



December 17, 2021

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 and Additional Information Regarding Committed Avoidance, Minimization and Mitigation Measures for the Flood Damage Reduction Projects Proposed by the Chehalis River Basin 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 Flood Control Zone District's (District) proposed flood damage reduction facilities near Pe Ell and at the Chehalis Airport (proposed project). Ecology and the USACE have also requested further clarification and commitments by the District regarding measures to avoid, minimize or mitigate potential impacts from construction and operation of these facilities. 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 is also dedicated to the avoidance, minimization, and mitigation of potential environmental impacts that may arise from construction and operation of the project and has further developed measures that the District commits to implementing as part of the proposed project. The purpose of these efforts, as described in the attached documents, is to respond to the agencies inquiries and further inform Ecology and the USACE. These responses will serve to aid in both the USACE and Ecology's response to comments on the Draft EISs, and aid in the development of NEPA and SEPA Final Environmental Impact Statements (EIS).

As part of its continuing efforts to define measures to avoid, minimize or mitigate (AMM) and to clarify certain elements of the project description, the District submitted a series of technical reports and memorandums to Ecology and the USACE. These documents, which were submitted on June 4, 2021 included:

- *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*
- *District's 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*

On August 30, 2021, the District submitted a technical memorandum clarifying additional elements of the project description, as well as providing the District's commitments to implementing a number of specific AMM measures. The project description clarifications and District commitments were detailed in the following documents:

- *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*

Following the August 30, 2021 submittal, Ecology and the District have engaged in ongoing discussions to answer questions regarding the District's previous submittals. These discussions largely resulted in work to further clarify the District's committed AMM mitigation measures and to complete the definition of certain project description elements that are contained in the documents attached herein.

It has always been the District's goal to develop and provide the best information possible to support the agencies assessment of the proposed project's potential environmental effects so they can be quantified to the extent possible, and addressed. This includes taking into account to the extent possible, avoidance, minimization and mitigation measures the District commits to provide as part of project implementation. The District greatly appreciates Ecology's ongoing collaborative efforts to develop a shared understanding of the potential environmental effects of the project. This has provided a strong basis for the District's development of AMM measures and commitment to their implementation.

The District submittals attached to this letter include the following documents:

- *Vegetation Management Plan (Updated)*
- *Conceptual Level Recreation Improvement 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*

These documents are generally in two groups, 1) Updates to proposed measures to avoid and minimize effects to vegetation, and 2) further clarifications to the project description. The District is also submitting some additional information regarding the effects of the proposed project on communities related to Environmental Justice and the benefits to those communities from development of the project.

Updates to Proposed Measures to Avoid and Minimize Effects on Vegetation

The District recognizes that among the most important effects of the proposed project are the potential impacts to aquatic habitat and species as they relate to the potential loss of vegetation in the temporary inundation zone of the Flood Retention Expandable (FRE) facility site. In response, the District has undertaken considerable analytic and planning work over the past year to find means to avoid, minimize and mitigate these potential effects. The District previously submitted a *Conceptual Vegetation Management Plan* (VMP) in November of 2020¹ to describe the intended approach to vegetation management in the temporary inundation area. The Conceptual VMP identified the need for two additional work products. The first is a *Water Temperature Model Sensitivity Analysis*² which highlights the potential for vegetation in the temporary inundation area to minimize effects to stream temperature. The second is a *Proposed Plant Replacement Plan*³ which provides further clarification concerning the expected vegetation that will viably persist within the proposed temporary inundation area, and has been updated with this submittal.

In addition to the detailed work on developing feasible actions to avoid and minimize effects of the proposed project on vegetation and related aquatic habitat and species, the District has initiated extensive research to identify sites for aquatic habitat improvement and mitigation measures. These actions are proposed for the downstream reach of the Chehalis River below the FRE facility site and in the tributary reaches upstream of the FRE facility⁴. The District is continuing this work as part of a comprehensive Conceptual Mitigation Plan to be issued early next year.

Included herein is an update to the *Conceptual VMP* which provides further clarification on the District's proposed plan to maintain adequate vegetation cover within the temporary inundation area (temporary

¹ Conceptual Vegetation Management Plan. Prepared by HDR. Submitted November 2020 to Ecology and USACE.

² Water Temperature Model Sensitivity Analysis. Prepared by HDR and Portland State University. Submitted April 2021 to Ecology and USACE

³ Plant Replacement Plan. Prepared by HDR. Submitted August 2021 to Ecology and USACE.

⁴ Draft Aquatic and Terrestrial Mitigation Opportunities Assessment Mitigation Opportunities Report. Prepared by Kleinschmidt Associates, HydroGeoLogic, Inc., Stillwater Sciences, Biohabitats, Inc., and Ecological Engineering, LLC July 2020.

reservoir), especially in the riparian zone, to minimize the potential effects of vegetation changes on water temperature and sedimentation. The updated plan directly addresses the potential for some existing shade tree mortality during FRE operation and temporary inundation by replacing these trees to maintain shade. The updated VMP builds upon concepts previously introduced in the *Conceptual VMP*, *Water Temperature Model Sensitivity Analysis*, and *Proposed Plant Replacement Plan*, and provides greater detail including a selective tree removal plan during construction, a plant replacement strategy including a species list and planting plan, a timeline of implementation, and a proposed adaptive management plan. The updated VMP is intended for use in the development of the Final EISs by Ecology and USACE and will be used for future stakeholder and agency coordination efforts to serve as the basis for the development of a final VMP during project permitting. The updated VMP has been reviewed by a third-party professional silviculturalist.⁵ Comments and suggestions regarding the technical merits of the updated VMP, and specifically the selection of certain plant species, have been incorporated.

Included in the updated VMP is an adaptive management approach. This approach addresses how uncertainties regarding the frequency, duration, and intensity of future flood events and resulting impacts will be considered to inform the management of vegetation in the temporary inundation area. Although impacts from future flood events are unknown, the VMP is designed to manage for resilience in response to future disturbance. The draft adaptive management component of the VMP presents basic plan elements that will be developed in more detail once permitting commences.

Most importantly, the District believes that the VMP coupled with its work identifying specific mitigation actions and site opportunities, as documented in previous submittals to Ecology and the USACE,⁶ provides a valid basis for the District to achieve its commitment to no net loss of aquatic habitat function.

Project Description Clarifications

In response to questions from Ecology and the USACE, the District is providing further clarification regarding several components of the proposed project description. The District requests that these clarifications, as described in the attached technical memorandums, are included in the project description and considered in the analysis of the project's effects in the Final EISs, including the analysis

⁵ The VMP has been reviewed by Shavonne Sargent, Principle at SilvaSaunterra LLC, a forestry consulting business based in Albany, Oregon. Ms. Sargent holds a Society of American Foresters Certified Forester credential and is a member of the Society of American Foresters, the Forest Stewards Guide, and Oregon Small Woodlands Association.

⁶ See documents and reports prepared by Kleinschmidt Associates including:

- Draft Aquatic and Terrestrial Mitigation Opportunities Assessment Mitigation Opportunities Report. July 2020.
- Wetlands Mitigation Opportunities Assessment Report. August 2020
- Mitigation Capacity and Species Benefits Memo. February 2021.
- Commitment to No Net Loss of Aquatic Habitat Function. August 2021.

of impacts to air quality, sedimentation, and aquatic species and habitats, and other resource areas as they apply. These clarifications include:

- **Quarry Operations** – The District submits the attached technical memorandum *Quarry Operations* which describes two quarries as potential sources of rock aggregate for the construction of the proposed FRE facility. This memo is an update to the previously submitted *Quarry Operations Memo* (August 30, 2021). Related information is provided about the quarry area, rough order magnitude of material that will be disposed, estimated amount of rock needed from the quarry, and the amount of truck loads anticipated for transfer from the quarries to the FRE facility site.
- **Access Roads** - The District submits the attached technical memorandum *Access Roads Update and Best Management Practices* which clarifies construction and operation of the proposed FRE facility assumptions for access roads between the FRE facility and quarries and access around the temporary inundation area. This memo is an update to the previously submitted *Access Roads Memo* (August 30, 2021), and includes detailed information regarding the use of existing access roads, new temporary construction access roads, main access for commercial forest practices, debris management after a flood event, construction and project access roads BMPs, construction vehicle quantity estimate using the access roads, and a quantity estimate for re-grading and surface treatment for existing access roads.
- **Temporary Construction Facilities** – The District submits the attached technical memorandum *Temporary Construction Facilities*, which clarifies assumptions regarding the temporary facilities that will be needed to support construction of the FRE facility. The memo provides additional details to the August 30, 2021 *Temporary Construction Facilities Memo*, including environmental control efforts during construction, impacts of aggregate and concrete material processing, impacts of temporary fish trap and transport, impacts of the diversion tunnel construction, and details on the project clearing practices of vegetation in the FRE facility construction areas.

This technical memorandum does not further develop estimates of the area needed for staging construction activities for the proposed levee improvement. It should be assumed that these activities would occur adjacent to the existing levee within the airport boundary but not within jurisdictional wetlands that have been previously identified.

- **Temporary Fish Passage** – The District submits the attached memorandum *Information from FCZD Related to SEPA Final EIS, Fish Passage Design – Response to Requested Information*, which provides a response to detailed questions from Ecology and Washington Department of Fish and Wildlife (WDFW) regarding the temporary fish passage facilities to be developed during construction of the FRE facility. This memorandum was previously submitted to Ecology on November 15, 2021 and is included herein for Ecology and other reviewers of the updates to the project description information. The final memo detailing the 10% design of the temporary fish passage facilities will be provided to Ecology and USACE in January of 2022.

Proposed Preliminary Recreation Plan and Commitment to Mitigate Potential Effects of the Proposed Project to Recreational Resources

The District submits the attached technical memorandum *FRE Facility – Conceptual Level Recreational Improvement Options* which provides a review of the existing recreation resources in the vicinity of the proposed FRE facility and identifies potential feasible recreation improvement alternatives that provide access to the area upstream of the FRE facility. The document provides a preliminary screening of feasible options for recreation improvements that the District will consider for development of a recreation management plan during subsequent phases of project development. The District is committed to development of public recreational access and sites within the project area that would support recreational uses including day uses such as fishing, kayaking, hiking, biking, and horseback riding. The District also intends to pursue future recreational developments including expanded uses such as picnicking, interpretive and educational sites, trails, and developed camping opportunities, where appropriate. To further enhance the recreational opportunities for county and regional residents the District is committed to developing plans for enhancing recreation opportunities in the vicinity of the FRE site location and temporary inundation area with facilities and visitor amenities that currently do not exist.

Additional Information Provided

The District is also submitting the attached technical memorandum *Additional Information – Environmental Justice Benefits of the Proposed FRE Project* for consideration by Ecology and the USACE to inform their preparation of final EISs under SEPA and NEPA. The additional information provides an analysis of the avoided flooding impacts to environmental justice communities in the Chehalis Basin from operation of the proposed FRE project. This analysis includes modeled hydrology information for the Chehalis River Basin, specifically the projected increase in flooding due to climate change. The additional information includes a comparison of the potential for flooding impacts on environmental justice communities including facilities and residences associated with those communities. The results indicate that the proposed project, when compared to a future without the proposed project, provides flood protection to environmental justice community facilities and residences through a reduction in the magnitude and extent of flooding in those communities and throughout Chehalis River Basin.

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Based on the recently approved budget for the Office of the Chehalis Basin by the Chehalis Basin Board, the District continues work on three areas of work that will result in additional information that will be available to Ecology and the USACE in 2022. These include 1) a temporary fish passage 10% design report, 2) an airport levee 10% design report, and 3) a conceptual Comprehensive Mitigation Plan. The District looks forward to continued collaboration and coordination in the review of the materials submitted herein and the planned submittals for 2022.

The District acknowledges and appreciates the complexity of the proposed project and the natural and built environmental resources you are analyzing to determine the potential effects of project construction and operation as you prepare for 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 public and decision makers, including the District, who must determine under what circumstances this project can be carried forward.

Submitted By,



Erik Martin,

Chehalis River Basin FCZD Administrator

CC with Attachments

Diane Butorac – Department of Ecology

Andrea McNamara Doyle – Office of the Chehalis Basin