



February 25, 2022

Attention: Rich Doenges  
Washington State Department of Ecology  
PO Box 47600  
Olympia, WA 98504

Attention: Brandon Clinton  
U.S. Army Corps of Engineers  
Regulatory Branch  
PO Box 3755  
Seattle, WA 98124-3164

**RE: Submittal of Project Description Clarifications for the Flood Damage Reduction Projects Proposed by the Chehalis Flood Control Zone District.**

Correspondence from the Department of Ecology (Ecology), (May 7, 2021) and the United States Army Corps of Engineers (USACE) (April 26, 2021 and April 29, 2021), requested clarification of project description information for the Chehalis River Basin Flood Control Zone District (District) proposed flood damage reduction facilities near Pe Ell and at the Chehalis-Centralia Airport (proposed project). In response to the agency requests and continuing discussions with both agencies, the District has worked diligently to develop and provide the requested clarifications to the project description. The District had previously submitted a series of technical reports and memorandums to Ecology and the USACE on June 4, 2021<sup>1</sup>; September 3, 2021<sup>2</sup>; and December 17, 2021<sup>3</sup>. The purpose of those submittals and the enclosed submittal is to respond to Ecology and the USACE inquirers and further inform the agencies regarding the project configuration and commitments to avoid, minimize or mitigate potential project impacts as they consider comments on the NEPA and SEPA Draft Environmental Impact Statements (EISs) and aid in the development of NEPA and SEPA Final EISs. Included herein are further clarifications to the project

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<sup>1</sup> The June 4, 2020 submittal included the following reports and technical memos: Aquatic Habitat Mitigation Capacity and Species Benefits; Stope Stabilization Mitigation; Avoidance and Minimization of Rainbow Falls/Fisk Falls Lamprey Fishery Impacts and Related Cultural Effects; Alternative Quarry Site Selection; Operations under Climate Change Conditions; Districts Committed AMM Measures Catalog (MS Excel database); Letter regarding Land Transfer Use and Jurisdiction; Short Term Aquatic Species Benefits; Existing All Species Fish Passage Facilities Research.

<sup>2</sup> The September 3, 2021 submittal included the following reports and technical memos: Temporary Construction Fish Passage; Vegetation Planting Plan; Quarry Operations; Access Roads; Temporary Construction Facilities; Sediment Transport and Geomorphology Review of SEPA and NEPA Documents; Power Supply; Airport Levee Construction; Large Woody Material Passage and Placement Clarification; FRE Site Selection; Commitment to No Net Loss of Aquatic Habitat Function.

<sup>3</sup> The December 17, 2021 submittal included the following reports and technical memos: Vegetation Management Plan (Updated); Conceptual Level Recreation Improvements Options; Additional Information – Environmental Justice; Quarry Operations; Access Roads Update and Best Management Practices; Temporary Construction Facilities; Information from FCZD Related to SEPA Final EIS, Fish Passage Design – Response to Requested Information.

description information regarding construction phase fish passage facilities, airport levee improvements, and FRE facility design safety standards.

It has always been the Districts goal to develop and provide the best information possible to support the agencies assessment of the potential environmental effects of the proposed project, so they can be quantified to the extent possible and addressed. This has included further refinements to the project description which provides important information for assessing potential environmental effects. To further clarify project description information, the District submittals attached to this letter including the following documents:

- *Construction Phase Upstream Fish Passage Alternatives Selection*
- *Airport Levee Wetland Avoidance*
- *FRE Facility Safety Standards and Seismic Fault Study Review*

### **Construction Phase Upstream Fish Passage Alternatives Selection**

To prepare the Final EISs under NEPA and SEPA, the agencies have requested that the District provide a conceptual design for facilities that would maintain upstream fish passage during the construction phase of the FRE facility. The District previously submitted a *Temporary Construction Fish Passage Technical Memorandum* describing the likely use of a velocity barrier weir in the design of the upstream fish passage facilities (see September 3, 2021, submittal). Subsequently the District responded to detailed questions from Ecology and Washington Department of Fish and Wildlife (WDFW) (see December 17, 2021 submittal). On January 28, 2022, the District submitted a draft narrative description of the construction phase upstream fish passage conceptual design which includes the following information:

- A summary of the relevant regulations and design criteria that apply to upstream fish passage.
- A description of technologies available for upstream fish passage and an assessment of their feasibility for consideration for the proposed FRE project based on defined criteria.
- The description of three alternative design concepts based on the technologies found to be feasible for consideration.
- A comparison of the three design concepts and recommendation of one concept for further design development.

A completed conceptual design for the construction phase upstream fish passage facility, including both the draft narrative and conceptual design of the recommended facility is included in this submittal. The narrative description describes and analyzes three design concept alternatives, named Alternative 1, Alternative 2 and Alternative 3. Based on a comparative evaluation, the District's engineering consultant (HDR Engineering) has recommended Alternative 3 as the preferred alternative for development. The District concurs with this recommendation and hereby incorporates this finding as part of its Proposed Action (project description) for the FRE portion of the project. The District requests that the agencies incorporate this design concept alternative into the Final EIS as part of the project description.

## **Airport Levee Wetland Avoidance**

The District previously submitted the *Airport Levee Wetland Avoidance Technical Memorandum* (September 3, 2021) clarifying that the conceptual design and construction best management practices for the Airport levee improvements would avoid impacts to jurisdictional wetlands. Ecology requested further clarification on the conceptual design for the airport levee improvements and the means to avoid jurisdictional wetlands. The District submits the attached technical memorandum *Airport Levee Wetland Avoidance* which provides additional information regarding the ability to use standard levee design/construction methods to avoid affecting jurisdictional wetlands and updates to assumptions regarding the project description for the airport levee improvements. The District intends to incorporate these design concepts into the final design of the levee improvements project to avoid impacts to jurisdictional wetlands. The District further requests that the agencies incorporate the design concepts, as described in the attached technical memorandum, in the development of the Final EISs regarding effects on wetlands from the construction of the airport levee improvements.

## **FRE Facility Safety Standards and Seismic Fault Study Review**

By statute and rule the District will be required to design and construct the proposed FRE facility in accordance with federal and state engineering standards that incorporate engineering factors of safety, actual local and regional potential seismic activity and other geophysical considerations. The attached *FRE Facility Safety Standards and Seismic Fault Study Review*, summarizes federal dam safety standards and design criteria that will govern the design of the facility. Further, the District's engineering consultant (HDR Engineering) reviewed *Geologic and Geophysical Assessment of Tectonic Uplift and Fault Activity in the Doty and Willapa Hills, Southwest Washington: Final Report* (June 30, 2021) which was prepared by the Washington Department of Natural Resources. The attached report provides a preliminary assessment of the seismic condition at or near the site and how it would affect the project.

The District's project design team will complete the FRE facility final design based on a risk-informed structure response evaluation as required under current Federal dam safety requirements and best practices. This approach will provide the state confirmation that the facility design will conform to the Federal guidelines for dam safety risk analysis.

The District anticipates that the most recent estimated seismic hazards at the site, as well as the development of ground motion time histories that can be used in the structural analyses of the facility, will be updated as a required element of the final engineering design.

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The District again acknowledges and appreciates the work of your staff as we all address the complexity of the proposed project as you prepare the Final EISs under SEPA and NEPA. If as you review this information, you have any questions or require further clarification, please contact myself or Betsy Dillin our Project Manager immediately. We view incorporation of this information as critical to the

development of Final EISs that provide the best information to the decision makers, including the District that must determine under what circumstances this project can be carried forward.

Submitted By,

A handwritten signature in black ink, appearing to read 'Erik Martin', with a stylized, cursive script.

Erik Martin,

Chehalis River Basin FCZD Administrator

CC with Attachments

Diane Butorac – Department of Ecology

Andrea McNamara Doyle – Office of the Chehalis Basin

Attachments:

Construction Phase Upstream Fish Passage Alternatives Selection and 10% Design

Airport Levee Wetland Avoidance

FRE Facility Safety Standards and Seismic Fault Study Review