

JONES LEVEE FLOOD CONTROL PROJECT ORTING, WASHINGTON

Draft Integrated Feasibility Report/Environmental Assessment

APPENDIX B – ENVIRONMENTAL AND CULTURAL SUPPLEMENTAL INFORMATION

May 2020



**US Army Corps
of Engineers®**
Seattle District



Pierce County
Public Works and Utilities
Surface Water Management

This is providing a placeholder for Environmental Documentation including ESA, CZMA, CWA, 106, etc, which will be inserted as we receive them.

CONTENTS

Appendix B.1 – Salmon Sound and Noise Analysis

Appendix B.2 – Clean Water Act and Coastal Zone Management Act documentation

- Draft Coastal Zone Management Act Consistency Determination
- Draft 404(b)(1) Evaluation
- Response from the Washington State Department of Ecology

Appendix B.3 – Endangered Species Act Documentation

- U.S. Fish and Wildlife Service Concurrence
- National Marine Fisheries Service Concurrence

Appendix B.4 – Cultural Resource Documentation

- APE letters
- Findings Letters

Appendix B.5 – Fish and Wildlife Coordination Act Documentation

Appendix B.6 – Draft Finding of No Significant Impact

Appendix B.1 – Salmon Sound and Noise Analysis

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Vibration and sound would be generated from construction activities. The construction activities greatest sound levels would be generated by removal and placement of rock below the waterline where needed, and during installation of the engineered log jams (ELJs). These activities would occur within the in-water work window during both construction years.

The sound-field associated with pile driving is not well-understood. It is complex and reflects acoustic input from sound propagating through the water, the substrate, and reflecting off both the substrate and surface (Popper, 2019). For example, the sound pressure levels generated are affected by the method of pile driving, the material of the pile, the type of substrate, the depth of water the pile driving occurs, and whether physical mitigation measures are used (Popper, 2019).

There are two methods to drive piles: impact hammers or vibratory hammers. Vibratory pile driving is the preferred method for installation of the ELJs, as impact pile driving tends to produce the highest, most damaging noise levels. The vibratory hammer produces sound energy that is spread out over time, as the oscillation of the vibratory hammer increases slowly, and is generally 10 to 20 decibels (dB) lower than impact pile driving. Therefore, vibratory pile driving can be a minimization measure in pile driving projects, depending on the type of construction project and substrate conditions (Caltrans, 2015).

The sound waves generated by pile driving could affect Chinook in several ways, including altered behavior, physical injury, or mortality. Efforts to stay in compliance with applicable laws and regulations have required the development of guidance by resource agencies to assess the effects of anthropogenic sound on aquatic species. The following are interim noise thresholds for salmonids and sturgeon for pile driving (Hastings, 2002; NMFS et al., 2008).

- 150 dBRMS¹ for behavioral/harassment for continuous noise² for fish of all sizes
- 187dB cumulative SEL³ for injury of fish ≥ 2 grams⁴
- 183dB cumulative SEL for injury of fish < 2 grams
- 206 dBpeak⁵ for injury of fish of all sizes

To assess potential impacts as a result of pile driving for this project, pile driving sound data from Caltrans (2015) and a pile driving acoustics tool developed by the National Marine Fisheries Service (NMFS, 2020) was used. The California Department of Transportation has developed technical guidance that provides information on underwater sound pressure levels resulting from pile driving in seven states, including all West Coast states (Caltrans, 2015). The intent is to give an empirical database to help predict underwater sound pressure levels for in-water pile driving projects. Unfortunately, this tool does not include an analogous project driving a 24-inch timber piling with a vibratory hammer in shallow

¹ Decibels root mean square over a period of time

² Vibratory pile driving is characterized as continuous noise

³ Decibel sound exposure level over a 24-hour period (cumulative)

⁴ Injury thresholds are based on pile driving (pulsed noise)

⁵ Peak sounds in decibels

water. Instead, the closest analogous project used a vibratory hammer on 12-16” timber pilings in approximately 12.2 meters of water with the sound measured at a distance of 9 meters. The Corps selected this project as the “proxy” for the source level root mean square (RMS) metric (Caltrans, 2015).

The Corps used the simplified attenuation formula in the pile driving acoustics tool because that formula accounts for shallow, confined areas. The ponds and wetlands landward of the Jones Levee are shallow relative to the open water formula used for projects that include pile driving for wind farms in open, unconfined waters. Table 1 provides the proxy project details for the proxy project most similar to the Jones Levee setback based on similar materials and methods. Table 2 provides the proxy-based estimates for underwater noise used to estimate the distance to injury and behavioral thresholds of listed species.

Table 1. Proxy project for estimating underwater noise.

Project Location	Water Depth (m)	Pile Size (inches)	Pile Type	Hammer Type	Attenuation rate (dB/10m)
Norfolk, VA	12.2	12-16	Timber	Vibratory	5

Table 2. Proxy-based Estimates for Underwater Noise

Type of Pile	Hammer Type	Estimated Peak Noise Level (dB _{PEAK})	Estimated Pressure Level (dB _{RMS})	Estimated Single Strike Sound Exposure Level (dB _{SEL})
12-16” Timber	Vibratory	176	165	165

Table 3 provides the estimated distance for underwater noise injury and behavioral thresholds for salmonids. According to the pile driving acoustics tool (NMFS, 2020), the interim noise threshold for peak noise (206 dB_{peak}) would not be reached. However, the interim threshold for noise over a 24-hour period (cumulative) for injury of fish two grams or greater (187 dB cumulative SEL) and less than 2 grams (183 dB cumulative SEL) would be within 39 meters of the piling. Additionally, 39 meters is also the threshold where harassment for continuous noise would occur.

Table 3. Estimated distances to sturgeon/salmon injury and behavioral thresholds.

Type of Pile	Hammer Type	Distance (m) to 206dB _{Peak} (injury)	Distance (m) to 150 dB _{sSEL} (surrogate for 187 dB _{cSEL} injury)	Distance (m) to Behavioral Disturbance Threshold (150 dB _{RMS})
12-16” Timber	Vibratory	N/A ⁶	39	39

⁶ No projects that used a vibratory hammer with steel or timber piles exceeded 180 Peak dB in the pile driving acoustics tool (NMFS, 2020).

Based on results from the proxy project, installation of the ELJ timber piles has the potential to injure and harass Chinook and other salmonids located in the waters behind the existing levee (i.e., freshwater ponds). The Corps does not expect injury and harassment thresholds from in-water work behind the Jones Levee (before breaching) to reach the Puyallup River since the existing structure would diminish noise impacts into the river. Noise transmission through the ground is characterized by low frequencies that cannot propagate efficiently through shallow water like that behind the existing levee (Caltrans, 2015).

Data are lacking for species of interest in the region, primarily aquatic species such as Chinook, but one study showed Atlantic salmon are sensitive to sounds transmitted through substrate in a river environment (Hawkins and Johnstone, 1978). Studies directly measuring underwater sound from underwater rock placement and removal are lacking (Maritime Limited, 2015). In one study, Nedwell and Edwards (2004) measured sound generation from a vessel placing rock through a steel/HDPE pipe in an open-water marine environment. The study measured sound levels up to 120 dB, but most of the sound is attributed to the vessel. Another study recorded sound between 124 and 148 dB from a backhoe dredge 60 meters away (Reine et al., 2012). This study estimated a maximum intensity of 179 dB from 1 meter away. This backhoe dredge is significantly larger and more powerful than excavators that would be used to conduct work under the proposed action, so the sound created by a backhoe is expected to be more intense than that created from the proposed action. Work above the waterline could create a sound that propagates through the ground into the water, albeit at a lower level than the source (Reinhall and Dahl, 2011; Hawkins and Johnstone, 1978).

The limited data available suggests sound potentially created by the proposed action would not exceed these thresholds and therefore not cause fish injury. Popper et al. (2014) and Reine et al. (2012) both indicate there is no direct evidence for fish mortality or mortal injury from continuous sounds such as that resulting from the proposed action during excavation and placement of rock and embankment material. The National Marine Fisheries Service threshold for fish harassment is 150 dB (Hastings 2002; NMFS et al. 2008). It is possible this harassment threshold could be exceeded by the proposed in-water excavation work based on Reine et al. (2012) discussed above. If this were to occur, it would result in fish moving away from the immediate project site. This behavior is likely to occur regardless, simply due to the ground and water disturbance associated with removing and placing rock along the levee. It is possible a temporary migration barrier could be formed during short periods when this work is occurring.

The main source of vibration and sound generated by the repairs would come from ELJ construction and the removal and placement of riprap and embankment below the waterline. These activities would occur within the in-water work window (July 15 to August 31). Vibration and noise generated by the repair could trigger a behavioral response; however, the Corps does not anticipate noise levels sufficient to injure aquatic species, especially those of greater interest such as Chinook.

Fish moving past the in-water work locations at the time of construction may be temporarily delayed at the construction site due to noise. If construction does interfere with fish movement past the repairs, breaks in the work during the day or overnight would allow fish to continue past, minimizing any effect.

The area affected would be limited to the portion of the channel adjacent to the levee, and the proposed actions would likely have no long-term effect on the movement or spawning of fish species.

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Appendix B.2 – Clean Water Act and Coastal Zone Management Act documentation

- Draft Coastal Zone Management Act Consistency Determination
- Draft 404(b)(1) Evaluation
- Responds from Ecology

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Draft Coastal Zone Management Act Consistency Determination

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**COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION**

**Section 205 Jones Levee Project
Orting, Pierce County, Washington**

**Submitted by the U.S. Army Corps of Engineers,
Seattle District**

May 2021

1 INTRODUCTION

The Coastal Zone Management Act (CZMA) of 1972, as amended, requires Federal agencies to carry out their activities in a manner consistent to the maximum extent practicable with the enforceable policies of the approved state Coastal Zone Management (CZM) Programs. The Shoreline Management Act (SMA) of 1972 (RCW 90.58) is the core of Washington's CZM Program. Primary responsibility for the implementation of the SMA is assigned to the local government.

According to 15 CFR Ch. IX § 930.30, the Federal Government is directed to ensure “that all Federal agency activities including development projects affecting any coastal use or resource will be undertaken in a manner consistent to the maximum extent practicable with the enforceable policies of approved management programs.” The Section 205 Jones Levee Project is an activity undertaken by a Federal agency, namely the U.S. Army Corps of Engineers (Corps); the following constitutes a Federal consistency determination with the enforceable provisions of the Washington CZMA Program. The Section 205 Jones Levee Project occurs within the coastal zone governed by the regulations of policies of the city of Orting Shoreline Master Program¹ (SMP) and the Pierce County SMP².

1.1 Authority

The Section 205 Jones Levee Project is a flood risk management project under Section 205 of the 1948 Flood Control Act (P.L. 80-858) as amended, also referred to as Section 205 under the Continuing Authorities Program (CAP). Under Section 205, the Corps is authorized to study, plan, and construct small flood damage reduction projects that have not already been authorized by Congress.

The purpose of CAP Section 205 projects is to reduce the risks of flooding, life safety and loss of life, and property damage in partnership with state and local governments or private entities. Projects may be structural (e.g., levees, floodwalls, diversion channels, bridge modifications) or nonstructural (e.g., elevation, flood proofing, relocation of structures, flood-warning systems).

1.2 Project Location

The Jones Levee is part of a non-Federal levee system that reduces flood risk to the city of Orting from the Puyallup River. This system includes Jones, Calistoga, and High Cedars Levees along the right descending bank (Figure 1). The levee system provides flood risk management benefits to Orting west of State Route 162 (teal polygon of Figure 2). The Jones Levee extends from River Mile (RM) 21.6 to RM 22.8 and is approximately 9,400 feet long.

¹ City of Orting Shoreline Master Program, adopted April 2009

² Pierce County Shoreline Master Program, adopted March 1974, most recently revised June 2019

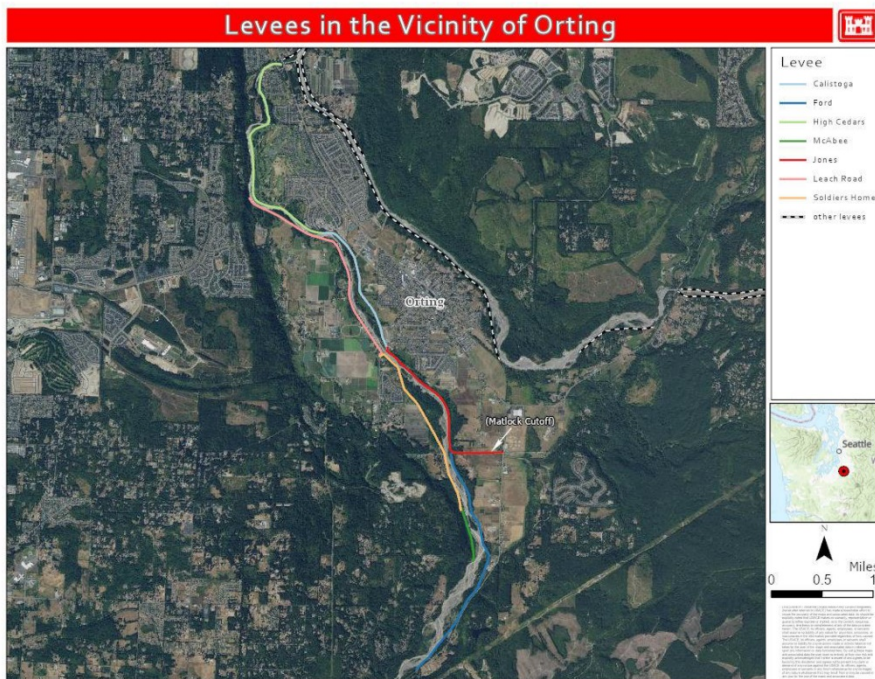


Figure 1. Levees around Orting. Matlock Cutoff is a part of the Jones Levee and extends inland from the river.

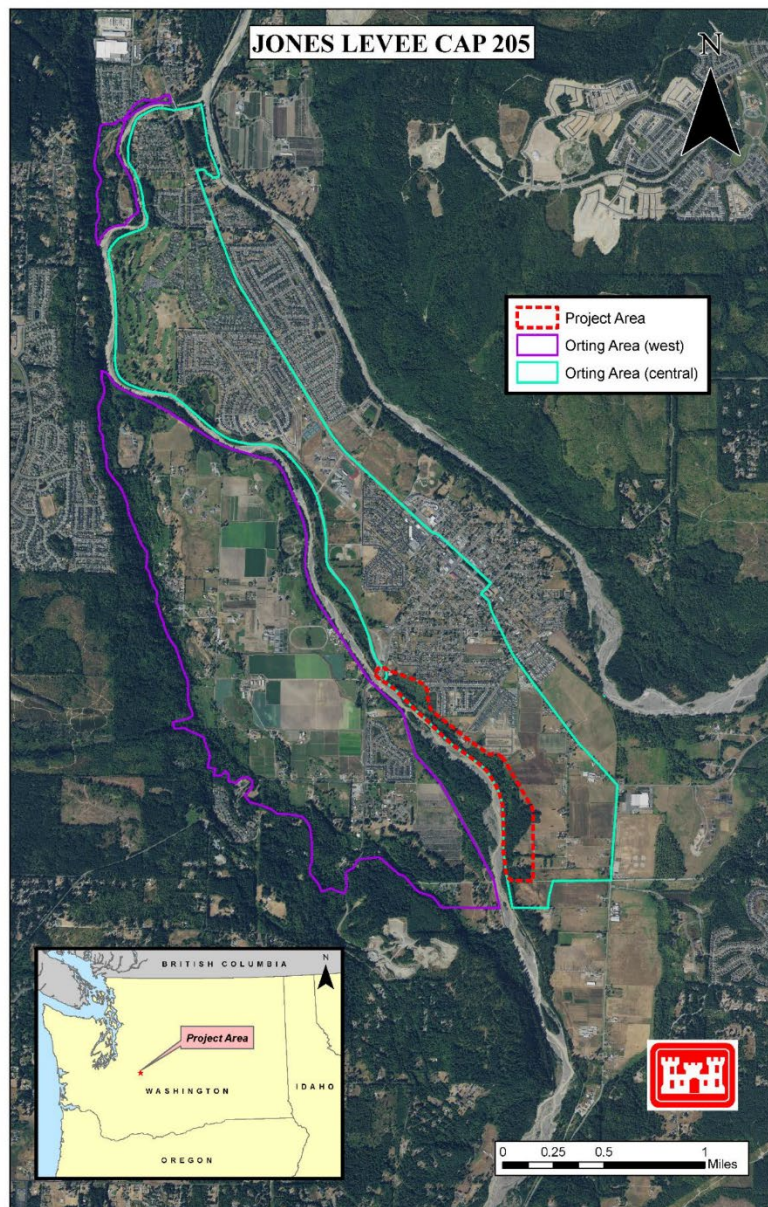


Figure 2. Project location.

1.3 Background

CAP projects are conducted in two Phases: (1) a feasibility study and (2) design and implementation (D&I). Phase 1 results in a report documenting the issues, objectives, recommended alternative(s), and environmental compliance required for the project. The Corps is preparing an Integrated Feasibility Report and Environmental Assessment (FR/EA) for the Jones Levee Project to meet the planning requirements in Phase 1 to identify a Tentatively Selected Plan (TSP). The Corps will provide the draft FR/EA to Washington State Department of Ecology (Ecology) when it is released for public review and comment.

After the FR/EA is complete and the project receives approval, the Corps enters Phase 2, D&I. In the D&I phase the Corps completes design work and constructs the project. The Corps' planning process directs planners to complete environmental compliance in Phase 1 with only a preliminary level of project design suitable for feasibility. However, due to the greater level of design needed to assess impacts to water resources and the shoreline, the Corps proposes to complete compliance with CZMA in Phase 2 (D&I) prior to construction. Therefore, this is a draft CZMA Consistency Determination for pre-application coordination and review.

The Jones Levee project is in the feasibility phase, which includes determining whether there is a Federal interest in the project (e.g. identifying costs and benefits) and identifying the TSP (preferred project alternative). The feasibility phase will involve planning activities such as development of alternative plans to achieve the project goals, initial design, cost estimations, economic analyses, environmental impact analyses, and real estate. Federal interest is focused on cost efficient reductions in economic flood damage and life safety risks. The Corps has preliminarily identified the TSP as a setback levee.

2 PROJECT NEED

The action is needed because the Puyallup River experiences frequent flooding, resulting in damages to rural and urban areas. Three primary contributors to increased flood risks are (1) development in the floodplain, (2) sediment aggradation, and (3) significant channel migration potential. In its existing condition, the Jones Levee provides an Annual Exceedance Probability (AEP) of 17.39%. With the predicted increase in local development and sedimentation aggradation, the Jones Levee is expected to provide a 44.11% AEP within 50 years.

Development in the floodplain has increased risk to life safety, property, and infrastructure. Levees confine the Puyallup and Carbon Rivers next to Orting and limit channel capacity, increasing flood risk. Since 1948, major flood events in the basin occurred in 1990, 1996, 2006, 2009, 2014, 2015, 2017, and 2020. The 1996 flood caused severe damages of approximately \$40,000,000 in the Puyallup River basin. During this flood, the Puyallup River's discharge near Orting was 17,500 cubic feet per second (cfs), which exceeded the designated flood stage of 10,000 cfs for this location. Besides life safety risk, there is a risk of flood damage to critical infrastructure in Orting, including two schools, police, and fire departments.

The Puyallup River experiences higher sediment loads compared to other rivers in western Washington. The heavy sediment load contributes to the long-term channel sediment aggradation that is reducing

channel capacity and raising water surface levels. These effects of sediment aggradation increase the risk of channel migration and flooding, which can cause significant erosion.

Channel migration is the process of a stream or river channel moving laterally over time. Channel migration can occur gradually, such as when a stream erodes away one bank and deposits sediment along the opposite side. It can happen quickly, such as a flood carving a new path for a river. Ultimately, the rate of change depends on an array of factors such as gradient, geology, sediment supply, stream flow, vegetation, natural instability, and human development. While channel migration provides important habitats and natural diversity, this process can also erode the shoreline and cause damage to or destroy homes, septic systems, roads, bridges, and other infrastructure. Repetitive flooding and high-water events accelerate channel migration processes and put a burden on local, state, and Federal entities to repair or construct structures to prevent damages to the human environment. The Jones Levee has experienced repetitive damages from erosion with many repairs occurring over the last 25 years. The reliance on post-flood repair authorities and flood fighting to manage flood risk are reactive approaches, further intensifying the need for a long-term solution.

3 PROJECT PURPOSE

The purpose of the proposed Federal action is to reduce flood risks to property, critical infrastructure, and life safety in the city of Orting from diminished river capacity, sediment aggradation, and erosion-induced levee damage from the Puyallup River.

Setting back the Jones Levee towards the historical Holocene extent reduces the risks associated with diminished river capacity from sediment aggradation and the risk from sediment aggradation. The predicted future increase in water surface is 1-3 feet over the existing elevation if the Jones Levee is not setback within 50 years. Storing sediment in the Jones levee setback area will benefit downstream areas. With a setback levee, water surface elevations are predicted to decrease compared to the future without-project condition an average of one foot along Calistoga and High Cedars levees. This reduction is expected to reduce flood risk downstream of the project as well.

4 PROPOSED ACTION

While the feasibility study (Phase 1) is ongoing, the Corps has made a preliminary decision on a levee setback for the Jones Levee TSP. The Corps will take the TSP into Phase 2, D&I, where it will complete design work and construct the project. While the purpose of the project under Section 205 relates to the construction or improvement of flood control works, setting back the levee also provides a unique additive opportunity to restore a floodplain connection that has been cut off since at least the 1960s and perhaps since the 1930s while addressing flood risk.

The Corps has developed a feasibility level design for the Jones Levee setback. The design comprises three major components: the setback levee, breaching the existing levee, and engineered log jams (ELJs). The Corps will complete designs in D&I. Figure 3 through Figure 5 show the preliminary project cross-sections and footprint for the feasibility level design. Measurements in the below tables and figures are based on this design; final design and construction area may be different after D&I. This document will be updated with any design changes during D&I.

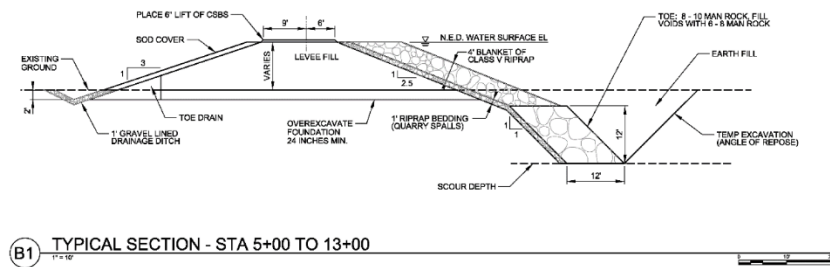
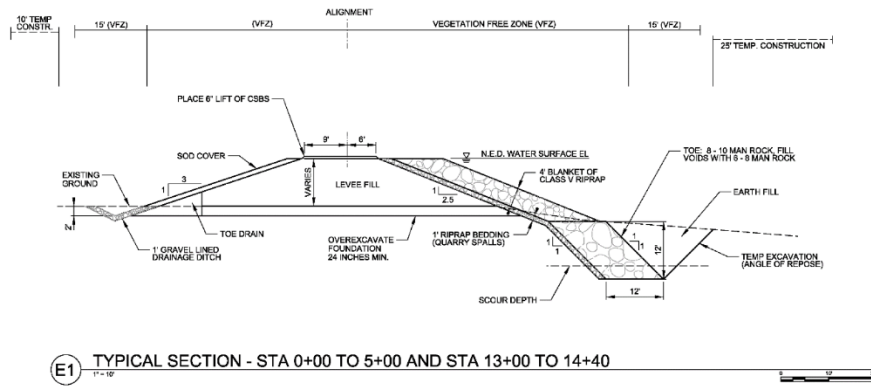
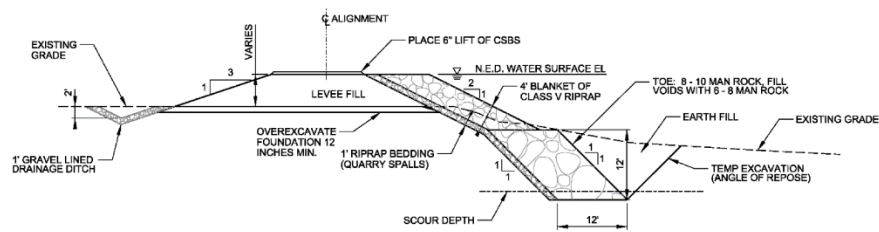
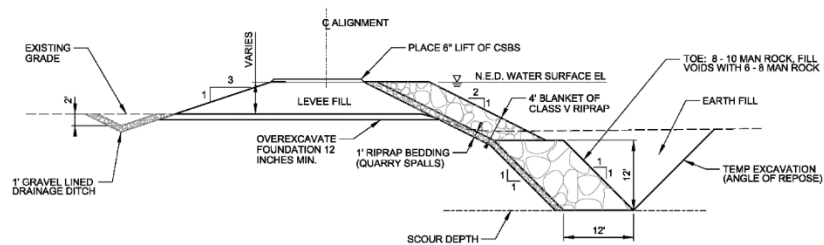


Figure 3. Proposed typical feasibility level design cross-section at the downstream end of the setback for the Section 205 Jones Levee Project.



E1 TYPICAL SECTION - STA 14+40 TO 37+00



B1 TYPICAL SECTION - STA 37+00 TO 64+13.72

Figure 4. Proposed typical feasibility level design cross-sections for a majority of the Section 205 Jones Levee Project.

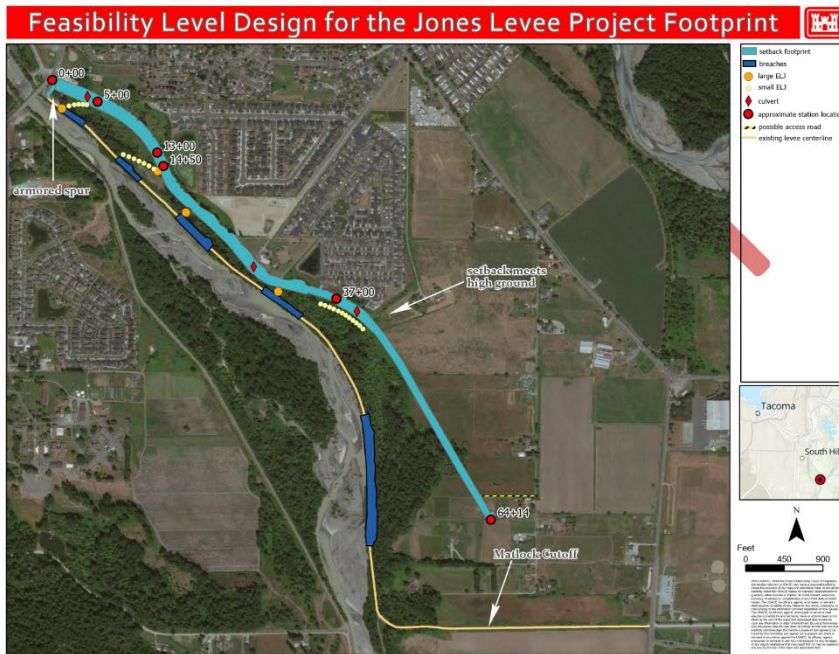


Figure 5. Feasibility level design footprint for the Section 205 Jones Levee Project. Station locations correspond to those identified in Figures 3 and 4. Temporary staging activities are proposed in a parking lot near Calistoga Bridge and in an agricultural field near the Matlock Cutoff.

4.1.1 Component 1: Setback Levee

Clearing and grubbing, excavation, material placement (rock and embankment), grading, and compaction will be necessary to build the setback levee. The Jones Levee setback will tie into the Calistoga Levee at the Calistoga Bridge. At the bridge, part of the existing levee will remain, and the Corps will armor an access road to protect the Calistoga Bridge and its piers from erosion. Modifications to a gate-operated culvert under the Calistoga Bridge may be necessary so it closes during flood events. The Corps will assess in D&I what river conditions (e.g. flow rate, flood height) would cause gate closures.

The setback levee will have side slopes between 2 horizontal to 1 vertical (2H:1V) and 3:1 (Figure 3; Figure 4) with a 15-foot-wide gravel surface for vehicle access. Excess substrate from excavation and salvaged from the obsolete levee will be placed on the armored slope of the setback levee to reduce offsite disposal costs. This material would be hydroseeded. Access is necessary for inspections, maintenance, and repairs. At the downstream end near Calistoga Bridge the levee can be accessed by existing roads. At least one new road through agricultural land will be necessary to connect the setback levee to existing roads. This road is expected to be 12 feet wide. Access during construction, the Corps will access the project by existing roads and on the proposed levee footprint. Final alignment of the upstream access roads will be determined in D&I.

Both sides of the setback levee will have vegetation-free zones where only grass would be allowed to grow. This complies with the Corps' levee vegetation maintenance standards (see Engineering Pamphlet [EP] 1110-2-18). EP 1110-2-18 outlines the minimum guidelines that allow vegetation on levees without compromising the reliability of levees and other flood control structures. Pierce County is responsible for operation and maintenance of the levee once construction is completed.

Table 1 lists the lengths and acreage of the setback component of the project. Table 2 shows the estimated area of overlap of the setback component with different habitat types. These tables are based on the feasibility level design and represent the estimated footprint directly affected by the setback component.

Table 1. Project lengths and areas for the setback component of the Jones Levee Project.

Feature	Length (linear ft.)	Area (acres)
Setback	6,414	14.2
Armored spur	114	0.18
Access Roads	532	0.16 ¹
¹ Based on a road width of 12 feet.		

Table 2. Setback component overlap with different habitat types.

Feature	Setback (acres)	Armored Spur (acres)	Access Roads (acres)
Puyallup River	0	0	0
Freshwater Emergent Wetland ¹	1.87	0	0
Freshwater Forested/Shrub Wetland ¹	7	0	0
Freshwater Pond ¹	0.04	0	0
Non-wetland Forest	1.95	0	0
Developed/Agricultural	3.33	0.18	0.15

¹Based on National Wetland Inventory Data (USFWS 2020). A wetland delineation will be completed in D&I.

4.1.2 Component 2: Breaching the Old Levee

The Corps will breach portions of the existing Jones Levee to reconnect the historic floodplain. Breaching the levee will fully remove the structure to below the waterline, which will reconnect an estimated 40 to 50 acres of floodplain to the Puyallup River. Final breach locations and depths have yet to be determined, pending further hydraulic and hydrologic analysis. The Corps will reuse the reclaimed vegetation, embankment material, and riprap from the breach locations in the setback levee.

Outside of the breach locations, the Corps will remove armor and embankment material above the waterline for reuse in the setback levee. The Corps will avoid areas with significant riparian vegetation (e.g. trees) to the greatest extent possible while retrieving excess materials to preserve existing shoreline vegetation.

The Corps will abandon the isolated parts of the old Jones Levee between breaches after construction is completed. Damage to these sections would not constitute damage to the flood control structure and further repairs would not occur. However, part of the old Jones Levee that extends inland, known as the Matlock Cutoff, will remain as a separate flood control structure and part of the levee system that protects the city of Orting. The purpose of the Matlock Cutoff is to prevent the river from meandering landward, getting behind the setback levee, and causing sheet flows across the landscape into Orting. Future damages to the Matlock Cutoff would require repair as it is integral to the levee system.

Table 3 lists the estimated lengths and acreage of this component of the project. Table 4 shows the estimated area of overlap of the breach component with different habitat types. These tables are based on the feasibility level design and represent the estimated footprint directly affected by the breach component.

Table 3. Project lengths and areas for the breach component of the Jones Levee Project.

Feature	Length (linear ft.)	Area (acres)
Breach	2,845 ¹	5.26
Reclaimed Area ²	2,839	Varies ³

¹Length of levee to be removed and the length of in-water work in the Puyallup River.

²Comprises the area of the levee not breached. Does not include the Matlock Cutoff portion that will remain.

³Will vary due to avoidance of existing riparian vegetation.

Table 4. Breach component overlap with different habitat types.

Feature	Breach	Reclaimed Area
Freshwater Forested/Shrub Wetlands ¹	0.76	N/A
Non-wetland Forest	2.18	0 ²
Puyallup River/Freshwater Ponds	2.32 or 5.26 ³	0 ⁴
¹ Based on National Wetland Inventory Data (USFWS 2020). A wetland delineation will be completed in D&I. ² Will vary due to avoidance of existing riparian vegetation. ³ Assuming entire breach footprint becomes inundated with waters from the Puyallup River since material will be removed below the waterline. ⁴ No in-water work to reclaim material at non-breach locations.		

4.1.3 Component 3: Engineered Log Jams

The Corps will build multiple ELJs between the river and the setback levee. The purpose of the ELJs is to divert river flow away from the setback levee in key areas, as floodwater or the river moves into the reconnected floodplain. While not their primary purpose, the ELJs will also provide habitat to salmonids.

The largest ELJs will be approximately 40 feet long by 80 feet wide and consist of horizontal and vertical logs interspersed with rootwads, slash, and willow stakes. Pilings for these structures will be 40-foot-long wood pilings with a bottom diameter of 27 inches, embedded at least 25 feet below the surface. The Corps will install all pilings using a vibratory hammer. The feasibility level design includes four large ELJs.

The Corps will place smaller ELJs of piled large woody material (LWM) along the setback levee and within the setback area in rows to roughen the bank. These smaller ELJs would not require pile driving. The feasibility design includes three lines of smaller ELJs (Figure 5).

Materials for the ELJs will come from materials salvaged during construction (clearing and grubbing). The Corps will assess other sources for LWM during D&I. One potential source of LWM from Mud Mountain Dam, which collects quantities of LWM that is too large to pass through the dam. These logs would be large and could include intact rootwads.

The Corps expects in-water work, or work within regulated waters of the U.S., will be necessary to install the ELJs. The Corps estimates installing the wood pilings for ELJ construction will take 12 working days. Fully breaching the levee would not be completed before the ELJs are built. The Corps will finalize placement and design of the ELJs in D&I after further hydraulic and hydrologic analysis. Table 5 shows the footprint of these structures under the feasibility level design.

Table 5. Number and affected footprint for the ELJ component of the Jones Levee Project.

Feature	ELJ Footprint
Large ELJs	0.29 acres ¹
Small ELJs	1,054 linear ft.
¹ Assuming a footprint of 40 x 80 ft.	

4.1.4 Other Construction Details

Earthwork is necessary to build the proposed project. The Corps expects excavators, dump trucks, bulldozers, loaders, scrapers, graders, and compaction equipment (rollers) will be necessary. Earthwork includes the following components:

- clearing and grubbing work areas
- excavating and removing riprap and embankment material from the existing levee (i.e. breach locations and sections to be abandoned)
- excavating and placing material for the setback alignment
- compacting and grading the new setback alignment

The Corps has identified potential staging areas in a parking lot next to the Calistoga Bridge and in agricultural fields near the Matlock Cutoff.

The Corps anticipates the need for at least three culverts in the new setback levee to preserve stormwater connection from the city of Orting (see Figure 5). The Corps will assess additional design and placement of stormwater culverts in D&I.

The Corps will restore construction areas to their previous condition. These include staging areas, the temporary construction areas next to the setback footprint, gaps, and areas next to the breach locations, and areas disturbed during construction of the ELJs. All exposed soils will be planted with native vegetation to restore the project footprint to its previous condition and to reduce soil erosion. Native vegetation may include a native hydroseed mixture, shrubs, and trees including various willow species.

Except for invasive vegetation, organic matter generated during clearing and grubbing (e.g. soil and native vegetation including woody debris and LWM not used in ELJs) would largely be left on site for reuse. The Corps will remove invasive vegetation offsite for composting. Woody debris and slash may be used in building the ELJs or placed within the wetland and along the old levee as habitat.

5 JURISDICTION AND CONSISTENCY REQUIREMENTS

Washington's CZM Program defines the state's coastal zone to include the 15 counties with marine shorelines, which includes Pierce County. Local governments hold the primary responsibility for implementing the SMA. The city of Orting and Pierce County, in which the proposed project will occur, fulfilled this requirement with their respective SMPs.

5.1 Consistency Requirements

The Corps is seeking state concurrence with its CZMA Consistency Determination for the proposed Section 205 Jones Levee Project from Ecology per CZMA Section 307 (c) and 15 CFR 923.33 (a) and (b). The anticipated TSP resulting from the FR/EA is a levee setback. Under Washington's program, Federal projects that would affect land use, water use, or natural resources strive to demonstrate consistency with the enforceable policies. Each of these laws is addressed below.

5.1.1 Washington State Water Pollution Control Act

The proposed action is consistent to the maximum extent practicable with the Washington State Water Pollution Control Act. The project will implement Best Management Practices (BMPs) to protect water quality. The Corps is seeking a 401 Water Quality Certification (WQC) from Ecology pursuant to the Federal Clean Water Act (CWA). WQC under Section 401 of the CWA for discharges of dredged or fill material into waters of the U.S. assures compliance with state water quality standards.

The Corps has also prepared a 404(b)(1) evaluation to document findings regarding this project pursuant to Section 404 of the CWA. The Corps will distribute a Section 404 public notice for public comment on the draft FR/EA prepared for this project. The Corps anticipates the need for excavation and fill in Waters of the U.S. behind the existing levee. The project would be self-mitigating since the increase in function and values expected from the 40 to 50 acres of reconnected floodplain combined with the systemic long-term benefits throughout the Puyallup River ecosystem are expected to outweigh the impacts of the project. This levee setback would restore the connection between the river and the floodplain, providing a functional lift to the riparian zone and wetlands above their current isolated function.

5.1.2 Washington State Clean Air Act

The Corps reviewed Washington Administrative Codes WAC 173.400 through 173.495 and confirmed the project is consistent with the Washington State Clean Air Act. Furthermore, the project complies with the adopted Federal rules. Section 176 of the Clean Air Act, 42 USC 7506(c), prohibits Federal agencies from approving any action that does not conform to an approved state or Federal implementation plan. Activities during the project would cause short-term localized effects to air quality and noise. There would be a temporary increase in emissions and noise during equipment operation. Construction of the setback will occur in an attainment zone, therefore *de minimus* thresholds and conformity determination requirements do not apply [40 CFR 93.153(c)(2)(ix)].

5.1.3 Washington State Ocean Resources Management Act

The enforceable policies of Washington Administrative Code (WAC) 173-26-360 Part IV: Ocean Use Guidelines do not apply to the project because the proposed action does not include sites in or adjacent to the Pacific Ocean. No significant long-term impacts to coastal or marine resources or uses of the Pacific Ocean will occur because of this project.

5.1.4 The Marine Spatial Plan for Washington Waters

The proposed project is not located in one of the four Pacific coastal counties covered by the Marine Spatial Plan. Therefore, the proposed project is not subject to the enforceable policies of the Marine Spatial Plan.

5.1.5 Shoreline Management Act

Ecology enforces the following policies under the SMA:

- Washington Administrative Code (WAC) 173-15: Oil and Natural Gas Exploration Permits: **This project does not include the exploration of oil or natural gas and therefore does not require this permit.**
- WAC 173-18: Rivers within Shoreline jurisdiction: **The project area includes the shoreline and bank area of the Puyallup River. The purpose of this document is to demonstrate consistency with all applicable policies and regulations.**
- WAC 173-20: Lakes within Shoreline jurisdiction: **This project does not include shoreline adjacent to a lake. Therefore, the rule does not apply to the proposed action.**
- WAC 173-22: Wetlands: **Wetlands are present in the project area. A wetland analysis shall be completed in D&I. The wetland analysis will include a wetland delineation, a wetland rating, and a functional assessment of the wetland.**
- WAC 173-26: Permit Enforcement: **This project falls within the boundary of Pierce County. The Corps is a Federal agency and thus does not obtain local permits. However, the Orting and Pierce County SMPs were used to demonstrate consistency with all applicable policies and regulations for shorelines of statewide and local significance.**

The determination of consistency with the CZMA for this proposed action is based on review of the Orting and Pierce County SMPs, as defined in RCW 90.58 and WAC Chapter 173-26. Applicable sections of each plan are presented below.

6 CONSISTENCY DETERMINATION

6.1 Orting Shoreline Master Program

A majority of the Section 205 Jones Levee Project is within the city limits of Orting and will be assessed under the city's plan, also known as the Orting SMP (Adopted by Reference into City Code Ord. 945, 9-11-2013). The Orting SMP designates land that the Section 205 Jones Levee Project overlaps with as Urban Conservancy. The following outlines pertinent sections of the Orting SMP.

Each relevant section of the Orting SMP appears below with the Corps' description of how the proposed Federal Action is consistent with the code in ***bold italic*** text.

CHAPTER 3.1 URBAN CONSERVANCY SHORELINE ENVIRONMENT

POL. S-UC 2

The shorelines of the Carbon and Puyallup Rivers within the city limits of Orting shall be designated as the Urban Conservancy shoreline environment.

The proposed Section 205 Jones Levee Project is in the city limits of Orting. The shoreline areas within Orting are classified as Urban Conservancy.

CHAPTER 3.2 REGULATIONS

- D. Flood hazard management structures (such as setback levees, dikes, and revetments) may be allowed to intrude into the 150-foot setback when there are no feasible alternative locations and is the minimum necessary. The proposal must be consistent with an approved flood hazard

management plan and with the policies and regulations in sections 5.05 Environmental Impacts, 5.07 Critical Areas and 7.05 Shoreline Stabilization to ensure no net loss of ecological functions. (2013 Amendment)

Consistent. The proposed action is a levee setback and the Corps is designing the project to minimize and avoid negative impacts to human health, safety, and welfare while preserving and restoring the natural and beneficial values and functions served by floodplains. The proposal is consistent with the Pierce County Rivers Flood Hazard Management Plan (Pierce County 2013).

CHAPTER 5 GENERAL POLICIES AND REGULATIONS

5.2 GENERAL REGULATIONS

- A. All proposed shoreline uses, and shoreline modification activities including those that do not require a Shoreline Substantial Development Permit, must conform to the Shoreline Goal provisions, General provisions, Environment Designation provisions (including the environment designation maps), Shoreline Use provisions and Shoreline Modification provisions.
- B. All proposed shoreline development shall be designed in accordance with the State Environmental Policy Act, the City's Critical Areas Ordinance, the City's Municipal Code, and Federal FEMA flood control regulations.
- C. Shoreline modification activities must be in support of an allowable shoreline use which conforms to the provisions of this Master Program. Except as otherwise noted, all shoreline modification activities not associated with a legally existing or an approved shoreline use are prohibited.
- D. All proposed uses and development occurring within shoreline jurisdiction must conform to chapter 90.58 RCW, the SMA, and this master program.
- E. Where provisions of this Master Program conflict with each other, the critical areas regulations, or with other laws, ordinances or programs, the more protective provisions shall apply.

Consistent. The project does not require a Shoreline Substantial Development permit. The project would shift the Jones Levee alignment away from the river and towards the Puyallup's historical Holocene extent. Construction of the setback does not significantly alter the public access, recreation, or character of the shoreline. The existing Jones Levee is not meant for recreational use but the public use it as a trail. Once completed, the setback levee would provide similar recreational uses. Additionally, part of the Matlock Cutoff would remain in its current alignment along the river after construction is completed. River and shoreline access would remain here and downstream where the setback meets the Calistoga Bridge. Corps projects are not subject to SEPA; the Corps will prepare the appropriate National Environmental Policy Act documentation, which the Corps anticipates to be an Environmental Assessment and Finding of No Significant Impact. The Corps has also completed consultation with the National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) concerning impacts to ESA-listed species and designated critical habitat. This action is in conformance with an approved shoreline use. As discussed further below, this project complies with the regulations outlined above in the SMP or is otherwise governed by Federal regulations.

CHAPTER 5.3 ARCHAEOLOGICAL AND HISTORIC RESOURCES

CHAPTER 5.3.3 REGULATIONS

- A. All shoreline permits shall contain provisions which require developers to immediately stop work and notify the City, State Office of Archaeology and Historic Preservation and affected Indian Tribes of any archaeological phenomena uncovered during excavations. In such cases, the developer shall be required to provide for a site inspection and evaluation by a professional archaeologist in coordination with affected Indian Tribes to ensure that all possible valuable archaeological data is properly salvaged.
- B. Archaeological and historic resources shall be permanently preserved for scientific study, education, and public observation. If a professional archaeologist with concurrence from DAPH determines that a site has archeological, natural, scientific, or historical value, a shoreline substantial development permit shall not be issued. The City may require that development be postponed in the affected areas to allow investigation of public acquisition potential and/or retrieval and preservation of artifacts. (2013 Amendment)
- C. In the event that unforeseen factors constituting an emergency as defined in RCW 90.58.030 necessitate rapid action to retrieve or preserve artifacts or data, the project may be exempted from the permit requirements. If the project is exempt, the City shall notify the State Department of Ecology, the State Attorney General's Office, the Office of Archaeological and Historic Preservation, and affected Indian Tribes in a timely manner.
- D. Archaeological sites located both in and outside the shoreline jurisdiction are subject to RCW 27.44 (Indian Graves and Records) and RCW 27.53 (Archaeological Sites and Records) and shall comply with WAC 25-48 as well as the provisions of this Master Program.
- E. Identified historical or archaeological resources shall be designed and managed to provide maximum protection to the resource and surrounding environment.

Consistent. The Corps will comply with the National Historic Preservation Act, detailed at 36 CFR 800 et al., and will act accordingly if cultural resources are inadvertently uncovered during repairs.

CHAPTER 5.4 CLEARING AND GRADING

CHAPTER 5.4.3 REGULATIONS

- A. Land clearing, grading, filling shall be limited to the minimum necessary for development. Surfaces cleared of vegetation and not developed must be replanted within one (1) year with native species. The City, in consultation with appropriate resource agencies, shall review the proposal to confirm that amount of land clearing, grading, filling, and alteration of drainage features is the minimum necessary for development.
 - B. All shoreline development, both during and after construction, shall control, treat, and release surface water runoff so that the quality of receiving waters and shore properties and features are not adversely affected. Control measures include but are not limited to levees, catch basins or settling ponds, oil interceptor drains, grassy swales, planted buffers and fugitive dust controls.
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Consistent. Clearing and grading will be required to build the setback levee; however, much of this will be outside of the designated Urban Conservancy area. All clearing and grading would be limited to the minimum necessary to complete the project. The Corps will incorporate native plantings into the proposed project to restore areas disturbed by construction activities. After the setback is completed, the remaining portions of the old levee would be abandoned and left to develop naturally without vegetation maintenance. The Corps project delivery team includes certified Professional Engineers specializing in civil design and hydraulic engineering; the team will follow BMPs to address any potential surface water runoff issues. The Corps, or its contractor, will secure a National Pollution Discharge Elimination System (NPDES) permit regulating construction stormwater discharges. As part of the NPDES, a Stormwater Pollution Protection Plan will be prepared to document the BMPs to be used to collect and control stormwater generated from the project construction.

CHAPTER 5.5 ENVIRONMENTAL IMPACTS

CHAPTER 5.5.3 REGULATIONS

- A. Noise levels shall not interfere with the quiet enjoyment of the shoreline.
 - B. Ambient noise levels shall be a factor in evaluating a shoreline permit application. Shoreline developments that would increase noise levels to the extent that the natural character of the shoreline would be disrupted shall be prohibited.
 - C. Solid waste, liquid waste and untreated effluent shall be prohibited within the shoreline jurisdiction.
 - D. The release of oil, hazardous materials or chemicals within the shoreline jurisdiction is prohibited. Equipment used to transport, store, handle or apply hazardous materials shall be maintained in a safe and leak proof condition. If there is evidence of leakage, further use of the equipment shall be suspended until corrected.
 - E. Proposed shoreline uses and activities shall utilize best management practices to prevent increased surface runoff and to control, treat and release surface water runoff. The Administrator shall review and approve the method of surface water control and the maintenance program for all shoreline development proposals. Control measures include but are not limited to catch basins or settling ponds, installation and required maintenance of oil/water separators, grassy swales, interceptor drains and landscaped buffers.
 - F. Proposed shoreline development shall utilize best management practices and effective erosion control methods (such as those defined in the Stormwater Management Manual for the Puget Sound Basin and the City's stormwater management ordinance) during both construction and operation.
 - G. Proposed shoreline uses and activities shall be located, designed, constructed and managed to avoid disturbance of and to minimize impacts to water quality, fish and wildlife resources, including spawning, nesting, rearing, feeding and habitat areas, and migratory routes.
 - H. Proposed shoreline development shall not cause any hazard to public health and safety and the proposal shall be aesthetically compatible with the surrounding area.
 - I. Herbicides and pesticides shall not be applied or allowed to enter water bodies or wetlands unless approved by the appropriate agencies (State Department of Agriculture, Ecology, U.S.
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Department of Agriculture, and/or the Seattle Regional Office of Environmental Protection Agency (EPA).

- J. Alternatives to the use of chemical fertilizers, herbicides, and pesticides shall be a preferred best management practice (BMP). The use of time release fertilizer and herbicides shall be preferred over liquid or concentrate application.
- K. All new shoreline development and activities within the Orting shoreline jurisdiction shall be located, designed, constructed, and managed in a manner that avoids, minimizes, and mitigates adverse impacts to the environment. In approving shoreline developments, the City shall ensure that shoreline development, use, and/or activities will not result in a net loss of ecological function. To this end, the City may require mitigation consistent with WAC 173-26-201(2)(e).

Consistent. Noise generated by the project will be temporary and during working days only and will conform to the timing restrictions designated by local ordinances. Construction related noise is not expected to reduce outdoor enjoyment and there will be no noise increase after the project is completed. No solid or liquid waste and untreated effluent will be generated. Only material free of contaminants will be used. Machinery will be cleaned before being used onsite. The Corps will take corrective actions and cleanup measures if leaks are detected. Runoff from the site will be controlled by BMPs and comply with the Western Washington Stormwater Manual. The project will be consulted upon with resource agencies to mitigate, avoid, and reduce impacts to the natural environment, and will be aesthetically compatible with the surrounding area. Alternatives to chemical fertilizers, herbicides, and pesticides shall be preferred. The action is a setback levee that once completed will restore floodplain connectivity; therefore, a net increase of ecological function is expected to occur. Conservation measures for impacts of this project will be coordinated with appropriate Federal, state, local, and tribal parties.

CHAPTER 5.6 FLOOD HAZARD MANAGEMENT

CHAPTER 5.6.3 REGULATIONS

- A. The City shall require and utilize the following information during its review of flood protection proposals:
 - Purpose of the project;
 - Hydraulic characteristics of the river within one-half (0.5) mile on each side of the proposed project;
 - Existing shoreline stabilization and flood protection devices within one-half (0.5) mile on each side of the proposed project;
 - Biological characteristics of the area, including fish and wildlife resources;
 - Construction material and methods;
 - Physical, geological, and/or soil characteristics of the area;
 - Predicted impact upon area shore and hydraulic processes, adjacent properties, and shoreline and water uses; and
 - Alternative measures (including non-structural) that will achieve the same purpose.
 - B. Development and uses proposed within shoreline jurisdiction shall be consistent with the City's flood hazard prevention regulations.
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Consistent to the maximum extent practicable. The purpose of the Section 205 Jones Levee Project is to reduce flood risk to the city of Orting and is consistent with the existing shoreline designation for the area. The Corps is preparing a FR/EA that examines alternatives to the proposed action and its impacts to the human environment. The setback levee will also be coordinated and consulted upon with the city, Pierce County, and resource agencies, including NMFS and USFWS. The project designers are certified Professional Engineers specializing in civil design and hydraulic engineering. Completion of the setback will provide continued protection to the infrastructure and community interests of Orting. The project will not significantly alter public access. The existing levee is used by the public as a hiking path. During construction, public access would be restricted. However, after the setback is completed the new structure would be available for similar uses by the public.

CHAPTER 5.7 CRITICAL AREAS

CHAPTER 5.7.3 REGULATIONS

- A. Proposed shoreline uses and activities shall be located, designed, constructed, and managed to protect the existing ecological functions of critical areas.
- B. Proposed shoreline uses, developments, and activities on sites within the shoreline jurisdiction must comply with all applicable local, state and Federal laws including but not limited to FEMA flood control management codes and regulations and the State Environmental Policy Act.

Consistent to the maximum extent practicable. The proposed repair is designed to reduce impacts to critical areas. It will largely accomplish this by setting the levee back, which will restore floodplain connectivity to wetlands and riparian areas, improving the functions of critical areas. The Corps is coordinating with Federal and state resource agencies and interested parties on the project. The repair will be assessed in an FR/EA, which will be released for public review and comment.

CHAPTER 5.7.A WETLANDS

5.7.A.3 REGULATIONS

- A. Identification of wetlands and delineation of their boundaries shall be done in accordance with Ecology's approved Federal wetland delineation manual and applicable regional supplements.
 - B. Wetlands shall be rated according to the "Washington State Wetland Rating System for Western Washington, Revised," Ecology Publication #14-06-029, October 2014, or as revised by Ecology.
 - C. Shoreline development proposed within 300 feet of a shoreline jurisdictional wetland shall require preparation of a wetland analysis by a qualified professional. The analysis shall include a wetland delineation, the wetland rating, a functional assessment of the wetland and potential buffers, and notes of any water features and other critical areas and their related buffers in the proximity of the wetland. This requirement may be waived or modified when the City determines, in consultation with Ecology, that the activity will have no impact on adjacent wetlands.
 - D. Development and uses shall be prohibited from wetlands and buffers, except as provided in this shoreline master program. In wetlands, only the following uses shall be allowed, provided they are conducted using best management practices:
 - 1. Outdoor recreational activities, including fishing, bird watching, and hiking
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2. The maintenance of drainage ditches
 3. Nature trails. Trails shall be limited to elevated trails in wetlands for pedestrian use only, placed within the outer twenty-five (25) feet of the wetland.
 4. Utility lines.
 5. Shoreline flood hazard management facilities including levees, dikes, and revetments (2013 Amendment).
- E. In addition to those activities listed above in Regulation No. D, the following activities are allowed within wetland buffers provided that buffer impacts are minimized and that disturbed areas are immediately restored:
1. Normal maintenance and repair of existing structures or improved areas. Maintenance and repair do not include modifications that change the character, scope, or size of the original structure or improved area.
 2. Nature trails. Trails shall be limited to permeable surfaces for pedestrian use only.
 3. Vegetation-lined swales designed for storm water management; provided that they are placed within the outer twenty-five (25) feet of the buffer of Category III or IV wetlands, only.
 4. Shoreline restoration.

Consistent. Wetlands and their boundaries will be delineated and rated in D&I. A report will be prepared outlining the wetland boundaries, their rating, and the impact of the proposed project on the wetlands. The Corps anticipates a functional lift to wetlands as a result of setting back the levee that currently isolates them from the floodplain. According to the city of Orting SMP, shoreline flood hazard management facilities, such as levees, are allowed within the wetlands and their buffers. BMPs will be implemented during construction. The project will reduce the human footprint along the shoreline by removing and abandoning the old levee alignment along the Puyallup River. The abandoned segments will no longer be maintained or repaired and so will naturally vegetate and erode over time. Furthermore, the setback levee will have a buried toe constructed out of jetty stone. Jetty stone is a reliable material for toe construction due to its size and weight, requiring less maintenance and repair work in the long-term. Pierce County and the Puyallup Tribe are supportive of this design and have used rock of this size in other levee projects. This rock is less likely to launch and be carried downstream during flood events, reducing levee operation and maintenance and impacts to the aquatic environment.

CHAPTER 5.7.B SALMON AND STEELHEAD HABITATS

5.7.B.3 REGULATIONS

- A. Proposed shoreline development and activity shall be scheduled to protect biological productivity and to minimize interference with salmonid migration, spawning, and rearing.

Consistent. The Corps is designing the project to minimize construction impacts to salmonids and their critical habitat. All in-water work, both landward and riverward of the current Jones Levee, will be constructed within the fish window to reduce impacts to aquatic species. Additionally, the Corps will complete in-water work behind the Jones Levee before breaching the levee to limit impacts to the

Puyallup River. In-water work on the landward side would occur in freshwater ponds to build the setback and ELJs. The completed activity will restore the connection between the floodplain and the Puyallup River will enhance juvenile salmon refuge and rearing habitat and increase the foraging opportunities for adult resident fish.

- D. Proposed shoreline protection structures are allowable only under the following conditions:
1. The applicant demonstrates that shoreline or streambank stabilization is necessary, and
 2. The applicant demonstrates that soil bioengineering techniques for stabilization are not feasible or otherwise will not be successful.

Consistent. The Jones Levee's current alignment constricts the river. Setting the new levee towards the river's historical Holocene extent will improve flood risk management for the city of Orting. Bioengineering techniques alone will not provide the necessary flood risk management for Orting; however, bioengineering techniques are incorporated into the design (i.e. ELJs).

- E. Proposed shoreline protection structures may intrude into salmonid habitat only where the applicant can demonstrate that all of the following conditions are met:
1. An alternative alignment, location, or technology is not feasible;
 2. The project is designed to minimize impacts on the environment;
 3. The project does not adversely affect salmonid spawning habitat;
 4. The facility is in the public interest; and
 5. If the project will create significant unavoidable adverse impacts on habitat, the impacts are mitigated by creating in-kind replacement habitat near the project. Where in-kind replacement mitigation is not feasible, rehabilitation of degraded habitat may be required as a substitute.

Consistent. The Corps proposes to setback the existing Jones levee. This will reduce the structure's intrusion into salmonid habitat, minimize impacts to the environment, and return isolated habitat back to the floodplain. River substrates along the bank could be disturbed during construction activities to deconstruct the Jones Levee. Spawning and rearing conditions in the Puyallup would improve once the levee is setback. The Corps anticipates little to no additional encroachment into the river due to the setback design. Any encroachment would be minimal, and necessary, to maintain existing infrastructure (i.e. the Calistoga Bridge) or provide flood risk management reduction to the city of Orting. The Corps is coordinating and consulting with interested agencies and parties, including NMSF and USFWS.

- K. The removal of riparian vegetation within or adjacent to salmonid habitat shall be prohibited unless the activity is part of a City-approved restoration project. See section on Vegetation Management in this chapter.

Consistent to the maximum extent practicable. The Corps will need to remove vegetation within or adjacent to salmonid habitat to construct the Jones Levee setback. Areas that are disturbed will be planted with native vegetation. After project completion, the amount of habitat restored and

reconnected to the floodplain will exceed that disturbed by the project (see response to Chapter 5.11 below also).

CHAPTER 5.11 VEGETATION CONSERVATION

CHAPTER 5.11.3 REGULATIONS

- A. Shorelines shall be protected from degradation caused by the modifications of the land surface within the shoreline area and/or the adjacent uplands.
- B. Restoration of any shoreline or streambank that has been disturbed or degraded shall use noninvasive plant materials with a diversity and type similar to that which most recently occurred on-site.
- C. Stabilization of exposed erosion-prone surfaces along shorelines of rivers, streams, side channels, and wetlands shall, wherever feasible, utilize soil bioengineering techniques.

Consistent to the maximum extent practicable. The Corps will remove vegetation to construct the project. However, it will also restore floodplain connectivity to wetlands and forested riparian areas behind the current Jones Levee alignment to the Puyallup River. The Corps will abandon most of the obsolete levee adjacent to the river once the setback is completed. This will improve the vegetation condition along the shoreline and allow the area to develop naturally. The Corps will plant native vegetation to restore disturbed sites as necessary.

CHAPTER 5.1 WATER QUALITY, STORMWATER, AND NONPOINT POLLUTION

CHAPTER 5.12.3 REGULATIONS

- B. The City shall encourage restoration of natural floodplain functions that will have multiple benefits: reduction of flood damage to life and property and improvement to water quality and fish and habitat.

Consistent. The Section 205 Jones Levee Project will setback the Jones Levee towards the Puyallup River's historical Holocene extent. This will improve flood risk management and reduce flood damage to life and property. It will also restore floodplain connectivity to wetlands and riparian forest. Reconnecting the Puyallup River floodplain will improve water quality and habitat in the river, through providing off-channel habitat for aquatic-dependent species and improving natural filtration of stormwater and floodwater.

CHAPTER 7.3 FILL

CHAPTER 7.3.3 REGULATIONS

1. Fill (in a river or wetland) shall be permitted as a conditional use only if the following would apply:
 - b. As part of approved shoreline flood hazard management such as levees, dikes, or revetments, an environmental restoration or enhancement project, such as fisheries or habitat enhancement project
 5. Fill materials shall be clean sand, gravel, soil, rock, or similar material. Use of polluted soils is prohibited. The developer shall provide evidence that the material has been obtained from a clean source prior to fill placement.
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Consistent. The Section 205 Jones Levee Project is an approved flood hazard management project that shifts the alignment of the Jones Levee back towards the Puyallup River's historical Holocene extent. The Corps is designing the project to avoid and minimize fill to the greatest extent possible. The Corps will only use rock that meets design criteria that is sourced from the old levee alignment or from permitted outside sources. No polluted soils will be used.

CHAPTER 7.5 SHORELINE STABILIZATION

CHAPTER 7.5.3 REGULATIONS

- A. Shoreline stabilization and flood protection works are prohibited in wetlands except as authorized in this SMP. They are also prohibited in salmonid spawning areas. (2013 Amendment)

Consistent. The Section 205 Jones Levee Project includes work in wetlands. This project will construct a shoreline flood hazard management facility (levee) that is allowed in wetlands [see Chapter 5.7.A.3(D)]. Salmon spawning occurs in the Puyallup River near Orting. In-water work will be necessary in the river to breach the Jones Levee. These activities would occur during the in-water work window to avoid spawning times for salmonids in the Puyallup River.

- B. If permitted, all new shoreline modification activity shall be located and designed to prevent or minimize environmental impacts and the need for bank stabilization and flood protection measures. Shoreline modifications and flood protection measures shall result in no net loss of ecological functions associated with the shorelines.

Consistent. The Section 205 Jones Levee Project's purpose is to reduce flood risk to the city of Orting. The Corps proposes to setback the levee towards the Puyallup River's historical Holocene extent. Doing so will restore floodplain connectivity between the river and 40 to 50 acres of wetlands and forested riparian areas that have been isolated since the construction of the Jones Levee. This will improve natural riverine functions important for aquatic and aquatic-dependent fish and wildlife. It will also improve the functional value of the reconnected wetlands. Furthermore, long-term operation and maintenance of the levee is expected to decrease. This will in turn reduce impacts to the aquatic environment. The Corps does not anticipate a net loss of ecological functions associated with the shoreline.

- C. Use of car bodies, scrap building materials, scrap concrete and concrete block, asphalt from street work, or any discarded piles of equipment or appliances for the stabilization of shorelines shall be prohibited.

Consistent. The Corps will not use any of the materials listed here to build the Section 205 Jones Levee Project.

- D. Flood control levees shall be landward of the floodway, including any wetlands directly interrelated and interdependent with the Puyallup and Carbon Rivers, except as authorized in this SMP so long as they do not disrupt water flows and habitat connectivity. (2013 Amendment)

Consistent to the maximum extent practicable. The proposed alignment of the Section 205 Jones Levee Project is setback towards the Puyallup River's historical Holocene extent. This alignment will restore the floodplain connection between isolated wetlands and forested riparian areas. The proposed alignment will be a significant improvement over the existing condition.

- E. Shoreline modification shall to the greatest extent possible, be planned, designed, and constructed to allow for channel migration. These developments shall not reduce the volume and storage capacity of the rivers and adjacent wetlands and/or flood plains and shall not result in a cumulative increase of the flood hazard.

Consistent. The Jones levee Section 205 project is a levee setback project. It includes removing parts of the existing levee. Doing so will restore floodplain connectivity, increasing the area available to the Puyallup River to migrate. Setbacks will also increase the storage capacity of the river and adjacent wetlands. The setback levee will not increase flood hazards to the city of Orting.

- G. New structural flood hazard reduction measures may be allowed in shoreline jurisdiction only when it can be demonstrated by a scientific and engineering analysis that they are necessary to protect existing development, that nonstructural measures are not feasible, that impacts to ecological functions and priority species and habitats can be successfully mitigated so as to assure no net loss, and that appropriate vegetation conservation actions are undertaken consistent with WAC 173-26-221(5).

Consistent. The Section 205 Jones Levee Project will setback the levee. Scientists and engineers have used best professional judgment, scientific analysis, and modelling in the design. The FR/EA will describe the planning process and rationale for the design. The Corps will complete further analysis in D&I. No net loss to ecological functions and priority species and habitats are expected. The Corps will replant disturbed areas with native vegetation.

CHAPTER 9.2 PUBLIC ACCESS AND RESTORATION PLAN

CHAPTER 9.2.1

GOAL #3 ECOLOGY

All future development projects and restoration projects, such as the Soldiers Home Setback Levee Project should be developed and managed in a way that enhances water quality, open space, and natural resource values while minimizing conflicts between public access and habitat conditions.

Consistent to the maximum extent practicable. The Section 205 Jones Levee Project complements the Soldiers Home Setback Levee Project and is additive to it in regards to opening up the floodplain, improving water quality, open space, and natural resources values. Public access will be limited during construction. However, once construction is completed, recreational use of the new setback would be available for the public and shoreline access maintained along the Matlock Cutoff and downstream at the Calistoga Bridge.

GOAL #5 SAFETY

Improvement and management of the levees should provide safe public use opportunities and should not preclude long-term construction access needs, emergency, and maintenance access.

Consistent. Construction of the Section 205 Jones Levee Project will not preclude long-term construction needs or emergency and maintenance access. Pierce County will be responsible for the long-term operation and maintenance of the completed project.

CHAPTER 9.2.2

Goal #1 Water Quality

Restore, protect, and enhance the shoreline function of water quality improvement, such as trapping sediment and filtering turbidity, nutrients, and metals.

Consistent. The Corps anticipates the setback area reconnected to the floodplain will receive floodwaters during flood events on the Puyallup River and capture sediment. This will filter suspended sediments from the river, capture and process nutrients, and improve water quality.

GOAL #2: FLOOD PROTECTION

Reduce impacts of flooding events by improving the storage of floodwaters and thereby reducing peak flows and erosion.

Consistent. The Corps anticipates the setback area reconnected to the floodplain will receive floodwaters during flood events on the Puyallup River, increasing floodwater storage capacity within the river.

GOAL #3: VEGETATION

Restore, protect, and enhance natural vegetation. Encourage removal of invasive species and plant native species to enhance diversity of vegetative structure.

Consistent. The project includes clearing and grading. Any invasive vegetation removed from the project site will be disposed of in a safe manner that will not increase their spread. Project plantings will use only native species. Restoring floodplain connectivity will restore processes that support a naturally dynamic riparian area.

GOAL #4: HABITAT

Restore, protect, and enhance habitat functions. Enhance the diversity of habitat and improve the connectivity of the restored shoreline areas with existing high-quality habitat.

Consistent. The Section 205 Jones Levee Project is a levee setback that will restore floodplain connectivity between the river and riparian area.

6.2 Pierce County Shoreline Master Plan

A portion of the Section 205 Jones Levee Project at the upstream end near the Matlock Cutoff and at the downstream extent near the Calistoga Bridge, are within the boundaries of the Pierce County SMP (Title 18S PCC, Development Policies and Regulations – Shorelines). Title 18S PCC includes the shoreline policies, regulations, and shoreline environment designation maps for Pierce County. The Pierce County SMP designates areas that overlap with the Section 205 Jones Levee Project as High Intensity, Shoreline Residential, and Conservancy. The following outlines pertinent sections of the Pierce County SMP.

Each relevant section of the Pierce County SMP appears below with the Corps' description of how the proposed Federal Action is consistent with the code in ***bold italic*** text.

SECTION 18S.30 – GENERAL POLICIES AND REGULATIONS

18S.30.020 – ARCHAEOLOGICAL, CULTURAL, AND HISTORIC RESOURCES

The intent of the Archaeological, Cultural, and Historic Resources policies and regulations is to recognize that these resources can be found throughout the County and that they are valuable because they are irreplaceable and limited. When these resources are found on shoreline sites they should be preserved, protected, and restored. Archaeological areas, ancient villages, military forts, old settlers' homes, ghost towns, historic trails, historical cemeteries, and other cultural sites and features are nonrenewable resources, many of which are in danger of being lost through present day changes in land use and urbanization.

Consistent. The Corps will comply with the National Historic Preservation Act, detailed at 36 CFR 800 et al., and will act accordingly if cultural resources are inadvertently uncovered during design or construction.

18S.30.030 – ECOLOGICAL PROTECTION

The intent of the Ecological Protection policies and regulations is to ensure that shoreline development is established and managed in a manner that protects existing ecological functions and ecosystem-wide process and that mitigates adverse impacts to ecological functions. This means assuring no net loss of ecological functions and processes in shorelines, and protecting critical areas designated in Title 18E PCC.

Consistent. The Corps does not anticipate a net loss of ecological functions and processes associated with the shoreline. The Corps will setback the Jones Levee, restoring floodplain connectivity to approximately 40 to 50 acres of wetlands and forested riparian areas. Shoreline ecological functions (e.g. fish and wildlife habitat, food chain support, water temperature maintenance) will be temporarily affected during construction activities. However, the project will improve ecological processes and functions. Furthermore, the levee setback design is more durable than the existing structure. The larger jetty stone used in the buried toe is expected to provide stable and reliable material for toe construction due to its size and weight, requiring less maintenance and repair work in the long-term. Pierce County and the Puyallup Tribe are supportive of this design and have used rock of this size in other levee projects. This rock is less likely to launch and be carried downstream during flood events. This means that operation and maintenance of the setback levee will occur less often and have less impacts to the aquatic environment.

18S.30.040 – EXCAVATION, DREDGING, FILLING, AND GRADING

(B) – POLICIES

1. Prohibit fill waterward of the ordinary high water mark (OHWM) except for restoration projects mitigation, beach nourishment or enhancement projects or when necessary to support a water dependent use, public access, cleanup of contaminated sediments, or alteration of a transportation facility of statewide significance.

2. Locate and design new development to avoid the need for fill. When fill is deemed necessary, its use should be minimized, and environmental impacts mitigated.
3. Evaluate fill projects for:
 - a. Total water surface reduction;
 - b. Navigation restriction;
 - c. Impediment to water flow circulation, and currents;
 - d. Reduction of water quality;
 - e. Destruction of habitat and natural resource systems; and
 - f. Creation of hazard to the public and adjacent properties.

Consistent. The project will setback an existing levee to provide flood risk management to Orting. Setting back the levee will improve floodplain connectivity between the Puyallup River and a riparian area containing wetlands and riparian forest. The design will minimize impacts to the environment and provide a functional lift to the wetlands currently isolated from the river by the existing alignment of the Jones Levee. The project is self-mitigating. Floodplain connectivity will be restored over a larger area, reducing total water surface. No navigation restrictions will be created. Natural water flows through the project area will be improved to a more natural condition. Water quality is anticipated to improve. The human footprint in the floodplain will be reduced, which will cause a net gain of habitat as ecological functions and processes improve. The project will not create a hazard to the public and adjacent properties. The new setback is more durable and is expected to require less frequent and extensive repairs.

(C) – REGULATIONS

1. The following activities are prohibited:
 - a. Filling in locations that will cut off or isolate hydrological features, except as allowed pursuant to PCC 18S.40.060m Flood Hazard Management;
 - b. Solid waste landfills;

Consistent. The Section 205 Jones Levee Project is a flood risk management project. The project will setback the Jones levee and restore connectivity to the floodplain.

2. Filling waterward of the OHWM is prohibited for the purpose of creating upland, but may be allowed when necessary to support:
 - a. Water-dependent uses;

Consistent. The Section 205 Jones Levee Project will construct a levee setback, a water dependent structure.

3. Excavation, dredging, filling, and/or grading shall not occur without an authorized principal use or development.
-

Consistent. The principle purpose of the proposed project is to reduce the risk of flooding, life safety and loss of life, and property damage for the city of Orting.

4. Excavation, dredging, filling, and/or grading shall be limited to the minimum amount necessary for the specific use or development proposed.

Consistent. The Corps is designing the Section 205 Jones Levee Project to minimize the amount of necessary grading and filling.

5. Activities waterward of the OHWM shall only be allowed after the proponent has demonstrated that alternative locations and designs have been considered and found to be infeasible, and the dump site or destination and staging area for dredged material has been provided.

Consistent. The Corps is developing a FR/EA that describes the analysis of project alternatives and documents that the proposed alternative is the least environmentally damaging practicable alternative. A draft FR/EA will be released for public review and comment.

6. Excavation, dredging, filling, and/or grading shall not unnecessarily impact natural processes such as water flow, circulation, currents, channel migration, erosion, sediment transport, and floodwater storage, and shall not cut off or isolate hydrologic features.

Consistent. The levee setback will restore floodplain connectivity between the river and isolated hydrologic features located behind the current Jones Levee. Doing so will improve natural processes.

7. Dredging material, if suitable, should be utilized for beneficial shoreline resources.

Consistent. The project does not involve dredge material.

8. Stabilization measures should be designed to blend physically and visually with existing topography.

Consistent to the maximum extent practicable. The project design ties into high ground and preserves natural features such as wetlands and vegetation to the greatest extent possible. The Corps will replant disturbed areas with native vegetation.

9. New development shall be located and designed to avoid or minimize the need for maintenance dredging.

Consistent. The project does not involve dredging.

18S.30.050 – SHORELINE ACCESS

The intent of the Shoreline Access policies and regulations is to recognize the rights of the general public to reach, touch, view and enjoy the water's edge, to travel the waters of the State, and to view the water and the shoreline from adjacent locations. These rights are a fundamental element of the SMA.

Consistent. Although the Jones Levee is a flood control structure with gates blocking vehicle access, the public use the structure as a trail. The proposed work would not interfere with the public's enjoyment of the river environment or its aesthetics, except on a short-term, limited basis during construction. Ample recreational opportunities are nearby for public use during construction. These

include recreational fishing, hunting, other riverfront walking paths, and nature watching activities. After construction is complete, the river would return to a more natural condition that would improve aesthetic and recreational opportunities. The public would be able to use the new setback levee top for a trail. Additionally, part of the Matlock Cutoff would remain in its current alignment along the river after construction is completed. River and shoreline access would remain here and downstream where the setback meets the Calistoga Bridge. The Corps expects beneficial effects to recreational fishing because reconnecting the river to its historical flood plain will enhance juvenile salmon refuge and rearing habitat and increase the foraging opportunities for adult resident fish. Setting the levee back will also improve the aesthetics and visual quality of the river as it returns to a more natural condition.

18S.30.060 – SCENIC PROTECTION AND COMPATIBILITY

The purpose of the Scenic Protection and Compatibility policies and regulations is to preserve shoreline scenic vistas and to ensure development on shorelines is compatible with the surrounding environment, existing, and planned development.

Consistent. The Section 205 Jones Levee Project will setback the levee and restore floodplain connectivity. Doing so will restore natural riverine processes that create and sustain natural scenic conditions. The public will still have access to shoreline scenic vistas.

18S.30.070 – SHORELINE STABILIZATION

The intent of the Shoreline Stabilization policies and regulations is to allow shoreline stabilization structures or measures where no alternatives are feasible to accommodate development along the shorelines, while preserving and improving ecological functions of the shoreline and while protecting the shoreline environment from impacts caused by development within and adjacent to geologically hazardous areas.

Consistent. The Section 205 Jones Levee Project will setback the levee and restore floodplain connectivity. Doing so will preserve and improve ecological functions in the floodplain and prevent development from occurring in ecologically sensitive areas.

18S.30.080 – SHORELINE MODIFICATIONS

The intent of the Shoreline Modification policies and regulations is to limit those actions that modify the physical configuration or qualities of the shoreline area. Shoreline modifications are those actions that modify the physical configuration or qualities of the shoreline area, usually through the construction of a physical element such as a dike, breakwater, pier, weir, dredged basin, fill, bulkhead, or other shoreline structure. They can include other actions, such as clearing, grading, or application of chemicals.

Consistent. The Section 205 Jones Levee Project will setback the levee and restore floodplain connectivity. Doing so will remove modifications to the shoreline and restore natural riverine processes that create and sustain natural scenic conditions.

18S.30.090 – WATER ORIENTED DEVELOPMENT

The intent of the Water Oriented Development policies and regulations is to ensure that water-dependent, water-related, or water-enjoyment, or a combination of such uses, is preferred in shorelines.

Consistent. The Section 205 Jones Levee Project will setback the levee and restore floodplain connectivity. No new residential, commercial, or other development is proposed. The setback levee is a water-dependent and water-related structure.

18S.30.100 – WATER QUALITY, STORMWATER, AND NONPOINT POLLUTION

The intent of the Water Quality, Stormwater, and Nonpoint Pollution policies and regulations is to protect against adverse impacts to water quality and quantity.

Consistent. The Corps anticipates the setback area reconnected to the floodplain will receive floodwaters during flood events on the Puyallup River and capture sediment. This will filter suspended sediments from the river, capture and process nutrients, and improve water quality. During construction, BMPs will be employed to protect water quality.

SECTION 18S.40 – USE AND DEVELOPMENT POLICIES AND REGULATIONS

18S.40.060 – FLOOD HAZARD MANAGEMENT

The intent of the Flood Hazard Management policies and regulations is to minimize public and private losses due to flood conditions in flood hazard areas.

(B) – POLICIES

1. Demonstrate avoidance of adverse impacts to shoreline uses, resources, and values, including shoreline geomorphic processes, water quality, fish and wildlife habitat, commercial aquaculture, scenic resources, and bank erosion.

Consistent. The Section 205 Jones Levee Project will build a setback levee that avoids impacts to shoreline uses, resources, and values to the greatest extent practicable. The Corps is coordinating with state and Federal agencies, as well as Tribes, to assure careful consideration of shoreline uses, resources, and values. Setting back the levee will improve ecosystem functions, increased fish and wildlife habitat, improve sediment filtration, and enhance natural geomorphic processes.

2. Give preference to flood hazard reduction measures that consist of nonstructural measures such as setbacks, land use controls, wetland restoration, dike removal, impervious surface reduction, use relocation, vegetation retention, biotechnical measures, and stormwater management programs.

Consistent. The Section 205 Jones Levee Project is a setback levee. Setting back the Jones Levee will restore floodplain connectivity to wetlands and riparian forest currently isolated from the river.

3. Flood hazard reduction measures may include structural measures such as dikes, levees, revetments, floodwalls, channel realignment, and elevation of structures.

Consistent. The Section 205 Jones Levee Project is flood hazard reduction measured achieved through a levee setback.

4. Limit development, flood control structures, and other shoreline modifications that may adversely impact property or public improvements, or result in a net loss of ecological functions associated with rivers and streams, by interfering with channel migration processes.

Consistent. The Section 205 Jones Levee Project's purpose is to reduce flood risk to the city of Orting. Setting the Jones Levee back will restore floodplain connectivity. This will improve ecological functions associated with the Puyallup River, including channel migration processes.

5. Return river and stream corridors to more natural hydrological conditions, recognizing that seasonal flooding is an essential natural process.

Consistent. The Section 205 Jones Levee Project will improve natural hydrological conditions within the river reach next to the Jones Levee by reconnecting part of the historical floodplain.

6. Consider the removal or relocation of structures in flood hazard areas when evaluating alternate flood control measures.

Consistent. The Section 205 Jones Levee Project relocates the levee landward, away from the river, and will partially remove the existing flood control structure.

7. Allow flood hazard management structures only when the following can be demonstrated:
 - a. They are necessary to protect development;
 - b. Nonstructural measures are not feasible; and
 - c. Appropriate vegetation conservation actions are undertaken.

Consistent. The Section 205 Jones Levee Project is a levee setback that is necessary for flood risk management in Orting. Vegetation on the new levee will be maintained by Pierce County, according to Corps of Engineers Levee Vegetation Guidelines. The Corps will incorporate native plantings into the proposed project to restore areas disturbed by construction activities.

8. Give preference to placing new flood hazard reduction structures landward of wetlands and associated buffers.

Consistent. The Section 205 Jones Levee Project is designed to maximize the setback area and to avoid wetlands to the greatest extent possible. However, some wetlands will continue to remain landward of the new setback alignment due to cost, levee safety, existing development, and other constraints.

(C) – REGULATIONS – GENERAL

1. Proposals for flood hazard management measures shall demonstrate, by engineering and scientific evaluation, the following:
 - a. Measures are necessary to protect health, safety, or existing legally established development;
-

- b. Measures are consistent with an adopted flood hazard management plan that evaluates cumulative impacts to the watershed system; and
- c. Benefits of the flood hazard project outweigh the anticipated environmental impacts.

Consistent. The Section 205 Jones Levee Project is necessary for flood risk management to Orting. Setting the levee back is consistent with Pierce County's and other local entities' plans for the floodplain. The Corps anticipates that setting the levee back will improve the environmental baseline in the area since it removes human structures from the floodplain.

- 2. Removal of gravel for flood management purposes shall be consistent with an adopted flood hazard reduction plan and shall be allowed only after a biological study and geomorphological study show that extraction has a benefit to flood hazard management, does not result in a net loss of ecological functions, and is part of a comprehensive flood management solution.

Consistent. The Section 205 Jones Levee Project does not include removing river gravel for flood management purposes.

- 3. Removing material from rivers and streams for the sole purpose of flood control may be permitted under the following conditions:
 - a. The location and quantities of sand and gravel or other materials to be removed are specified;
 - b. Extraction amounts, rates, timing and locations are based on a scientifically determined sediment budget adjusted periodically according to data provided by a regular monitoring plan;
 - c. The development will not adversely affect the natural processes of gravel transportation for the river or stream system as a whole. Specific studies prepared by a hydrogeologist and included with the application shall demonstrate that any adverse flood, erosion, or other environmental impacts occurring either upstream or downstream of extraction sites are mitigated; and
 - d. The development shall be limited to work that occurs out of the water unless the project is adopted by a governmental agency or approved comprehensive flood hazard management plan.

Consistent. The Section 205 Jones Levee Project does not include removing native material from rivers and streams.

- 4. Accessory aggregate processing (crushing, washing, screening, stockpiling, and staging areas) may occur on site on a temporary basis after review of potential impacts.

Consistent. The Section 205 Jones Levee Project will use staging areas to process materials excavated from the existing levee to make satisfactory levee fill for the setback alignment. Other material will be brought to the staging area from a quarry and will not need processing. The staging areas will be located away from a shoreline area. Impacts of the project will be reviewed in the FR/EA.

5. Riprapping and other bank stabilization measures shall be located, designed, and constructed to protect the natural character of the waterway.

Consistent. The Section 205 Jones Levee Project is a setback levee. Setting back the Jones Levee will restore floodplain connectivity. Doing so will restore the natural character of the Puyallup River. The buried toe of the setback levee will use jetty stone. Jetty stone is a reliable material for toe construction due to its size and weight, requiring less maintenance and repair work in the long-term. Pierce County and the Puyallup Tribe are supportive of this design and have used rock of this size in other levee projects. This rock is less likely to launch and be carried downstream during flood events. This means that operation and maintenance of the setback levee will occur less often and have less impacts to the aquatic environment.

6. Levees, revetments, berms, and similar flood control structures shall be shaped and planted with vegetation suitable for wildlife habitat when feasible.

Consistent. The Section 205 Jones Levee Project will plant the project site as needed with native vegetation. Removal of riparian vegetation from the existing levee will be avoided to the maximum extent practicable.

(D) – REGULATIONS – STRUCTURAL FLOOD HAZARD REDUCTION MEASURES

1. New structural flood hazard reduction measures shall be:
 - a. Permitted only in those circumstances in which nonstructural flood hazard reduction measures will not achieve the intended flood hazard reduction; and
 - b. Constructed and maintained in a manner that does not degrade water quality.

Consistent. The Section 205 Jones Levee Project is a setback levee. It will be set landward of the existing Jones Levee alignment and the old alignment breached to reconnect the floodplain. The Corps anticipates the setback area reconnected to the floodplain will receive floodwaters during flood events on the Puyallup River and capture sediment. This will filter suspended sediments from the river, capture and process nutrients, and improve water quality.

2. Groundwater movement and surface water runoff shall be considered in the design and operation of new structural flood hazard reduction measures.

Consistent. The Section 205 Jones Levee Project is a setback levee that will allow for a more natural flow of surface water and groundwater within the floodplain. A study in the Yakima River found that setback levees improved hyporheic flow. The Corps plans to integrate a drainage ditch to the backside of the setback levee so that runoff can be captured and transported. Additionally, the Corps will assess culvert replacement in D&I as needed to maintain stormwater drainage from the city of Orting.

7 STATEMENT OF CONSISTENCY

Based on the above evaluation, the Corps has determined that the proposed Section 205 Jones Levee Project is consistent with the Orting Comprehensive Plan and Pierce County SMP. The Corps considers the proposed action to be consistent to the maximum extent practicable with the enforceable policies of

the State of Washington Shoreline Management Program and the policies and standards of the Orting Comprehensive Plan and Pierce County SMP.

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**Section 205 Jones Levee Project
Feasibility Study
Pierce County, Washington**

**Substantive Compliance for
Clean Water Act Section 404**

1 Introduction

This document records the U.S. Army Corps of Engineers' (Corps) evaluation and findings regarding this project pursuant to Section 404 of the Clean Water Act (CWA).

This document covers the following actions: setting back the Jones Levee, breaching the old levee, and installing engineered log jams (ELJs).

The information in this document reflects the findings of the project record. Specific sources of information include:

- Jones Levee Flood Control Project, Orting, Washington Continued Authorities Program, Section 205 Draft Integrated Feasibility Report/Environmental Assessment (FR/EA)
- CWA, 404(b)(1) Evaluation
- Section 205 Jones Levee Project Biological Assessment (BA)
- Public Interest Review

This document addresses the substantive compliance issues of the Clean Water Act 404(b)(1) Guidelines [40 CFR §230.12(a)] and the Regulatory Programs of the Corps of Engineers [33 CFR §320.4(a)]. The measurements outlined in this document are based on the feasibility level design, which will undergo further design and analysis in the Design and Implementation (D&I) phase. This document will be updated with any design changes and a wetland delineation during D&I.

2 Project Background

2.1 Project Location

Jones Levee is on the right bank of the Puyallup River near the city of Orting, Washington in Pierce County. The levee extends from River Mile (RM) 21.6 to RM 22.8 and is approximately 9,400 feet long (

Figure 1; Figure 2). The flood control structure provides flood risk reduction for the city of Orting from the Puyallup River. Section 2.2 describes the proposed project and includes tables showing the extent of the proposed discharge.

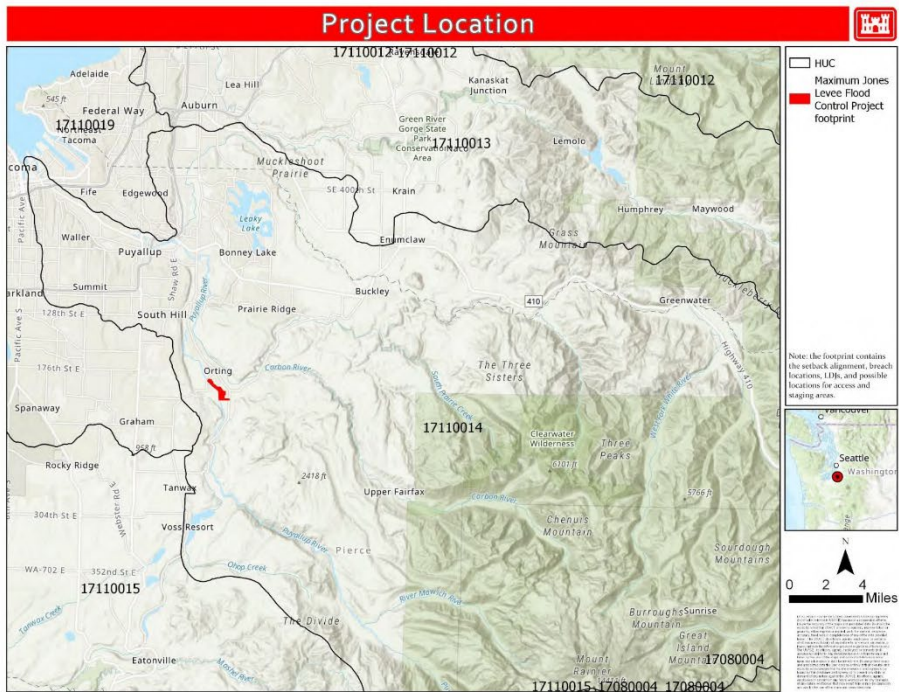


Figure 1. Project location

Draft Substantive Compliance for Clean Water Act Section 404
Section 205 Jones Levee Project



Figure 2. Existing Jones Levee

Draft Substantive Compliance for Clean Water Act Section 404
Section 205 Jones Levee Project

2.2 Proposed Federal Action

While the feasibility study is ongoing, the Corps has made a preliminary decision on a levee setback design for the Jones Levee Tentatively Selected Plan (TSP). The Corps will take the TSP design into D&I and then construction. While the purpose of the project under Section 205 relates to the construction or improvement of flood control works to address flood risk, setting back the levee provides a unique, additive opportunity to restore a floodplain connection that has been cut off since at least the 1960s and perhaps since the 1930s.

The Corps has developed a feasibility level design for the Jones Levee setback. The design comprises three major components: the setback levee, breaching the existing levee, and ELJs. The Corps will complete designs in D&I. Figure 3 through Figure 5 show the project cross-sections and footprint for the feasibility level design. Measurements in the below tables and figures are based on this design; final design and construction area may be different in D&I.

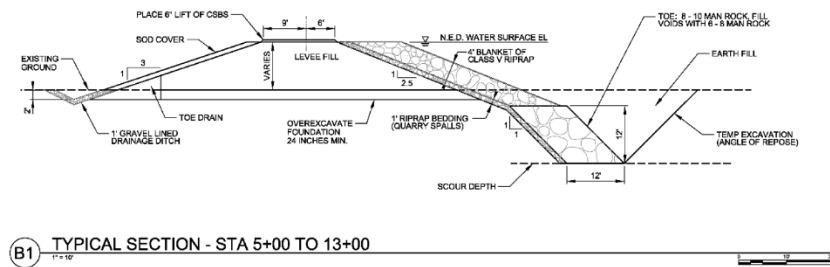
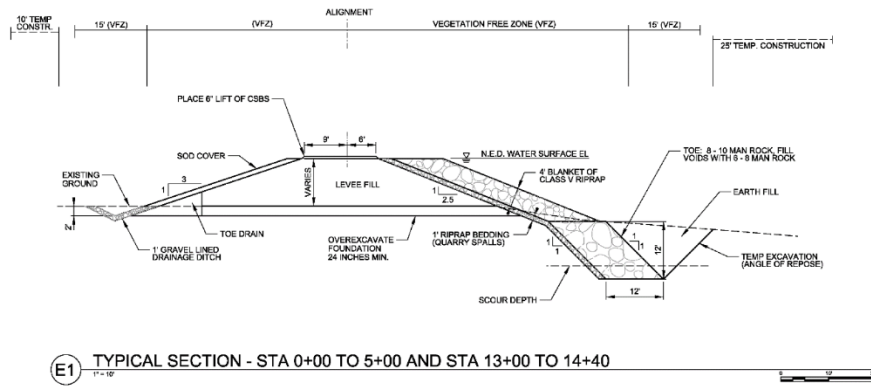
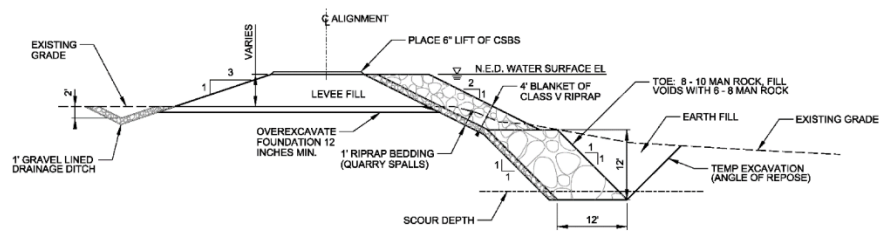
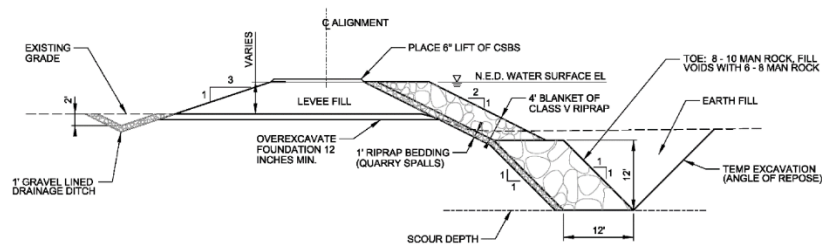


Figure 3. Proposed typical feasibility level design cross-sections at the downstream end of the setback for the Section 205 Jones Levee Project.



E1 TYPICAL SECTION - STA 14+40 TO 37+00



B1 TYPICAL SECTION - STA 37+00 TO 64+13.72

Figure 4. Proposed typical feasibility level design cross-sections for a majority of the setback for the Section 205 Jones Levee Project.

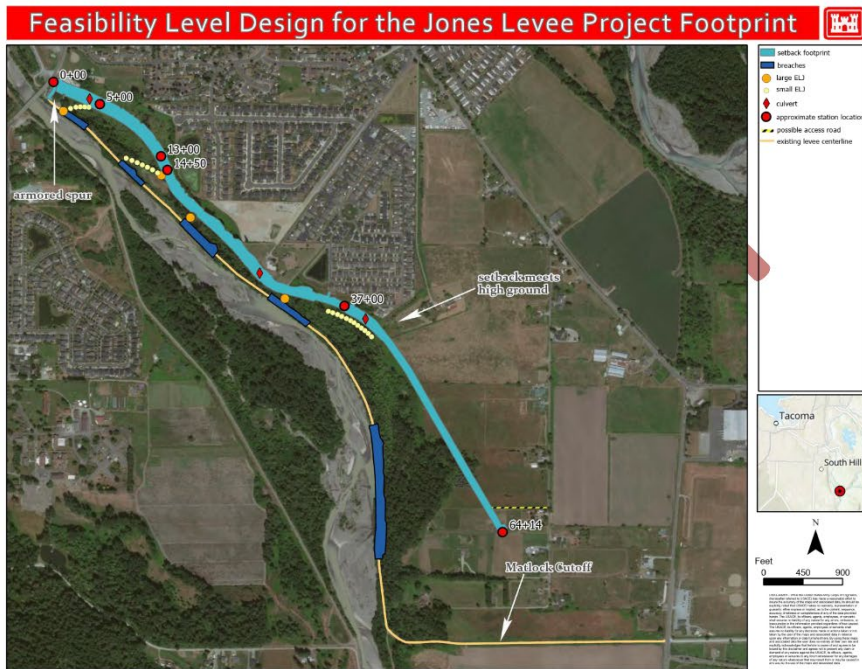


Figure 5. Feasibility level design footprint for the Section 205 Jones Levee Project. Station locations correspond to those identified in Figures 3 and 4. Temporary staging activities are proposed in a parking lot near Calistoga Bridge and in an agricultural field near the Matlock Cutoff.

Draft Substantive Compliance for Clean Water Act Section 404
Section 205 Jones Levee Project

2.2.1 Component 1: Setback Levee

Clearing and grubbing, excavation, material placement (rock and embankment), grading, and compaction will be necessary to build the setback levee. The Jones Levee setback will tie into the Calistoga Levee at the Calistoga Bridge. At the bridge, part of the levee will remain, and the Corps will armor an access road to protect the Calistoga Bridge and its piers from erosion. Modifications to a gate-operated culvert under the Calistoga Bridge may be necessary so it closes during flood events. The Corps will assess in D&I what river conditions (e.g. flow rate, flood height) would cause gate closures.

The setback levee will have side slopes between 2 horizontal to 1 vertical (2H:1V) and 3H:1V (Figure 3; Figure 4) with a 15-foot-wide gravel surface for vehicle access. Excess substrate from excavation and salvaged from the obsolete levee will be placed on the armored slope of the setback levee to reduce offsite disposal costs. This material would be hydroseeded. Access is necessary for inspections, maintenance, and repairs. At the downstream end near Calistoga Bridge the levee can be accessed by existing roads. At least one new road through agricultural land will be necessary to connect the setback levee to existing roads. This road is expected to be 12 feet wide. Access during construction, the Corps will access the project by existing roads and on the proposed levee footprint. Final alignment of the upstream access roads will be determined in D&I.

Both sides of the setback levee will have vegetation free zones (VFZs) where only grass would be allowed to grow. This complies with the Corps' levee vegetation maintenance standards (see Engineering Pamphlet [EP] 1110-2-18). EP 1110-2-18 outlines the minimum guidelines that allow vegetation on levees without compromising the reliability of levees and other flood control structures. Pierce County is responsible for operation and maintenance of the levee once construction is completed.

Table 1 lists the estimated lengths and acreage of the setback component of the project. Table 2 shows the estimated area of overlap of the setback component with different habitat types. These tables are based on the feasibility level design and represent the estimated footprint directly affected by the setback component.

Table 1. Project lengths and areas for the setback component of the Jones Levee Project.

Feature	Length (linear ft.)	Area (acres)
Setback	6,414	14.2
Armored spur	114	0.18
Access Road	532	0.16 ¹

¹Based on a road width of 12 feet.

Table 2. Setback component overlap with different habitat types.

Feature	Setback (acres)	Armored Spur (acres)	Access Roads (acres)
Puyallup River	0	0	0
Freshwater Emergent Wetland ¹	1.87	0	0
Freshwater Forested/Shrub Wetland ¹	7	0	0
Freshwater Pond ¹	0.04	0	0
Non-wetland Forest	1.95	0	0
Developed/Agricultural	3.33	0.18	0.15

¹Based on National Wetland Inventory Data (USFWS 2020). A wetland delineation will be completed in I&D.

2.2.2 Component 2: Breaching the Existing Levee

The Corps will breach portions of the existing Jones Levee to reconnect the historical floodplain. Breaching the levee will consist of removing the structure to below the waterline, which will reconnect an estimated 40 to 50 acres of floodplain to the Puyallup River. Final breach locations and depths have yet to be determined, pending further hydraulic and hydrologic analysis. The Corps will reuse the reclaimed vegetation, embankment material, and riprap from the breach locations in the setback levee.

Outside of the breach locations, the Corps will remove armor and embankment material above the waterline for reuse in the setback levee. The Corps will avoid areas with significant riparian vegetation (e.g. trees) to the greatest extent possible while retrieving excess materials to preserve existing shoreline vegetation.

The Corps will abandon the isolated parts of the old Jones Levee between breaches after construction is completed. Damage to these sections would not constitute damage to the flood control structure and further repairs would not occur. However, part of the old Jones Levee that extends inland, known as the Matlock Cutoff, will remain as a separate flood control structure and part of the levee system that protects the city of Orting. The purpose of the Matlock Cutoff is to prevent the river from meandering landward, getting behind the setback levee, and causing sheet flows across the landscape into Orting. Future damages to the Matlock Cutoff would require repair as it is integral to the levee system.

Table 3 lists the estimated lengths and acreage of this component of the project. Table 4 shows the estimated area of overlap of the breach component with different habitat types. These tables are based on the feasibility level design and represent the estimated footprint directly affected by the breach component.

Table 3. Project lengths and areas for the breach component of the Jones Levee Project.

Feature	Length (linear ft.)	Area (acres)
Breach	2,845 ¹	5.26
Reclaimed Area ²	2,839	Varies ³

¹Length of levee to be removed and the length of in-water work in the Puyallup River.

²Comprises the area of the levee not breached. Does not include the Matlock Cutoff portion that will remain.

³Will vary due to avoidance of existing riparian vegetation.

Table 4. Breach component overlap with different habitat types.

Feature	Breach	Reclaimed Area
Freshwater Forested/Shrub Wetlands ¹	0.76	N/A
Non-wetland Forest	2.18	0 ²
Puyallup River/Freshwater Ponds	2.32 or 5.26 ³	0 ⁴
¹ Based on National Wetland Inventory Data (USFWS 2020). A wetland delineation will be completed in D&I. ² Will vary due to avoidance of existing riparian vegetation. ³ Assuming entire breach footprint becomes inundated with waters from the Puyallup River since material will be removed below the waterline. ⁴ No in-water work to reclaim material at non-breach locations.		

2.2.3 Component 3: Engineered Log Jams

The Corps will build multiple ELJs between the river and the setback levee. The purpose of the ELJs is to divert river flow away from the setback levee in key areas, as floodwater or the river moves into the reconnected floodplain. While not their primary purpose, the ELJs will also provide habitat to salmonids.

The largest ELJs will be approximately 40 feet long by 80 feet wide and consist of horizontal and vertical logs interspersed with root wads, slash, and willow stakes. Pilings for these structures will be 40-foot-long wood pilings with a bottom diameter of 27 inches, embedded at least 25 feet below the surface. The Corps will install all pilings using a vibratory hammer. The feasibility level design includes four large ELJs.

The Corps will place smaller ELJs of piled large woody material (LWM) along the setback levee and within the setback area in rows to roughen the bank. These smaller ELJs will not require pile driving. The feasibility level design includes three lines of smaller ELJs (Figure 5).

Materials for the ELJs will come from materials salvaged during clearing and grubbing activities. The Corps will assess other sources for LWM during D&I. One potential source of LWM from Mud Mountain Dam, which collects quantities of LWM that is too large to pass through the dam. These logs would be large and may include intact root wads.

The Corps expects in-water work, or work within regulated waters of the U.S., will be necessary to install the ELJs. The Corps estimates installing the wood pilings for ELJ construction will take 12 working days. Fully breaching the levee would not be completed before the ELJs are built. The Corps will finalize placement and design of the ELJs in D&I after further hydraulic and hydrologic analysis. Table 5 shows the footprint of these structures under the feasibility level design.

Table 5. Number and affected footprint for the ELJ component of the Jones Levee Project.

Feature	ELJ Footprint
Large ELJs	0.29 acres ¹
Small ELJs	1,054 linear ft.
¹ Assuming a footprint of 40 x 80 ft.	

2.2.4 Other Construction Details

Earthwork is necessary to build the proposed project. The Corps expects excavators, dump trucks, bulldozers, loaders, scrapers, graders, and compaction equipment (rollers) will be necessary. Earthwork includes the following components:

- clearing and grubbing work areas
- excavating and removing existing riprap and embankment material from the existing levee (i.e. breach locations and sections to be abandoned)
- excavating and placing material for the setback alignment
- compacting and grading the new setback alignment

The Corps has identified potential staging areas in a parking lot next to the Calistoga Bridge and in agricultural fields near the Matlock Cutoff.

The Corps anticipates the need for at least three culverts in the new setback levee to preserve stormwater connection from the city of Orting (Figure 5). The Corps will assess additional design and placement of stormwater culverts in D&I.

The Corps will restore construction areas to their previous condition. These include staging areas, the temporary construction areas next to the setback footprint, gaps and areas next to the breach locations, and areas disturbed during construction of the ELJs. All exposed soils will be planted with native vegetation to restore the project footprint to its previous condition and to reduce soil erosion. Native vegetation may include a native hydroseed mixture, shrubs, and trees including various willow species.

Except for invasive vegetation, organic matter generated during clearing and grubbing (e.g. soil and native vegetation including woody debris and LWM not used in ELJs) would largely be left on site for reuse. The Corps will remove invasive vegetation offsite for composting. Woody debris and slash may be used in building the ELJs or placed within the wetland and along the old levee as habitat.

3 Project Need

The action is needed because the Puyallup River experiences frequent flooding, resulting in damages to rural and urban areas. Three primary contributors to increased flood risks are (1) development in the floodplain, (2) sediment aggradation, and (3) significant channel migration potential. In its existing condition, the Jones Levee provides an Annual Exceedance Probability (AEP) of 17.39%. With the predicted increase in local development and sediment aggradation, Jones Levee is expected to provide a 44.11% AEP within 50 years.

Development in the floodplain has increased risk to life safety, property, and infrastructure. Levees confine the Puyallup and Carbon Rivers next to Orting and limit channel capacity, increasing flood risk. Since 1948, major flood events in the basin occurred in 1990, 1996, 2006, 2009, 2014, 2015, 2017, and 2020. The 1996 flood caused severe damages, of approximately \$40,000,000, in the Puyallup River basin. During this flood event, the Puyallup River discharge near Orting was 17,500 cubic feet per second (cfs), which exceeded the designated flood stage of 10,000 cfs for this location. Besides life safety risk,

there is a risk of flood damage to critical infrastructure in Orting, including two schools, police, and fire departments.

The Puyallup River experiences higher sediment loads compared to other rivers in western Washington. The heavy sediment load contributes to the long-term channel sediment aggradation that is reducing channel capacity and raising water surface levels. These effects of sediment aggradation increase the risk of channel migration and flooding, which can cause significant erosion. The Jones Levee has experienced repetitive damages from erosion. Many repairs have occurred over the last 25 years. The reliance on post-flood repair authorities and flood fighting to manage flood risk is a reactive approach, further intensifying the need for long-term solutions.

4 Project Purpose

The purpose of the proposed Federal action is to reduce flood risks to property, critical infrastructure, and life safety in the city of Orting from diminished river capacity, sediment aggradation, and erosion induced levee damage from the Puyallup River.

5 Availability of Less Environmentally Damaging Practicable Alternatives to Meet the Project Purpose

The alternatives evaluated for this project were as follows:

- a. *Alternative 1 (No Action)*. The No-Action Alternative is analyzed as the future without-project conditions and serves as a baseline reference for comparison of the action alternatives. Under this alternative, the Corps would take no action to address flood risk to the city of Orting. The Corps assumes that all physical conditions existing at the time of this analysis remain, and that routine maintenance operations would continue to maintain the Jones Levee for flood risk reduction. The floodplain would remain disconnected and increased sedimentation would continue to be an issue. Over time, sediment aggradation would increase flood risks to Jones Levee and adjacent levee segments. The Corps expects the diminished river capacity to increase the frequency of levee loading resulting in increased risk for damage, failure, and overtopping. This is assumed to contribute to future channel conditions where the riverbed is higher in elevation than the adjacent landward side of the levee.
- b. *Alternative 2 (Levee Raise-in-Place)*. A levee raise-in-place would modify the existing Jones Levee prism by raising it vertically and widening it horizontally to reduce flood risk to the city of Orting. Expanding the levee footprint would cause encroachment into the wetland complex next to the levee. The floodplain would remain disconnected and sedimentation would continue to be an issue as it does under Alternative 1. This would mean the affected wetlands would not experience a functional lift with floodplain reconnection and would require additional mitigation. Furthermore, mitigation would need to occur offsite and incur significant costs beyond the limit allowable under the project authority.
- c. *Alternative 3 (Full Levee Setback with Partial Removal of Existing Levee – described in Section 2.2)*. The Levee Setback alignment comprises three major components: the setback levee, breaching of the existing levee, and ELJs. The proposed setback is approximately 6,414 feet long and moves the levee alignment landward towards the historical Holocene channel migration zone.

This would restore floodplain connectivity to approximately 40 to 50 acres and functionally lift the wetlands in the setback area by removing the barrier between them and the river. The existing levee would be breached in multiple locations to allow the river access to the additional storage area provided by the setback alignment. ELJs would be used to breakup flow and reduce velocities as floodwaters and the Puyallup River enter the setback area. Setting the levee back reduces the risks associated with diminished river capacity due to sediment aggradation and reduces the risk of the riverbed becoming higher in elevation than the adjacent floodplain. The predicted increase in water surface is 1 to 3-feet over the existing elevation if the Jones Levee is not setback. Storing sediment in the Jones levee setback area will benefit downstream areas. With a setback, water surfaces are predicted to decrease from the future without-project condition an average of one foot along Calistoga and High Cedars levees, reducing flood risk downstream of the project, too. Immediately following construction, the setback levee would provide 0.01% AEP (1 in 10,000 annual chance). With the predicted increase in sediment aggradation, the setback is expected to provide up to a 0.2% AEP (1 in 500 annual chance), or 14.5% AEP (1 in 7 annual chance) with risk and uncertainty factored in, 50 years after construction.

Findings. The Corps eliminated Alternative 1 because it would not meet the project purpose and need and failed to meet any of the project objectives. Alternative 2 was not selected due to several reasons including increased mitigation for environmental impacts, opposition from non-Federal sponsors, increased project costs, and missed opportunities for incidental environmental benefits including reconnection of floodplains.

Alternative 3 presents the least damaging and practicable alternative that meets the purpose and need for action, provides economic benefits to the region and nation, and reduces flood risk to Orting. It is also the National Economic Development Plan. Furthermore, Alternative 3 provides a unique opportunity at Orting to address flood risk in the area while restoring floodplain connection to an area that has been isolated since construction of the Jones Levee. Reconnecting the floodplain would provide benefits to salmon, including Endangered Species Act (ESA)-listed Chinook, steelhead, and bull trout by restoring natural floodplain processes and connectivity to the setback area. Setting back the Jones Levee would also create additive benefits with other setbacks constructed nearby (e.g. Old Soldiers Home and Calistoga Levee setbacks), both ecologically and hydraulically, improving the environmental baseline.

6 Significant Degradation, Either Individually or Cumulatively, to the Aquatic Environment

Impacts on Ecosystem Function. Natural floodplain processes and connectivity are essential for a healthy salmon population. However, the degraded Puyallup River basin continues to undergo rapid growth and development. In many areas of the Puyallup River basin, human development has encroached so close to levees that any setback opportunity either has been lost or is cost-prohibitive. Further floodplain development will only diminish restoration opportunities and increase dependency upon structural flood management alternatives.

This project poses a unique opportunity to protect established residences, commercial facilities, and agriculture from flooding while reconnecting the river to floodplains that are important salmon habitat before substantial growth and development prohibits such action. Reconnecting the floodplain by

setting the Jones Levee back will benefit ESA-listed species, particularly Puget Sound salmonids. It will also contribute to improvements already constructed nearby (e.g. Old Soldiers Home Levee and the Calistoga Levee setbacks) by allowing the river to use more of the floodplain.

The Corps assessed potential effects from construction of the proposed project and determined that negative impacts to the ecosystem function would be localized to the construction area, short (occurring during construction), and minor in spatial scope. Negative effects will be reduced or avoided by limiting in-water work to the in-water work window to protect aquatic species, construction sequencing, conducting turbidity monitoring, using vibratory instead of impact driving to install piles, and implementing BMPs to control runoff from the site. Long-term benefits would occur after project completion and extend outside of the project site. Negative effects to ecosystem function would not be significant either individually or cumulatively. Long-term benefits to aquatic related and dependent habitats, including wetlands, stem from restoring floodplain connectivity to 40 to 50 acres. This area includes wetlands and riparian forest that have been isolated since the construction of the Jones Levee. This will improve natural riverine functions important for aquatic and aquatic-dependent fish and wildlife. It will also improve the functional value of the reconnected wetlands. The Corps anticipates any wetland impacts would be offset by the functional lift provided by the setback.

Impacts on Recreational, Aesthetic, and Economic Values. The Jones Levee is a flood control structure operated and maintained by Pierce County. The Corps does not expect significant adverse effects on recreation or aesthetics from setting the levee back because the proposed work would not interfere with the public's enjoyment of the river environment or its aesthetics, except on a localized, short-term, and limited basis during construction. Additionally, ample recreational opportunities are nearby for public use during construction. These include recreational fishing, hunting, other riverfront walking paths, and nature watching activities. After construction is complete, the river would return to a more natural condition that would improve aesthetic and recreational opportunities. The public would be able to use the new setback levee top for a trail. Additionally, part of the Matlock Cutoff would remain in its current alignment along the river after construction is completed. River and shoreline access would remain here and downstream where the setback meets the Calistoga Bridge. The Corps expects beneficial effects to recreational fishing because reconnecting the river to its historical flood plain will enhance juvenile salmon refuge and rearing habitat and increase the foraging opportunities for adult resident fish. Setting the levee back will also improve the visual quality of the river as it returns to a more natural condition. There would be a positive economic impact to the community from the reduction of flood risk.

Findings. The Corps has determined that there would be no significant adverse effects to aquatic ecosystem functions and values under the preferred alternative. It is expected that aquatic functions and values will increase as a result of the project by reconnecting the floodplains and re-introducing natural habitat for listed species.

7 Appropriate and Practicable Measures to Minimize Potential Harm to the Aquatic Ecosystem

- a. *Impact Avoidance Measures.* The Corps will avoid potential construction related effects on salmonids by timing restrictions and construction sequencing. The in-water work window is July 15 through August 31. Working within this period will avoid impacts to specific life stages of

aquatic life. The Corps will complete in-water work during the in-water work window landward of the existing levee before breaching it to limit impacts to the Puyallup River. The Corps will not remove material below the waterline where the Jones Levee is abandoned. Additional steps to avoid impacts will be considered during D&I.

- b. *Impact Minimization Measures.* The Corps will minimize potential construction related effects on salmonids by timing restrictions and BMPs. While the in-water work window will avoid specific life stages of aquatic life, it will not avoid all. Therefore, limiting the duration of in-water work will reduce impacts to the aquatic environment. Additionally, the Corps will disturb aquatic substrates, soils, and vegetation during construction. The Corps will use BMPs to minimize runoff, invasive species will be cleared from the construction footprint and removed offsite, and the Corps will replant disturbed areas with native vegetation. Vibratory hammers will minimize noise impacts during ELJ construction. The Corps will use the existing levee and the proposed setback alignment for access to the greatest extent possible to minimize the need for temporary access roads and construction areas. The setback levee alignment minimizes in-water work and supports future alterations to open up the floodplain at the bridge. The buried toe of the setback levee will use jetty stone. Jetty stone provides reliable material for toe construction, requiring less maintenance and repair work in the long-term. Pierce County and the Puyallup Tribe are supportive of this design and have used rock of this size in other levee projects. This rock is less likely to launch and be carried downstream during flood events, reducing levee operation and maintenance and impacts to the aquatic environment. Additional steps to minimize impacts will be considered during D&I.
- c. *Compensatory Mitigation Measures.* Although the project will cause the loss of approximately 8.87 acres of wetland and 0.04 acres of waterbodies converted to flood control structure, the increase in function and values expected from the 40 to 50 acres of reconnected floodplain combined with the systemic benefits throughout the Puyallup River ecosystem are expected to outweigh the impacts.

Findings. The Corps has determined that all appropriate and practicable measures have been taken to minimize potential harm. Additional steps will be taken to avoid and minimize impacts during D&I.

8 Other Factors in the Public Interest.

- a. *Fish and Wildlife.* The Corps is coordinating with state and Federal agencies, as well as Tribes, to assure careful consideration of fish and wildlife resources. The Corps has completed ESA Section 7 consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) on May 8, 2020 and June 16, 2020, respectively. The Corps will continue to coordinate with the USFWS and NMFS throughout feasibility and D&I.
- b. *Water Quality.* The Corps will request and receive a Section 401 Water Quality Certification (WQC) from the Washington State Department of Ecology (Ecology) prior to construction. The Corps will abide by applicable conditions in a WQC issued by Ecology to ensure compliance with state water quality standards, in accordance with Section 401 of the CWA and its implementing regulations.

- c. *Cultural Resources*. National Historic Preservation Act, Section 106 consultation to be completed. The Corps has established an area of potential effect and will complete a records search and cultural resources survey prior to submitting a finding to the State Historic Preservation Office (SHPO).
- d. *Activities Affecting Coastal Zones*. The Corps prepared a Coastal Zone Management Act Consistency Determination for the Section 205 Jones Levee Project during feasibility-level design phase. The evaluation demonstrates the proposed work complies with the policies, general conditions, and general activities specified in the Pierce County Shoreline Management Master Plan and the city of Orting Shoreline Management Master Plan. The proposed action is consistent to the maximum extent practicable with the State of Washington Shoreline Management Program.
- e. *Environmental Benefits*. The long-term benefit of this action is from restoring the floodplain connection to 40 to 50 acres of riparian forest and wetlands along the Puyallup River that have been isolated since the construction of the Jones Levee. This will improve natural riverine functions important for aquatic and aquatic-dependent fish and wildlife. It will also improve the functional value of the reconnected wetlands.
- f. *Navigation*. No temporary or permanent disruption of navigation traffic is expected from setting back the Jones Levee.

Findings. The Corps has determined that this project is within the public interest.

9 Conclusions

Based on the analyses in the draft Feasibility Report and Environmental Assessment, as well as the following 404(b)(1) Evaluation and General Policies for the Evaluation of the Public Interest, the Corps finds that this project complies with the substantive elements of Section 404 of the CWA.

404(b)(1) Evaluation [40 CFR §230] and General Regulatory Policies Analysis [33 CFR §320.4]

404(b)(1) Evaluation [40 CFR§230]

Potential Impacts on Physical and Chemical Characteristics (Subpart C)

1. **Substrate [230.20]** Soils in the basin originate from glacial deposits except in the mountains where bedrock is exposed, and some valley soils originate directly from the rock. Elsewhere, successive stages of glaciation have re-worked the sub-soils to depths of several thousand feet. Thus, the parent material of the soil is usually a glacial or riverine deposit of some sort.

Soils found in the project area include Pilchuck fine sand, Aquic Xerofluents, Sultan silt loam, Orting fine loamy sand, riverwash, and Puyallup fine sandy loam¹. These soils are predominantly formed from alluvium parent material.

2. **Suspended Particulate/Turbidity [230.21]** Excavation and placement of material in-water will cause a temporary increase in turbidity and suspended particulate levels. Sand and most silts would sink rapidly to the bottom, while a small percentage of finer material is expected to remain in suspension. Increases in turbidity associated with these activities will be minimal (mostly confined to the areas in the immediate vicinity) and of short duration (during construction activities).
3. **Water Quality [230.22]** No significant water quality effects are anticipated. During in-water work, a localized turbidity plume may persist for a short period. A minor reduction in dissolved oxygen may be associated with this plume. Any water quality effects should be short-lived (hours at most) and localized (immediate vicinity). Due to the absence or minimal presence of water flow, the Corps expects the turbidity plumes made in the freshwater ponds behind the Jones Levee will persist longer than those in the Puyallup River. BMPs will be implemented as applicable to minimize turbidity, which may include turbidity curtains. The Corps will seek a WQC from Ecology and will comply with applicable water quality conditions and criteria issued in the permit and the Ecology approved water quality monitoring plan associated with the discharge of dredged material into the waters of the U.S.
4. **Current Patterns and Water Circulation [230.23]** Setting back the Jones levee will restore current patterns and water circulation to a more natural state by shifting the levee alignment back towards the historical Holocene floodplain.
5. **Normal Water Fluctuations [230.24]** Setting back the Jones levee will not alter normal water fluctuations within the Puyallup River basin or tidal fluctuations downstream in Commencement Bay. The amount of water transported by the Puyallup River will not change. The Corps expects benefits downstream of the Jones Levee from the river naturally storing sediment in the setback area. The Corps predicts this would decrease water surface levels from the future without-project condition an average of one foot along the Calistoga and High Cedars levees.

¹ Natural Resources Conservation Service. 2020. Web Soil Survey. Available online at <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

6. **Salinity Gradients [230.25]** Setting back the Jones levee will not alter salinity gradients in the Puyallup River basin, Commencement Bay, or the Puget Sound.

Potential Impacts on Biological Characteristics of the Aquatic Ecosystem (Subpart D)

1. **Threatened and Endangered Species [230.30]** In accordance with Section 7 of the Endangered Species Act (ESA) of 1973, as amended, Federally funded, constructed, permitted, or licensed projects must take into consideration effects to Federally listed or proposed threatened or endangered species. The Corps prepared a Biological Assessment (BA) and submitted it to the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) on May 6, 2020. The BA concluded that building the Section 205 Jones Levee Project would have the following effect levels:

- **No Effect** to the following ESA-listed species and their designated critical habitat: Green Sturgeon (*Acipenser medirostris*), gray wolf (*Canis lupus*), North American wolverine (*Gulo gulo luscus*), marbled murrelet (*Brachyramphus marmoratus*), streaked horned lark (*Eremophila alpestris strigata*), and yellow-billed cuckoo (*Coccyzus americanus*).
- **May Affect, not likely to Adversely Affect:** Coastal-Puget Sound bull trout (*Salvelinus confluentus*), southern resident killer whale (*Orcinus orca*), and eulachon (*Thaleichthys pacificus*).
- **May Affect, likely to Adversely Affect:** Puget Sound Chinook (*Oncorhynchus tshawytscha*) and Puget Sound steelhead (*O. mykiss*).

The BA also concluded that the proposed action would not cause the destruction or adverse modification of designated critical habitat for any species, but would have **No Effect** to eulachon critical habitat and **May Affect, Not Likely to Adversely Affect** the critical habitat of Puget Sound Chinook, steelhead, bull trout, and southern resident killer whale.

Consultation is complete. The NMFS notified the Corps on May 8, 2020 that the Project meets the requirements of the Fish Passage and Restoration III Programmatic Biological Opinion (WCRO-2014-00004), concluding consultation for the ESA and Magnuson-Stevens Fishery Conservation and Management Act. On June 16, 2020, the USFWS notified the Corps that the Project meets all the applicable criteria in the 2008 Fish Passage and Habitat Restoration Programmatic Biological Opinion (13410-2008-FWS-F-0209) for Activity Categories (AC) 2c: *Installation of Instream Structures, Placement of Engineered Log Jams*; and AC 3: *Levee Removal and Modification*.

2. **Aquatic Food Web [230.31]** Turbidity associated with the excavation or placement of material may interfere with feeding and respiratory mechanisms of aquatic species. Some sessile invertebrates will suffer mortality from these activities. Species that could be affected are freshwater organisms such as fish, amphibians, insects, and aquatic plants. Most of these organisms are mobile and are expected to escape the immediate area without significant injury. Potential effects of the action on salmonids will be reduced and/or avoided through avoidance and minimization measures.
3. **Wildlife [230.32]** Noise associated with construction activities may affect wildlife in the project area. The effects of any sound disturbance would likely cause displacement of wildlife, but injury is possible for aquatic organisms near construction of the ELJs. Increases in turbidity associated

with in-water work could reduce visibility directly below and for a short distance down current from the disturbance, thereby reducing foraging success for any animals in the area. Any reduction in availability of food would be localized and subside rapidly upon completion of the activity. Construction and completion of the setback levee is not expected to cause a long-term reduction in the abundance and distribution of prey items. Animals would likely avoid the project area and its impact area once construction starts. The Corps expects the abundance and distribution of prey items and forage opportunities in the floodplain to increase after the Jones Levee is setback.

Potential Impacts to Special Aquatic Sites (Subpart E)

1. **Sanctuaries and Refuges [230.40]** Not applicable.
2. **Wetlands [230.41]** The Corps anticipates fill and excavation in wetlands will be necessary to complete the proposed project. However, the long-term benefit of this action stems from reconnecting between 40 to 50 acres of riparian forest and wetlands to the Puyallup River that have been isolated since the construction of the existing Jones Levee. This project will improve natural riverine functions important for aquatic and aquatic-dependent fish and wildlife in the floodplain. It will also reconnect wetlands to the floodplain, increasing their functional value.
3. **Mudflats [230.42]** Not applicable.
4. **Vegetated Shallows [230.43]** The Corps anticipates in-water work will be necessary in freshwater ponds behind the Jones Levee. These ponds may include vegetated shallows. However, the long-term benefit of this action stems from reconnecting between 40 to 50 acres of riparian forest and wetlands to the Puyallup River that have been isolated since the construction of the Jones Levee. This will improve natural riverine functions important for aquatic and aquatic-dependent fish and wildlife in the floodplain. It will also reconnect wetlands to the floodplain, increasing their functional value. Marine vegetated shallows would not be affected.
5. **Coral Reefs [230.44]** Not applicable. The project location does not include coral reefs.
6. **Riffle and Pool Complexes [230.45]** Riffle-pool sequences are important for spawning, rearing, and insect production. Channelization can alter and destroy riverine processes that create riffle and pool complexes. The Corps anticipates that a setback levee that restores floodplain connectivity will improve riverine processes that create and sustain riffle and pool complexes. Setting the Jones Levee back will improve this aquatic site.

Potential Effects on Human Use Characteristics (Subpart F)

1. **Municipal and Private Water Supplies [230.50]** Not applicable.

Recreational and Commercial Fisheries [230.51] Sport fishing occurs along the Puyallup River and boaters may use the river adjacent to Jones Levee for this purpose. Work is timed and located to minimize effects to fishing seasons as well as critical migration periods for salmonids. The Corps expects beneficial effects to recreational fishing because reconnecting the river to its historical flood plain will enhance juvenile salmon refuge and rearing habitat and increase the

foraging opportunities for adult resident fish. Setting the levee back will also improve the visual quality of the river as it returns to a more natural condition.

2. **Water-related Recreation [230.52]** The proposed project would not block watercraft movement in the Puyallup River.
3. **Aesthetics [230.53]** Localized, temporary increases in noise, lighting, and turbidity will occur while equipment is operating, but are not expected to be significant.
4. **Parks, National and Historic Monuments, National Seashores, Wilderness Areas, Research Sites, and Similar Preserves [230.54]** Not applicable.

Evaluation and Testing (Subpart G)

1. **General Evaluation of Dredged or Fill Material [230.60]** Fill material will be predominantly levee embankment and armor. The Corps will not use unfit fill material. Material will be clean and free of contaminants that could negatively affect water quality standards.
2. **Chemical, Biological, and Physical Evaluation and Testing [230.61]** The Corps has completed a Hazardous, Toxic, and Radioactive Waste (HTRW) Preliminary Assessment. This assessment did not find materials or sites with HTRW in the project footprint. The Corps will continue to evaluate the presence of HTRW materials as the design progresses. Appropriate actions will be taken if HTRW is located. Only clean material free of contaminants will be used to build the project. The Corps will seek a WQC from Ecology and will comply with applicable water quality conditions and criteria issued in the permit and the Ecology approved water quality-monitoring plan associated with the discharge of dredged material into the waters of the U.S.

Action to Minimize Adverse Effects (Subpart H)

1. **Actions Concerning the Location of the Discharge [230.70]** Effects of the discharge will be minimized by implementing BMPs, timing of in-water work, construction sequencing, and setting back the levee. BMPs, such as using vibratory hammers and turbidity monitoring, will reduce construction related impacts to water quality, noise, and aquatic life. The timing and location of proposed discharges is planned to minimize negative effects to the environment. All in-water work, both landward and riverward of the current Jones Levee, will be completed within the fish window (July 15 to August 31) to reduce impacts to aquatic life. The in-water work on the landward side would consist of work in freshwater ponds to build the setback levee and ELJs. The Corps will complete in-water work during the in-water work window landward of the existing levee before breaching it to limit impacts to the Puyallup River. The buried toe of the setback levee will use jetty stone. Jetty stone provides reliable material for toe construction, requiring less maintenance and repair work in the long-term. Pierce County and the Puyallup Tribe are supportive of this design and have used rock of this size in other levee projects. This rock is less likely to launch and be carried downstream during flood events. This means that operation and maintenance of the setback levee will occur less often and have less impacts to the aquatic environment from discharge activities.
2. **Actions Concerning the Material to be Discharged [230.71]** Material to be discharged will be sourced from the existing levee to be setback or from approved and permitted sources offsite, including from a Pierce County quarry. The Corps will evaluate all materials for suitability. If the

Corps determines material is not suitable for use in the project, the Corps will return or dispose of it appropriately.

3. **Actions Controlling the Material after Discharge [230.72]** The Corps will place discharged material in a controlled manner. Armoring will be placed over embankment material and the large rock "locked" together so that there is little to no shifting or movement. Jetty rock is less likely to launch and be carried downstream during flood events, decreasing operation and maintenance of the setback levee, and requiring less rock for repairs.
4. **Actions Affecting the Method of Dispersion [230.73]** The Corps will place discharged material in a controlled manner and carefully place it below the water surface individually or in small bucket loads. Dumping rocks in-water will not occur. Equipment will slowly operate when in-water to allow fish time to move away and to minimize the disturbance.
5. **Actions Related to Technology [270.74]** Appropriate machinery and methods of transport of the material for discharge and placement will be employed. All machinery will be properly maintained and operated.
6. **Actions Affecting Plant and Animal Populations [270.75]** The Corps has coordinated with the local Native American Tribes and the state and Federal resource agencies to minimize and avoid impacts to the greatest extent possible.
7. **Actions Affecting Human Use [230.76]** The discharge will not cause damage to aesthetically pleasing features of the aquatic landscape. The discharge will not increase incompatible human activity in remote fish and wildlife areas. The Corps expects beneficial effects to recreational fishing because reconnecting the river to its historical flood plain will enhance juvenile salmon refuge and rearing habitat and increase the foraging opportunities for adult resident fish. Setting the levee back will also improve the visual quality of the river as it returns to a more natural condition. There would be a positive economic impact to the community from the reduction of flood risk.
8. **Other actions [230.77]** Not applicable.

General Policies for the Evaluation of Permit Applications [33 CFR §320.4]

1. **Public Interest Review [320.4(a)]** The Corps finds these actions to compliant with the 404(b)(1) guidelines and not contrary to the public interest.
2. **Effects on Wetlands [320.4(b)]** Effects to wetlands have been minimized to the greatest extent possible. Further impact and design to avoid or improve wetlands will be assessed in D&I. Setting back the Jones Levee would reconnect the floodplain and provide a functional lift to the previously disconnected floodplain wetlands.
3. **Fish and Wildlife [320.4(c)]** The Corps has coordinated with the local Native American Tribes and the state and Federal resource agencies to minimize and avoid effects to fish and wildlife resources.

4. **Water Quality [320.4(d)]** The Corps will seek a 401 WQC and will abide by applicable conditions of the Section 401 WQC issued by Ecology, in accordance with Section 401 of the CWA and its implementing regulations to ensure compliance with Washington State water quality standards.
5. **Historic, Cultural, Scenic, and Recreational Values [320.4(e)]** The Corps will consult with representatives of interested tribes, the State Historic Preservation Office, and other parties on the proposed action. The Corps will complete a cultural resources survey and assess potential affects to cultural resources. No wild and scenic rivers, historic properties, National Landmarks, National Rivers, National Wilderness Areas, National Seashores, National Recreation Areas, National Lakeshores, National Parks, National Monuments, estuarine and marine sanctuaries will be affected by the proposed work.
6. **Effects on Limits of the Territorial Sea [320.4(f)]** Not applicable.
7. **Consideration of Property Ownership [320.4(g)]** Pierce County, the non-Federal sponsor for the Section 205 Jones Levee Project, is responsible for obtaining all real estate and will do so before project construction.
8. **Activities Affecting Coastal Zones [320.4(h)]** The Corps prepared a Coastal Zone Management Act Consistency Determination for the Section 205 Jones Levee Project during feasibility-level design phase. The proposed work complies with the policies, general conditions, and general activities specified in the Pierce County Shoreline Management Master Plan and the city of Orting Shoreline Management Master Plan. The proposed action is consistent to the maximum extent practicable with the State of Washington Shoreline Management Program.
9. **Activities in Marine Sanctuaries [320.4(i)]** Not applicable.
10. **Other Federal, State, or Local Requirements [320.4(j)]**
- a. *National Environmental Policy Act (NEPA).* A draft Integrated Feasibility Report and Environmental Assessment (FR/EA) will be prepared and released for public review and comment to satisfy the documentation requirements of NEPA.
 - b. *Endangered Species Act.* In accordance with Section 7(a)(2) of the ESA of 1973, as amended, Federally funded, constructed, permitted, or licensed projects must take into consideration effects to Federally listed or proposed threatened or endangered species. Consultation is complete. The Corps prepared a BA and submitted it to the USFWS and NMFS on May 6, 2020. The NMFS notified the Corps on May 8, 2020 that the Project meets the requirements of the Fish Passage and Restoration III Programmatic Biological Opinion (WCRO-2014-00004), concluding consultation for the ESA and Magnuson-Stevens Fishery Conservation and Management Act. On June 16, 2020, the USFWS notified the Corps that the Project meets all the applicable criteria in the 2008 Fish Passage and Habitat Restoration Programmatic Biological Opinion (13410-2008-FWS-F-0209) for Activity Categories (AC) 2c: *Installation of Instream Structures, Placement of Engineered Log Jams*; and AC 3: *Levee Removal and Modification*. The Corps will continue to coordinate with the USFWS and NMFS during the feasibility D&I phases.
 - c. *Clean Water Act.* The Corps must demonstrate compliance with the substantive requirements of the CWA. A Public Notice, Joint Aquatic Resources form, and draft Water Quality

Monitoring Plan will serve as the basis for pre-coordination and the Corps will seek a Section 401 WQC from Ecology during D&I. The Corps will abide by the applicable conditions in the WQC in a manner consistent with Section 401 of the CWA and its implementing regulations to ensure compliance with State water quality standards.

- d. Coastal Zone Management Act.** The Coastal Zone Management Act of 1972, as amended, requires Federal agencies to carry out their activities in a manner consistent to the maximum extent practicable with the enforceable policies of the approved Washington Coastal Zone Management Program. The Corps prepared a Coastal Zone Management Act Consistency Determination for the Section 205 Jones Levee Project during feasibility-level design phase. The evaluation demonstrates the proposed work complies with the policies, general conditions, and general activities specified in the Pierce County Shoreline Management Master Plan and the city of Orting Shoreline Management Master Plan. The proposed action is consistent to the maximum extent practicable with the State of Washington Shoreline Management Program.
- e. Marine Protection, Research, and Sanctuaries Act.** Not applicable
- f. National Historic Preservation Act.** The National Historic Preservation Act (16 USC 470) requires that the effects of proposed actions on historic properties included in or eligible for the National Register of Historic Places must be identified and evaluated. The Corps will consult with the SHPO, Muckleshoot Indian Tribe, Nisqually Indian Tribe, Puyallup Tribe of Indians, and the Confederated Tribes and Bands of the Yakama Nation under Section 106 of the NHPA.
- g. Fish and Wildlife Coordination Act.** The Fish and Wildlife Coordination Act (16 USC 470) requires that wildlife conservation receive equal consideration and be coordinated with other features of water resource development projects. The Corps initiated coordination for consideration of fish and wildlife species on August 29, 2019. On October 17, 2019, the USFWS informed the Corps that the Corps has fully met the intent of the FWCA by the proposed project design.
- 11. Safety of Impoundment Structures [320.4(k)]** Not applicable.
- 12. Floodplain Management [320.4(l)]** The project will restore floodplain connectivity to the influence of the Puyallup River by setting the Jones Levee back. This will reduce the presence of artificial structures within the floodplain. The Corps anticipates beneficial impacts to result for water resource values (natural moderation of floods, water quality improvements, ground water recharge), living resources (fish, wildlife, plants), scenic and recreational improvements, and aquaculture. The Corps is designing the project to minimize and avoid negative impacts to human health, safety, and welfare while preserving and restoring the natural and beneficial values served by floodplains. The Corps anticipates no significant adverse impact to the floodplain.
- 13. Water Supply and Conservation [320.4(m)]** Not applicable.
- 14. Energy Conservation and Development [320.4(n)]** Not applicable.
- 15. Navigation [320.4(o)]** Not Applicable.

- 16. Environmental Benefits [320.4(p)]** The proposed project will create long-term benefits to the Puyallup River. Reconnecting the floodplain by setting the levee back will benefit ESA-listed species, such as Chinook. Setting back the Jones Levee would also contribute to improvements constructed nearby (e.g. Old Soldiers Home Levee and the Calistoga Levee setbacks) by allowing the river to use more of the floodplain. The Corps estimates between 40 to 50 acres will be reconnected to the floodplain, containing wetlands and riparian forest.

Natural floodplain processes and connectivity are essential for a healthy salmon population. However, the Puyallup River basin continues to undergo rapid growth and development. In many areas, development has encroached so close to levees that any setback opportunity either has been lost or is cost-prohibitive. Further development behind levees will only diminish restorative opportunities and at the same time increase dependency upon structural flood management alternatives. Among the substantial developments along rivers, this project poses a unique opportunity at Orting to protect established residences and agriculture from flooding while reconnecting the river to floodplains that are important salmon habitat. The design also uses jetty rock in the buried toe, which will provide reliable performance and require less maintenance and repair work in the long-term. Pierce County and the Puyallup Tribe are supportive of this design and have used rock of this size in other levee projects. This rock is less likely to launch and be carried downstream during flood events, reducing operation and maintenance of the setback levee, resulting in decreased impacts to the aquatic environment.

- 17. Economics [320.4(q)]** The Federal objective is to contribute to national economic development. A benefit-cost analysis was completed to measure contributions to the nation in terms of goods and services, such as flood damages reduced or avoided. The economic analysis will be documented in the draft FR/EA.
- 18. Mitigation [320.49(r)]** Potential effects of fill and excavation in the Puyallup River and wetlands within the project footprint will be avoided and minimized. Although the project will cause the loss of approximately 8.87 acres of wetland and 0.04 acres of waterbodies converted to flood control structure, the increase in function and values expected from the 40 to 50 acres of reconnected floodplain combined with the systemic benefits throughout the Puyallup River ecosystem are expected to outweigh the impacts. No compensatory mitigation is required for the project.

Response from Ecology

DRAFT

From: [Randall, Loree' \(ECY\)](#)
To: [Wilson, Zachary M CIV USARMY CENWS \(USA\)](#)
Cc: [Swanson, Terry \(ECY\)](#)
Subject: [Non-DoD Source] RE: U.S. Army Corps of Engineers Letter of Support Request for the Jones Levee Setback Project
Date: Friday, July 2, 2021 1:15:49 PM

I have discussed this with Ecology's management. Message back – "At this time we need to say focus on the high priorities with deadlines". So, doing letters of support are not very high on the priority list, so I don't have a good estimate of when we will have anything. Enjoy your time off.

Thanks
Loree'

From: Wilson, Zachary M CIV USARMY CENWS (USA) <Zachary.M.Wilson@usace.army.mil>
Sent: Friday, July 2, 2021 8:51 AM
To: Randall, Loree' (ECY) <lora461@ECY.WA.GOV>
Cc: Swanson, Terry (ECY) <tswa461@ECY.WA.GOV>
Subject: RE: U.S. Army Corps of Engineers Letter of Support Request for the Jones Levee Setback Project

THIS EMAIL ORIGINATED FROM OUTSIDE THE WASHINGTON STATE EMAIL SYSTEM - Take caution not to open attachments or links unless you know the sender AND were expecting the attachment or the link

Morning Loree' and Terry!

Do you have an estimate on when you can provide something back to us on Jones? And FYSA I am leaving this afternoon and won't be back until July 12.

ZW

From: Randall, Loree' (ECY) <lora461@ECY.WA.GOV>
Sent: Friday, June 11, 2021 12:27 PM
To: Wilson, Zachary M CIV USARMY CENWS (USA) <Zachary.M.Wilson@usace.army.mil>
Cc: Swanson, Terry (ECY) <tswa461@ECY.WA.GOV>
Subject: [Non-DoD Source] RE: U.S. Army Corps of Engineers Letter of Support Request for the Jones Levee Setback Project

Sorry have not had a chance to review or assign this. At this time we have other work load demands and deadlines that we are juggling. I will be checking with Ecology upper management to determine how we should priorities these requests for letter of support. I'll try and get back to you next week on an estimation on when we might be able to provide something.

Thanks
Loree'

From: Wilson, Zachary M CIV USARMY CENWS (USA) <Zachary.M.Wilson@usace.army.mil>
Sent: Thursday, June 10, 2021 2:16 PM

To: Randall, Loree' (ECY) <lora461@ECY.WA.GOV>; Swanson, Terry (ECY) <tswa461@ECY.WA.GOV>
Subject: RE: U.S. Army Corps of Engineers Letter of Support Request for the Jones Levee Setback Project

THIS EMAIL ORIGINATED FROM OUTSIDE THE WASHINGTON STATE EMAIL SYSTEM - Take caution not to open attachments or links unless you know the sender AND were expecting the attachment or the link

Afternoon,

Hope you're having a great week! Have you had a chance to review the documentation included in the Corps' request for a letter of support from Ecology for the proposed Jones Levee setback near Orting, WA? Do you have any questions about it? Let me know if you need me to send them again.

Thanks,
Zachary Wilson
Planning, Environmental and Cultural Resources Branch
U.S. Army Corps of Engineers, Seattle District
Zachary.M.Wilson@usace.army.mil
206.316.3896

From: Wilson, Zachary M CIV USARMY CENWS (USA)
Sent: Monday, June 7, 2021 9:13 AM
To: ECY RE FED PERMITS (SEA) <ECYREFEDPERMITS@ECY.WA.GOV>
Subject: FW: U.S. Army Corps of Engineers Letter of Support Request for the Jones Levee Setback Project

Apologies, ECYREFEDPERMITS@ECY.WA.GOV was mistakenly omitted from the email below.

Zachary Wilson
Planning, Environmental and Cultural Resources Branch
U.S. Army Corps of Engineers, Seattle District
Zachary.M.Wilson@usace.army.mil
206.316.3896

From: Wilson, Zachary M CIV USARMY CENWS (USA)
Sent: Friday, May 14, 2021 2:26 PM
To: Randall, Loree' (ECY) <lora461@ECY.WA.GOV>; Terry Swanson (Tswa461@ecy.wa.gov) <tswa461@ecy.wa.gov>
Cc: Gardiner, Joanne C CIV USARMY CENWS (USA) <loanne.L.Gardiner@usace.army.mil>; Boerner, Laura A CIV USARMY CENWS (USA) <laura.A.Boerner@usace.army.mil>; McKenna, Stephanie Ann

CIV USARMY CENWS (USA) <Stephanie.A.Mckenna@usace.army.mil>; Scuderi, Michael R CIV
USARMY CENWS (USA) <Michael.R.Scuderi@usace.army.mil>

Subject: U.S. Army Corps of Engineers Letter of Support Request for the Jones Levee Setback Project

Afternoon,

The U.S. Army Corps of Engineers (Corps) is proposing to setback the Jones Levee near the city of Orting, Pierce County, Washington. The project is in the feasibility phase prior to authorization. Following authorization and funding, the Corps will enter the design and implementation phase where design work is completed and the project built. Corps policy requires that during feasibility, a project recommended for authorization must show reasonable assurance that all applicable environmental compliance has been or can be obtained. As a pre-application, the Corps is submitting draft documents for a 401 Water Quality Certification and concurrence with our Coastal Zone Management Act Consistency Determination. The Corps submits these draft documents for your agency's review. The Corps requests from Ecology a letter of support that identifies elements needed to process a 401 WQC request, and any concerns about the proposed project. The draft documentation will be updated, finalized, and submitted to Ecology during design and implementation.

The following seven documents are attached:

- 1) Transmittal Letter
- 2) DRAFT JAR documentation
 - a. JAR
 - b. JAR Attachment A
 - c. JAR Attachment D
- 3) Draft Water Quality Monitoring Plan
- 4) Draft Coastal Zone Management Act Consistency Determination
- 5) Draft 404(b)1 Analysis

Zachary Wilson
Planning, Environmental and Cultural Resources Branch
U.S. Army Corps of Engineers, Seattle District
Zachary.M.Wilson@usace.army.mil
206.316.3896

Appendix B.3 – Endangered Species Act Documentation

DRAFT

From: [Muck, Jim](#)
To: [Wilson, Zachary M CIV USARMY CENWS \(USA\)](#)
Cc: [Goetz, Frederick A CIV USARMY CENWS \(USA\)](#); [Houghton, Juliana CIV USARMY CENWS \(USA\)](#); [Rhodes, Darold](#)
Subject: [Non-DoD Source] eApproval - Section 205 Jones Levee Project
Date: Tuesday, June 16, 2020 2:54:54 PM

Electronic Approval for Use of the 2008 Fish Passage and Restoration Programmatic

U.S. Army Corps of Engineers' Section 205 Jones Levee Project

On May 6, 2020, the U.S. Fish and Wildlife Service (USFWS) received your letter and Biological Assessment for the U.S. Army Corps of Engineers' (Corps) Section 205 Jones Levee Project on the Puyallup River, City of Orting, Pierce County, Washington. On June 10, 2020, we received an email from Fred Goetz, Corps, requesting that the project be covered under the 2008 Fish Passage and Habitat Restoration Programmatic Biological Opinion (PBO). The Corps made a "may affect, not likely to adversely affect" determination for the bull trout (*Salvelinus confluentus*) and bull trout designated critical habitat. On June 12, 2020, we asked for clarification on the effects determination because the cover letter and Biological Assessment were not consistent. On June 12, 2020, we received clarification that the cover letter was in error, and the Corps would support a "may affect, likely to adversely affect" determination to the bull trout. The USFWS does not concur with the "may affect, not likely to adversely affect" determination for the bull trout.

The project will result in increased levels of turbidity and suspended sediment during levee breaching activities at five locations along the existing Jones Levee. This increase in turbidity and sediment will result in measurable effects to bull trout. The USFWS estimates that all bull trout within the each levee breaching location (five total) plus 300 feet downstream of each location will result in significant behavioral changes as a result of increased turbidity and suspended sediment during in-water project construction. Total length of Jones Levee to be breached is 2,844 feet, plus 1,500 feet (300 feet downstream of each of the five breached areas) for a total length of 4,344 feet where significant behavioral changes will occur to bull trout.

The proposed project meets all the applicable criteria in the PBO (13410-2008-FWS-F-0209) for Activity Categories (AC) 2c: Installation of Instream Structures, Placement of Engineered Log Jams; and AC 3: Levee Removal and Modification. As per the criteria set forth in the PBO, the USFWS is responding via this electronic format to give approval to cover the proposed action under the PBO. The Corps has met their obligation under Section 7 of the Endangered Species Act and no further consultation on this action is required unless any reinitiation criteria are triggered. The USFWS tracking number for this project is 01EWF00-2020-TA-1021.

Please let me know if you have any questions.

Jim

Jim Muck
U.S. Fish and Wildlife Service
510 Desmond Dr. SE, Suite 102
Lacey, WA 98503
(360) 753-9586

WEST COAST REGION
PROGRAMMATIC TRACKING & RESPONSE FORM

Project Name: Jones Levee Setback - Changed from Informal to FPRP WCRO-2020-01172

PROGRAMMATIC #: FPRP III WCRO-2014-00004

RCV'D DATE: 5-07-20

6th Field HUC: _____

Acres of Habitat Protected: 40-50

Lead Action Agency: USACE

Action Agency Contact: Zachary Wilson

Project Biologist: BAUMLER CHAD EDWARD
1297924717
Digitally signed by
BAUMLER CHAD EDWARD.1297924717
Date: 2020.06.02 16:05:19 -0700

NMFS TRACKING #: WCRO-2014-00004-1819

RESPONSE DATE: _____

CATEGORY OF ACTIVITY: Levee Setback

Statutory Authority:

☐ ESA only ☐ EFH only ☒ ESA & EFH

Applicant: USACE

Agency Reference No.: N/A

BC for ARA Kim Kratz: QUAN JENNIFER LEIGH.1536293139
2020.06.08 14:26:22 -0700

NMFS Species/Critical Habitat Present in Action Area:

Identify the species found in the action area:

ESA Species

- | | | |
|--|---|--|
| <input type="checkbox"/> Upper Willamette River spring-run Chinook | <input type="checkbox"/> MCR steelhead | <input type="checkbox"/> Green sturgeon |
| <input type="checkbox"/> Upper Willamette River steelhead | <input type="checkbox"/> UCR spring-run Chinook | <input type="checkbox"/> Eulachon |
| <input type="checkbox"/> Lower Columbia River Chinook | <input type="checkbox"/> UCR steelhead | <input type="checkbox"/> PS Chinook |
| <input type="checkbox"/> Lower Columbia River steelhead | <input type="checkbox"/> SR spring/summer run Chinook | <input checked="" type="checkbox"/> PS Steelhead |
| <input type="checkbox"/> Lower Columbia River coho | <input type="checkbox"/> SR fall-run Chinook | <input type="checkbox"/> Whale (Killer) |
| <input type="checkbox"/> Columbia River chum | <input type="checkbox"/> SR steelhead | <input type="checkbox"/> Whale (Humpback) |
| <input type="checkbox"/> HC Summer-Run Chum | <input type="checkbox"/> SR sockeye | |

EFH Species

- ☒ Salmon, Chinook
☒ Salmon, coho
☐ Coastal Pelagics
☐ Groundfish

Rockfish

- ☐ Bocaccio
☐ Canary
☐ Yelloweye

NMFS RESPONSE ☐ NMFS CONFIRMS

EFH Conservation Recommendations: _____

The USACE is proposing to complete a setback levee project near Orting, Washington along the Puyallup river. The project is expected to reconnect 40-50 acres of historical floodplain habitat that should lead to an increase in woody material recruitment, nutrient inputs, and increased prey items for listed salmonids. The project requires a variance to the programmatic since it is dual purpose with the primary purpose being increased flood protection. The NMFS reviewed the project's restoration benefits and certified that it falls under the scope of the programmatic. The project plans to meet all of the best management practices associated with the FPRP opinion, but if for any reason a BMP cannot be met the project should request additional variances from NMFS.

The NMFS certifies that the proposed action falls within the parameters of of the FPRP III Biological Opinion. The NMFS used the best available commercial and scientific information in analyzing this action. If you have any questions or concerns about this certification please contact Jennifer Quan of the Lacey office of the Oregon/Washington Coast.

Appendix B.4 – Cultural Resource Documentation

DRAFT



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, SEATTLE DISTRICT
PO BOX 3755
SEATTLE, WA 98124-3755

Planning, Environmental and Cultural Resources Branch

27 January 2020

Allyson Brooks, Ph.D.
State Historic Preservation Officer
Department of Archaeology and Historic Preservation
Post Office Box 48343
Olympia, Washington 98504-8343

SUBJECT: Jones Levee Flood Control Project: Pierce County, WA

Dear Dr. Brooks:

The U.S. Army Corps of Engineers (Corps) proposes setting back the Jones Levee (undertaking) located on the right bank of the Puyallup River near the city of Orting, Pierce County, Washington (Figure 1). The purpose of the undertaking to address flood risk in the area while reconnecting the floodplain with the Puyallup River. The Corps has determined and documented the area of potential effect (APE) for the undertaking and is consulting with your office under Section 106 as provided at 36 C.F.R. § 800.4(a). The letter requests agreement with the Corps' APE determination.

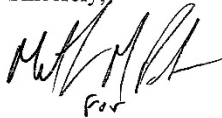
The Jones Levee currently extends from River Mile (RM) 21.6 to RM 22.8 on the Puyallup River, and is approximately 6,000 feet long. The flood control structure provides flood risk reduction for Orting, which is sandwiched between the Carbon and Puyallup Rivers. In order to address the frequent flooding in the project area, the Corps proposes breaching the existing levee, creating a new setback levee, and placing large woody material. The proposed setback is approximately 6,000 linear feet and extends from the Calistoga Bridge upstream to high ground downstream.

The undertaking is located in Section 32, Township 19 North, Range 5 East near Orting, WA (Figure 2). The APE for the undertaking encompasses the project footprint, including all staging and access areas, and totals 307 acres. The Corps believes the APE is sufficient to identify and consider both direct and indirect effects of the proposed project.

The Corps is making a good faith effort to gather information from affected Tribes identified pursuant to 36 C.F.R. § 800.3(f). We have notified the Muckleshoot Indian Tribe, the Puyallup Tribe of Indians, and the Yakama Nation to assist in identifying properties which may be of religious and cultural significance.

The Corps requests your review and agreement with our determination of the APE. If you have any questions or desire additional information, please contact the project Archaeologist, Ashley Dailide, at ashley.m.dailide@usace.army.mil or (206) (764-6942). I may be contacted at laura.a.boerner@usace.army.mil or (206) 764-6761.

Sincerely,

A handwritten signature in black ink, appearing to read 'Laura Boerner', with a small 'for' written below it.

Laura Boerner, Chief
Planning, Environmental and Cultural
Resources Branch

Enclosures



Allyson Brooks Ph.D., Director
State Historic Preservation Officer

January 27, 2020

Ms. Laura A. Boerner
Environmental Resources Section
Corps of Engineers – Seattle District
PO Box 3755
Seattle, Washington 98124-3755

Re: Jones Levee Flood Control Project
Log No.: 2020-01-00840-COE-S

Dear Ms. Boerner:

Thank you for contacting our department. We have reviewed the materials you provided for the Area of Potential Effect (APE) for the proposed Jones Levee Flood Control Project along the Puyallup River near Orting, Pierce County, Washington

We concur with your determination of the Area of Potential Effect (APE) as described and presented in your figures and text.

We look forward to further consultations as you consult with the concerned tribal governments, provide the results of the professional cultural resources review, and render your determination of effect.

We would also appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4).

These comments are based on the information available at the time of this review and on behalf of the State Historic Preservation Officer in compliance with the Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations 36CFR800.4. Should additional information become available, our assessment may be revised. Thank you for the opportunity to comment.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Rob Whitlam', followed by a horizontal line.

Robert G. Whitlam, Ph.D.
State Archaeologist
(360) 586-3080
email: rob.whitlam@dahp.wa.gov

State of Washington • Department of Archaeology & Historic Preservation
P.O. Box 48343 • Olympia, Washington 98504-8343 • (360) 586-3065
www.dahp.wa.gov



Appendix B.5 – Fish and Wildlife Coordination Act Documentation

DRAFT

From: [Muck, Jim](#)
To: [Wilson, Zachary M CIV USARMY CENWS \(US\)](#); [Goetz, Frederick A CIV USARMY CENWS \(USA\)](#)
Cc: [Emily Teachout](#); [Molly Good](#)
Subject: [Non-DoD Source] Jones Levee Flood Risk Management Project
Date: Thursday, October 17, 2019 11:29:10 AM

Zach, Fred,

Thank you for your August 29, 2010, letter and October 10, 2019 email regarding the Jones Levee Flood Risk Management Project. The U.S. Fish and Wildlife Service appreciates your invitation for our early involvement in the feasibility study on the project. Your letter requested the preparation of a Fish and Wildlife Coordination Act (FWCA) report. We reviewed your information and since the purpose and need of the proposed project is essentially restoration that will benefit fish and wildlife, we see no reason to require a FWCA report to provide you recommendations to benefit fish and wildlife. You have fully met the intent of the FWCA by the proposed project design.

I will be participating in the site visit on November 4. Please provide me with the information on the meeting location, time, and agenda. I look forward to the site visit and the continued coordination and participation in the project.

Jim

Jim Muck
U.S. Fish and Wildlife Service
510 Desmond Dr. SE, Suite 102
Lacey, WA 98503
(360) 753-9586

Appendix B.6– Draft Finding of No Significant Impact

DRAFT

DRAFT FINDING OF NO SIGNIFICANT IMPACT

JONES LEVEE FLOOD CONTROL FEASIBILITY STUDY ORTING, WASHINGTON

The U.S. Army Corps of Engineers, Seattle District (Corps) has conducted an environmental analysis in accordance with the National Environmental Policy Act of 1969, as amended. The draft Integrated Feasibility Report and Environmental Assessment (IFR/EA) dated **<DATE OF IFR/EA>**, for the Jones Levee Project addresses flood risk reduction opportunities and feasibility in the city of Orting, Washington.

The draft IFR/EA, incorporated herein by reference, evaluated various alternatives that would reduce flood risk in the study area. The recommended plan is the National Economic Development (NED) Plan and includes:

- Construct a levee 6,414 feet long landward of the existing Jones Levee.
- Install engineered log jams (ELJs) to break up flow and reduce velocities as floodwaters from the Puyallup River enter the setback area.
- Breach the existing Jones Levee to allow river access to the additional riverine area provided by the setback levee.
- Restore floodplain connectivity to approximately 40 to 50 acres.

In addition to a “no action” plan, three alternatives were evaluated in the IFR/EA. The alternatives included Alternative 2: Levee Raise-In-Place and Alternative 3: Levee Setback and Partial Removal (Locally Preferred Plan), and Alternative 4: Levee Setback and Partial Removal (NED). The difference between Alternative 3 and 4 is the design of the buried toe, which in Alternative 3 uses larger rock. Otherwise, the two alternatives are the same in alignment, elevation profile, and slope armoring. The recommended plan is Alternative 3.

For all alternatives, the potential effects were evaluated, as appropriate. A summary assessment of the potential effects of the recommended plan are listed in Table 1:

Table 1: Summary of Potential Effects of the Recommended Plan

	Insignificant effects	Insignificant effects as a result of mitigation*	Resource unaffected by action
Hydraulics and Hydrology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Geomorphology and Sediment Transport	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Noise and Air Quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Climate Change and Sea Level Change	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hazardous, Toxic & Radioactive Waste	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Soil Resources	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vegetation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Insignificant effects	Insignificant effects as a result of mitigation*	Resource unaffected by action
Wetlands	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Threatened and Endangered Species	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fish and Wildlife	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cultural Resources	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aesthetics and Recreation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transportation, Public Services, and Utilities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public Health and Safety	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Socio-Economics	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Land Use, Planning, and Zoning	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

All practicable and appropriate means to avoid or minimize adverse environmental effects were analyzed and incorporated into the recommended plan. Best management practices (BMPs) as detailed in the IFR/EA will be implemented, if appropriate, to minimize impacts. BMPs are outlined in Section 5.5 of the IFR/EA and include, but are not limited to:

- All in-water work will be scheduled within the in-water work window (July 15 to August 31).
- Erosion control practices will be implemented (e.g. silt fencing, swamp mats, covering stockpiles if rain is forecasted, coir logs, etc.).
- Levee rock on the new setback will be covered with native sediments and hydroseeded.
- Material placed in the water shall be placed individually or in small bucket loads (riprap, spall rock). No in-water rock dumping is allowed.
- Wood piles will be installed using a vibratory hammer. Impact hammers will not be used.
- Water quality monitoring for turbidity will be conducted during construction. The Corps anticipates the need for a Water Quality Certification from the Washington State Department of Ecology (Ecology), which will be obtained during design and implementation (D&I). Additional BMPs related to water quality will be considered during D&I, such as silt curtains.
- Vegetation removal will be limited to the smallest extent possible.
- Disturbed soils will be revegetated with native vegetation.
- Woody material generated by the action will be reused in the ELJs or placed in the river or setback area for habitat. Rootwads will remain attached to the tree, to the extent feasible.
- All site access routes and staging areas will be repaired and hydroseeded as appropriate to restore the project to preconstruction conditions or better.
- Equipment maintenance and refueling will take place away from the river and other waters of the U.S. and use best practices and methods to prevent and respond to spills or leaks.
- Equipment used near the water will be cleaned before construction.
- Biodegradable hydraulic fluids will be used in machinery where appropriate.
- Construction equipment shall be regularly checked for drips or leaks. Any leak will be fixed promptly, or the equipment removed from the project site.
- Fuel spill kits with absorbent pads will be onsite at all times.

- All trash and unauthorized fill resulting from construction activities will be removed from the construction and staging areas, including but not limited to concrete blocks or pieces, bricks, asphalt, metal, treated wood, glass, floating debris, and paper and disposed of properly.

No compensatory mitigation is required as part of the recommended plan.

Public review of the draft IFR/EA and draft Finding of No Significant Impact (FONSI) will take place on <DATE OF IFR/EA>. All comments submitted during the public review period will be responded to in the Final IFR/EA and FONSI.

Pursuant to Section 7 of the Endangered Species Act (ESA) of 1973, as amended, the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) determined that the recommended plan will not jeopardize the continued existence of the following federally listed species or adversely modify designated critical habitat: southern resident killer whale, eulachon, coastal-Puget Sound bull trout, Puget Sound Chinook, and Puget Sound steelhead. The NMFS notified the Corps on May 8, 2020 that the project meets the requirements of the Fish Passage and Restoration III Programmatic Biological Opinion (WCRO-2014-00004). On June 16, 2020, the USFWS notified the Corps that the project meets all the applicable criteria in the 2008 Fish Passage and Habitat Restoration Programmatic Biological Opinion (13410-2008-FWS-F-0209) for Activity Categories (AC) 2c: Installation of Instream Structures, Placement of Engineered Log Jams; and AC 3: Levee Removal and Modification. The Corps will continue to assess impacts to ESA-listed species and their critical habitat throughout D&I and will reinstate consultation as necessary.

Pursuant to Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, the Corps has taken actions to identify historic properties that may be affected by the proposed action. An initial letter to document the area of potential effect (APE) was sent to the Washington State Historic Preservation Officer (SHPO) on January 27, 2020. The SHPO agreed with the Corps' determination of the APE on January 27, 2020. A field investigation will be conducted of the project APE followed by a report summarizing the findings of the survey. Upon completion of the report the Corps will submit the report to the SHPO along with a letter documenting the Corps determination and findings and complete consultation as necessary.

Pursuant to the Clean Water Act of 1972, as amended, the discharge of dredged or fill material associated with the recommended plan has been found to be compliant with Section 404(b)(1) Guidelines (40 CFR 230). The Clean Water Act Section 404(b)(1) Guidelines evaluation is found in Section 6.4 of the IFR/EA.

A water quality certification pursuant to Section 401 of the Clean Water Act will be obtained from Ecology prior to construction. The Corps submitted draft documents to Ecology as part of the pre-application procedures for requesting a 401 WQC to Ecology on May 14, 2021. These draft documents consist of the Corps' completed 404(b)(1) analysis and a Coastal Management Act Consistency Determination, as attached in Appendix B of the draft IFR/EA. Coordination

with Ecology will continue into D&I and all conditions of the water quality certification will be implemented in order to minimize adverse impacts to water quality.

All applicable environmental laws have been considered and coordination with appropriate agencies and officials has been or will be completed in D&I. See Section 6 for more details.

Technical, environmental, and economic criteria used in the formulation of alternative plans were those specified in the Water Resources Council's 1983 Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies. All applicable laws, executive orders, regulations, and local government plans were considered in evaluation of alternatives. Based on this report, the reviews by other federal, state and local agencies, tribes, input of the public, and the review by my staff, it is my determination that the recommended plan would not cause significant adverse effects on the quality of the human environment; therefore, preparation of an Environmental Impact Statement is not required.

Date

Alexander "Xander" L. Bullock
Colonel, Corps of Engineers
District Commander