would then achieve compliance with NEPA.

### 5.2.2 Clean Water Act

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

Section 404 of the CWA established a program to regulate the discharge of dredged or fill material into WOTUS and Section 401 requires that any federal activity that may result in a discharge to WOTUS must first receive a water quality certification from the state in which the activity would occur.

The preferred alternative would place approximately 610 cubic yards of fill below the ordinary high water mark in the unnamed drainage for the construction of the sediment stilling basin, the access road ramp, wingwalls, and a rip rap revetement. The proposed action does not qualify for a Nationwide Permit (NWP). Therefore, the proposed action requires the associated Section 404 compliance, and the USACE prepared a CWA Section 404(b)(1) Evaluation, attached to this EA as Appendix A.

Compensatory mitigation is provided in accordance with the Compensatory Mitigation for Losses of Aquatic Resources Final Rule (33CFR 325 and 332; 40 CFR Part 230) in April 2008. The mitigation would be in the form of riparian vegetation plantings to replace the functions and values of an intermittent stream. Approximately 30 trees would be removed from the Area 380 and replaced with 500 linear feet of plantings along the Asotin Slough Habitat Management Unit. (Appendix D). The mitigation ratio was determined based on the linear length of stream channel affected by the proposed action.

The letter to the interested public, Tribes, and agencies announcing the start of the 30-day review and comment period of the Draft FONSI, EA, and all supporting appendices also serves as CWA Public Notice stating the 404(b)(1) evaluation available for review and comment. For Section 401 compliance, the USACE began coordination early with the certifying authority, Idaho Department of Environmental Quality (IDEQ), and requested Section 401 water quality certification (WQC) on March 20, 2024 USACE received the final Section 401 Water Certification on April 22, 2024.

### 5.2.3 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 the NMFS, as appropriate, to ensure that their actions are not likely to jeopardize the continued existence of endangered or threatened species or adversely modify or destroy their critical habitats. Section 7(c) of the ESA and the federal regulations on endangered species coordination (50 CFR §402.12) require that federal agencies prepare biological assessments of the potential effects of major actions on listed species and critical habitat.

The USACE has determined that the proposed action would have no effect to ESA-listed fish species (Appendix E) since the proposed action area is not inhabited by any ESA-listed fish. The USACE would use best management practices to ensure that turbidity would not reach the Clearwater River, downstream of the sediment basin construction and any construction noise would not exceed background level;s and be buffered by the levee. The proposed action would have no effect on designated critical habitat for these species. No further coordination or consultation would be needed.

### 5.2.4 Bald and Golden Eagle Protection Act

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

Bald and golden eagles are known to nest throughout USACE managed lands. While all nest sites have not been documented, locations of some are known. None are known to occur in or near the proposed action area, therefore, there would be no effect or take (to include disturbance) of either bald or golden eagles.

### 5.2.5 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.

There would be no take of migratory birds from this action. Trees should be removed outside of the bird nesting season. However, if trees are removed during nesting season, a wildlife biologist would survey the trees prior to removal. If active nests are observed, the vegetation would be flagged, and a 15-foot buffer would be implemented to protect the nest until the nestlings fledge. There would be no effect to birds under the MBTA.

### 5.2.6 Fish and Wildlife Coordination Act

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

provides recommendations for mitigating or enhancing effects to fish and wildlife affected by a federal project.

The proposed action is intended to support operation and maintenance of an existing USACE Civil Works project and would not result in the new diversion or modification of a waterbody. A Coordination Act Report (CAR) is, therefore, not required under the Act (16 USC 661-666c), as confirmed in a Memorandum of Agreement with USFWS (USFWS 2003) and NMFS (NMFS 2020b).

### 5.2.7 Fishery Conservation Management Act of 1976

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

The Clearwater River is identified as current Essential Fish Habitat for Chinook and currently accessible, but unutilized historic EFH for coho. The potential effects of the alternatives on the fisheries in this zone have been examined in Section 3.1 (Threatened and Endangered Species) of this EA. The proposed action does not adversely modify essential fish habitat and no EFH consultation is required. The proposed action could result in short-term adverse effects on water quality habitat parameters but those effects are avoided by the implementation of BMPs.

### 5.2.8 National Historic Preservation Act

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

The potential effects of the alternatives on cultural resources have been examined in this EA and were examined in a separate Cultural Resources Review that was sent to consulting parties on March 29, 2022, for a 30-day review. The Cultural Resources Review documents the effects of the proposed action. The USACE determined that the proposed action would not have an adverse effect on Traditional Cultural Properties as the proposed work is within an area of previously highly disturbed land and would not result in any changes to the use of that facility that might adversely affect historic properties. A Letter of Concurrence from the Idaho SHPO (Appendix B) was received on April 27, 2022. No comments were received from the Tribal consulting parties during

the Cultural Resources review comment period. The Nez Perce tribe would be given the opportunity to comment during the public and agency comment period.

### 5.2.9 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.

There is no land use change associated with the proposed action. The concrete slabs and stop logs would not change the floodplain as the active floodplain is on the downstream side of the East Lewiston Levees. The intermittent stream does not have an active floodplain. The proposed action would not interfere with floodplain function or lead to floodplain development.

### 5.2.10 Executive Order 11990, Protection of Wetlands

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

It has been the goal of the USACE to avoid or minimize wetland effects associated with their planned actions. The proposed action considers potential effects on wetlands, as well as opportunities to minimize effects and preserve and enhance wetlands and wetland values. The preferred alternative would have no effect on wetlands.

# 6 Consultation, Coordination, and Public Involvement

## 6.1 Tribal and Agency Consultation and Coordination

**Tribal Consultation and National Historic Preservation Act Section 106 Coordination:**

Tribal leadership for the Nez Perce Tribe were formally offered government to government consultation regarding the proposed action in a letter that also announced the start of the public review and comment period, dated March 29, 2022.

Pursuant to Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, USACE analyzed the potential effects of the alternatives on cultural resources in the proposed action area in the EA and prepared a Cultural Resources Review that was sent to the Idaho SHPO and one area Tribe on March 29, 2022, for a 30-day review. USACE determined that the proposed action would not have an adverse effect on Traditional Cultural Properties as the proposed work is within an area of previously highly disturbed land and would not result in any changes to the use of that facility that might adversely affect historic properties. A Letter of Concurrence from the Idaho SHPO has been received (Appendix B). No other comments were received during the review of the Cultural Resources Report.

**Endangered Species Act Consultation:**

Pursuant to Section 7 of the Endangered Species Act of 1973, as amended, USACE determined that the preferred alternative would have no effect to ESA-listed fish species as noted above. The USACE would use Best Management Practices upstream of the Clearwater to prevent sediment from entering the Clearwater River. No further coordination or consultation with the USFWS or NMFS is needed.

**Clean Water Act Compliance and Coordination:**

For the proposed action, which includes the disposal of fill material into waters of the U.S., and therefore requires the associated Section 404 compliance, USACE prepared a CWA Section 404(b)(1) Evaluation, attached to this EA as Appendix A. The letter to the interested public, Tribes, and agencies announcing the start of the 30-day review and comment period of the Draft FONSI, EA, and all supporting appendices also serves as CWA Public Notice stating the 404(b)(1) Evaluation available for review and comment. For Section 401 (state water quality standards), USACE began coordination early with the certifying authority, the IDEQ, and requested Section 401 water quality certification (WQC) on March 20, 2024. USACE received the Section 401 WQC from IDEQ on 22 April 2024.

## 6.2 Public Involvement

**Scoping**

Scoping for this EA was not conducted because the scope was limited to what could be conducted for an existing drainage structure on the USACE owned property along the Area 380 drainage. Public and agency scoping involvement was not, therefore solicited.

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

In compliance with NEPA, the draft Finding of No Significant Impact (FONSI) and EA, and all supporting appendices, was made available for a 30-day review and comment period beginning on April 12, 2024, and concluding on May 12, 2024.

In compliance with and to complete the NEPA process, USACE intends to sign the FONSI and proceed with the proposed action beginning in July 2024. The final FONSI and EA with all supporting appendices are available on the Walla Walla District Corps of Engineers website at www.nww.usace.army.mil/Missions/Environmental-Compliance.

If significant environmental effects resulting from implementing the proposed action had been identified during the review period, USACE would need to prepare an Environmental Impact Statement and implementation of the proposed action would be delayed until the USACE completed the NEPA process with the signing of a Record of Decision.

# 7 References


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# Appendix A

# Clean Water Act Section 404(b)(1) Evaluation

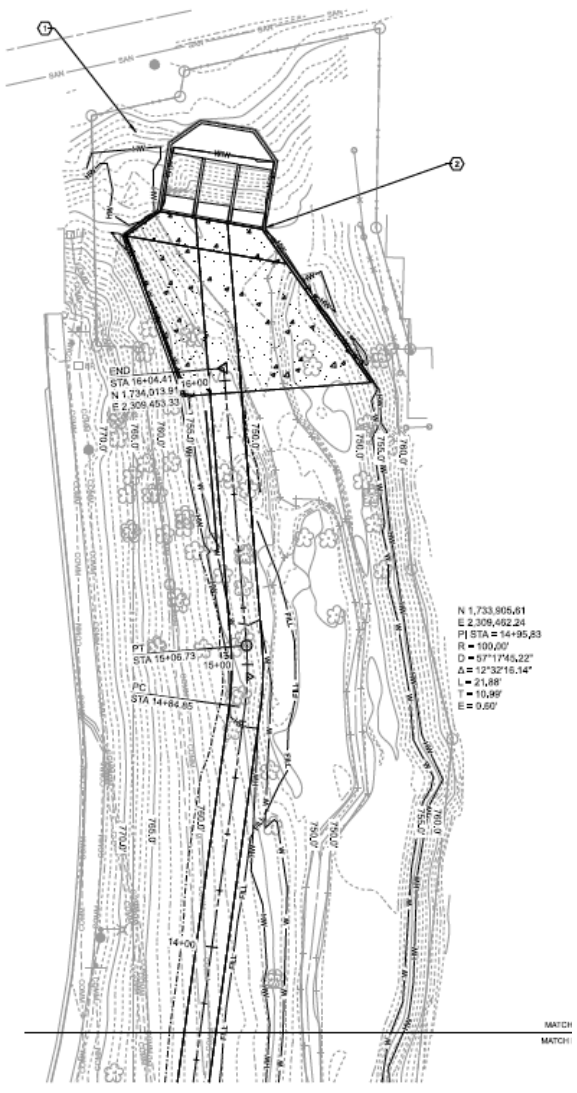
US Army Corps of Engineers

**U.S. Army Corps of Engineers**

Walla Walla District

# Area 380 Drainage Improvements

*Clean Water Act Section 404(b)(1) Evaluation*




*March 13, 2024*

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# I. BACKGROUND INFORMATION

## A. 404(B)1 GUIDELINES

Section 404 of the Clean Water Act of 1977 (the "Act") requires that all projects involving the discharge of dredged or fill material into waters of the United States be evaluated for water quality and other effects prior to making the discharge. This Section 404(b)(1) Evaluation addresses water quality effects of a proposed drainage improvements to the intake structure located at Area 380. This work includes 1) installation of a stop log weir at the culvert intake, 2) the construction of a sediment stilling basin, 3) approximately 460 linear feet of shoreline stabilization, and 4) construction of the access road into the stilling basin for cleanout purposes. The construction of these features would be performed by contractors hired by the Walla Walla District Corps of Engineers (USACE). This work is to occur July 2024 through December 2024. All in water work would be conducted during low flow conditions and the construction site would be dewatered. The proposed discharge is associated with the USACE proposal to install concrete slabs within the sediment stilling basin, install an access ramp, and install a shoreline revetment along the eastern shoreline of the intermittent stream.

This evaluation assesses the potential effects of the proposed discharge and possible alternatives utilizing guidelines established by the U.S. Environmental Protection Agency (EPA) under Section 404(b)(1) of the Act (40 C.F.R. 230). Although USACE does not process and issue permits for its own activities (33 C.F.R. 336.1(a)), USACE authorizes its own discharges of dredged or fill material by applying all applicable substantive legal requirements, including application of the section 404(b)(1) guidelines and associated evaluation factors in 33 C.F.R. 336.1(c).

## B. USACE AUTHORITY, PURPOSE AND NEED

The East Lewiston Levee Area 380 Project (Project) is an authorized federal project. The USACE is proposing to improve access for maintenance of the existing USACE owned culvert intake structure and reducing sediment discharge to the Clearwater River.

USACE proposes to construct a maintenance access road, a sediment stilling basin, and approximately 460 linear feet of shoreline revetment at the East Lewiston Levee Area 380 intake structure and channel. The purpose of the proposed action is to improve the function of the Area 380 intake structure and drainage features and to facilitate more efficient future removal of sediment. An action is needed because sediment can and has blocked or reduced flowage capacity at the intake structure allowing the creation of eddies and inundating the Area 380 drainage channel and ravine. The eddies cause the eastern streambank to destabilize. The Area 380 channel is designed to accommodate flow from an unnamed intermittent stream and stormwater

from a portion of Lewiston. Continued sedimentation at the intake structure, and further streambank erosion or damage, would increase flood risk and risk damage to property. The proposed action is also needed to improve maintenance access to Area 380, prevent sediment from entering the intake structure and improve sediment removal.

## II. PROPOSED ACTION DESCRIPTION

### A. LOCATION OF THE PROPOSED ACTION

The proposed project is located along a drainage that flows into the Clearwater River to the upstream side of the Memorial Bridge (Highway 12) in Lewiston, Nez Perce County, Idaho (Figure 1). The proposed action would take upstream of the Intake Structure, **County:** Nez Perce; **State:** Idaho; **Coordinates:** Section 32 Township 36 North, Range 5 West Boise Principal Meridian.


**Figure 1. Map Showing Location of Area 380**

The Project is in a ravine in Lewiston, Nez Perce County, Idaho. The existing drainage consists of a short, channelized intermittent stream that flows into a culvert. The culvert routes flows under a roadway and railroad to the Clearwater River. Adjacent to the Memorial Bridge (Idaho State Route 12). The intake structure consists of three 54-inch welded steel culverts that convey flow under the Camas Prairie Railroad and Railroad Avenue to the Clearwater River.

## A. GENERAL DESCRIPTION OF THE PROPOSED ACTION

USACE proposes to construct a six foot high stop log weir at the culvert inlet, install a sediment stilling basin, an access road ramp to the sediment stilling basin and culvert structure, and shoreline stabilization on the east bank within the East Lewiston Levee Area 380 in Lewiston, Idaho. These structures would be installed within an unnamed tributary that drains from Area 380 to the Clearwater River in Lewiston, Nez Perce County, Idaho.

### The Sediment Stilling Basin

A sediment stilling basin would be built to capture and detain sediment before it enters the intake structure. A sediment stilling basin is a hydraulic structure that allows water to pass through but captures suspended sediments to allow for easier removal. The sediment stilling basin accomplishes this by directing water flow to a comparatively broad and deep basin with a bulkhead at the downstream end. Flowing water enters the basin and loses velocity, or energy. Without the energy of movement, suspended particles and debris gently settle to the bottom of the basin, while clean water flows over the bulkhead and into the intake structure (Figure 2).

The sediment stilling basin would be upstream of the intake structure, and the sedimentation basin would extend approximately 65 feet. The basin would measure approximately 55 feet by 65 feet (3,585 square feet).

To construct the sediment stilling basin, USACE would excavate in front of the intake structure. This area would be sloped towards the intake structure and lined with gravel. Concrete slabs would be placed in the new basin to line the bottom. A retaining wall on the west bank of the ravine would be installed as necessary for the construction of the new access road and ramp. The concrete wingwalls would be extended and raised to increase capacity of the sediment stilling basin. The west wingwall would be extended roughly sixty feet and the east wingwall would be extended forty feet.

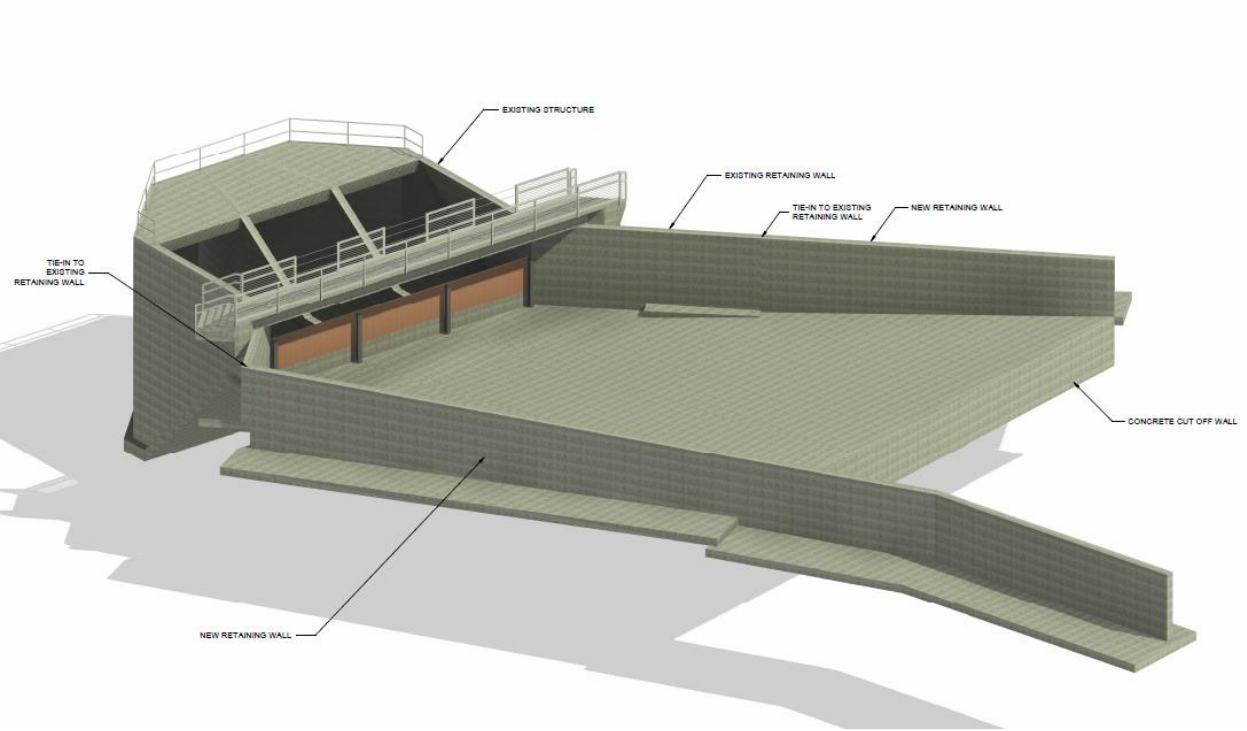


**Figure 2. Conceptual Sediment Stilling Basin**

USACE would dewater the construction work area and install erosion and sediment control devices. USACE would excavate the sediment trap section approximately 1 to 2 feet. Gravel would be leveled to create a foundation for the concrete slabs. New fill and concrete slabs would be poured onsite to create the sediment trap.

Accumulated sediment in the sediment trap would be excavated annually to remove approximately 150 cubic yards of silty sand material per year. The sediment trap would be accessed by the road and ramp. Periodic draining of the sediment trap may be necessary to dry sediment for transport. A small sluice drain would be installed in the weir to allow for drainage.

### The Stop Log Weir

The sediment stilling basin would be fitted with a stop log weir that can be adjusted from two to six feet high (Figure 3). A stop log weir is a type of water control structure built across a river or stream to alter its flow characteristics. The stop log weir would consist of several removable gates composed of steel beams that hold the stop logs in place to form a low head dam at the downstream end of the sedimentation basin. The stop logs are not actual logs but are metal or synthetic boards that slide in and out of the gate channels. In normal operation, the stop logs would be in place and would pool water to have the sediment settle into the basin. An access bridge would be placed above the stop-log weir to assist in dewatering of the sediment stilling basin for maintenance activities.

**Figure 3. An Example of an Aluminum Stop Log Gate Weir, Made by the Rodney Hunt Corporation.**

### The Access Road

A permanent access road would be constructed from 22nd street, parallel to US-12, and would terminate at the sediment stilling basin (Figure 4). At the sediment stilling basin, USACE would construct an access ramp to allow for vehicles to enter the stilling basin to annually remove accumulated sediment.


**Figure 4. Proposed Access Road**

The ramp would be 11-foot wide and would consist of a gravel base foundation and concrete slabs (Figure 5). A retaining wall would be placed on the west shoreline to stabilize the bank and a 3-foot-wide rock shoulder would be placed on the east shoreline to allow for the road to drain.

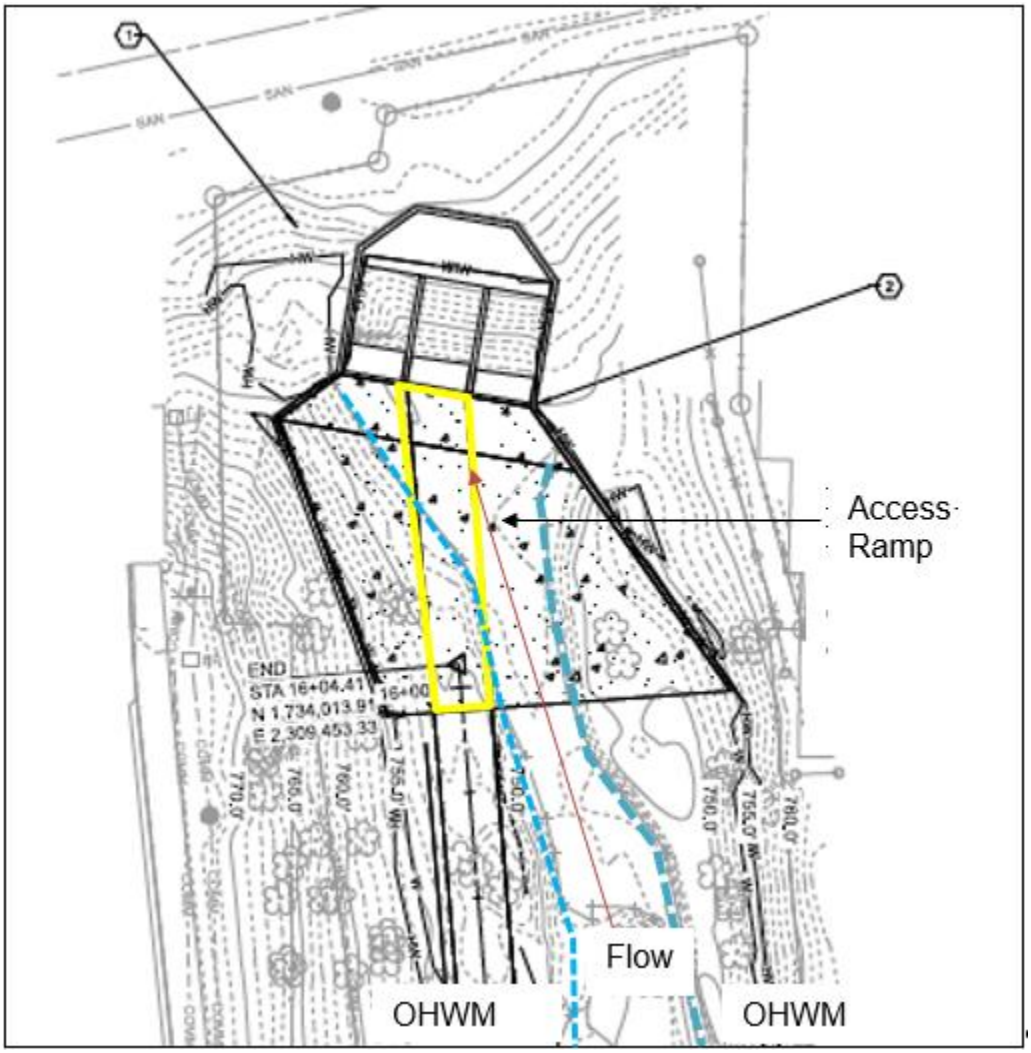


**Figure 5. Proposed Access Ramp in the Stream Shown in Yellow.**

The 11 foot wide ramp would overlay the concrete slabs (Figure 6). A 4-inch aggregate base would be laid as a base for the road. The concrete ramp would be approximately 6 inches thick. A 3 inch drain rock buffer would be laid at the shoulder. A retaining wall would be installed along the perimeter of the ramp.

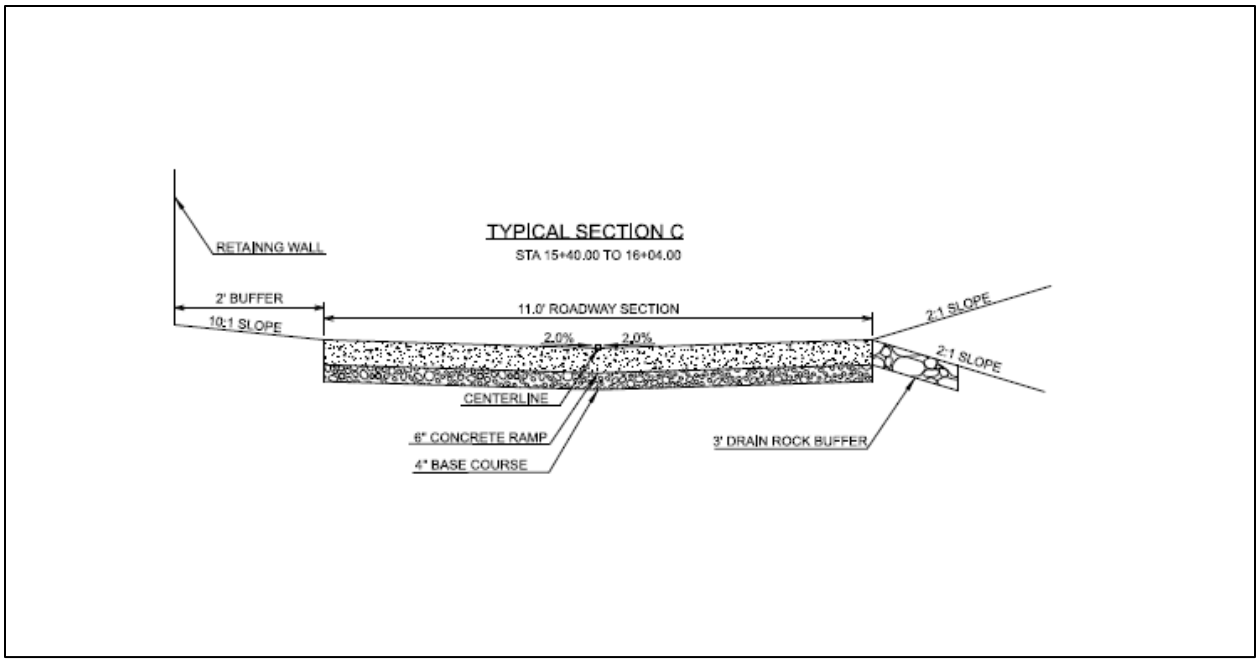


**Figure 6. Cross-Section of the Access Ramp.**

### Rock Revetment

Approximately 460 linear feet of shoreline along the eastern side of the ravine would be reinforced using rock to build a revetment. A ravine is a deep, narrow valley with steep sides, typically carved by the erosion of water such as a river or stream. A revetment is a structure or protective facing that is built to absorb the impact of water or erosion and prevent wearing of a slope or embankment (Figure 7). The revetment would reinforce the shoreline to protect it from damage during high flow events.

**Figure 7. Example of a Shoreline Revetment along a River**

The revetment would be approximately 15 feet high with approximately 2 feet of the toe buried within the intermittent stream (Figure 8 through 10). The rip rap would be planted with willow stakes to further provide shoreline stabilization and some riparian benefits.

**Construction Activities and Schedule**

The contractor would install proper erosion and sediment control measures to prevent sediment from entering areas beyond the work area. Construction materials would be stored in nearby parking lots and disposed of off-site.

The contractor would initiate construction by removing the trees from the ravine. The entire tree and its roots would be removed.

The access road and ramp would be constructed next. This would provide the contractor stable ground to access the large equipment to the site.

The contractor would excavate the sediment stilling basin and build the wingwalls. Then build the sediment stilling basin and the bridge over the inlet structure. To perform this work, the contractor would conduct the activities during seasonal low flow conditions (July through December) so work could occur under dry conditions. The flow of the stream would be diverted around the work area.

Finally, the contractor would install the revetment and willow plantings and repair any damage to the access road.

In summary, the following amounts of excavation and fill of material below the Ordinary High Water Mark is described in Table 1.

**Table 1. Excavation and Fill Quantities of Material Associated with the Area 380 Proposed Action**

| Structure | Fill Material (Cubic Yards) | | | Excavation (Cubic Yards) |
|---|---|---|---|---|
| | Rip Rap Rock | Concrete | Soil | Soil |
| **Sediment Stilling Basin** | 0 | 164 | 18 | 165 |
| **Shoreline Revetment** | 343 | 0 | 85 | 289 |
| **Total** | **343** | **164** | **103** | **454** |

The proposed action would excavate approximately 454 cubic yards of soil to create the sediment stilling basin and anchor the shoreline revetment. The installation of the sediment basin would need approximately 164 cubic yards of concrete and the shoreline revetment would need approximately 343 cubic yards of rip rap.

### Future Routine Sediment Removal

USACE would annually excavate approximately 150 cubic yards of accumulated sediment in the sediment stilling basin using an excavator. The stop-logs would normally be in place to catch the sediment. The stop-logs can act as a dam to allow the sediment to settle out of the water, while the water trickles over the stop-logs. The trap would be dewatered before sediment removal by channeling the sediment, allowing the sediment to settle and then removing the stop-log in-line with the channel. This would allow the water to pass through the basin, basically diverted around the sediment. The remaining sediment would dry and the USACE would excavate the material using a skid-steer or backhoe.

Sediment and mud would be allowed to dry on-site in an upland location and hauled by dump trucks to another site, likely Tammany Quarry Site. The material would be placed in a contained location in uplands.

## B. ALTERNATIVES CONSIDERED

USACE considered several alternatives, including the no action, combinations of road alignment, shoreline stabilization and needs for the sediment stilling basin, or the proposed action.

- USACE has designed the concrete wingwalls to reduce the amount of regrading required.
- The sediment stilling basin design features were sloped concrete apron to allow for the retention of additional sediment and reduces the grading in the Area 380 ravine.
- The access road was designed to avoid wetlands and the drainage feature to the maximum extent practicable. Only the access ramp would impact waters of the U.S. The ramp width was minimized to be a maximum of 11 feet to minimize

impacts within Waters of the U.S. In addition, the access point for the ramp would be within the confines of the sediment stilling basin.

## III. FACTUAL DETERMINATIONS

## A. PHYSICAL DETERMINATIONS

### 1. Substrate Elevation and Slope

The topography of the Area 380 is a steep-graded ravine that changes elevation by approximately 150 feet in elevation over an approximately 500 foot distance.

### 2. Sediment Type

According to the NRCS soil survey website, the soils within this site are classified as Urban land-Wistonia complex. These soils are non-hydric found on floodplains and consist of mixed alluvium. Soils are composed of fine sandy loams. Runoff can mobilize these sediments during construction without proper erosion and sediment control measures.

### 3. Excavated and Fill Material Movement

Excavated material placement sites are located within the greenspace area located between Highway 12 and Area 380. Soils would be excavated using an excavator and dump trucks. The temporary disposal areas would be maintained with erosion and sediment construction measures such as silt fence to prevent excavated material from reentering the drainageway.

Areas along the construction area would also be secured with erosion and sediment control measures to ensure that disturbed material does not discharge into adjacent surface waters.

### 4. Physical Effects on Benthos

Benthos may be temporarily affected by dewatering activities, turbidity, or mobilized. Post construction, water quality would be restored, and turbidity is expected to decrease quickly, allowing benthos to recolonize quickly.

### 5. Actions Taken to Minimize Impacts

The construction footprint has been designed to minimize impacts to the benthic and aquatic community. Erosion and sediment control measures would be used in the work area and staging areas (Table 2). All work areas would be dewatered prior to initiating work. Construction materials to be used are physically stable and clean, reducing the chances for impacting the Clearwater River.

The intermittent stream would be diverted outside of the construction work area to work under dry conditions.

Table 2. Management Measures to Reduce Impacts to the Aquatic Resources

| Management Measure | Resource Protected | Result of Implementation of the Measures |
|---|---|---|
| **Clearly Mark Construction Limits Prior to Initiating Construction.** | Adjacent shorelines of Area 380 and Clearwater River located downstream. | • Minimize disturbance outside of the work area. |
| **Dewater Construction Area.** | Area 380 and Clearwater downstream of Area 380. | • Minimize sediment plume/turbidity downstream of the work area.<br>• Minimize impacts to fish by lowering turbidity.<br>• Establish limits of work area thereby lower the potential impact to adjacent shoreline. |
| **Conducting Work During Low Flow Conditions (June through November).** | Water Quality<br>Fish | • Decrease the amount of water to be dewatered form the work area.<br>• Work conducted in the dry.<br>• Decrease turbidity and sedimentation.<br>• Decrease stress on aquatic wildlife. |
| **Visual Water Quality Monitoring. (Stop Work During Visible Plume Downstream of Work Area).** | Water Quality<br>Fish | • Stop work if plume is visible downstream of work area.<br>• Minimizes turbidity outside of work area.<br>• Decreases probability of effects downstream or in the Clearwater River. |
| **Staging Areas Would be in the Greenspace Area between Memorial Bridge and the Intermittent Stream in Uplands.** | Water Quality<br>Wetlands<br>Fish | • Prevent material from reentering the tributary or affecting the Clearwater river. Prevent material from entering wetlands.<br>• Decrease turbidity and sedimentation that may affect aquatic wildlife. |

## B. WATER CIRCULATION, FLUCTUATION, AND SALINITY DETERMINATIONS

### 1. Water Chemistry

There are no significant fluctuations of water chemistry expected following the proposed construction, and no violations of applicable state water standards are anticipated. Impacts should be temporary in nature.

To minimize the potential for effects on water chemistry, any liquid materials, including concrete, would be stored, or staged in a location that it could not encounter the surface water or runoff. Placement of any concrete would be conducted behind erosion and sedimentation control barriers to prevent contact with surface waters. Once the concrete cures it does not mobilize or change the water chemistry. Thus, the effects of in-water discharge on water chemistry are expected to be localized and short-term.

### 2. Current Patterns and Circulation.

Water in the Area 380 only flows towards the Clearwater River. There are no tides or impediments to natural circulation within the drainage. Water depth is shallow, approximately two feet during high water flows.

The proposed action would temporarily dewater the area of construction for the installation of concrete slabs to minimize the impact to water quality. Dewatering would be accomplished by creating a small earthen berm around the construction work area and diverting the flow around the work area. This would be a temporary impact that could last a couple of months.

### 3. Normal Water Level Fluctuation.

The normal water level during low flow conditions would be a couple of feet deep. The proposed action would dewater the construction area during construction activities, especially for installation of the concrete slabs. This dewatering would have a temporary effect on the normal water level fluctuation that would dry the channel in the construction site for a couple of months during low flow conditions. Wildlife and fish migration patterns would be minimally affected.

### 4. Salinity Gradient.

This consideration is not applicable in the location of the proposed action.

### 5. Actions Taken to Minimize Impacts

- The construction footprint has been designed to minimize any potential for adverse effects to water circulation and fluctuation.

## C. SUSPENDED PARTICULATE/TURBIDITY DETERMINATIONS

### 1. Expected Changes in Suspended Particulates and Turbidity Levels.

Suspended solids and turbidity values would be expected to temporarily increase during excavation and the mobilization of accumulated sediment. A return to ambient conditions should occur within 4 days after completion of construction. No long term impacts to suspended solids and turbidity levels are anticipated.

### 2. Effects on Chemical and Physical Properties of the Water Column

Suspended solids and turbidity values would be expected to temporarily increase during excavation and the mobilization of accumulated sediment. A return to ambient conditions should occur within 4 days after completion of construction. No long-term impacts to suspended solids and turbidity levels are anticipated.

- **Light Penetration.** The proposed action would have short-term adverse impacts during construction due to localized turbidity plumes. Following construction turbidity and associated light penetration would be expected to return to pre-condition levels in approximately 4 days.
- **Dissolved Oxygen (DO).** Excavation of material is expected to have minor short-term but no long-term adverse impacts to DO levels.
- **Toxic Metals and Organics.** The sediments are not expected to contain contaminants as the area has been a disposal site. There may be some localized contaminants from the residual rock, but very unlikely. Even so, the disturbance to sediment would be localized to the area within the Area 380 construction footprint. Excavated material would be stored off-site in parking lots in uplands and transported to upland disposal areas.

## D. CONTAMINANT DETERMINATIONS.

The disturbance to sediments would be localized to the construction area. Excavated material would be transported to upland areas and parking lot areas and transported to upland disposal sites.

No toxic material would be introduced to the area because of the proposed construction activities. Riprap would be clean, uncontaminated stone from an approved source.

## E. AQUATIC ECOSYSTEM AND ORGANISM DETERMINATIONS.

1. **Effects on Plankton.** Short-term, minimal effects on plankton are anticipated to occur because of excavation (and fill) activities. No significant impacts to plankton are expected.

2. **Effects on Benthos.** No significant impacts to benthos are anticipated. The benthic substrate would be reestablished as concrete slabs. This type of environment would collect sediment over time and therefore recolonization of benthic organisms would reestablish over a short duration.

3. **Effects on Nekton.** The proposed action would have no effects to fish because Area 380 does not support fish. The construction work area would be dewatered to prevent turbidity within the water column. The short term effect and the long term impact would be negligible.

4. **Effects on Aquatic Food Web.** The loss of the benthic organisms within the footprint may cause temporary changes to the foraging behavior of some small mammals and some small birds. This small benthic loss should not result in the reduction or potential elimination of food chain in organism populations and should not cause any decrease in the overall productivity and nutrient export capability of the ecosystem.

**1. Effects on Special Aquatic Sites**

- **Sanctuaries and Refuges.** The proposed action area is not located within a designated Wildlife and Fish Refuge or sanctuary. All adjacent lands are part of the Area 380 Operations and Maintenance and serve as a drainageway for the city of Lewiston. The proposed action will not impede, hinder, or otherwise affect the physical features, location, or timing of sanctuaries, refuges, or other outdoor activities.

- **Wetlands, Mud Flats, and Vegetated Shallows.** USACE did conduct a wetland delineation of the Area 380. The delineation report is attached. The proposed action area does not contain wetlands.

  To be considered a wetland under the 1987 USACE Wetland Delineation Manual, three criteria are required: hydric soils, hydrophytic vegetation, and hydrology. Based on both a desktop review and pictures of an on-site reconnaissance review of the proposed action area, there is no indication of wetlands within the proposed construction area or staging areas. The following observations were found to complete this determination:

  **Hydric soils**. Information in the on-line NRCS soil survey mapper (https://websoilsurvey.nrcs.usda.gov, accessed January 18, 2024), soils within Area 380 drainage and associated staging areas are mostly Urban land Wistonia complex. These soils are non-hydric found on floodplains and consist of mixed alluvium. Soils are composed of fine sandy loams.

**Vegetation.** The desktop review utilized the National Wetland Inventory (NWI) online assessed January 18, 2024 (https://fwsprimry.wim.usgs.gov /wetlands/apps/wetlands-mapper/) identifies the area as Intermittent Riverine Streambed that is Seasonally Flooded (R4SBC). This is a narrow drainage through the ravine that begins at Main Street and flows into the Clearwater River. A wetland delineation was conducted and found no hydrophytic vegetation associated with this stream channel.

**Hydrology.** USACE defines wetland hydrology as inundation or saturation to the surface continuously for at least 5% of the growing season in most years (50% probability of recurrence) (USACE 1987). While the project area does support an intermittent stream which flows periodically throughout the year, the channel does not support hydrology along its streambanks or adjacent floodplain. Soils were found to have groundwater and saturation deeper than 12 inches of the surface and there were no hydrological indicators.

**Summary of Wetland Impacts.** The proposed action area does not contain wetlands. Although hydrology may be met, there is no indication of the presence of hydric soils or vegetation in the Area 380 drainage area. Field observations confirms that this area would be considered uplands and therefore wetland impacts would not be a component of this proposed action.

- **Threatened and Endangered Species.** According to the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPAC) website (https:/ipac.ecosphere.fws.gov), accessed January 18, 2024, there are two Endangered Species Act (ESA) listed species and one Candidate species within the vicinity of the proposed action: bull trout (*Salvelinus confluentus*), Spalding's catchfly (*Silene spaldingii*), and Candidate species monarch butterfly (*Danaus plexippus*). ESA listed anadromous fish within the Clearwater River, downstream of the project area include Snake River Sockeye (*Oncorhynchus nerka*), Snake River Spring/Summer Run Chinook (*Oncorhynchus tshawytscha*), Snake River Fall Run Chinook (*Oncorhynchus thawytscha*) and Snake River Basin Steelhead (*Oncorhyncus mykiss*). The intermittent tributary upstream of the intake structure does not support salmon species or bull trout. The drainage area does not support populations of Spalding's catchfly or milkweed vegetation. Milkweed is the main food source for Monarch butterflies. Therefore, construction activities associated with the proposed action would not affect NMFS or USFWS ESA-listed species.

- **Other Wildlife.** The effects on wildlife species because of drainage area improvements are expected to be indirect, short-term, and minor, primarily because of displacement during the operation. The proposed action would occur along and in the waters of the drainage above the Area 380 intake structure. This

structure is in a ravine that is surrounded by urban development and experiences high volumes of vehicle and pedestrian traffic. The activities would not prevent terrestrial wildlife from obtaining food or making other use of the areas adjacent to the shoreline and staging areas. There would be a temporary (~60 days) disruption of habitat use by fish and aquatic wildlife during construction activity because of dewatering (lowering water levels in the reservoir) the project area during construction. The shoreline to the intermittent stream does contain riparian vegetation that may be used as perch trees for raptors and other birds, would not be affected. Compensatory mitigation for stream function and value losses would occur through planting approximately 500 linear feet within Asotin Slough Habitat Management Unit, along the Snake River and the slough. Waterfowl, birds, aquatic furbearers could inhabit this ravine, but because of its isolated habitat, its wildlife value is intrinsically low. Waterfowl and other wildlife would return to the areas shortly after completion of the construction activities. USACE anticipates there would be no long-term direct or indirect effects to vegetation or wildlife from the proposed construction activities or staging areas.

### 2. Actions to Minimize Impacts

- Effects on plankton would be minimized by dewatering the construction site during in-stream activities.
- Effects on benthos would be minimized by indirect runoff. Any impact would be temporary and negligible because of implementing best management practices.
- Effects on listed bull trout would be minimized by dewatering the stream during in-stream activities and implementing erosion and sediment control measures.
- Effects on terrestrial wildlife would be temporary and negligible. Construction would be localized to areas that are highly urbanized areas and parking lots.
- Effects on the aquatic food web would be minimized by restricting the discharges to fall which minimizes effects on spring and summer plankton populations, and by limiting discharges to a small area relative to the size of the Clearwater River.

## F. PROPOSED CONSTRUCTION OF SEDIMENT STILLING BASIN, CONSTRUCTION OF MAINTENANCE ROAD, AND INSTALLATION OF A SHORELINE REVETMENT

### 1) Mixing Zone Determinations.

There are no wastewater treatment plants or other wastewater outfalls within this reservoir and construction would occur under dry conditions.

### 2) Determination of Compliance with Applicable Water Quality Standards

Section 401 of the Clean Water Act requires that applicants requesting a federal license or permit to conduct activities that may result in a discharge into waters of the United States, provide, to the licensing or remitting agency, a certification from the State that any such discharge complies with applicable provisions of the Clean Water Act and state water quality standards. Idaho Department of Environmental Quality has the following conditions necessary to ensure compliance with water quality standards:

1) 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 to prevent exceedances of Water Quality standards (IDAPA 58.01.02.350.01.1).

2) BMPs must be selected and properly installed. Proper installation and operation of BMPs are required to ensure the provisions of IDAPA 58.01.02.05 are met. To ensure that BMPs are operating properly and to demonstrate that degradation has not occurred, the permittee must monitor and evaluate BMP effectiveness daily during project activities to assure that water quality standards are being met.

3) If there is no visible sediment plume, 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.

USACE has determined the proposed in-water activities would meet the Idaho's state water quality standards for sediment and aquatic life. There is no domestic water supply or wastewater treatment requirements needed for this project. USACE has determined the proposed in-water activities will likely meet the state standards for turbidity. USACE will monitor for turbidity during the proposed activities at times where a plume is visible.

### 3) Potential Effects of Human Use Characteristics

Implementation of the proposed construction would have no significant adverse effects on municipal or private water supplies; recreational or commercial fisheries; water related recreation or aesthetics; parks; national monuments; or other similar preserves.

### 4) Determination of Cumulative Effects on the Aquatic Ecosystem

The impacts associated with the proposed action would not create significant effects on the aquatic ecosystem. Work would be conducted during low flow conditions and turbidity would be located to areas surrounding the construction area. USACE would continue the operation and maintenance of the ramp to ensure that it continues to provide a stable shoreline.

### 5) Determination of Secondary Effects on the Aquatic Ecosystem

No significant secondary effects should result from the proposed action.

## IV. FINDINGS OF COMPLIANCE OR NON-COMPLIANCE WITH THE RESTRICTIONS ON DISCHARGE

### 1. Adaptation of the Section 404(b)(1) Guidelines to this Evaluation

No significant adaptations of the Guidelines were made relative to this evaluation.

### 2. Evaluation of Availability of Practicable Alternatives to the Proposed Discharge Site Which Would Have Less Adverse Impact on the Aquatic Ecosystem

USACE considered several alternatives to improve drainage conditions associated with Area 380 and stabilize the eastern bank of the stream channel. USACE determined the alternatives were not practicable because they did not meet all the goals of the proposed action by minimizing impact to ESA and the intermittent stream channel. The preferred alternative provides the minimum impact to these resources and meets the intent of the purpose and need of the project.

### 3. Compliance with Applicable State Water Quality Standards

Erosion and Sediment Control Measures would be implemented to minimize sediment laden runoff from entering the Clearwater River. Construction activities would be monitored for effects to water quality (i.e., turbidity). Actions would be taken to reduce resulting effects to a level within the criteria set forth in applicable state standards.

### 4. Compliance with Applicable Toxic Effluent Standard or Prohibition Under Section 307 of the Clean Water Act

The proposed action would not discharge effluent or toxic substances into the intermittent stream or the Clearwater River.

### 5. Compliance with Endangered Species Act of 1973

USACE has determined that the proposed action would not affect ESA-listed species because the proposed action area is spatially separated from suitable habitat for these species. Mitigation measures will be implemented to minimize turbidity in the Clearwater River. This includes turbidity monitoring, working in seasonally low flow conditions, and diverting the stream channel outside of the construction work area.

## 6. Compliance with Specified Protection Measures for Marine Sanctuaries Designated by the Marine Protection, Research, and Sanctuaries Act of 1972

Designated marine sanctuaries are not located in the proposed work area.

## 7. Evaluation of Extent of Degradation of the Waters of the United States

### i. Significant Adverse Effects on Human Health and Welfare

The proposed excavation and fill actions would have no significant adverse effects on human health and welfare.

Municipal and private water supply intakes are not located in the vicinity of the proposed discharge sites. Such water supplies are not expected to be adversely affected.

Commercial fisheries are not present in the Clearwater River. Recreational fishing for Clearwater River would not occur in the vicinity of the construction activities or staging areas because fishing occurs downstream of the proposed action area. These activities are not expected to influence recreational fishing in the vicinity of the sites as the work would take place in the intermittent channel not used for recreational fishing.

Localized, short-term effects to plankton, benthic communities, bull trout, salmonids and other fish populations would be minimized as the work would take place under dry conditions. No short-term or long-term effects are anticipated.

The effects on wildlife because of construction activities are expected to be indirect, short-term, and minor, primarily because of displacement during the operation. The proposed construction activities would occur under dry conditions and would not prevent wildlife from obtaining food or otherwise using the areas adjacent to the activities.

Wetlands are not present at the construction site or staging areas. Sanctuaries and refuges, mud flats, vegetated shallows, coral reefs, and riffle and pool complexes are not present at the construction site or staging areas.

### ii. Significant Adverse Effects on Life Stages of Aquatic Life and Other Wildlife Dependent on Aquatic Ecosystems

The proposed construction activities would have no significant adverse effects on aquatic life or wildlife dependent upon aquatic ecosystems. The in-water work window has been scheduled to allow the project to be constructed under dry conditions. Localized, short-term effects on resident aquatic life would also be minimized by performing the work under dry conditions. Effects on wildlife are expected to be indirect, short-term, and minor, primarily because of displacement during the operation.

### iii. Significant Adverse Effects on Aquatic Ecosystem Diversity, Productivity and Stability

The proposed construction activities would have no significant adverse effects on the aquatic ecosystem. Localized, short-term effects on the productivity of plankton and benthic communities are expected to be minimized by performing the work in late fall under dry conditions.

### iv. Significant Adverse Effects on Recreational, Aesthetic, and Economic Values

The proposed construction activities would have no significant adverse effects on recreational, aesthetic, or economic values. Adverse effects on economic values are not expected as the there is no commercial use of Area 380. Adverse effects on recreational and aesthetic values are expected to be minor as the effects would be localized (confined to areas upstream of the intake culvert.

## 8. Finding of Compliance or Non-Compliance

The proposed excavation and fill action complies with the Section 404(b)(1) Guidelines from EPA (40 C.F.R. 230), with the inclusion of the appropriate and practicable steps taken to minimize potential adverse effects of the discharge on the aquatic ecosystem. The preferred action is the least environmentally damaging practicable alternative as it capable of being performed and minimizes adverse effects while staying within the available budget. The preferred disposal action also complies with the applicable USACE evaluation factors in 33 C.F.R. 336.1(c)), as it provides for adequate operations and maintenance of the Area 380 intake structure while meeting the Federal standard of least costly, environmentally acceptable, and consistent with engineering requirements. Other factors identified in 33 C.F.R. 336.1(c) are adequately addressed under the Section 404(b)(1) evaluation.

# Appendix B

# Idaho SHPO NHPA Section 106 Concurrence Letter

IDAHO STATE HISTORICAL SOCIETY

27 April 2022

**Brad Little**
Governor of Idaho

**Janet Gallimore**
Executive Director
State Historic
Preservation Officer

**Administration:**
2205 Old Penitentiary Rd.
Boise, Idaho 83712
208.334.2682
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**Idaho State Museum:**
610 Julia Davis Dr.
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**Idaho State Archives and State Records Center:**
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**State Historic Preservation Office:**
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**Old Idaho Penitentiary and Historic Sites:**
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HISTORY.IDAHO.GOV

Scott M. Hall
Supervisory Archaeologist
Walla Walla District, Corps of Engineers
Planning, Programs, and Project Management
201 North Third Ave.
Walla Walla, WA 99362-1876

**RE: Area 380 Drainage Structure Improvements, Lewiston, Nez Perce County, Idaho / SHPO Rev. No. 2022-485**

Dear Mr. Hall:

Thank you for consulting with our office on the above referenced project. We understand the U.S. Army Corps of Engineers (USACE), is proposing to conduct improvements to the "380 Area" levee drainage structure in Lewiston, Nez Perce County, Idaho. The "Area 380" consists of the collection and conveyance facility that allows for the drainage of run-off above the Lewiston levees to re-enter the Clearwater River. The proposed work would include cleaning of the existing culverts and outlet; construction of a sediment trap at the intake; construction of a permanent access for annual maintenance that includes a gravel road, ramp, and retaining wall; and slope stabilization of an unnamed drainage channel.

On 4 April 2022, our office received an inventory report prepared by Stephen J. Roberts of USACE detailing the results of an archival study that documented historic properties within or adjacent to the proposed area of potential effects (APE). The proposed work will be conducted within the National Register of Historic Places (NRHP)-eligible Lewiston Levee System (IHSI Ref: 69-18224) and the NRHP-eligible Clearwater River Memorial Bridge (IHSI Ref: 69-18013).

In accordance with the recommendations of the archival study, the USACE has determined that character defining attributes that may make the identified historic properties eligible for the NRHP would not be adversely affected by the proposed project. After careful consideration, our office concurs with these findings as presented.

Pursuant to 36 CFR 800.5, we have applied the criteria of effect to the proposed undertaking. Based on the information received 4 April 2022, we find the proposed project undertaking will have **no adverse effect** to historic properties.

In the event that cultural material is inadvertently encountered during the implementation of this project, work shall be halted in the vicinity of the finds until they can be inspected and assessed by the appropriate consulting parties. If you have any questions, or the scope of the work changes, please contact me at chris.shaver@ishs.idaho.gov or (208) 488-7467.

Sincerely,

**Christopher L. Shaver**
**Compliance Archaeologist**
**Idaho State Historic Preservation Office**

# Appendix C

# GHG Emissions Data

**East Lewiston Area 380 Drainage Construction**
**Anticipated Equipment USED Onsite**
(Does not included equipment delivering supplies)

| EQUIPMENT | SIZE | FUEL |
|---|---|---|
| Cement Trucks | 8mt tipper | Diesel |
| Dump Trucks | 12 yards | Diesel |
| Excavator CAT | 320 | Diesel |
| Excavator CAT | 312 | Diesel |
| Skid Steer | 279D | Diesel |
| Truck-mounted crane | 1870 Boom Truck | Diesel |
| Chainsaw | 180 Stihl | Gas |
| Pickups (4) | Dodge Ram one ton | Diesel |
| Roller compactor | Bomag 211 | Diesel |
| CAT Dozer | D4 | Diesel |
| Concrete Pump truck | 90 foot | Diesel |
| Concrete saw | 5 hp Stihl | Gas |
| Jumping jack compactor | 120 lb | gas |
| Plate vibrator | 110 LB | gas |
| All Terrain Fork Lift | JLG 305 horse | Diesel |

# East Lewiston Area 380 Drainage Restoration Desing Build

# DRAFT Greenhouse Gas Emissions Evaluation

## 1. GREENHOUSE GAS BASELINE CONDITIONS

Greenhouse gases (GHG), such as CO2, methane (CH4), and nitrous oxide (N2O), contribute to climate change, including alteration of temperatures and precipitation patterns (EPA 2023a). Climate shapes the environment and where and how people live. Natural ecosystems are adapted to past climate conditions and their natural range of variability. Changes in climate could impact ecosystems and water resources and the benefits they provide to society.

Consistent with EO 13990, *Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis,* CEQ has issued interim National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change. This guidance includes direction for agencies to quantify a proposed action's GHG emissions and to disclose and provide contact for a proposed action's GHG emissions and climate effects.

*Existing GHG Conditions*

The EPA's GHG Reporting Program (GHRP) requires facilities that emit above 25,000 metric tons of CO2eq to report their emissions. For the City of Lewiston, and the greater Nez Perce County, there is only one facility that produces greater than 25,000 metric tons of CO2eq. The Clearwater Paper Corp produces anywhere from 240,000 to 360,000 metric tons of CO2eq annually (EPA 2023c). These figures are representative of the last decade of emission reports from the facility. This facility is one of 36 facilities in the state of Idaho that surpass the reporting threshold and emit approximately 5,228,325 metric tons of CO2eq annually (EPA 2023c).

*Existing Climate Conditions*

The Snake River Basin experiences seasonal variations in temperature and geographic variations in precipitation. The project area lies in the path of prevailing westerly winds and is largely influenced by air from the Pacific Ocean. Winters are generally damp and foggy with an average daily high of 32 degrees Fahrenheit (°F) in January. Occasionally, polar outbreaks of cold air pass over the Rocky Mountains, resulting in short periods of extremely low temperatures. Summers are hot and dry. The hot season lasts for two and a half months, with an average daily high of around 84 °F in July. Average and extreme temperatures for January and July are provided in Table 1-1. The average frost-free period extends from late May through September, and the average growing season is about 130 days.

**Table 1-1. January and July Temperature in the Snake River Basin**

| Month | Average Maximum | Average Minimum | Average Monthly | Extreme |
|---|---|---|---|---|
| January | 38 | 20 | 27 | -15 |
| July | 87 | 49 | 87 | 112 |

*Future Forecast*

Annual trends of warming temperatures, earlier spring snow melt, and reduced snowpack are already affecting water resources in the western United States, and these trends are expected to continue (USGCRP 2018). Temperatures in the region have warmed about 1.5 °F since the 1970s and are expected to warm another 1 to 4 °F by the 2030s (RMJOC 2018). As temperature warm, winter precipitation in the form of rain, not snow, is projected to increase while summer precipitation is projected to decrease (Melillo et al. 2014).

Climate change is expected to have important consequences for water quality conditions across the Snake River Basin due to increased temperatures and altered flow regimes. Studies have projected that as warming trends continue, fall and winter stream flows would increase and the peak seasonal snowmelt would occur earlier in the spring with higher flow peaks (Regonda et al. 2005, Knowles et al. 2006, and Colins et al. 2013). In transient runoff watersheds (mid-elevation watersheds with winter and spring flows driven by both snowmelt and rainfall), like the Snake River Basin, the magnitude and frequency of flooding is predicted to increase significantly in the months of December and January (Elsner et al. 2010 and Mantua et al. 2010). Additionally, summer flows will likely decrease and the period of low summer flows that historically extended from mid-July to October may shift earlier (RMJOC 2018). Rising air temperatures and lower summer flows would not only affect water quality, but in-stream habitat and the present aquatic flora and fauna.

# 2. IMPACT EVALUATION

*Project Location*

The proposed action area is located within the Lower Granite Lock and Dam Project Lands, Nez Perce County, Idaho (Figure 1).


**Figure 1. Proposed Action Location.**

### 2.1 Alternative 1: No Action

Under the No Action Alternative USACE would not construct the sediment trap, access road, or shoreline revetment. As it stands, there are no known sources of GHG emissions that come from the area aside from minor emissions from the roadway to the west and the residential area to the east. Therefore, implementation of the No Action Alternative would have no meaningful impact on climate change. In comparison to the total annual output of emissions from sources in the surrounding areas, the No Action Alternative would not have any impact on local, regional, or global greenhouse gas emissions.

### 2.2 Alternative 2: Proposed Action USACE Sediment Trap, Access Road Ramp, and Revetment Wall Installation

Under Alternative 2, hence forth referred to as the Proposed Action Alternative, USACE intends to construct a sediment stilling basin and required accessory structures at Area 380 in Lewiston, Idaho. This alternative would include: 1) the sedimentation basin itself,

2) a six-foot-high stop-log weir at the culvert inlet, 3) extension of the existing wing walls at the culvert and 4) an access road and ramp to facilitate maintenance upstream of the drainage structure. These structures would be installed within an unnamed intermittent stream that drains from Area 380 to the Clearwater River in Lewiston, Nez Perce County, Idaho.

*Estimated Equipment*

Table (1) below, displays estimated equipment required for Alternative 2: Proposed Action USACE Sediment Trap, Access Road Ramp, and Revetment Wall Installation.

**Table 1. Alternative 2: Proposed Action Equipment List**

| EQUIPMENT | SIZE | FUEL |
|---|---|---|
| Cement Trucks | 8mt tipper | Diesel |
| Dump Trucks | 12 yards | Diesel |
| Excavator CAT | 320 | Diesel |
| Excavator CAT | 312 | Diesel |
| Skid Steer | 279D | Diesel |
| Truck-mounted crane | 1870 Boom Truck | Diesel |
| Chainsaw | 180 Stihl | Gas |
| Pickups (4) | Dodge Ram one ton | Diesel |
| Roller compactor | Bomag 211 | Diesel |
| CAT Dozer | D4 | Diesel |
| Concrete Pump truck | 90 foot | Diesel |
| Concrete saw | 5 hp Stihl | Gas |
| Jumping jack compactor | 120 lb | gas |
| Plate vibrator | 110 LB | gas |
| All Terrain Fork Lift | JLG 305 horse | Diesel |

*GHG Emissions Analysis*

Under the Alternative 2: Proposed Action, carbon emissions would be increased temporarily during construction activities. GHG production is a byproduct of internal combustion of the construction equipment listed above. Table (2), below, displays the GHG emission estimates for the Proposed Action based on required equipment, emissions factors specific to the equipment type, and the estimated hours of operation for each piece of equipment. The CO2 equivalent (a non-CO2 GHG molecule's equivalent global warming potential to CO2) is calculated, totaled, and represented in metric tons.

# Alternative 2: Proposed Action USACE Sediment Trap, Access Road Ramp, and Revetment Wall Installation

**Table 2 GHG Emissions Inventory**

| Emission Source Data | | | Equipment Emission Factor (lbs/hr) | | | GHG Emissions (kg) | | | | Concrete Emissions Contribution | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Construction Activity/ Equipment Type | Power Rating HP | Est. Hours of Operation | CO2 | CH4 | N2O | CO22 | CH42 | N2O4 | CO2eq | Est. Quantity of Concrete (cubic yards) | CO2eq Emissions (kg) |
| Off-Highway Trucks_250 | 250 | 40 | 166.5 | 0.0 | 0.3 | 3021.1 | 0.1 | 6.0 | 4809.1 | 164 | 0.006068 |
| Off-Highway Trucks_500 | 500 | 40 | 272.3 | 0.0 | 0.5 | 4940.1 | 0.2 | 9.1 | 7660.8 | **Asphalt Emissions Contribution** | |
| Excavators_250 | 250 | 40 | 158.7 | 0.0 | 0.3 | 2878.5 | 0.1 | 5.3 | 4457.1 | Est. Quantity of Asphalt (cubic yards) | CO2eq Emissions (kg) |
| Excavators_250 | 250 | 40 | 158.7 | 0.0 | 0.3 | 2878.5 | 0.1 | 5.3 | 4457.1 | 0 | 0 |
| Skid Steer Loaders_120 | 120 | 25 | 42.8 | 0.0 | 0.1 | 484.8 | 0.0 | 1.5 | 946.3 | | |
| Cranes_120 | 120 | 16 | 50.1 | 0.0 | 0.3 | 363.9 | 0.0 | 1.9 | 935.8 | | |
| Other General Industrial Equipmen_25 | 25 | 8 | 15.3 | 0.0 | 0.1 | 55.7 | 0.0 | 0.4 | 182.4 | | |
| Off-Highway Trucks_250 | 250 | 20 | 166.5 | 0.0 | 0.3 | 1510.6 | 0.1 | 3.0 | 2404.6 | | |
| Forklifts_250 | 250 | 20 | 77.1 | 0.0 | 0.1 | 699.5 | 0.0 | 1.0 | 989.0 | | |
| Plate Compactors_15 | 15 | 25 | 4.3 | 0.0 | 0.0 | 48.9 | 0.0 | 0.4 | 155.3 | | |
| Concrete/Industrial Saws_120 | 120 | 15 | 74.1 | 0.0 | 0.3 | 504.4 | 0.0 | 2.2 | 1160.7 | | |
| Pumps_250 | 250 | 40 | 201.4 | 0.0 | 0.5 | 3652.8 | 0.1 | 8.8 | 6287.9 | | |
| Rollers_250 | 250 | 8 | 153.1 | 0.0 | 0.5 | 555.4 | 0.0 | 1.7 | 1056.3 | | |
| Other General Industrial Equipmen_25 | 25 | 16 | 15.3 | 0.0 | 0.1 | 111.4 | 0.0 | 0.8 | 364.7 | | |
| | | | | **Total (Metric Tons)** | | 21.706 | 0.0009 | 0.04745 | **35.87** | | |

| $CO_2eq = X*CO_2 + Y*N_2O + Z*CH_4$ |
|---|
| Where X = 100 Year Global Warming Potential for Carbon Dioxide = 1 |
| Where Y = 100 Year Global Warming Potential for Nitrous Oxide = 298 |
| Where Z = 100 Year Global Warming Potential for Methane = 25 |

CFR Title 40 Chapter I Subchapter C Part 98: Table A-1 Global Warming Potentials

Based on required equipment and estimated durations, the Proposed Action Alternative would produce approximately 35.87 metric tons of CO2 eq. However, these emissions would be localized, temporary, and comparatively small. This quantity is well below the EPA's 25,000 metric ton reporting requirement and would not have any meaningful impact on climate change. In comparison to the total annual output of emissions from sources in the surrounding areas, the Proposed Action would not have any measurable impact on local, regional, or global greenhouse gas emissions. Furthermore, the Proposed Action includes the compensatory mitigation for the removal of approximately 30 trees. The mitigative measures would include the planting of approximately 600 riparian plantings. These efforts would provide long-term GHG offsets from the natural sequestration of atmospheric carbon.

## 2.3 Alternative 3: Installation of Drainage Improvement Features and Temporary Access Road

Under Alternative 3, USACE would implement the same project elements contained within Alternative 2. USACE would construct a sediment stilling basin and required accessory structures at Area 380 in Lewiston, Idaho. This would include: 1) the sedimentation basin itself, 2) a six-foot-high stop-log weir at the culvert inlet, 3) and extension of the existing wing walls at the culvert. In addition, Alternative 3 would involve the construction of a gravel access roadway, however, unlike Alternative 2, the roadway would be a temporary installation. The roadway would be installed for the initial construction of the above project features, then removed upon completion. The roadway would be installed on an annual basis for routine removal of sediment from the stilling basin.

*Estimated Equipment*

The equipment required for Alternative 2 would be same equipment listed above, in Table (1). Construction timelines and equipment durations are likely to change due to the initial installation and subsequent removal of the gravel roadway.

*GHG Emissions Analysis*

Much like Alternative 2, implementation of Alternative 3 would result in a temporary increase in carbon emissions during construction activities. Table (3), below, displays the GHG emission estimates for Alternative 3 based on required equipment, emissions factors specific to the equipment type, and the estimated hours of operation for each piece of equipment. Table (3) includes the removal of the gravel access road upon completion of the other construction activities. Table (4) represents an estimate for the annual GHG emissions produced from the temporary installation and removal of the gravel roadway for maintenance removal of the sediment from the stilling basin.

# Alternative 3: Installation of Drainage Improvement Features and Temporary Access Road

**Table 3 GHG Equipment Emissions Inventory**

| Emission Source Data | | | Equipment Emission Factor (lbs/hr) | | | GHG Emissions (kg) | | | | Concrete Emissions Contribution | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Construction Activity/ Equipment Type | Power Rating HP | Est. Hours of Operation | CO2 | CH4 | N2O | CO22 | CH42 | N2O4 | CO2eq | Est. Quantity of Concrete (cubic yards) | CO2eq Emissions (kg) |
| Off-Highway Trucks_250 | 250 | 40 | 166.5 | 0.0 | 0.3 | 3021.1 | 0.1 | 6.0 | 4809.1 | 164 | 0.006068 |
| Off-Highway Trucks_500 | 500 | 40 | 272.3 | 0.0 | 0.5 | 4940.1 | 0.2 | 9.1 | 7660.8 | **Asphalt Emissions Contribution** | |
| Excavators_250 | 250 | 50 | 158.7 | 0.0 | 0.3 | 3598.1 | 0.1 | 6.6 | 5571.3 | Est. Quantity of Asphalt (cubic yards) | CO2eq Emissions (kg) |
| Excavators_250 | 250 | 40 | 158.7 | 0.0 | 0.3 | 2878.5 | 0.1 | 5.3 | 4457.1 | 0 | 0 |
| Skid Steer Loaders_120 | 120 | 35 | 42.8 | 0.0 | 0.1 | 678.7 | 0.0 | 2.2 | 1324.8 | | |
| Cranes_120 | 120 | 16 | 50.1 | 0.0 | 0.3 | 363.9 | 0.0 | 1.9 | 935.8 | | |
| Other General Industrial Equipmen_25 | 25 | 8 | 15.3 | 0.0 | 0.1 | 55.7 | 0.0 | 0.4 | 182.4 | | |
| Off-Highway Trucks_250 | 250 | 20 | 166.5 | 0.0 | 0.3 | 1510.6 | 0.1 | 3.0 | 2404.6 | | |
| Forklifts_250 | 250 | 20 | 77.1 | 0.0 | 0.1 | 699.5 | 0.0 | 1.0 | 989.0 | | |
| Plate Compactors_15 | 15 | 35 | 4.3 | 0.0 | 0.0 | 68.5 | 0.0 | 0.5 | 217.4 | | |
| Concrete/Industrial Saws_120 | 120 | 15 | 74.1 | 0.0 | 0.3 | 504.4 | 0.0 | 2.2 | 1160.7 | | |
| Pumps_250 | 250 | 40 | 201.4 | 0.0 | 0.5 | 3652.8 | 0.1 | 8.8 | 6287.9 | | |
| Rollers_250 | 250 | 16 | 153.1 | 0.0 | 0.5 | 1110.8 | 0.0 | 3.4 | 2112.6 | | |
| Other General Industrial Equipmen_25 | 25 | 16 | 15.3 | 0.0 | 0.1 | 111.4 | 0.0 | 0.8 | 364.7 | | |
| | | | | **Total (Metric Tons)** | | 23.194 | 0.0009 | 0.05121 | **38.48** | | |

| $CO_2eq = X*CO_2 + Y*N_2O + Z*CH_4$ |
|---|
| Where X = 100 Year Global Warming Potential for Carbon Dioxide = 1 |
| Where Y = 100 Year Global Warming Potential for Nitrous Oxide = 298 |
| Where Z = 100 Year Global Warming Potential for Methane = 25 |

CFR Title 40 Chapter I Subchapter C Part 98: Table A-1 Global Warming Potentials

# Alternative 3: Temporary Roadway Removal and Construction Emissions (Annual Emissions)

**Table 4 GHG Equipment Emissions Inventory**

| Emission Source Data | | | Equipment Emission Factor (lbs/hr) | | | GHG Emissions (kg) | | | |
|---|---|---|---|---|---|---|---|---|---|
| Construction Activity/ Equipment Type | Power Rating HP | Est. Hours of Operation | CO2 | CH4 | N2O | CO22 | CH42 | N2O4 | CO2eq |
| Off-Highway Trucks_250 | 250 | 16 | 166.5 | 0.0 | 0.3 | 1208.5 | 0.1 | 2.4 | 1923.7 |
| Skid Steer Loaders_120 | 120 | 16 | 42.8 | 0.0 | 0.1 | 310.3 | 0.0 | 1.0 | 605.6 |
| Plate Compactors_15 | 15 | 16 | 4.3 | 0.0 | 0.0 | 31.3 | 0.0 | 0.2 | 99.4 |
| Rollers_250 | 250 | 8 | 153.1 | 0.0 | 0.5 | 555.4 | 0.0 | 1.7 | 1056.3 |
| Excavators_250 | 250 | 8 | 158.7 | 0.0 | 0.3 | 575.7 | 0.0 | 1.1 | 891.4 |
| Off-Highway Trucks_500 | 500 | 16 | 272.3 | 0.0 | 0.5 | 1976.1 | 0.1 | 3.6 | 3064.3 |
| | | | | **Total (Metric Tons)** | | 4.6572 | 0.0002 | 0.00999 | **7.64** |

| $CO_2eq = X*CO_2 + Y*N_2O + Z*CH_4$ |
|---|
| Where X = 100 Year Global Warming Potential for Carbon Dioxide = 1 |
| Where Y = 100 Year Global Warming Potential for Nitrous Oxide = 298 |
| Where Z = 100 Year Global Warming Potential for Methane = 25 |

CFR Title 40 Chapter I Subchapter C Part 98: Table A-1 Global Warming Potentials

Under Alternative 3, the construction aspects would remain the same with the exception of the removal of the gravel roadway upon completion. This would result in approximately 38.48 metric tons of GHG emissions compared to 35.87 metric tons for the Proposed Action Alternative 2. In addition, Alternative 3 would require the annual installation and removal of the gravel roadway for maintenance removal of the sediment from the stilling basin. This would result in approximately 7.64 metric tons of GHG emissions per year for the life of the project. Over the course of a decade, this would represent approximately 76.4 additional metric tons of GHG emissions. Although Alternative 3 would emit more GHGs in comparison to Alternative 2, these emissions would be localized, temporary, and comparatively small. Both quantities are well below the EPA's 25,000 metric ton reporting requirement and would not have any meaningful impact on climate change. In comparison to the total annual output of emissions from sources in the surrounding areas, the Proposed Action would not have any measurable impact on local, regional, or global greenhouse gas emissions. Similar to Alternative 2, Alternative 3 would include the compensatory planting of approximately 600 riparian plantings. These efforts would provide long-term GHG offsets from the natural sequestration of atmospheric carbon.

# Appendix D

# Clean Water Act Compensatory Mitigation Plan

US Army Corps
of Engineers®
Walla Walla District

# AREA 380 DRAINAGE IMPROVEMENTS COMPENSATORY MITIGATION DECISION DOCUMENT AND PLANTING PLAN ASOTIN SLOUGH ENHANCEMENT

## LOWER GRANITE LOCK AND DAM

**Planting Plan for Mitigation of Impacts to Wetland/Riparian Resources under the Clean Water Act, as amended, and Executive Order 11990**

**ADMINISTRATIVE RECORD – DO NOT DESTROY**

**PROJECT FILE NUMBER: PM-EC-2024-0034**

**March 2024**

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# EXECUTIVE SUMMARY

The Area 380 Drainage Improvements Project (The Project) and associated mitigation plan are being implemented by the U.S. Army Corps of Engineers, Walla Walla District. The purpose of this Mitigation Plan is to mitigate for 0.17 acres of unavoidable riparian impacts associated with an intermittent stream that would be impacted during construction at Area 380 in Lewiston, Idaho. The Project is needed to improve management of accumulated sediment removal, reduce erosion along the shoreline of the intermittent stream, and provide access for the removal of accumulated sediment.

The mitigation plan would enhance approximately 0.17 acres of riparian habitat on the Asotin Slough HMU adjacent to the Snake River. Asotin Slough HMU is a mitigation site established to replace public fishing and hunting opportunity under the Lower Snake River Fish and Wildlife Compensation Plan (Comp Plan) for habitats that were lost with the construction of the Lower Granite Dam. HMU management includes habitat enhancement as the Comp Plan requirement, which were completed in 2019. Therefore, the proposed mitigation plantings would be additive to the Comp Plan mitigation previously completed. No other agency is directing this work and this planting would be provided to satisfy Clean Water Act requirements only.

**AREA 380 DRAINAGE IMPROVEMENTS**
**COMPENSATORY MITIGATION DECISION DOCUMENT**
**AND PLANTING PLAN**
**ASOTIN SLOUGH ENHANCEMENT**

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Annex A Wetland Delineation Report

# ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| CFR | Code of Federal Regulations |
| EPA | Environmental Protection Agency |
| EP | Engineer Pamphlet |
| ER | Engineer Regulation |
| FR | Federal Register |
| IDEQ | Idaho Department of Environmental Quality |
| NEPA | National Environmental Protection Agency |
| NWI | National Wetlands Inventory |
| USACE | U.S. Army Corps of Engineers, Walla Walla District |
| USFWS | U.S. Fish and Wildlife Service |

# SECTION 1 - BACKGROUND AND INTRODUCTION

## 1.1 PURPOSE OF THIS DOCUMENT AND AUTHORITY

The U.S. Army Corps of Engineers, Walla Walla District (USACE) plans to implement a compensatory mitigation plan in accordance with CFR §332.3 and EPA Final Mitigation Rule (73 FR 70:19594-19705, EPA, 2008). These are requirements necessary to offset environmental losses resulting from unavoidable impacts to waters of the United States authorized by Clean Water Act, Section 404 permits. Based on this regulation, the USACE must determine the compensatory mitigation to be required, based on what is practicable and capable of compensating for the aquatic resource functions that would be lost because of the permitted activity. The USACE would consider what would be environmentally preferable and likely to result in ecological success and sustainability, the location of the compensation site relative to the impact site and site significance within the watershed, and the costs of the compensatory mitigation project. This document is the decision-making tool that was used to determine the compensatory mitigation for the Area 380 Drainage Improvement Project (Project) in Lewiston, Idaho.

## 1.2 PROJECT IMPACT LOCATION

The Project is located on an intermittent tributary that drains into the Clearwater in Lewiston, Idaho (46.416835°, -116.999831°) between river mile 2 and 3 (Figure 1). The site lies within the Clearwater Hydrological Unit Code [(HUC) 17060306]; Idaho, Section 32 Township 36 North, Range 5 West Boise Principal Meridian.

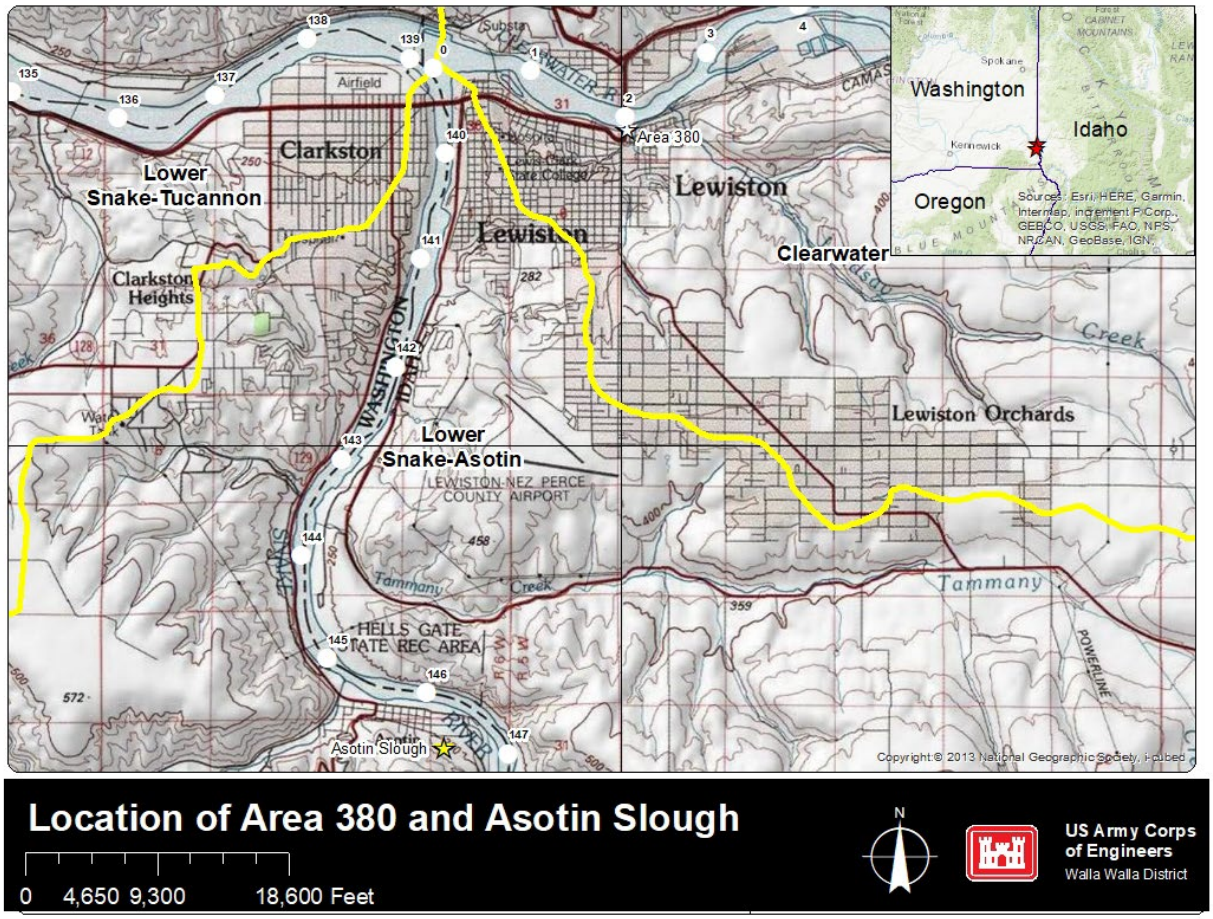


**Figure 1. Project Location for Area 380 and Asotin Slough HMU**

## 1.3 PROJECT GENERATING IMPACTS

Area 380 is a component of the East Lewiston Levee system, built August 1972 and authorized under the Rivers and Harbors Act of 1945. The Project aims at improving access for maintenance of the existing USACE owned culvert intake structure and reducing sediment discharge to the Clearwater River.

The purpose of the proposed action is to improve the function of the Area 380 intake structure and drainage features and to facilitate more efficient future removal of sediment. An action is needed because sediment can and has blocked or reduced flowage capacity at the intake structure allowing the creation of eddies and inundating the Area 380 drainage channel and ravine. The eddies cause the eastern streambank to destabilize. The Area 380 channel is designed to accommodate flow from an unnamed intermittent stream and stormwater from a portion of Lewiston. Continued sedimentation at the intake structure, and further streambank erosion or damage, would increase flood risk and risk damage to property. The proposed action is also needed to improve maintenance access to Area 380, prevent sediment from entering the intake structure and improve sediment removal.

USACE would construct a sediment trap and required accessory structures at Area 380 in Lewiston, Idaho. This alternative would include the following construction:

1) A sediment stilling basin,

2) A six-foot-high stop-log weir at the culvert inlet,

3) Extension of the existing wing walls at the intake structure, and

4) An access road and ramp to facilitate maintenance upstream of the drainage structure.

These structures would be installed within an unnamed intermittent stream that drains from Area 380 to the Clearwater River in Lewiston, Nez Perce County, Idaho.

The Sediment Stilling Basin

A sediment stilling basin would be built to capture and detain sediment before it enters the intake structure. A sediment stilling basin is a hydraulic structure that allows water to pass through but captures suspended sediments to allow for easier removal. The sediment stilling basin accomplishes this by directing water flow to a comparatively broad and deep basin with a bulkhead at the downstream end. Flowing water enters the basin and loses velocity, or energy. Without the energy of movement, suspended particles and debris gently settle to the bottom of the basin, while clean water flows over the bulkhead and into the intake structure (Figure 2).

The sediment stilling basin would be upstream of the intake structure, and the sedimentation basin would extend upstream approximately 65 feet. The basin would measure approximately 55 feet by 65 feet (3,585 square feet).

To construct the sediment stilling basin, USACE would excavate in front of the intake structure. This area would be sloped towards the intake structure and lined with gravel. Concrete slabs would be placed in the new basin to line the bottom. A retaining wall on the west bank of the ravine would be installed as necessary for the construction of the new access road and ramp. The concrete wingwalls would be extended and raised to increase capacity of the sediment stilling basin. The west wingwall would be extended roughly sixty feet and the east wingwall would be extended forty feet.

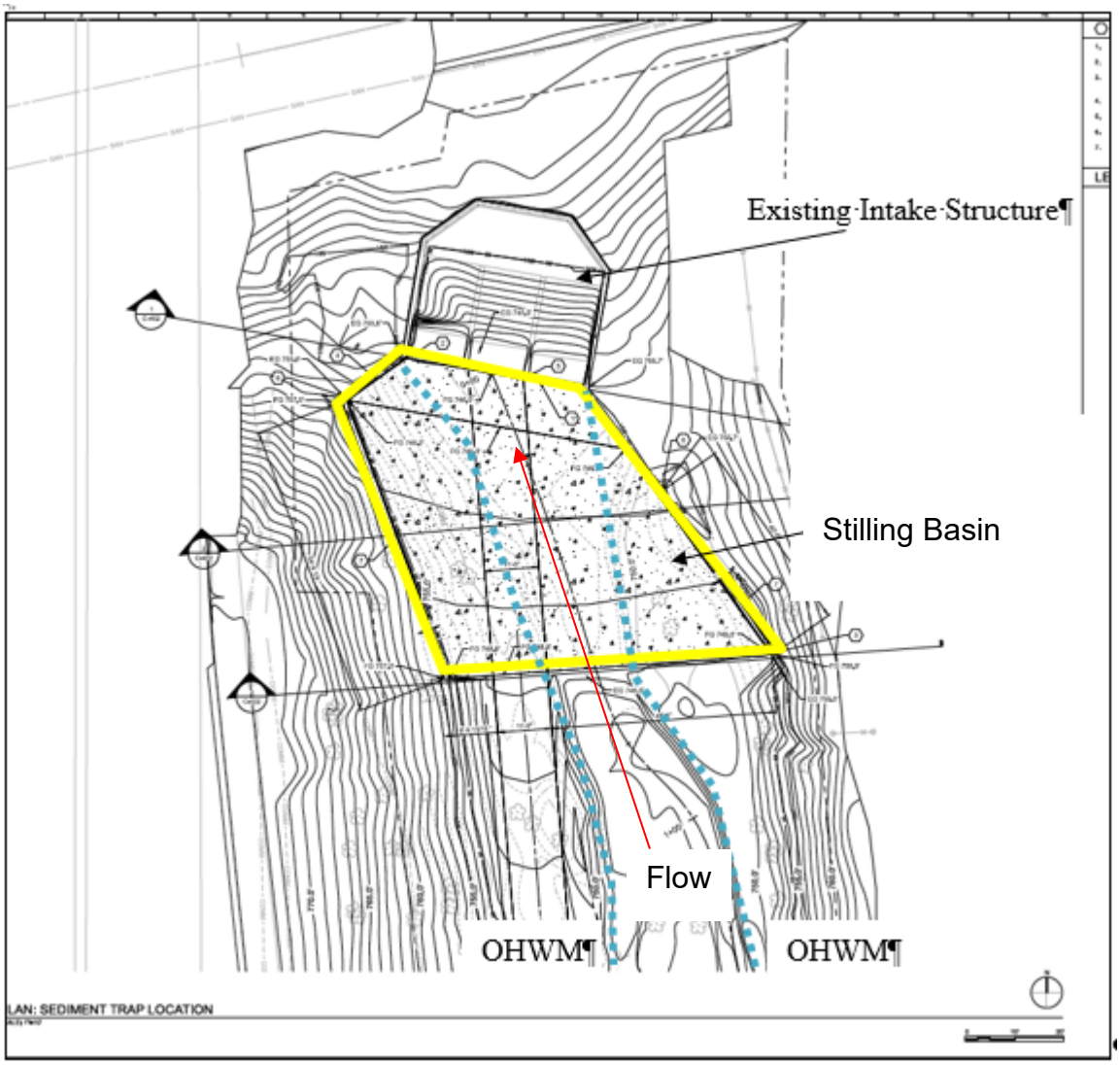


**Figure 2. Proposed Sediment Stilling Basin Shown in Yellow**

USACE would dewater the construction work area and install erosion and sediment control devices. USACE would excavate the sediment trap section approximately 1 to 2 feet. Gravel would be leveled to create a foundation for the concrete slabs. New fill and concrete slabs would be poured onsite to create the sediment trap.

Accumulated sediment in the sediment trap would be excavated annually to remove approximately 150 cubic yards of silty sand material per year. The sediment trap would be accessed by the road and ramp. Periodic draining of the sediment trap may be necessary to dry sediment for transport. A small sluice drain would be installed in the weir to allow for drainage.

The Stop Log Weir

The sediment stilling basin would be fitted with a stop log weir that can be adjusted from two to six feet high (Figure 3). A stop log weir is a type of water control structure built across a river or stream to alter its flow characteristics. The stop log weir would consist of several removable gates composed of steel beams that hold the stop logs in place to

form a low head dam at the downstream end of the sedimentation basin. The stop logs are not actual logs but are metal or synthetic boards that slide in and out of the gate channels. In normal operation, the stop logs would be in place and would pool water to have the sediment settle into the basin. An access bridge would be placed above the stop-log weir to assist in dewatering of the sediment stilling basin for maintenance activities.

**Figure 3. An Example of an Aluminum Stop Log Gate Weir, Made by the Rodney Hunt Corporation**

The Access Road

A permanent access road would be constructed from 22nd street, parallel to US-12, and would terminate at the sediment stilling basin (Figure 4). At the sediment stilling basin, USACE would construct an access ramp to allow for vehicles to enter the stilling basin to annually remove accumulated sediment.


**Figure 4. Proposed Access Road**

The ramp would be 11-foot wide and would consist of a gravel base foundation and concrete slabs (Figure 5). A retaining wall would be placed on the west shoreline to stabilize the bank and a 3-foot-wide rock shoulder would be placed on the east shoreline to allow for the road to drain.

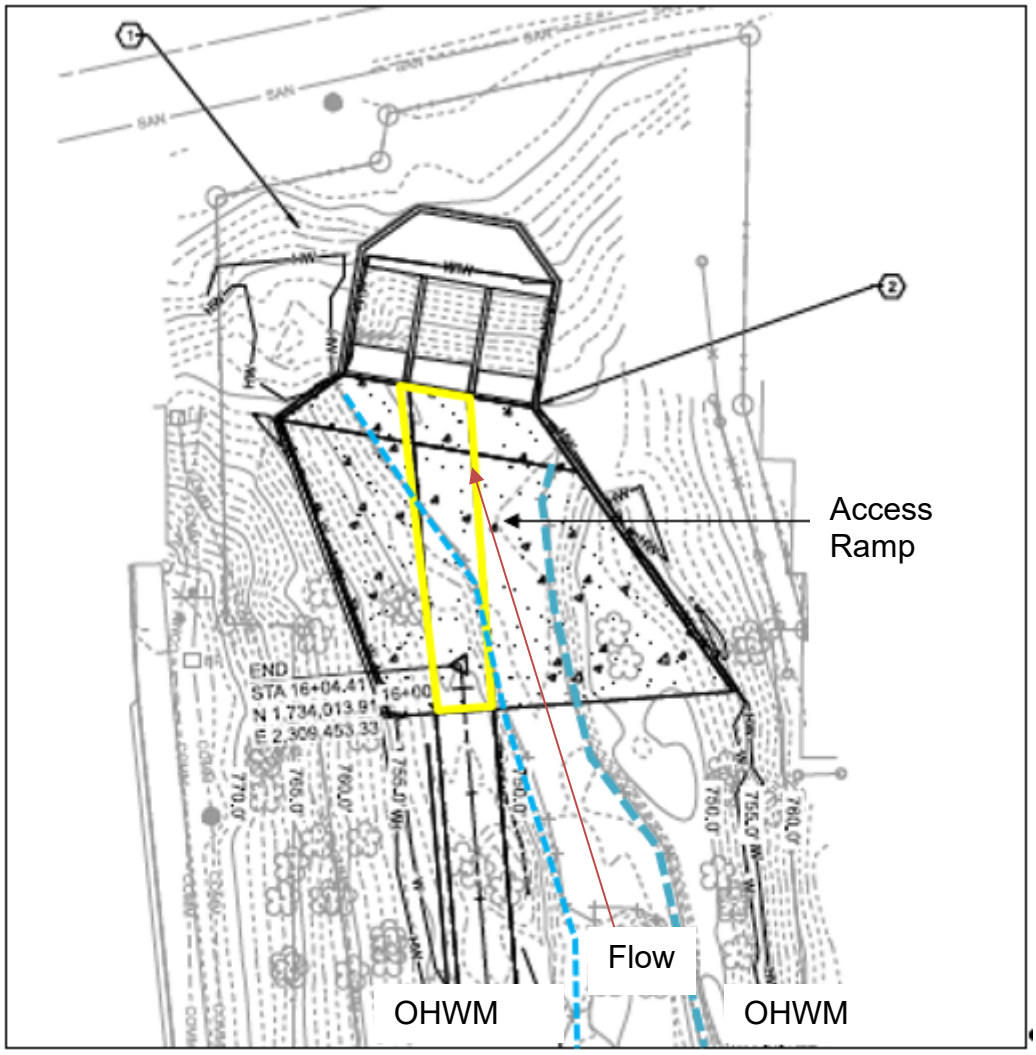


**Figure 5. Proposed Access Ramp in the Stream Shown in Yellow**

The 11 foot wide ramp would overlay the concrete slabs (Figure 6). A 4-inch aggregate base would be laid as a base for the road. The concrete ramp would be approximately 6 inches thick. A 3 inch drain rock buffer would be laid at the shoulder. A retaining wall would be installed along the perimeter of the ramp.

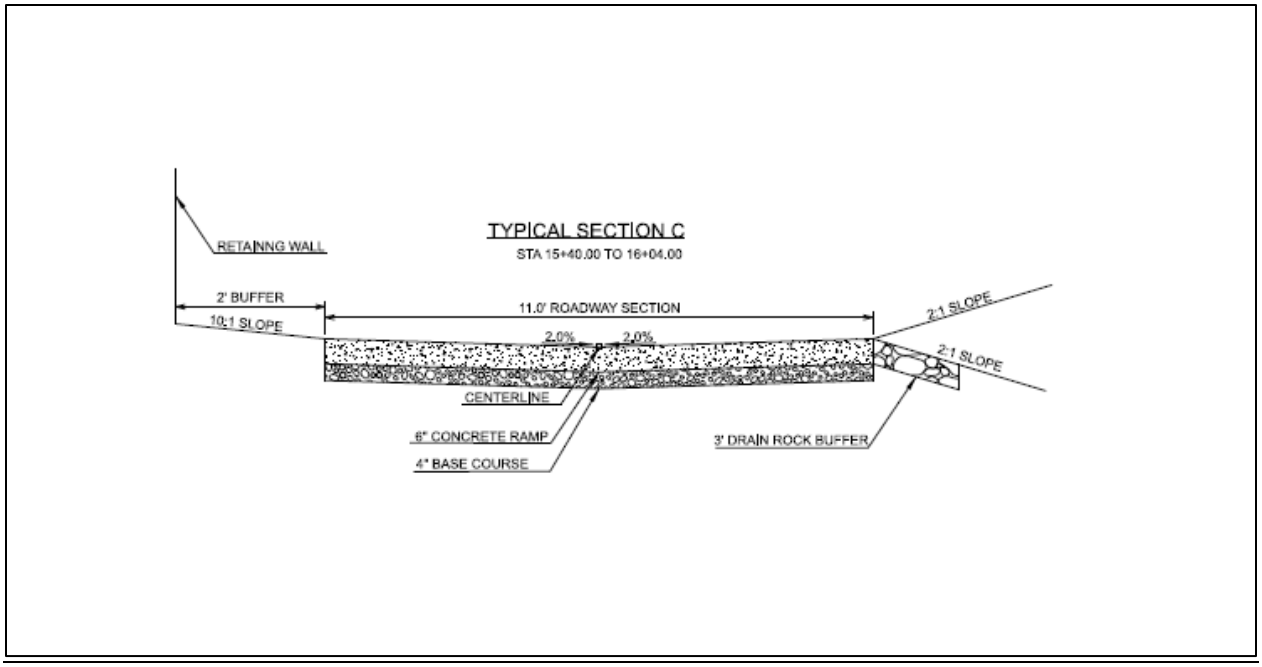


**Figure 6. Cross-Section of the Access Ramp**

Rock Revetment

Approximately 460 linear feet of shoreline along the eastern side of the ravine would be reinforced using rock to build a revetment. A ravine is a deep, narrow valley with steep sides, typically carved by the erosion of water such as a river or stream. A revetment is a structure or protective facing that is built to absorb the impact of water or erosion and prevent wearing of a slope or embankment (Figure 7). The revetment would reinforce the shoreline to protect it from damage during high flow events.

**Figure 7. Example of a Rock Revetment along a River**

The revetment would be approximately 15 feet high with approximately 2 feet of the toe buried within the intermittent stream (Figure 8 through 10). The rip rap would be planted with willow stakes to further provide shoreline stabilization and some riparian benefits.

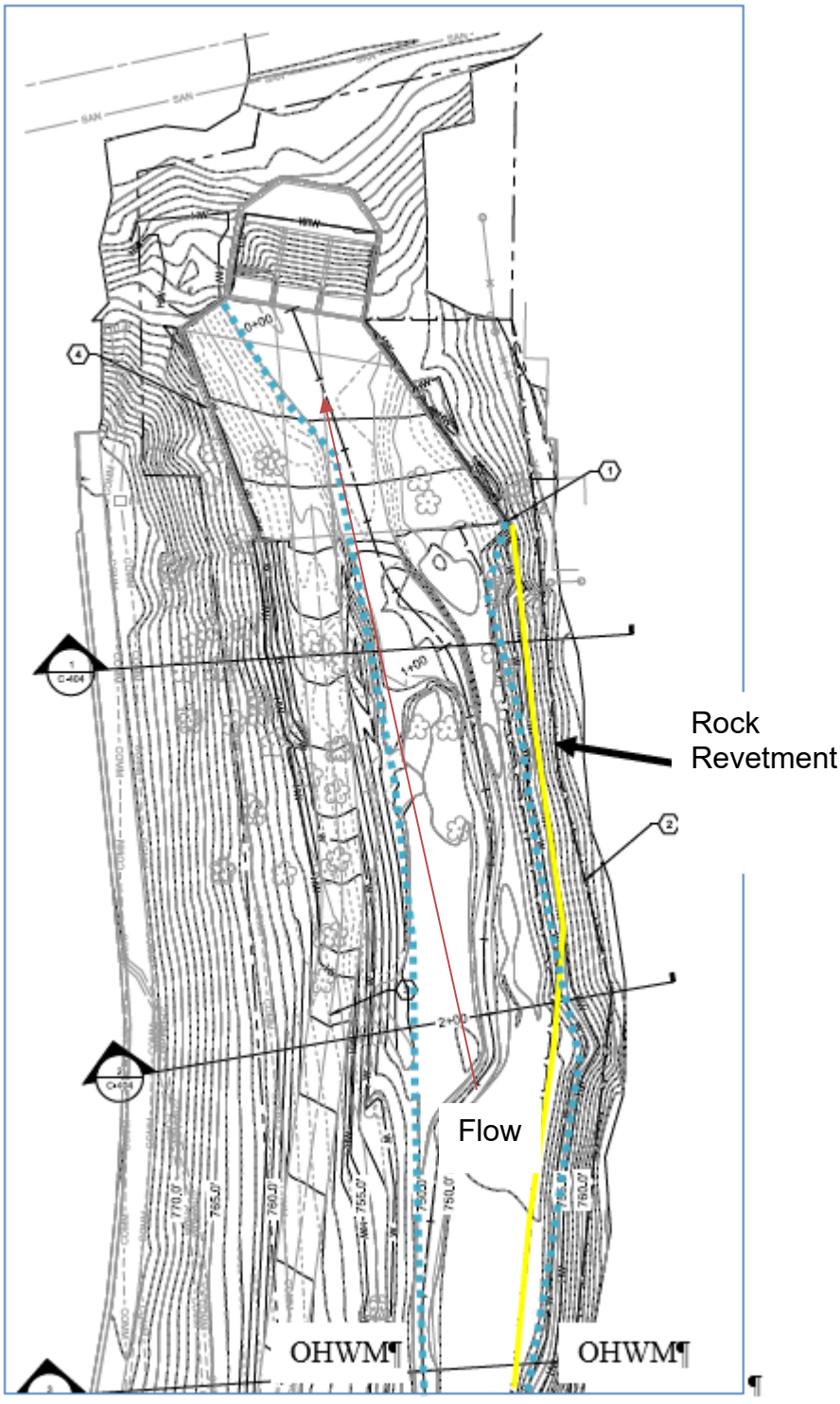


**Figure 8. Proposed Rock Revetment Shown in Yellow**

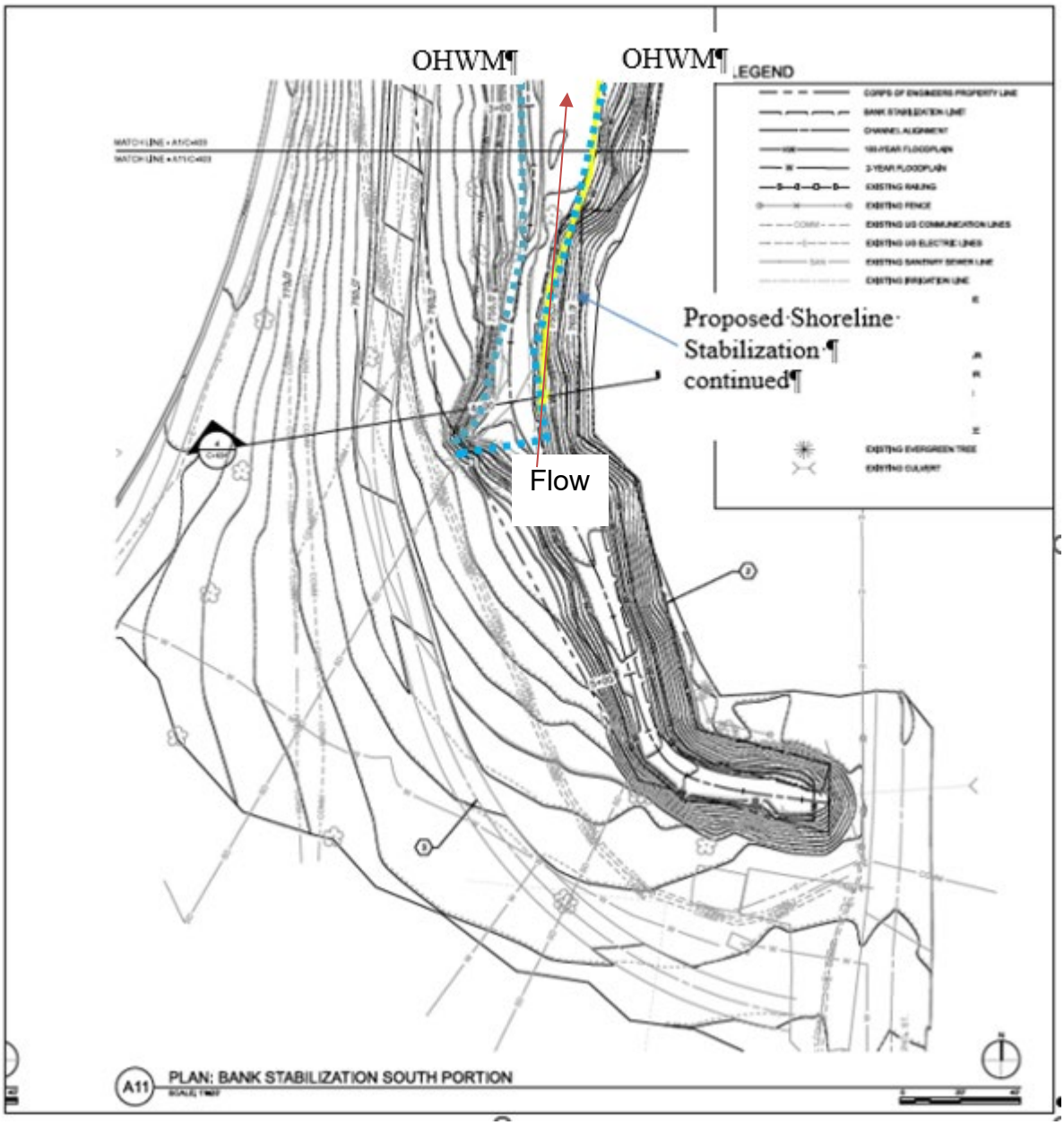


**Figure 9. Upper Extent of Reinforced Shoreline, Shown in Yellow**

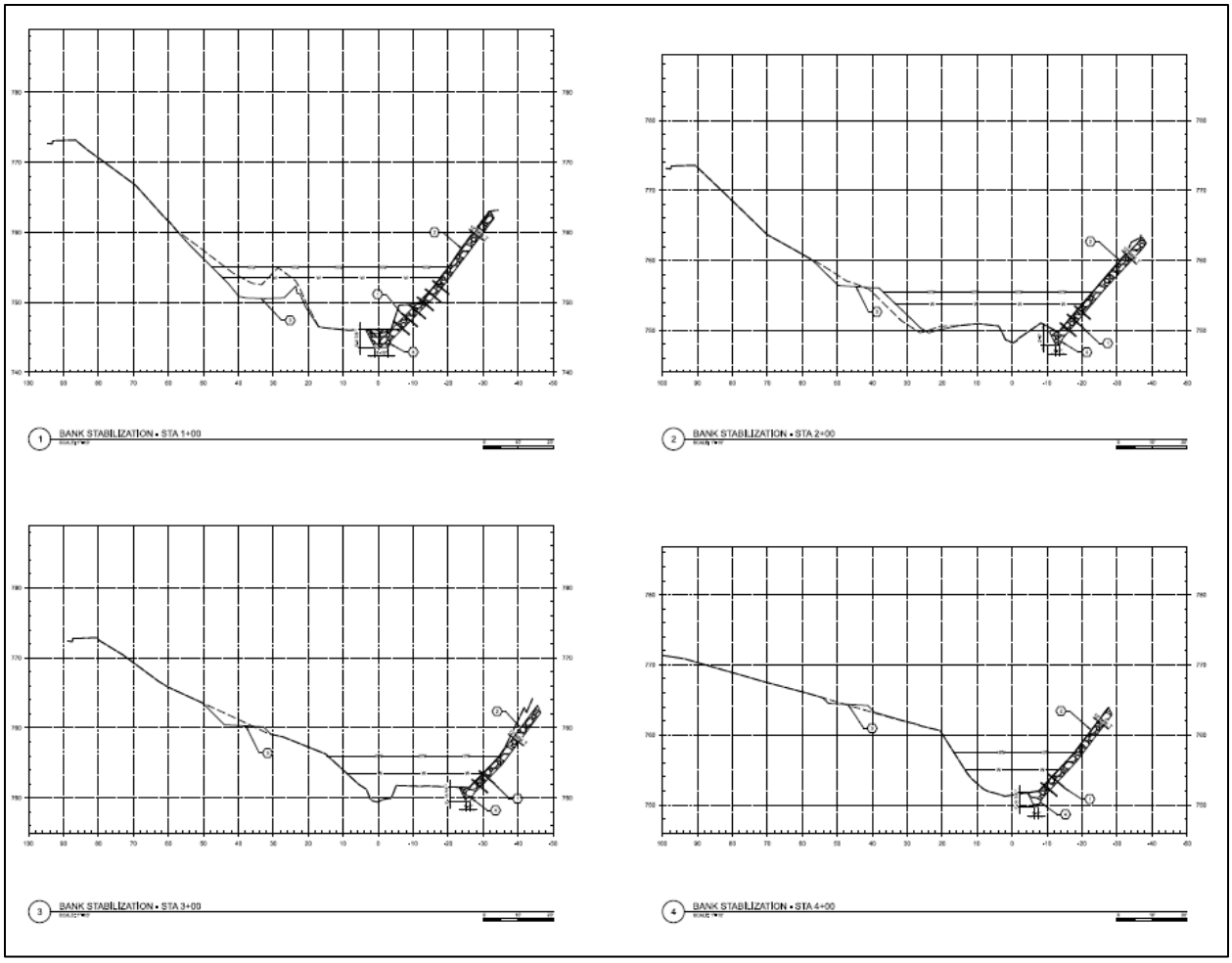


**Figure 10. Cross Section of Proposed Shoreline Stabilization**

### Construction Activities and Schedule

The contractor would install proper erosion and sediment control measures to prevent sediment from entering areas beyond the work area. Construction materials would be stored in nearby parking lots and disposed of off-site.

The contractor would initiate construction by removing the trees from the ravine. The entire tree and its roots would be removed.

The access road and ramp would be constructed next. This would provide the contractor stable ground to access the large equipment to the site.

The contractor would excavate the sediment stilling basin and build the wingwalls. Then build the sediment stilling basin and the bridge over the inlet structure. To perform this work, the contractor would conduct the activities during seasonal low flow conditions (July through December) so work could occur under dry conditions. The flow of the stream would be diverted around the work area.

Finally, the contractor would install the revetment and willow plantings and repair any damage to the access road.

In summary, the following amounts of excavation and fill of material below the Ordinary High Water Mark is described in Table 1.

**Table 1. Quantities of Excavation and Fill of Material Associated with the Project**

| Structure | Fill Material (Cubic Yards) | | | Excavation (Cubic Yards) |
|---|---|---|---|---|
| | Rip Rap Rock | Concrete | Soil | Soil |
| **Sediment Stilling Basin** | 0 | 164 | 18 | 165 |
| **Shoreline Revetment** | 343 | 0 | 85 | 289 |
| **Total** | **343** | **164** | **103** | **454** |

The proposed action would excavate approximately 454 cubic yards of soil to create the sediment stilling basin and anchor points for the shoreline revetment. The installation of the sediment stilling basin would need approximately 164 cubic yards of concrete and the shoreline revetment would need approximately 343 cubic yards of rip rap.

### Future Routine Sediment Removal

USACE would annually excavate approximately 150 cubic yards of accumulated sediment in the sediment stilling basin using an excavator. The stop-logs would normally be in place to catch the sediment. The stop-logs can act as a dam to allow the sediment to settle out of the water, while the water trickles over the stop-logs. The trap would be dewatered before sediment removal by channeling the sediment, allowing the sediment to settle and then removing the stop-log in-line with the channel. This would allow the water to pass through the basin, basically diverted around the sediment. The remaining sediment would dry and the USACE would excavate the material using a skid-steer or backhoe.

Sediment and mud would be allowed to dry on-site in an upland location and hauled by dump trucks to another site, likely Hells Gate Habitat Management Unit.

# SECTION 2 - ASSESSMENT OF IMPACTS TO AQUATIC RESOURCES AT AREA 380

The USACE conducted a field wetland analysis on July 10, 2023, to establish sample points, collect coordinates, and mark the boundaries of the Jurisdictional Waters of the United States. The approximate boundaries of the Water of the U.S. flags (A-1 through A-18) and datapoints (DP-1 and DP-2) are indicated on Figure 11.


**Figure 11. Riparian Area in Area 380**

Within this aquatic resource the following features were documented:

## 2.1 STREAM FEATURES

Area 380 contains an intermittent stream channel that flows from an underground source under Highway 12 downstream to an intake structure (Figure 12). The stream then flows approximately 500 linear feet downstream (Figure 13 and 14) until it flows into the Area 380 intake structure (Figure 15). This stream flows most of the year and consists of an earthen channel with slight meanders, small riffle and pool complex, with a riparian area supporting mature trees.

**Figure 12. Pipe under Highway 12. Stream Enters Drainage from this Point**

**Figure 13. Stream Channel Looking Downstream**

**Figure 14. Stream Channel at the Intake Structure, Looking Upstream**

**Figure 15. Intake Structure where the Stream Flows under Lewiston Levee System**

## 2.2 WETLAND FEATURES

Area 380 does not contain wetland features associated with this aquatic resource.

## 2.3 RIPARIAN FEATURES

The aquatic resource does contain an intermittent stream that is lined with riparian vegetation. The vegetation is composed mostly of mature black locust trees, a non-native species.

## 2.4 SUMMARY OF AQUATIC RESOURCES IN AREA 380

The intermittent stream flows from an underground source under Highway 12 through an intake structure that drains into the Clearwater River. Approximately 500 linear feet of this channel is above ground and earthen within Area 380. The stream channel does not support wetlands or floodplain features but does have riparian vegetation along both banks.

The riparian habitats impacted by the drainage improvements have been delineated as described below in Table 1 and shown above in Figure 9. The proposed impacts would occur in a riparian fringe. The shoreline is forested and contains primarily black locust trees.

**Table 2. Riparian Habitat Areas to be Impacted by the Project**

| Project Component | Impacted Area (acres) | Notes |
|---|---|---|
| **Revetment Fill** | | |
| **Riparian Vegetation** | 0.17 acres | This area is composed primarily of black locust trees. |
| **Sediment Trap** | | |
| **Riparian Vegetation** | 0.0 acres | This area contains no riparian vegetation to construct. |
| **Access Ramp** | | |
| **Riparian Vegetation** | 0.0 acres | This area contains no riparian vegetation to construct. |
| **Total Acreage Impacts for Mitigation** | 0.17 acres | |

## 2.5 BASELINE FUNCTIONS AND VALUES OF AQUATIC RESOURCES AFFECTED BY PROPOSED ACTION

The USACE considers the loss (impacts) and gain (compensatory mitigation) of aquatic resource functions as part of the Clean Water Act Section 404 permitting and compensatory mitigation decisions. The decision-making processes considers transparent and objective approaches to assess the function and condition of aquatic resources, including streams. Therefore, function-based stream assessments are used to 1) characterize the stream's condition or function, 2) improve understanding of the impact of a proposed action on an aquatic resource, and 3) to inform the development of stream compensatory mitigation tools rooted in stream condition and/or function. A function-based stream assessment can provide decision makers with the resources to objectively consider alternatives, minimize impacts, assess unavoidable impacts, determine mitigation requirements, and monitor the success of mitigation projects.

The intermittent stream was assessed to determine the loss of stream functions and services as a result of implementing the proposed action. The implementing regulations for the Clean Water Act Section 404 program define functions as “the physical, chemical, and biological processes that occur in ecosystems.” (33 CFR 332.2; 40 CFR 230.92). Table 2 shows the results of this assessment:

**Table 3. Function and Services Assessment of the Stream in Area 380**

| Functions and Services | Description | Level of Existing Services Present | Level of Existing Services Post-Construction |
|---|---|---|---|
| **Maintain Stream Evolution Process** | • Necessary process to maintain appropriate energy levels in the system.<br>• Promotes normally occurring change necessary to maintain diversity and succession.<br>• Provides for genetic variability and species diversity of biotic communities | The existing intermittent stream has been altered by its use as a drainage easement. It is entrenched, channelized, with little to no riffle to pool development. The area near the intake has been widened and is earthen. | The post construction would continue to function like the existing condition. |
| **Energy Management Processes** | • Spatial and temporal variability in cross section, grade and resistance allows for conversion between potential energy and kinetic energy through changes in physical features, hydraulic characteristics, and sediment transport processes. Provides habitat generates | The existing process is altered by the surrounding urban landscape. The intermittent stream does not support much grade as upstream of the | The processes after construction would continue to function like the existing condition. |

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| | heat, oxygenates flows. | drainage area is piped and underground. It is limited habitat for most organisms. | |
| **Provide for Riparian Succession** | • Changes in vegetation structure and age promote diversity and ecological vigor by initiating change, which is important to long term adaptation of ecosystems.<br>• Zones of mature riparian vegetation are necessary for system stability, LWD recruitment and nutrient cycling | There is the presence of large mature non-native trees along both shoreline of the intermittent stream. These trees do provide riparian functions of nutrient cycling and mitigates water temperature. | The riparian post construction would be willow along the western shoreline of the intermittent stream. This vegetation would provide some nutrient cycling and mitigate water temperature but would be managed by drainage easement functions. Therefore, the riparian vegetation may not mature to full growth potential. |
| **Surface Water Storage Processes** | • Provides temporary water storage during high flows.<br>• Regulates discharge and replenishes soil moisture. | There is no floodplain or wetland features associated with this intermittent stream. The | The post construction condition would continue to function like |

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| | • Provides pathways for fish and macroinvertebrate movement.<br>• Provides low-velocity habitats. Maintains base flow and soil moisture. Provides contact time for biogeochemical process. | stream has a limited capacity to infiltrate surface water and provide groundwater recharge. The stream is conveying water to the Clearwater River. | the existing condition. |
| **Maintain Surface/Subsurface Water Connections and Processes** | • Provides bi-directional flow pathways from open channel to subsurface soils.<br>• Allows exchange of chemicals, nutrients, and water.<br>• Moderates low and high in-channel flows. Provides habitat and pathways for organisms.<br>• Maintains subsurface capacity to store water for long durations.<br>• Maintains base flow, seasonal flow, and soil moisture. | The existing condition has limited subsurface soil connection. The ravine is confining areas where water could detain and infiltrate back into the subsurface. | The post construction would be like the existing condition. |
| **General Hydrodynamic Balance** | • Rivers have a unique hydrologic signature important to ensuring proper flow conditions at the appropriate seasons for support of the biotic environment. | The existing condition does not have an active floodplain or wetlands. | The post construction would continue to function like the existing condition. |

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| **Sediment Continuity** | • Provides for appropriate erosion, transport, and deposition processes.<br>• Maintains substrate sorting and armoring capabilities.<br>• Provides for establishment and succession of aquatic and riparian habitats.<br>• Important part of nutrient cycling and water quality maintenance. | The stream bed is uniform and not displaying sediment sorting. There are no deposition features in the channel. | The post construction would continue to function like the existing condition. |
| **Maintain Substrates and Structural Processes** | • Stream channels and riparian zones provide substrates and structural architecture to support diverse habitat and biotic communities.<br>• Complex habitats naturally attenuate the effects of irregular disturbance processes such as fire and floods. | There is limited diversity of biota within the existing conditions. There is a lack of large woody debris in the channel. The area is heavily disturbed by urban landscape. | The post construction would continue to function like the existing condition. |
| **Quality and Quantity of Sediments** | • Organisms often evolve under specific sediment regimes, and these must be preserved for ecological health of the system. Sediment yield and character are primary variables in determining the | There is a lack of banks, pools, and bars in the stream. | The post construction condition would function like the existing condition. |

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| | physical character of the system. | | |
| **Support Biological Communities and Processes** | • Provides for diverse assemblages of native species.<br>• Maintains natural predator/prey relationships.<br>• Maintains healthy physiological conditions of biotic communities.<br>• Maintains genetic diversity.<br>• Maintains age class and life form structures.<br>• Provides for natural reproduction and long-term biotic persistence. | There is a lack of food web diversity in the existing conditions. The area is a ravine that is piped upstream and located in an urban setting. | The post construction conditions would be like the existing condition. |
| **Maintain Trophic Structure and Process** | • Promotes growth and reproduction of biotic communities across trophic scales.<br>• Maintains contact time for biotic and abiotic energy processes.<br>• Maintains equilibrium between primary autotrophs and primary microbial heterotrophs. | These processes are very limited. The food web in the existing condition is rather small as the intermittent stream is isolated from another suitable aquatic habitat. There is little evidence of | The post construction condition would change slightly to include native willow. |

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| | • Supports food chain dynamics to convert energy to biomass.<br>• Supports characteristic patterns of energy cascade and pooling.<br>• Provides nutrient levels capable of sustaining indigenous biologic communities. | leaf litter and detritus in the stream. Most of the vegetation is non-native. | |
| **Maintain Water and Soil Quality** | • Water quality parameters are directly tied to support the biologic community.<br>• Riparian communities trap, retain, and remove particulate and dissolved constituents of surface and overland flow, improving water quality.<br>• Regulates chemical and nutrient cycles.<br>• Controls pathogens and viruses.<br>• Maintains chemistry and equilibrium conducive to reproduction, behavior, development and sustainability of a diverse aquatic ecosystem. | Species diversity would be mostly uniform throughout the intermittent stream and would be low. | The post construction would function like the existing condition. |

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| | • Supports important chemical processes and nutrient cycles. | | |
| **Maintain Chemical Processes and Nutrient Cycles** | • Provides for complex chemical reactions to maintain equilibrium and supply required elements to biota.<br>• Provides for acquisition, breakdown, storage, conversion, and transformation of nutrients within recurrent patterns. | The stream does contain periphyton and there is some evidence of decomposition products, but it is limited. | The post construction condition would function like the existing condition. |
| **Maintain Landscape Pathways** | • Maintains longitudinal and latitudinal connectivity to allow for biotic and abiotic energy process pathways.<br>• Serves as barriers, corridors, or buffers to plant and animal migration.<br>• Provides source and sink area for maintaining population equilibrium of plant and animal species. | There is little evidence of migratory species use because the intermittent stream is in an urban landscape with fragmented migration pathways. | The post construction condition would function like the existing condition. |

Most of the functions and services post construction would continue to function like the existing condition, except riparian vegetation. The riparian vegetation would be cleared from the intermittent stream to install the revetement on the western shoreline of the stream. That would result in the removal of approximately 30 black locust trees from both banks.

In summary, the Area 380 construction would impact the riparian function and services of the intermittent stream. The impact area is dominated by black locust trees, a non-

native species. The change in the vegetation structure would have a temporal effect which would limit large woody debris recruitment, water temperature, and nutrient cycling. All other functions and services would continue post construction.

## 2.6 MITIGATION SEQUENCING/STRATEGY

As discussed in the EPA 1990 Memorandum of Agreement on mitigation requirements, the Department of the Army and EPA agree that these mitigation types are generally applied sequentially in the following order to all Section 404 actions.

### Avoidance

The proposed action should avoid an aquatic resource impact by selecting the least-damaging project type, spatial location, and extent compatible with achieving the purpose of the project. Avoidance is achieved through an analysis for appropriate and practicable alternatives and a consideration of impact footprint.

For the Project, the staging areas, stockpile areas, and the construction of the access road would be in uplands adjacent to the drainageway.

### Minimization

The project would minimize impacts to an aquatic resource by managing the severity of the project's impacts at the project site. Minimization is achieved through the incorporation of appropriate and practicable design and risk avoidance measures.

For the Project, impacts would be minimized using erosion and sediment measures during construction and working under dry conditions. Water would be dewatered from the construction area during work to minimize turbidity and the potential for concrete to enter the Clearwater River.

The impacts to the stream channel are unavoidable. The sediment trap was designed taking into consideration minimizing impacts to the stream by locating the sediment trap and the access ramp in the same footprint. The access road would align to be outside of the ravine to minimize impacts to the stream channel.

Riparian impacts associated with the proposed action could not be fully avoided because of the nature of the project to stabilize the eroding western shoreline that is associated with a steep ravine. Riparian impacts are only associated with the footprint of the revetment structure and the opposite bank for access purposes. All other features necessary to construct the structure are to be located within the stream and adjacent uplands.

The western shoreline would be planted with willow stakes to allow for the riparian vegetation to establish. This would provide some detritus, leaf litter, and shade that would assist in maintaining a macroinvertebrate community within the stream channel.

Two rows of willows would be planted at the toe of the slope along 500 feet of the revetment. The willows would be installed vertically through the existing soil starting at the concrete wingwall to approximately 500 linear feet upstream on two foot centers.

The intent is to establish a riparian shoreline at the toe of the revetment to minimize impacts to the stream functions. This would provide approximately 3,200 square feet of riparian vegetation at the toe of the slope.

**Compensatory Mitigation Options**

Compensatory mitigation means mitigating an aquatic resource impact by replacing or providing substitute aquatic resources for impacts that remain after avoidance and minimization measures have been applied, and is achieved through appropriate and practicable restoration, establishment, enhancement, and/or preservation of aquatic functions and services.

Compensatory mitigation is required due to the loss of mature trees and associated riparian function and services.

# SECTION 3 - THE MITIGATION PLAN

The mitigation plan describes the following components.

1) Mitigation site selection process,
2) The baseline ecological information for both the proposed mitigation site and the proposed impact site
3) The mitigation work plan,
4) A long term monitoring plan based on objective and verifiable performance standards,
5) A management plan that ensures long term stewardship of the mitigation site.

## 3.1 THE MITIGATION PLAN OVERVIEW

The purpose of this Mitigation Plan (Plan) is to describe the details of the riparian mitigation efforts supporting the Area 380 Drainage Improvements Project (Project) in accordance with CFR §332.3 regulations.

This plan would result in approximately 0.17 acres of riparian enhancement on the Walla Walla (District), U.S. Army Corps of Engineers (USACE) property, located at Asotin Slough Habitat Management Unit (HMU). The Asotin Slough HMU is designated a Mitigation Area in the 2017-2018 Lower Granite Master Plan (MP) to align with the HMU's purpose per the Lower Snake River Fish and Wildlife Compensation Plan (USACE 1975). "Comp Plan" lands were purchased and/or developed by USACE to compensate for the loss of hunter and angler opportunity associated with construction of the Lower Granite Dam. Comp Plan required mitigation has been completed (USACE 2020), therefore any additional habitat enhancement within HMUs would be additive to COMP Plan mitigation requirements. Comp Plan mitigation areas are not to be adversely affected and no development is allowed within HMUs. Conservation easements and similar real estate tools are not appropriate for USACE lands, whereas the MP is appropriate.

The compensatory mitigation for the Project consists of riparian habitat enhancement at Asotin Slough HMU. This is a mitigation site located south end of Asotin, Washington.

The Mitigation Plan would be implemented by the U.S. Army Corps of Engineers, Walla Walla District (USACE), Natural Resources Program as a stipulation of the Clean Water Act, Section 404 and Section 401 Certification that would be issued by the Idaho Department of Ecology for the project.

## 3.2 CONSIDERATIONS ON MITIGATION SITE LOCATION

According to CFR §332.3 regulations, mitigation should be located generally within the same watershed as the impact site and should be located where it is most likely to successfully replace lost functions and services, considering such watershed scale features as aquatic habitat diversity, habitat connectivity, relationships to hydrologic sources (including the availability of water rights), trends in land use, ecological benefits, and compatibility with adjacent land uses.

There are no available mitigation bank credits or in-lieu fee program credits within the Clearwater watershed. Therefore, the USACE must mitigate for impacts through permittee-responsible mitigation under the watershed approach either through on-site, in-kind mitigation or off-site out of kind mitigation.

On-site mitigation is not feasible given the nature of operations within the drainageway. There is no assurance that once riparian vegetation is established, operations may need to clear it later to maintain the drainage.

The closest off-site mitigation site is the Asotin Slough HMU, located on the western shore of the Snake River in Asotin, Washington (46.336869°N, -117.027610°W) between River Mile 146 and 147 on the Snake River. The site lies within the Lower Snake-Asotin Hydrological Unit Code [(HUC) 17060107]; Washington, Township 16 North, Range 46 East, Section 17 Willamette Principal Meridian. This watershed is adjacent to the Clearwater Watershed.

Asotin Slough was identified as a potential compensatory mitigation area based on 1) USACE manages this HMU for mitigation purposes, 2) there is limited effect to cultural resources, 3) the site is within proximity of the site to the area of impact, an adjacent watershed. The site is already designated as mitigation site; however, the proposed enhancements would be beyond the requirements of the mitigation site. A site visit was conducted and determined two locations that together could total approximately 0.17 acres of riparian plantings (Figure 16).


**Figure 16. Proposed Areas for Planting at Asotin Slough HMU**

Other sites were considered; however, none of the other sites would provide the ecological lift needed by a mitigation site, could not provide compensatory mitigation in a timely manner, would require easements or other real estate coordination to secure, or would be difficult to access to conduct the mitigation needed. Sites were deselected based on the following considerations:

1. Sites within the Clearwater watershed: The Shoreline functions along the Clearwater River are highly functioning. The shoreline and floodplain are continuous and its shoreline experiences high flows during spring freshet, making any plantings susceptible to high flows and possible uprooting. Riparian vegetation is highly function and water quality in the mainstem of the river is good. Opportunities for new compensatory mitigation acreage in the Clearwater River are extremely limited due to its high value habitats.
2. There are disturbed areas within the Clearwater Watershed that could provide enhancement opportunities such as invasive species management or restricting grazing. This type of mitigation project requires coordination with landowners and lessees to restrict activities or manage vegetation. This

coordination can be a lengthy discussion and negotiations that may compromise the Project schedule or the time in which compensatory mitigation could be performed.

3. Islands within the Clearwater watershed where some enhancement could occur. However, the islands experience submersion and strong currents from spring flows, which makes establishing plants difficult. Additionally, they must be accessed by boat, making mitigation efforts costly.

## 3.3 ASOTIN SLOUGH BASELINE CONDITIONS

### 3.3.1 Snake River Basin and Stream Characteristics

The Snake River flows were separated by long stretches of erosion and deposition of porous material. Plateau tops and shoulder slopes are characterized by silt loams which are moderately to well drained and highly erosive. Within the last 35 to 40 million years, outwash from receding ice glaciers created vast quantities of fine-grained sediments deposited throughout the region. As well, the Missoula Flood incised and entrenched the Snake River into a steep-sided canyon.

The volcanic bedrock is overlain by unconsolidated sedimentary deposits comprised of gravels, sands, and silts of glacial or fluvial origin (collectively referred to as alluvium). Wind-blown silt and sand (referred to as loess) also covers much of the eastern portion of the area.

All streams are ephemeral (lack dry season flow) except in localized spring-fed reaches. Under current conditions, irrigation flows supply dry season flows in some streams.

The entire watershed is arid with mean annual precipitation decreasing from 16 inches/year to 8 inches/year. Precipitation, runoff, and direct groundwater discharge are the source of water to surface streams. Stream measurements in several of the streams suggest that virtually all the base flow come from groundwater discharge. Much precipitation occurs between October and April, with some precipitation occurring as snow, particularly at the higher elevations.

### 3.3.2 Asotin Slough Wetlands

Asotin Slough does not support wetland habitats more than small wetland fringes along the slough and Snake River.

### 3.3.3 Asotin Slough Streams

The slough is a man-made conveyance system that acts similar to a stream during high flows. There are a variety of aquatic streamside and riparian habitats present at the Asotin Slough HMU (Figure 17). It is identified on the USFWS NWI map as Perennial Riverine habitat with unconsolidated bottom that is permanently flooded.

**Figure 17. Parts of Asotin Slough with Reference Riparian Habitat**

The riparian vegetation along the shoreline provides thermal refugia for ESA-listed fish species as well as nesting habitat for nesting birds. The taller the habitat, the higher the value and the more protection for these species.

Portions of the slough have low value habitat for fish and birds (Figure 18 and 19). These areas could be planted with riparian species that would provide thermal refugia and bird habitat similar to found in Figure 17. There were two areas within Asotin Slough that were found to have this low value habitat.

**Figure 18. Planting Area 1. Area for Mitigation Plantings**

**Figure 19. Planting Area 1. Area for Mitigation Plantings**

Another area along the Snake River was also considered for mitigation plantings. This area is like a sandy beach under mature tree vegetation. The mitigation vegetation would assist in stabilizing the erosion that is causing root exposure along the shoreline (Figure 20 and Figure 21).

**Figure 20. Planting Area 2. Proposed Mitigation Plantings**

**Figure 21. Planting Area 2. Area for Mitigation Plantings**

### 3.3.4 Wildlife

Asotin Slough has been identified to support songbirds, waterfowl, chuker, and mule deer. A wide variety of resident and migratory birds may utilize the site.

### 3.3.5 Fish

The Snake River adjacent to Asotin Slough supports ESA listed fish including the Snake River Basin steelhead, Snake River Fall Chinook salmon, Snake River spring/summer

Chinook salmon, Snake River sockeye salmon, and bull trout. In addition, the Snake River mainstem contains populations of white sturgeon, among other species of fish.

### 3.3.6 Non-Native and Noxious Weeds

### 3.3.7 Land Use

The Asotin Slough HMU can be categorized as a moderately managed site with pastures, meadows, and dry land cisterns. In 2009, an old river chute was restored to improve riparian habitat. The restored chute was hydro-seeded and cobbles were placed in an adjacent mulberry grove to provide protection from erosion. In 2010, shrubs and trees were planted on the low benches along the river chute.

### 3.3.8 Synergy

The USACE manages HMUs under the Lower Snake River Fish and Wildlife Compensation Plan (USACE 1975) to mitigate for the loss of hunter and angler opportunity and comply with the Fish and Wildlife Coordination Act for construction of the lower Snake River dams. This mitigation effort would provide added benefits to the Comp Plan and other USACE natural resource management efforts within the Lower Granite Dam footprint. Stewardship and protection of this site directly supports the project authorization in the Flood Control Act, as well as Engineer Regulation 1110-2-400, ER 200-203, and Engineer Pamphlet (EP) 1130-2-540.

## 3.4 FUNCTIONS AND VALUES ASSESSMENT

The USACE considered the full implementation of credit-debit calculations under the Walla Walla regulatory method. The USACE is employing a simple credit/debit calculation for ease of understanding (Table 3). It was determined that enhancement of riparian could be performed at a 1:1 ratio for the impact.
Asotin Slough HMU is a habitat area managed by USACE as the Asotin Slough HMU was developed under USACE. Therefore, the site mitigation value should only increase from the proposed mitigation planting and ongoing invasive species management. There is low risk of the site mitigation value decreasing in the future. This valuation matrix illustrates a fair level of protection commensurate with the action at hand and provides comparable mitigation values to achieve the functions and services being lost at Area

380.

**Table 4. Wetland/Riparian Habitat Values and Mitigation**

| Functions and Services | Impact Acres | Mitigation Acres | Total Mitigation Acres |
|---|---|---|---|
| **Impact Acres (Area 380)** | 0.17 (Riparian) | | |
| **Riparian Enhancement (Asotin Slough HMU)** | 0.0 | 0.17 (Riparian) | 0.17 (Riparian) |

The proposed mitigation plan results in a net gain permanently (barring Congressional and similar higher authority action) by protecting 0.17 acres of significantly higher value stream habitat versus the 0.17 acres of lower value riparian proposed to be impacted. The functional mitigation ratio is 1 acre of impact to 1 acre of compensatory mitigation overall.

Protection includes active invasive species and other management actions that will serve to improve functions and values over time, and to protect the site from degradation pressures of invasive species, recreational uses, and potential development. This reasonable approach more than offsets the impacts to the low value riparian areas associated with Area 380 and results in overall public benefit that includes good habitat stewardship.

## 3.5 LAND USE CLASSIFICATION

The Asotin Slough HMU is designated a Mitigation Area in the 2018 Lower Granite Master Plan (MP). These areas are identified in the Comp Plan (USACE 1975) to mitigate the loss of hunter and angler opportunity associated with construction of the Lower Granite Dam. The required mitigation has been completed (USACE 2020) and any additional future enhancement would be beyond those requirements. Mitigation areas are not to be adversely affected as no development is allowed. Conservation easements and similar real estate tools are not appropriate for USACE lands, whereas the MP is appropriate.

## 3.6 SITE PREPARATION

## 3.7 VEGETATION REMOVAL TO ESTABLISH SITE FOR PLANTINGS

Any invasive species within the planting area would be treated appropriately per the USACE Integrated Pest Management Plan guidelines.

Bare soil would be reseeded with appropriate native grass/forb mixture. Soil erosion control may be accomplished by spreading certified weed free straw or the application of other acceptable erosion control methods, such as installation of silt fences or coir fiber logs and mats.

The condition for the Asotin Slough Plating Sites would be measured by determining the percent of dead vegetation for Monitoring year 1, and noting planting density in year 3, measuring percent survivorship in year 5 and identifying species composition for year 5.

Adaptive Management Plan (Section 3.10) would be implemented when:

1) Survivorship of invasive species is greater than 10%

2) The survivorship of mitigation plantings is less than 75%.

## 3.8 PLANTING AREAS AND METHODS

Figure 5 shows the two areas proposed for planting riparian habitat. The sites could be planted in 1 or 2 years after construction of the Project. The sites would initially be prepared by treating any invasive species that have established in these areas.

Plantings would begin the next spring or fall after spraying the area and as the site is prepared and desired plant species (Table 4) become available. Plantings may occur over several years to obtain desired plant establishment. A hand-power auger or a hydraulic auger may be used for difficult areas such as hardpan soils or rocks.

Plantings would be staged from the shoreline back toward the uplands, according to water requirements and expected canopy heights. Plantings would be on 4 to 5 foot centers to create a natural habitat and vegetation cover. For areas planted with willow, willow stakes would be collected from nearby areas. The stakes would be a minimum of 0.75 inch diameter and 2 feet long and would be planted so that a minimum of 80 percent of each stake is below ground with good soil contact and the bottom of each stake is in the saturation zone.

Plant material such as willow and red-osier dogwood whips may be collected from USACE habitat areas. The Confederated Tribe of the Umatilla Reservation may be another resource. Other plant material sources would be used as needed, provided the plants are locally adapted to site conditions at Asotin Slough HMU. Weed matting and plant protective caging may be necessary to discourage invasive species establishment and herbivory. Planting would be expected to begin in the spring or fall post-Project construction, and once funding is secured.

All work would be completed by USACE employees, volunteers, or contractors.

## 3.9 PLANT SPECIES

Table 4 shows a complete list of the types of vegetation that could be planted at the planting sites. Within the planting area hydrophytic shrubs, such as coyote willow (*Salix*

*exigua*), would be planted on 4 to 5 foot centers along the seasonally inundated shoreline. These plants would naturally fill in along the shoreline over time. Other riparian shrubs, such as red-osier dogwood (*Cornus sericea*), may be planted near the shoreline. Other species listed below could be used depending on site conditions and plant availability.

**Table 5. Proposed Plant Species and Wetland Indicator Status for Riparian Plantings**

| Common Name | Scientific Name | Wetland Indicator Status |
|---|---|---|
| Black Cottonwood | *Populus balsamifera* (trichocarpa) | FAC |
| Golden Current | *Ribes aureum* | FAC |
| Black Hawthorn | *Crataegus douglasii* | FAC |
| Saskatoon Serviceberry | *Amelanchier alnifolia* | FACU |
| Netleaf Hackberry | *Celtis reticulata* | FACU |
| Woods Rose | *Rosa woodsia* | FACU |
| Western Chokecherry | *Prunus virginiana* | FACU |
| Oregon Grape | *Mahonia aquifolium* | FACU |
| Mock Orange | *Philadelphus lewisii* | FACU |
| Smooth Sumac | *Rhus glabra* | UPL |
| Coyote Willow | *Salix exigua* | FACW |
| Peachleaf Willow | *Salix amygdaloides* | FACW |
| Mackenzie Willow | *Salix prolixa* | OBL |
| White Alder | *Alnus rhombifolia* | FACW |
| Golden Currant | *Ribes aureum* | FAC |
| Red-osier dogwood | *Cornus sericea* | FACW |

Higher areas could be planted with golden currant (*Ribes aure*um) and black hawthorn (*Crataegus douglasii*). Trees including black cottonwood (*Populus balsamifera*) or white alder (*Alnus rhombifolia*) or others would be planted in appropriate locations. A variety of shrubs such as woods rose (*Rosa woodsia*) and golden currant (*Ribes aureum*) could be interspersed throughout the site.

Additional native plant species may be considered, based on availability and survival of initial plantings. The goal is the establishment of native riparian vegetation that would serve important riparian functions.

## 3.10 MONITORING AND ADAPTIVE MANAGEMENT PLAN

The mitigation site would be monitored by conducting site walk-throughs with specific evaluation of potential invasive species and potential degradation from human use. These monitoring efforts would be conducted in Years 1 (complete as part of the site baseline establishment), 3, and 5. Reports would be prepared before December of Years 3 and 5 and shared with IDEQ.

Monitoring would consist of survival and establishment evaluations. Adaptive management redirects the planting effort if plants do not establish and survive as expected. Monitoring would occur regularly as USACE employees visit the site and attend to the planting. The monitoring and adaptive management process consists of the following steps.

**Step 1. Monitor and assess plant establishment.**

Planting survival would be assessed during the first growing season (approximately 90 days after planting) and then annually for five years, with monitoring reports submitted to IDEQ by December 1. A survival rate of at least 80% is the desired objective at the end of Year 5. Supplemental plantings would be conducted, if needed, to achieve desired survival and species composition, vegetative canopy cover, and lifeform mixture (trees, shrubs) over time.

**Step 2. Identify potential adverse conditions impacting establishment.**

Fluctuating river levels in the Snake River due to spring snowmelt, drought summer conditions, and irrigation demands, etc., may create adverse conditions for plant establishment, particularly during the first two growing seasons. Moisture stress, vandalism, poor planting stock, insects and disease, wildlife browsing, weather impacts (snow/ice breakage, wind damage, etc.), weed encroachment and other factors would be continually noted in the monitoring reports and evaluated to determine if ameliorative actions can be taken to improve plant establishment and survival.

**Step 3. Identify if potential adverse conditions can or should be remedied.**

Conditions would be evaluated throughout the growing season and remedial actions would be conducted if necessary. Expense, likelihood of success, timeliness of application, available resources, and other factors would be used to determine the best course of action.

If the mitigation site is found to be impacted or degraded, the USACE would document potential remedies to ensure the planting survival metrics are met. Further, if natural site condition does not develop over time, the USACE would consider enhancement planting or similar improvements to ensure best potential site values are achieved. Adaptive management actions would be derived from USACE operational budgets and subject to availability of funding.

If the classification for this area is changed in the future by higher authorities (i.e., U.S. Congress), the USACE would formally consult with Idaho Department of Environmental Quality to discuss alternative/replacement mitigation requirements.

Force majeure: The USACE is not responsible to replace damages from acts of God.

**Step 4. Implement the appropriate adaptive management action.**

Conditions would be evaluated, and determination would be made as to what type of adaptive management actions may be taken to ensure/improve establishment and survival. Possibilities include mulching, staking, pruning, supplemental irrigation (mobile irrigation gun, drip system, etc., soil amendments, replanting, planting of different species listed in Table 3, weed treatments, etc. Implementation would be conducted at the appropriate time of year to ensure success.

Noxious weed control is a routine management action at the Asotin Slough Mitigation Site as part of the USACE Integrated Pest Management Plan. Weed treatments would reduce competition with invasive species to ensure the development of desired palustrine shrub/tree habitats.

# SECTION 4 - PROPOSED MITIGATION SCHEDULE AND DETERMINING SUCCESS

## Proposed Mitigation Enhancement Schedule

The USACE would enhance the two riparian areas at Asotin Slough HMU within 2 years post construction of the Project. The Project is scheduled to begin July 2024 and finish December 2024. Therefore, plantings would occur before December 2026, unless field conditions are unsuitable to planting or plants are not available at the time of planting. Plantings would be conducted in the spring or fall.

## Methods of Determining Mitigation Success

The planting sites would be monitored by conducting site walk-throughs with specific evaluation of potential invasive species impacts and potential degradation from human use. These monitoring efforts would be conducted in Years 1 (complete as part of the site baseline of establishment), 3, and 5. Reports would be prepared before December 1 of Years 1, 3, and 5 and shared with IDEQ. Success metrics are defined as 10% or less invasive species ground cover and 75% or greater plant survival.

## SECTION 5 - REFERENCES

Environmental Protection Agency. 2008. Compensatory Mitigation for Losses of Aquatic Resources; Final Rule. 40 CFR Part 230, Vol. 73, No. 70.

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USACE. 2020. Lower Snake River Fish and Wildlife Compensation Plan: Construction General Completion Summary. U.S. Army Corps of Engineers, Walla Walla District, Walla Walla, Washington.

# Appendix E

# ESA No Effect Determination

**DEPARTMENT OF THE ARMY**
**U.S. ARMY CORPS OF ENGINEERS, WALLA WALLA DISTRICT**
**201 NORTH 3RD AVENUE**
**WALLA WALLA, WA 99362-1876**

CENWW-PPL-P (1200A) 28 June 2024

APPENDIX E: MEMORANDUM FOR THE RECORD

SUBJECT: No Effect Determination Area 380 Drainage Improvements Project, PPL-C-2024-0034

1. This memorandum documents the environmental compliance section's (EC Section) effects determination on the proposed actions of the Area 380 Drainage Improvements Project.

2. Pursuant to section 7 of the Endangered Species Act of 1973 (ESA), as amended, the USACE determined that the preferred alternative would have no effect to ESA-listed fish and their designated critical habitat. Best management practices are integrated into the preferred alternative to reduce the risk of turbidity entering the Clearwater River to avoid unauthorized take or jeopardization of threatened or endangered species. Project number PPL-C-2024-0034

3. The approach to the effects analysis followed questions (adapted from Johnson 2009, see also 14501-NWW EQ Biological Law Compliance 10-15-14) to determine the potential for effects, if any, and justify the effects determination for each species and critical habitat. Potential effects of the action are considered along with the environmental baseline and the project description to determine the potential effects to the species and critical habitat.

A. Is the proposed action likely to produce potential stressors or subsidies that would reasonably be expected to act directly on individual organisms or to have any direct or indirect consequences (positive or negative) on the environment?

i. If "no" to #1 then a "no effect" determination is documented.
ii. If "yes" to #1 then go to #2.

Answer: **Yes**, the construction involved in building a pond at that location would disturb ground enough to raise the turbidity in the Area 380 drainage water that flows into the Clearwater River. If the 380 intermittent stream is flowing at that time, the exposure would happen if turbid water were allowed to flow unimpeded into the river with no attempt to stop it.

B. If the proposed action is likely to produce those potential stressors, are endangered or threatened individuals likely to be exposed to one or more of those potential stressors or subsidies or one or more of the proposed action's direct or indirect consequences on the environment, even to the de minimus level?

i. If "no" to #2 then a "no effect" determination is documented.

Answer: **No**, there will be no exposure of stressors such as noise or elevated turbidity to ESA listed fishes even to the de minimus level with the planned BMP measures as described below. ***The proposed action would have "no effect" on ESA listed species.***

Explanations/Rationale: No ESA species exist in the Area 380 intermittent stream. The project is on the other side of the levee where construction noise would not be above the background of the nearby highway. Sampling from USACE Clarkston Office yielded no fish or aquatic invertebrates and there is a trash rack of sufficient bar width to prevent adults from entering and there is a 2-3 ft lip over the exit to the Clearwater River that prevents fish from getting into the area.

Standard BMPs for preventing stormwater runoff such as coir rolls, silt fencing and related will prevent any stormwater from the construction site from exiting the excavation area to the Clearwater River.

Further, the BMPs that are to be put in place will eliminate exposure to turbid water. Those practices being: contractor will, with the use of two 10” pipes, divert the stream flow around the sediment retention pond construction site; eliminating the chance of exposure to water of elevated turbidity from upstream runoff. The BMPs as listed below and detailed in the Environmental Protection Plan contractor submittal to convey the water around the construction site are achievable and suffice to prevent effects:

i. Lower water level by removing existing Stop Logs at the Weir.
ii. Connect 2 runs of approximately 150' each, 10" Kanaflex PVC braided pipe with DMl00 barbed couplers.
iii. The 2 separate barbed couplers will then be welded onto the steel plate (4’x8’) to which the pipe will be connected to.
iv. Once the water level is down, the pipe will be connected to the steel plate (4’x8’). The plate will then be lowered slowly into the narrowest part of the drainage creek. This will create a dam and force water through the pipe. The flex hose will allow the contractor to move pipe from side to side throughout the duration of the construction project.
v. While the pipe is being utilized it will be covered with fabric and 3/4" aggregate base allowing travel across pipes.

4. This memorandum and the determination of effect (no effect to ESA listed species or critical habitat) will remain as part of the project administrative record.

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MICHAEL S. ERICKSON
Chief, Environmental Compliance Section

CF:
CENWW-PPM (Handcox)

# **Attachment B:** Public Comments Response Document

**Area 380 Drainage Improvements**
East Lewiston Levees
Lewiston, Idaho
*Environmental Assessment*
Comment Response Document
June 5, 2024

| Comments | Responses |
|---|---|
| **Comment 1:**<br>EPA recommends the FEA include additional information about sediment quality data including physical and chemical characteristics. Idaho DEQ Waste Management and Remediation Program's Facility Mapper shows Leaking Underground Storage Tanks (LUST) and Idaho Resource Conservation and Recovery Act (RCRA) sites within the drainage watershed, including several within 0.5 miles of the stilling basin location.[1] The DEA states "the sediment is not expected to contain significant quantities of contaminants based on water quality testing conducted by the City"[2] and describes the water quality as being "comparable to most urban streams". EPA recommends the FEA include these data sets, including monitoring data for contaminants. | The EA has been edited to remove the reference to City water quality testing. There are no permanent water or sediment quality monitoring being conducted within the unnamed tributary in Area 380 because of upland disposal. Therefore, any possible contamination would be unknown.<br><br>The main two pollutants identified within the watershed are sediment and nutrients (nitrates), the Clearwater River is considered functioning, and the unnamed tributary has not been assessed. The stream within the Area 380 is not on the Section 303(d) list of impaired waters. This is an urban stream and would likely contain pollutants common to urban environments including petroleum, sediment, pesticides, herbicides, and other household chemicals. The amounts of these chemicals would likely be de minimus since there are no known sources of contamination within the watershed.<br><br>Based on Lindsey Creek, which is located within 0.5 miles of the stilling basin, the unnamed tributary could contain nutrients and sediment. In addition, it could contain E. coli.<br><br>Based on the potential for contamination from Leaking Underground Storage Tanks, there are three current on-going remediation efforts within the Lewiston Area, none of these sites are within 0.5 miles of the Area 380 drainage. All are undergoing remediation and groundwater monitoring. It would be unlikely that these tanks would have contaminated the Area |

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| | 380 drainage site. Other Leaking Storage Tank contamination has been remediated and is no longer a hazard risk to the public.<br><br>In accordance with the Environmental Protection Plan, the contractor of the Area 380 drainage improvements project would stop construction if soils were emitting a foul odor or appear to be discolored. An investigation would be conducted to determine if contaminated soils are present.<br><br>Previous cleanout of the sediment has involved turbidity monitoring. At the time of the cleanout, the turbidity never exceeded 50 NTU's. |
| **Comment 2:** EPA notes that there are discrepancies between the information provided in the Clean Water Act Section 404(b)(1) analysis and the NEPA Draft EA. We recommend that these two documents be aligned. Specifically, the CWA 404(b)(1) evaluation states that excavated materials would be transported to upland disposal sites. However, the DEQ and compensatory decision document state that materials would be hauled to another appropriate site for disposal/reuse likely at Hells Gate Management Unit. Inclusion of information regarding sediment quality and clarification on the disposition of sediments will better clarify for the public and decision makers the potential cumulative effects of proposed transportation of sediments, especially if the sediments are proposed for beneficial use at a habitat management unit. Identify and describe any sediment characterization that will be required as part of the proposed project and any adaptive management to the proposed project resulting from that additional data. | The disposal site would be Tammany Quarry Site owned by the Army Corps of Engineers on Tammany Creek Road in Lewiston, Idaho (Lat/Long are 46 21'08.90" N and 117 01'24.28" W). The site is about 10 miles south of Area 380. There is an old quarry located on site in which can contain the sediment in uplands. There is no connection to the aquifer, wetlands, or surface water. The sediment is not to be used for a project.<br><br>Hells Gate Management Unit has been used as a sediment disposal site before; however, its use is being discontinued.<br><br>The EA, mitigation plan, and 404(b)1 have been updated to reflect the Tammany Quarry Site. |

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| **Comment 3:** EPA recommends the Final EA consider impacts to groundwater. EPA notes the mitigation plan states: “stream measurements in several of the streams suggest that virtually all the base flow comes from groundwater discharge.” Given the stream’s connectivity with groundwater, EPA recommends including a discussion about best management practices to reduce groundwater contamination risk during and after construction. BMPs to consider include: 1) notifying general contractors that the site is sensitive, 2) using green infrastructure where possible to reduce potential impacts of stormwater runoff, 3) using secondary containment when storing hazardous liquids onsite, 4) implementing training/precautions for fueling and serving large equipment around the site. 5) developing contingency plans to handle the release of any hazardous materials. | The mitigation plan does indicate that the Snake River Basin watershed is primarily a base flow from groundwater discharge.<br><br>The unnamed tributary on the Area 380 drainage flows almost year-round indicating that it does contain groundwater recharge and it does collect stormwater runoff from the City of Lewiston. However, it would collect discharged groundwater that would not be able to recharge groundwater due to the proximity of the Area 380 drainage site to the Clearwater River.<br><br>USACE does plan to implement BMPs to reduce the effect of construction on the stream including groundwater. This includes: 1) use of erosion and sediment control structures 2) establishment of sediment controls, 3) containment measures of hazardous materials and 4) implementation of a spill prevention plan. The spill prevention plan is part of the Environmental Protection Plan (see response to comment 4). Given the small amount of impact (less than 1 acre) a SWPPP would not be required. |
| **Comment 4:** EPA also notes the Lewiston Basin Aquifer Area Sole Source Aquifer is near the project site. We recommend the Final EA include a discussion about potential impacts to the aquifer during/after construction, including the potential impacts to the aquifer during/after construction, including: the introduction of contaminants (during equipment staging/maintenance), reduced aquifer recharge capacity (due to revetment installation), and increased evapotranspiration (due to planting of young willows). | The creek is minuscule and is not a main driver for aquifer recharge. The revetment and apron would not notably affect recharge of the aquifer.<br><br>The contractor for the project has provided their Environmental Protection Plan that includes a Spill Control Plan, Solid Waste Management Plan, Air Pollution Prevention and Control Plan and Hazardous, Toxic and Radioactive Waste Plan. These would reduce the chances of contamination into the aquifer. Aquifer recharge is likely occurring upstream of the Area 380 based on the temperature of the water throughout the drainage was cool. The young willows would not increase evapotranspiration. Mature locusts would transpire more than the young willows and grasses in the area |

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| | now, as they have one of the highest evapotranspiration rates. Keeping it scrub-shrub or forested would decrease evapotranspiration rates. |