

Project Description RFI - Sent 06/10/2024; follow-up on 9/23/2024; Applicant Response 10/08/2024

RFI #	Information Requested	Type of Information Requested	Reference (if Applicable)	Date Request Sent	Due	Response Date	Status	Applicant Response	Follow Up	Requesting Agency	Recipient of Request	Notes2	Applicant Response
RFI 1-1	FCZD has coordinated with Ecology and Corps to use consistent assumptions across all parties where possible. Where are those assumptions documented?	General		6/10/2024	6/28/2024	6/28/2024	Pending	The assumptions are documented in the Revised Project Description Report (RPDR).	Specific questions added in combined draft project description	Ecology	Matt Dillin, FCZD		Assumptions are documented throughout the Revised Project Description Report (RPDR) and Mitigation Plan. Assumptions that are consistent between the FCZD, Ecology, and the Corps are not specifically called out as such in the RPDR and Mitigation Plan.
RFI 1-2	When will new geotechnical data be collected?	Site Condition Information	p. 39 of RPD Report	6/10/2024	6/28/2024	6/21/2024	Complete	Additional Investigations for the FRE, Quarries and Landslides will be conducted Summer 2024. The proposed investigations for the quarries and landslides is limited and intended to inform future investigations. Proposed investigations at the FRE are intended to advance the design of the FRE foundation. The current foundation design provided in the RPDR is conservative in nature and is anticipated decrease in size in lieu of the opposite.	None. Question answered.	Corps	Matt Dillin, FCZD		
RFI 1-3	Has coordination with Tribes occurred to determine if they agree with the characterization that the revision minimizes the effects on the TCP and to what degree (e.g., partially, substantially)? Can additional context be provided for the statement that the alignment minimizes effects to the identified TCP?	General		6/10/2024	6/28/2024	6/28/2024	Partial	District representatives have been participating in monthly Section 106 meetings with the Consulting Tribes hosted by USACE. Through this process the District learned that the original FRE alignment could have caused irreparable damage to important physical features associated with the TCP. To minimize and avoid these impacts, the District evaluated the feasibility of relocating the FRE to an upstream and a downstream alignment. Both alignments were deemed feasible and the District chose to advance the upstream alignment as the District determined it was better at minimizing impacts to the TCP. Specifically, the revised upstream alignment would preserve important physical features that would have been removed at the original alignment. The same important physical features are also now outside the temporary inundation zone and would not be inundated by FRE operations. The upstream alignment will also reduce impacts to existing vegetation near the TCP. When the District shared the proposed upstream minimization alignment location with the Tribes, the Chehalis Tribal Representatives were displeased with the distance that the revised alignment was moved upstream and they informed the District that the revised alignment would not be considered an avoidance measure. The District shared the constraints associated with moving the alignment further upstream; specifically, the potential loss of the Crim Creek watershed which accounts for approximately 20% of the project's tributary area. Based on these physical constraints and the early Tribal feedback, the District recognizes that the revised alignment can only minimize and not avoid impacts. The boundary of the TCP is still being evaluated, once that work is complete the District anticipates that they will have a more complete understanding regarding to what degree the revised alignment minimizes the effects on the TCP.	Request follow-up. Applicant responded with Chehalis Tribe response that it wouldn't be avoidance, but it's unclear from the response whether Tribes were asked to weigh in on whether or not the new alignment minimizes effects to the TCP or to what degree. Asking the Applicant to follow up after the boundary evaluation is complete.	Ecology	Matt Dillin, FCZD		The Section 106 consulting parties are waiting for the TCP report to better define the TCP prior to defining the unavaoided impacts. Applicant will follow up after the boundary evaluation is complete through the ongoing Section 106 consultation process.
RFI 1-4	The RPD mentions decisions that would be made or evaluated after "rezoning of these lands has been fully established" (Appendix G, Section 6). Can FCZD provide any information on the type of rezoning that is under consideration?	Operation Details		6/10/2024	6/28/2024	6/28/2024	Partial	The District submitted a letter dated June 1, 2021 titled "Transfer Land Use and Jurisdiction" that outlines the District's assumptions for land acquisition and transfer of jurisdiction for the FRE and associated reservoir site. The current land use designation with the Lewis County Code zoning administrating is Forest Reserve Lands. Commercial forestry is a "Primary Use" in this classification. Permitted accessory uses under this classification include "watershed management facilities, including but not limited to diversion devices, impoundments, dams for flood control, fire control, and stock watering. 17.30.460 (7)." Transfer of use from the current commercial forestry to use as a flood facility should not require a change in zoning.	It is unclear why the RPD includes this statement about zoning. Further clarification needed.	Ecology	Matt Dillin, FCZD	Comment added to Project Description Section 2.2.3 asking the Applicant to provide clarification.	It appears the RFI is intended to reference the last paragraph of Section 2.2.2 of the Project Description. See comment response in Project Description Section 2.2.2.
RFI 1-5	Spillway widths indicated as 255 feet or 316 feet in different locations of RPDR materials. Please confirm which is correct.	Facility Details		6/10/2024	6/28/2024	6/21/2024	Complete	The spillway is 316 feet wide at the crest and 255 feet wide at base of dam. The revised FRE is curved as shown on the Drawing Sheet 3C-02 in Appendix A of the RPDR. The curvature causes the FRE radius to decrease at lower elevations of the dam. The spillway edges have to parallel the proposed contraction joints as shown on Drawing Sheet 3C-03, resulting in the taper of the spillway from the crest to the base.	None. Question answered.	Ecology	Matt Dillin, FCZD		
RFI 1-6	Is the spillway bridge shown somewhere in the drawings? Can any information be provided on this feature?	Facility Details		6/10/2024	6/28/2024	6/21/2024	Complete	An elevation view of the spillway bridge is shown on Drawing 3C-03 in Appendix A. The bridge will be constructed of three precast concrete pretensioned I-girders with a concrete deck. The concrete deck will match the top width of the rest of the FRE as shown on Sheet 3C-04 (approximately 20-feet)	None. Question answered.	Ecology	Matt Dillin, FCZD		
RFI 1-7	Dam safety consequence rating information in RPDR Section 3.5.1 seems to indicate consideration of operations during future potential expansion of the FRE--can this be explained further?	Operation Details		6/10/2024	6/28/2024	6/21/2024	Complete	Hydrologic and seismic hazard design criteria applied to the proposed FRE must consider future expansion to capture the appropriate seismic design frequency criteria so as to not preclude future expansion.	None. Question answered.	Ecology	Matt Dillin, FCZD		

RFI 1-8	In general, would like to see more specifics on development of existing and future access roads/criteria and requirements noted in RPDR Section 11.3.	Road Details		6/10/2024	6/28/2024	6/28/2024	Partial	Appendix G of the RPDR (Access Road TM) provides additional information and assumptions on proposed approaches to road improvements, road widths and assumed lengths of roads requiring improvements. Permanent access routes and rerouting of existing roads for operations and maintenance, post construction of the FRE, have been developed and illustrated for the FRE Site. Estimated lengths and widths for permanent roadway improvements within the temporary pool/inundation zone have been provided. The current assumption is that existing access roads within and around the temporary pool could be improved (as outlined in Appendix G) to provide permanent access for multiple purposes. Specific permanent access routes within the temporary pool cannot be determined at this time. Final access for trap and haul requires continued consultation and coordination with agencies and continued forestry practice permanent access requires continued coordination and negotiations with Weyerhaeuser.	None. Information provided by applicant is most current.	Ecology	Matt Dillin, FCZD		
RFI 1-9	Will there be any overlap in the "permanent access roads used during operation and maintenance of the FRE facility" and "permanent access roads for commercial forestry practices" and roads for "permanent access for recreation sites"? In other words, would there be any shared/multi-purpose access roads or would the road networks need to be separated?	Road Details	p. 2 of Appendix G	6/10/2024	6/28/2024	6/28/2024	Complete	At the proposed FRE site, permanent access routes and rerouting of existing roads for operations and maintenance, post construction of the FRE, have been developed and illustrated. It is likely that final access roads will have multiple uses as this would minimize unnecessary construction of roads to support separate uses.	None. Question answered.	Corps	Matt Dillin, FCZD		
RFI 1-10	The category "abandoned access roads" is separate from the category "access roads used during construction of the FRE facility" and is defined as "existing roads revegetated after construction is complete". Does this mean that those roads would not be used for construction purposes? Are they existing logging roads that would no longer be used?	Road Details	p. 2 of Appendix G	6/10/2024	6/28/2024	6/28/2024	Complete	Figure A-1 in Appendix G illustrates existing access roads that will be abandoned/restored at the FRE site. These roads would be used temporarily for construction before being restored at the end of construction. Construction Figures within Appendix K – Constructability Report, provide additional detail on construction access. Forest Road 1010 (FR1010) is the primary commercial forest practices route at the FRE site that will be affected by the project. A reroute of FR1010 around the right abutment (east side) of the FRE is illustrated on Figure A-1 (purple linework). More information regarding roadway decommissioning will be provided in the forthcoming Revised Mitigation Plan to be submitted in July 2024.	None. Question answered.	Corps	Matt Dillin, FCZD		
RFI 1-11	Will the "orphaned access roads" be removed and revegetated or are they intended to be available for use when the FRE facility is not retaining water?	Road Details	p. 2 of Appendix G	6/10/2024	6/28/2024	6/28/2024	Complete	See response to RFI 1-8. It is possible that some of the orphaned access roads will become part of permanent access.	None. Question answered.	Corps	Matt Dillin, FCZD		
RFI 1-12	Can more information be provided on potential alternate access routes for commercial logging and any change to access from/to public highway/roads? How will commercial loggers access their areas and transport their product? What about fire access?	Road Details		6/10/2024	6/28/2024	6/28/2024	Partial	See response to RFI 1-8. Additional coordination with forestry landowners is required to determine which areas of land continue to be used for commercial forestry. Once this is determined, routes to preserve/maintain access to commercial loggers' areas will be identified so as not to inhibit product transport.	None. Information provided by applicant is most current.	Ecology	Matt Dillin, FCZD		
RFI 1-13	Regarding existing and additional culverts, will FCZD provide estimates for the number of existing culverts that need to be repaired or replaced and the number of new culverts that will need to be installed? Also, will FCZD provide a stream impact estimate for culvert work? Are those types of impacts accounted for in the wetland and other waters impact tables provided in Appendix O?	Facility Details	p. 4 of Appendix G	6/10/2024	6/28/2024	6/28/2024	Partial	Once the specific locations for permanent access routes is established, individual assessments and design for road improvements (including culverts) will involve conducting wetland and aquatic habitat assessments. This will occur in the design phase of the project if the proposed project moves forward. The impact assumptions provided in Appendix G (road improvement length and width) is a conservative estimate for the area of impact. Appendix O does not specifically identify WOTUS impacts outside of the FRE site area. Assumptions for WOTUS impacts within the proposed pool/inundation area have not changed.	None. Information provided by applicant is most current.	Corps	Matt Dillin, FCZD		
RFI 1-14	For roads that will be revegetated in the future, will the surface and base layers also be removed, and the former roadbed regraded to match the surrounding topography?	Road Details	Appendix G	6/10/2024	6/28/2024	6/28/2024	Pending	Chapter six of the Revised Mitigation Plan addresses specific techniques for roadway restoration/revegetation. This will be submitted to the agencies in July 2024.	Review Mitigation Plan.	Corps	Matt Dillin, FCZD		No response required.
RFI 1-15	Please provide a tabular breakdown of location of truck/vehicle trips and estimated number of trips during construction and operation.	Construction Details		6/10/2024	6/28/2024	6/28/2024	Partial	A tabular breakdown of the number of estimated trips has been provided in Tables 1, 2, and 3 of Appendix B of Appendix K, Constructability Technical Memorandum. Estimated trips during FRE Operations have not been calculated.	Will need operations trips eventually.	Ecology	Matt Dillin, FCZD	Comment added to Project Description Section 6 asking the Applicant to provide.	See comment response in Project Description Section 6.
RFI 1-16	Is there a figure showing the new electrical and telecommunications service duct bank to be buried along the service road and using the bridge to route new services across the river (RPDR Section 13)?	Facility Details		6/10/2024	6/28/2024	6/21/2024	Pending	A general site plan can be found on Plan Sheet 3E-01, Electrical FRE Structure Plan, in Appendix A of the RPDR.	requested	Ecology	Matt Dillin, FCZD	Comment added to Project Description Section 3.1.1 asking the Applicant to provide clarification if the road and bridge replacement are FR 1000.	See comment response in Project Description Section 3.1.1.
RFI 1-17	What types of modifications (if any) could be required for Pe Ell's existing raw water supply pipeline that extends between their intake on Lester Creek and their water treatment facility? Under the previous design, a portion of that line was within the temporary inundation area, including a section that crossed the river channel right at the previous FRE structure location. Based on the FRE alignment comparison figure, it looks like a section of that pipeline could be affected by the western dam abutment.	Facility Details	p. 8 of RPD Report	6/10/2024	6/28/2024	6/28/2024	Partial	The District has made the commitment to not disrupt the water supply service to Pe Ell from the Lester Creek Supply (District letter to the agencies dated August 30, 2021). The specific details of this design are planned for future project phases and the District will incorporate any recommended pipeline and access road modifications into the overall planned mitigation program for the project. Refer to the Draft Biological Assessment published September 2021, Section 3.1.8, for the most current information on potential improvements necessary to meet this commitment.	Still unclear which modifications would be made, if any.	Corps	Matt Dillin, FCZD	Comment added to Project Description Section 3.2.3 asking the Applicant to confirm.	See comment response in Project Description Section 3.2.3.
RFI 1-18	For the proposed temporary water supply infrastructure that would be used during construction, would the proposed water lines be run across the ground surface or trenched into place?	Construction Details	p. 120 of RPD Report	6/10/2024	6/28/2024	6/28/2024	Complete	Temporary water supply pipelines may be run across the ground surface and trenched into place based on the construction contractor's chosen means and methods for constructing the project and compliance with federal, state, and local laws and codes, including environmental and health and safety requirements. It is expected that the contractor would convey water from the river to the proposed RCC batch plant area and if so, this pipeline would be estimated to be approximately 2,200 feet in length.	None. Question answered.	Corps	Matt Dillin, FCZD		

RFI 1-19	Why will surface water withdrawals increase?	Operation Details		6/10/2024	6/28/2024	6/21/2024	Pending	Please provide additional clarification. For example, please identify specific document(s) and page number(s) for reference; please identify the surface water withdrawal rate(s) or volume(s) in question; please identify what you are comparing the surface water withdrawal values to.	Corps noted that the original comment is based on a statement from page 2 of the transmittal letter, which is that the FRE facility site realignment "...will result in some increase in temporary surface water withdrawals to support FRE construction, quarry activities, road construction and laydown area maintenance." We cannot find an explanation for this statement in the body of the report, hence the question.	Ecology	Matt Dillin, FCZD	The phrase "some increase in temporary surface water withdrawal" in the transmittal letter was intended as a comparison between the original FRE alignment and the revised FRE alignment presented in the Revised Project Description Report. The greater volume of materials required to construct the revised FRE alignment as compared to the volume of material for the original FRE alignment will require some increase in volume of temporary surface water withdrawal.
RFI 1-20	Will there be a future document that provides a more detailed description of the construction sequencing, including the steps involved in developing the foundation for the FRE (e.g., excavation, grouting)?	Construction Details	RPD Report	6/10/2024	6/28/2024	6/21/2024	Pending	Please advise if the description of construction sequencing and foundation design provided in Appendix K (construction phasing), Section 7.3 of the RPDR and Appendix B of Appendix E – Geotechnical Design Report (foundation excavation treatments) requires clarification.	Corps noted that the response points to several locations that presumably address the project schedule. However, Section 6.2 of Appendix K indicates that a "...construction schedule has not been prepared." The original comment remains valid and unanswered. When will a construction schedule be prepared?	Corps	Matt Dillin, FCZD	Thank you for the clarification. A technical memorandum providing additional detail on the construction steps taken during the in-water work periods is provided with these RFI responses. A construction schedule in roughly half-year time steps is included in RPDR Appendix K. A construction schedule with additional detail describing construction sequencing, including the steps involved in developing the foundation for the FRE (e.g., excavation, grouting), will be developed during future design development phases of the program and will not be available in October 2024.
RFI 1-21	Table 7-1 indicates that landslides LS-4, 5 and LS-18A, B are likely unstable during drawdown and could become significant maintenance issue. How would these landslides be stabilized? What makes them a significant maintenance issue?	Operation Details	p. 41 of RPD Report	6/10/2024	6/28/2024	6/28/2024	Complete	The landslides identified are a potential dam safety hazard and would be stabilized prior to operation of the FRE. The stabilization method used will be determined during final design. The stabilization method determined is intended to mitigate for the maintenance issues and from having to continuously monitor, remove, and stabilize throughout the life of the project while having to address additional wood debris from minor slides.	None. Question answered.	Corps	Matt Dillin, FCZD	
RFI 1-22	Once the quarry site(s) are selected, how would quarry development progress? What types of equipment/infrastructure would be required at each quarry site? Also, what types of activities would occur at each quarry site? Just rock extraction and crushing or are there other processes that would be performed (e.g., washing, sorting)?	Construction Details	p. 44 of RPD Report	6/10/2024	6/28/2024	6/21/2024	Complete	Appendix K, Section 5.4 - Quarry and Aggregate Operations, describes quarry operations to include crushing operations and required equipment.	None. Question answered.	Corps	Matt Dillin, FCZD	
RFI 1-23	In Section 16.4 it is noted that "quarry proximity is not conducive to economical line power". Does that mean that quarry operations requiring electricity will need to be supplied by diesel generators?	Construction Details	p. 120 of RPD Report	6/10/2024	6/28/2024	6/21/2024	Complete	See Appendix K, Section 4.3.1. Diesel generators will be required for quarry operations.	None. Question answered.	Corps	Matt Dillin, FCZD	
RFI 1-24	Can any information be provided on the data gathering and decision-making process (factors and timelines) re: which quarry sites will be used, to inform any potential narrowing of assumptions for the impact analysis?	Construction Details		6/10/2024	6/28/2024	6/21/2024	Pending	Limited analysis of quarries (2 borings each quarry) will be conducted in 2024. This new information may or may not eliminate one quarry over another. A more robust investigation is required to pinpoint the specific quarry source. These investigations will not occur until future phases and if the proposed project moves forward. Chapter 9, Aggregate Sourcing, of the RPDR describes that a maximum of 80 acres is proposed to be disturbed if two quarries are required. Only two quarries are proposed to be developed.	No additional questions at this time if information is not available.	Ecology	Matt Dillin, FCZD	
RFI 1-25	In Section 16.6, one of the activities listed as needing construction water is "tunneling". Is that a leftover from the previous project description where a diversion tunnel was proposed or is there tunneling involved in some aspect of the RPD?	Construction Details	p. 120 of RPD Report	6/10/2024	6/28/2024	6/21/2024	Complete	Tunneling is not a part of the current design. Consider "... tunneling operations, ..." deleted from page 120 of the RPD Report.	None. Question answered.	Corps	Matt Dillin, FCZD	
RFI 1-26	Section 16.6 mentions use of a cofferdam. Is there just one cofferdam proposed or multiple? Will it be used to isolate the existing natural river channel from the bypass channel during construction of left dam foundation?	Construction Details	p. 120 of RPD Report	6/10/2024	6/28/2024	6/28/2024	Complete	Yes, there is only one cofferdam. Yes, the term "cofferdam" in the RPDR refers to the function provided by the construction bypass channel banks. See Appendix D3 for a description of the river bank design.	None. Question answered.	Corps	Matt Dillin, FCZD	
RFI 1-27	Section 16.6 notes that it is unlikely that groundwater would be employed for construction water due to a statement in the draft BA that states "limited groundwater is present in (the vicinity of the project site) because the substrates are predominantly bedrock with a thin layer of overlaid alluvial material". However, at the end of the same section it states that construction water "may be pulled directly from the Chehalis River, from a well drilled to obtain water or a combination of both sources". Is a well still being considered a realistic source of construction water for the project?	Construction Details	pgs. 120-121 of RPD Report	6/10/2024	6/28/2024	6/28/2024	Complete	It is unlikely that groundwater would be available, but at this time, groundwater cannot or should not be eliminated as a construction water supply alternative. Further investigation is required. Note that future groundwater needs, or instream withdrawals, would require additional authorizations.	None. Question answered.	Corps	Matt Dillin, FCZD	
RFI 1-28	How does constructing the dam in two halves affect the need to conduct in-water work compared to previous design?	Construction Details	p. 122 of RPD Report	6/10/2024	6/28/2024	6/28/2024	Complete	Constructing the dam in two halves reduces the number of in-water work periods from 3 to 2 compared to previous design. It only takes one in-water work window to change river flow from one channel to the other (current alignment) while it is estimated to take two in-water work windows to construct a new temporary fish barrier and trap and transport facility (previous alignment).	None. Question answered.	Corps	Matt Dillin, FCZD	

RFI 1-29	RPDR Section 16.6 estimates 2M gallons per day water requirement during construction. Would the bulk of the demand occur during concrete production? If so, are there any specifics on when water use would occur (e.g., X % of water demand will occur within a X-month window) with an avg withdrawal rate per day during that window? Is there an estimated total water withdrawal for construction?	Construction Details		6/10/2024	6/28/2024	6/28/2024	Pending	The bulk of the water demand would occur during concrete production. The estimated water consumption is 3 cfs (2MGD). Historically the average summer river flow is about the minimum instream flow. Minimum instream flow during the low-flow summer period is 31 cfs (WAC 173-522). Water withdrawal will not allow river flow to drop below minimum instream flow. We do not currently have specifics regarding when water use would occur nor an average withdrawal rate per day. We currently do not have an estimate of total water withdrawal for construction. We will develop additional specific information regarding water withdrawal by the end of 2024.	Please provide information when available	Ecology	Matt Dillin, FCZD	Additional detail regarding construction water beyond what is provided in this response (below), such as variation in construction water demand over the construction period and total volume of construction water, will not be available in October 2024. A maximum daily peak use of 2MGD for construction water is expected. If these demands coincide unfavorably with Chehalis river low flow periods, supplemental water sources may be required. It is understood that minimum instream flows (MIF) in the Upper Chehalis River may restrict surface water withdrawal for construction several months of the year. The District will be considering alternatives for water supply during construction when surface water withdrawal from the Chehalis River is not possible due to natural flows in the Chehalis River being near or below the MIF. Alternatives the District will consider include storing water withdrawn from the Chehalis River during higher flow periods in tanks or other receptacles that could be used for construction when river flows are low; and dewatering wells and/or supplemental water supply wells. Supplemental wells are anticipated to be in the range of 4"-8" in diameter, 50'-250' deep, and located outside the zone of influence of the Chehalis River so that withdrawal of well water does not impact the Chehalis River. 5-15 supplemental wells, in addition to other supplemental sources, will be considered. Supplemental wells to supply water only during the construction period for construction purposes would be a separate, future permitting process. See also response to RFI 2-16 for additional information.	
RFI 1-30	Can details be provided on the concrete batch plant? Will concrete be processed at the construction site?	Construction Details		6/10/2024	6/28/2024	6/21/2024	Complete	See Appendix K, Constructability Report. A concrete batch plant will be constructed at the staging area north of the FRE right (east) abutment. Yes, concrete will be processed at the project site.	None. Question answered.	Ecology	Matt Dillin, FCZD		
RFI 1-31	Has FCZD identified an owner/operator for a future FRE facility?	General		6/10/2024	6/28/2024	6/28/2024	Complete	The District is approaching this project as an owner/operator. Future work is being planned to explore additional options including potential partnerships with other entities.	None. Question answered.	Ecology	Matt Dillin, FCZD		
RFI 1-32	The maximum pool boundary remains the same, but the inundation zone will be smaller. How is pool boundary and inundation zone different?	Operation Details		6/10/2024	6/28/2024	6/21/2024	Pending	The pool area is reduced by approximately 32-acre from the original 856-acre original pool area. See the inundation zone boundary Figure 1-2, page 9 of the RPDR.	None. Question answered.	Ecology	Matt Dillin, FCZD		
RFI 1-33	Table 3-1 indicates probable maximum flood is 69,800 cfs. Where would this flow rate be measured? There are several flow rates at Grand Mound (100-yr @ 75,000 cfs, 1996 @ 73,300 cfs, 2007 @ 79,500 cfs) that exceed this value.	Operation Details	p. 19 of RPD Report	6/10/2024	6/28/2024	6/21/2024	Complete	The PMF is measured at the spillway of the FRE. The flow rates at Grand Mound that exceed the PMF value have been produced by the entire watershed, including significant tributaries (South Fork of Chehalis, Newaukum, Skookumchuck) downstream of the FRE location.	None. Question answered.	Corps	Matt Dillin, FCZD		
RFI 1-34	Section 4 (Hydrology) describes previous and new(?) modeling, but the results are not presented here. Where are results discussed?	Modeling Data	p. 29 of RPD Report	6/10/2024	6/28/2024	6/28/2024	Complete	The Revised Project Description does not include a new hydrologic analysis. New hydrologic modeling is being conducted to support the next phase of design and BA.	None. Question answered.	Corps	Matt Dillin, FCZD		
RFI 1-35	Under what conditions would an emergency reservoir evacuation be required?	Operation Details		6/10/2024	6/28/2024	6/28/2024	Complete	An emergency reservoir evacuation could be triggered by any condition that could affect the structural stability, foundation seepage, or mechanical equipment failure of the dam that could possibly lead to an uncontrolled release of the pool. Events leading to an emergency reservoir evacuation have a low probability of occurrence.	None. Question answered.	Ecology	Matt Dillin, FCZD		
RFI 1-36	How will the evacuation conduit change dam operations from previous design?	Operation Details	p. 37 of RPD Report	6/10/2024	6/28/2024	6/28/2024	Complete	The addition of the evacuation conduit allows for finer control of the reservoir releases during flood operations. See Section 6.1 of Appendix J for additional details on operation of the FRE during an impoundment event using the evacuation conduit.	None. Question answered.	Corps	Matt Dillin, FCZD		
RFI 1-37	What are the water quality ports and how would they be used in a future expansion?	Operation Details		6/10/2024	6/28/2024	6/28/2024	Pending	The water quality ports will not be used in operation of the proposed FRE project. The water quality ports have been included to not preclude multi-level discharge in a potential future expansion of the FRE in accordance with the project objectives. The water quality conduits cannot be added in the future as they must be embedded in the initial FRE structure. Therefore they are included in the current project but will be blind-flanged and not used as part of the current project. See Appendix H of the RPDR for additional details.	Your response to RFI 1-37 indicates that the purpose of the water quality ports is "to not preclude multi-level discharge in a potential future expansion of the FRE" and Appendix H of the RPDR notes that their purpose is "to achieve the desired temperature discharge conditions downstream of the dam for the FRE-FC condition". Both the RPDR and Appendix H note that although the water quality ports are not needed for the current proposal, they need to be installed now because they can't be added later. In order to clarify the purpose of these ports we are going to need to acknowledge that the future expansion scenario could include a permanent reservoir condition. Is that the only option under the FRE-FC scenario or could there just be a larger temporary reservoir footprint?	Ecology	Matt Dillin, FCZD	Comment added to Project Description Section 3.1.1.3 asking the Applicant to provide clarification.	See comment response in Project Description Section 3.1.1.3
RFI 1-38	The operational sensitivity analysis provides some useful data, but does not include an assessment of how the area potentially flooded downstream of the dam might change. This is an important metric that should be evaluated.	Operation Details	pgs. 83-104 of RPD Report	6/10/2024	6/28/2024	6/28/2024	Pending	Please see Appendix B - Reservoir Operations Sensitivity TM. This document includes potential changes in flood elevations.	Please confirm when operational scenarios developed as a result of the operational sensitivity analysis will be available.	Corps	Matt Dillin, FCZD	More detailed operational scenarios are currently developed and refined with an estimated TM explaining updated operational refinements in December 2024. Final recommended operational set is anticipated in future design phases.	

RFI 1-39	Can more details be provided to explain the concept of "operational optimization", related operational details, and which recently recorded storm events would have been addressed in different ways or using different gauges? Would flow during flood retention periods no longer be restricted to 300 cfs? When will the new operational proposal be available based on the next steps indicated in the RPDR? What assumptions are you using related to closure frequency/duration in mid and late century scenarios?	Operation Details	6/10/2024	6/28/2024	6/28/2024	Pending	"Operational optimization" refers to the process of refining operations to minimize and avoid environmental impacts while achieving the flood damage reduction defined in the Purpose and Need. Refining the operations will better utilize the flexibility associated with the FRE design. Each storm in the Chehalis Basin is unique, therefore the FRE should not operate the exact same way for each storm event and, given the flexibility inherent in the design, it doesn't have to. For example, the 2007 event and the January 2022 event both exceeded 38,800-cfs at the Grand Mound Gage but the origin of the flows came from very different locations. The flows in 2007 had a much higher volume of water originating from the Willapa Hills, upstream of the proposed FRE, while the January 2022 event had a higher percentage of flows originating from the Newaukum and Skookumchuck Rivers. Part of the operational refinement approach will be taking the operational flexibility, that was demonstrated through the sensitivity analysis (Appendix B of the RPDR), and using that flexibility to meaningfully minimize and avoid environmental impacts while still providing reliable flood damage reduction for the downstream communities. One way this can be accomplished is by modifying the increasing release rates; however, the sensitivity analysis provides examples of several other operational variables that can be modified individually or in concert to refine operations. This work is being advanced now and will be incorporated into the Updated Biological Assessment.	Any information available at the end of September/start of October would be appreciated.	Ecology	Matt Dillin, FCZD	Given the timeline of the BA (and subsequent availability of new operational plans) vs. the SEPA EIS, Ecology will likely need to make assumptions about how operations may change from those presented previously. Comment added to Project Description Sections 3 and 6 asking the Applicant to provide any additional clarification they can at this time to inform agency assumptions.	See comment response in Project Description Sections 3 and 6.	
RFI 1-40	The basis for hydraulic design criteria are WSE and Anchor reports from 2016 and 2017 - are there any issues with using these document vs more recent information?	Modeling Data	6/10/2024	6/28/2024	6/28/2024	Pending	At this time, the WSE and Anchor reports represent best available information for the RPD. These documents do not fully recognize or take advantage of the operational flexibility inherent in the FRE design. For instance, the 2017 operations plan proposes a single operational protocol initiated using a single data point (the Grand Mound Gage). This may be appropriate for a less complex project setting or a more conventional structure; however, in this setting it may create significant operational impacts for storms where the flood reduction benefit may be relatively small. The operational sensitivity analysis suggests that operations can be flexible to storm locations and flood events throughout the basin.	Any information available at the end of September/start of October would be appreciated by Ecology.	Ecology	Matt Dillin, FCZD		Additional or updated operating information beyond what is provided in Sections 4 and 14 of the Revised Project Description Report will not be available in October 2024.	
RFI 1-41	Engineering technical design criteria for the RPD have not been updated from outdated lamprey passage guidance and anadromous salmonid fish passage design guidance. Can this reasoning and anticipated future refinements to incorporate current design guidance be further explained?	Operation Details	6/10/2024	6/28/2024	6/28/2024	Pending	Updating the fish passage technical design criteria, including anadromous salmonid fish passage design guidance and lamprey passage guidance beyond that provided in the RPDR was not included as part of the Revised Project Description or other work performed to-date. Development of fish passage design flows in accordance with the 2022 NOAA Fisheries West Coast Region Guidance to Improve the Resilience of Fish Passage Facilities to Climate Change is underway and anticipated to be complete by Q2 2025.	Any information available at the end of September/start of October would be appreciated by Ecology.	Ecology	Matt Dillin, FCZD		Additional or updated fish and lamprey passage design criteria will not be available in October 2024.	
RFI 1-42	Will sediment accumulation in the stilling basin be anticipated to affect ladder entrance conditions and fish passage during non-flood periods?	Operation Details	6/10/2024	6/28/2024	6/28/2024	Complete	Sediment accumulation in the stilling basin will be considered in the design of the fish ladder entrance and stilling basin. The project will be designed so sediment accumulation does not impede fish passage at the fish ladder entrance. Estimates of sediment accumulation in the stilling basin, potential impacts to fish ladder entrance performance, and refinement of the design to avoid related adverse impacts to fish passage are currently being conducted. Design refinement to address estimated sediment accumulation will continue through final design.	None. Question answered.	Ecology	Matt Dillin, FCZD			
RFI 1-43	Will the proposed FFPF upstream release sites require the construction of any infrastructure (e.g., gravel/paved roads) to support release activities?	Operation Details	p. 114 of RPDR Report	6/10/2024	6/28/2024	6/28/2024	Partial	It is anticipated that existing roads may need to be improved and it is possible that new infrastructure may be required to support release activities associated with operation of the FFPF. Identification and design development of potential infrastructure supporting transport and release of fish will be performed in future phases of design development. Improvements may include new roads, improvements to existing roads, retaining walls, drainage ditches, culverts, or release site infrastructure. A desktop review of the existing roadway infrastructure indicates that many potential release points associated with tributaries and the mainstem river above temporary reservoirs have existing access routes to them. This desktop review is currently being compiled into a brief technical memorandum and will be provided to the agencies this summer. Additional coordination with federal and state agencies and field investigations will be conducted in future phases of design development to fully develop the release locations and associated access improvement needs.	None. Question answered. Await technical memoranda.	Corps	Matt Dillin, FCZD	Awaiting technical memoranda.	Please see technical memorandum titled Potential FFPF Fish Release Concept and Route Desktop Analysis submitted on 10/11/2024.
RFI 1-44	The steps for flood operation in the Fish Passage Conduits TM are helpful, but fairly general. Helpful information would include the opening and closing of the fish passage conduits and evacuation conduits during both filling and evacuating transitions to understand where and how water flows, the hydraulic characteristics (head, turbulence, pressurization) under the gates in the conduits as they close and open, durations, whether the evacuation conduit is pressurized, how the control gate at the downstream end operates, and whether fish will be passing through this conduit.	Operation Details	6/10/2024	6/28/2024	6/28/2024	Pending	The operation of the fish passage and evacuation conduits has been developed to a conceptual level. The design minimizes the potential for fish passing through the evacuation conduit. Reservoir elevation 510 was selected as the trigger to transition flow from the fish passage conduit to the evacuation conduit (reservoir filling) and vice versa (reservoir draining) because studies have indicated that the number of salmonids that sound to find water outlets from reservoirs greatly reduces at depths greater than about 35 feet. Other details such as those noted will be developed in future design phases.	Thank you. No further information needed.	Ecology	Matt Dillin, FCZD			
RFI 1-45	Request more information on the operational details for the FFPF.	Operation Details	6/10/2024	6/28/2024	6/28/2024	Pending	Please advise if the description for operations of the FFPF in Section 14, Appendix I and Appendix J of the RPDR is adequate.	Any information available at the end of September/start of October would be appreciated.	Ecology	Matt Dillin, FCZD	Request for water flow clarification added to Section 3.1.1.4 of project description	Additional or updated details regarding operation of the FFPF will not be available in October 2024. Water flow clarification also provided in Project Description Section 3.1.1.4.	
RFI 1-46	Some text (e.g., Appendix G Section 5.5) seems to note trap and haul is expected to be by air or water instead of overland. Are there more details on the current design of fish transport upstream during an impoundment event?	Operation Details	6/10/2024	6/28/2024	6/28/2024	Partial	Trap and haul of fish from the FFPF facility to release sites is expected to be primarily by truck, but transport could be potentially provided by helicopter or boat as well. More details will be provided in a forthcoming TM (See RFI 1-43 response).	None. Question answered. Await technical memoranda.	Ecology	Matt Dillin, FCZD			

RFI 1-47	Can any information be provided on juvenile salmon/steelhead passage during spillway operation (assuming this path includes the uncontrolled Ogee crest, discharging to a stepped chute and stilling basin, and over the dentated sill)?	Operation Details	6/10/2024	6/28/2024	6/28/2024	Pending	The FRE is designed to impound water during major flood events without water passing over the spillway. For example, no water would have passed over the spillway had the facility been operated during the February 1996 and January 2022 floods. The December 2007 flood was the largest historic flood event in the basin above Grand Mound and a similar or greater magnitude of storm event would be required to activate the spillway. Juvenile salmon and Steelhead find places of refuge during large flood events and do not move upstream or downstream in the main channel until the flood passes and flow velocities decrease. Movement of juvenile salmon and Steelhead in the Chehalis River is expected to be limited during flood events.	Thank you. No further information needed.	Ecology	Matt Dillin, FCZD		
RFI 1-48	When will the Vegetation Management Plan be provided?	Map or Document	6/10/2024	6/28/2024	6/21/2024	Complete	Vegetation Management Plan will be provided with the Updated Mitigation Plan. The Updated Mitigation Plan delivery is anticipated delivery date is July 2024.	Review VMP once provided	Ecology	Matt Dillin, FCZD		
RFI 1-49	Why is the late-century ensemble average maximum scalar (+55%) applied to the historic high fish passage flow but the mid-century average minimum scalar (-14%) applied to the historic low fish passage flow?	Modeling Data	6/10/2024	6/28/2024	6/28/2024	Pending	Section 4.1.1 in Appendix I, Fish Passage Design, contains the information requested.	No further questions at this time	Ecology	Matt Dillin, FCZD		
RFI 1-50	When will the Mitigation Plan be provided?	Map or Document	6/10/2024	6/28/2024	6/21/2024		The Updated Mitigation Plan is anticipated in July 2024.		Ecology	Matt Dillin, FCZD		
RFI 1-51	Are specific mitigation measures proposed that relate to the Pe Ell water supply?	Mitigation Details	6/10/2024	6/28/2024	6/28/2024	Pending	The District has made the commitment to not disrupt the water supply service to Pe Ell from the Lester Creek Supply (District letter to the agencies dated August 30, 2021). The specific details of this design are planned for future project phases and the District will incorporate any recommended pipeline and access road modifications into the overall planned mitigation program for the project.	No further questions at this time	Ecology	Matt Dillin, FCZD		
RFI 1-52	Are the planned improvements/ mitigation for access roads within Temporary Pool Zone (Appendix G, Table 1-1) planned to occur during construction of the FRE?	Mitigation Details	6/10/2024	6/28/2024	6/28/2024	Complete	Improvements for future identified permanent access roads within the temporary pool zones are proposed prior to operation of the FRE to minimize or avoid sedimentation/erosion. These actions are termed 'proposed aggregate mitigation improvements' on Page 6 of the RPDR. Vegetation planting and erosion control for proposed roadway improvements would occur during construction of the FRE. Total area of roadway impacts are addressed in the Revised Mitigation Plan.	None. Question answered.	Ecology	Matt Dillin, FCZD		
RFI 1-53	HDR (2023) is not in the reference list. What is this document?	Map or Document	p. 67 of RPD Report	6/10/2024	6/28/2024	6/21/2024	Complete	Error. Please replace HDR (2023) with Appendix G.	FCZD to revise	Corps	Matt Dillin, FCZD	FCZD to revise.
RFI 1-54	Table 1-1 in the RPD Report (Informational Submittals Associated with RPRD Submitted Post-Issuance of DEIS) indicates information is appended without noting specifics or where.	Map or Document	6/10/2024	6/28/2024	6/21/2024	Complete	All appended submittals have been included (Appended) to the RPDR in Appendix N.	None. Question answered.	Ecology	Matt Dillin, FCZD		
RFI 1-55	Please identify any modeling and technical analysis that the District has (or will) complete that would accompany the project description. Could a timeline be provided that describes what deliverables will be available and by when? Similarly, when will the details regarding operational optimization be provided?	Map or Document	6/10/2024	6/28/2024	6/28/2024	Partial	The Revised Project Description includes 2D HEC-RAS modeling of the fish passage conduits, the permanent channel upstream and downstream of the fish passage conduits, and the temporary bypass channel used during construction. It also includes ResSIM modeling as part of the operational sensitivity analysis, used to demonstrate operational flexibility, and 2D structural modeling for concrete features and the radial gates. The updated mitigation plan also includes additional hydraulic modeling and habitat modeling and technical analyses. This information is presented in the Revised Mitigation Plan which will be submitted to the agencies in July of 2024. Additional hydraulic and hydrologic modeling are currently being advanced as part of the operational refinements and the fish passage design refinements which will be incorporated into the Updated Biological Assessment currently schedule for submittal in Q2 of 2025.	Any information available at the end of September/start of October related to the operational optimization would be appreciated by Ecology.	Ecology	Matt Dillin, FCZD	A technical memorandum regarding potential fish release sites and routes to those sites for use during FFPF operation will be provided in early October. A technical memorandum describing construction and fish protection/relocation work to occur during construction in-water work windows will be provided in early October. No additional technical information, modeling, or analysis beyond these 2 memos will be provided by early October.	
RFI 1-56	Describe the inclement weather plan during construction and permanent operations. For example, when flooding occurs and the facility is under construction or operational, what measures will be in place to ensure access for fish passage facility operations/management, eliminating blocked culverts under roads as the facility is evacuated, safely accessing the facility, etc.	Construction Details	6/10/2024	6/28/2024	6/28/2024	Partial	During Construction: The revised construction river diversions will accommodate a 25-year recurrence flow. This is an increased capacity over the 10-year recurrence proposed originally and to lessen the probability of requiring evacuation of the site during construction. The District will require the construction contractor to develop a plan to evacuate the construction area, including remove vehicles, equipment, and lose material, prior to a 25-year flow or greater, when such a flow is forecast. In the forecast of such an event, the District will also require the contractor to have a trained staff prepared to enter the construction area as soon as it is safe to find and relocate aquatic species back to the river. Salmon and steelhead find places of refuge during flood events such as a 25-year or greater flood, and therefore few salmonids and steelhead are likely to be trapped within the work area following such a flow event. During Permanent Operations: Access roads to the facility and to fish release sites upstream will be designed to minimize the potential for non-functionality during and following inclement weather. The District will also develop and implement an Operations and Maintenance Plan that includes direction on how to maintain facilities, including access roads, culverts, and the FFPF, during inclement weather so as not to impede operation of the facility, including the capture, handling, transport, and release of aquatic species.	No further questions at this time	Ecology	Matt Dillin, FCZD		
RFI 1-58	How will wood moving through the reservoir and facility be managed? What size material will pass through the conduit(s)? Will there be a "trash rack" to collect wood?	Operation Details	6/10/2024	6/28/2024	6/28/2024	Complete	See Sections 8.4.1.2 (Trashrack Structure) and 14.3.3 (Debris Management) of the RPDR. Chapter eight of the Revised Mitigation Plan contains a wood management plan that provides additional detail.	None. Question answered.	Ecology	Matt Dillin, FCZD		
RFI 1-59	Discuss how past applicant memos and commitments relate to the new submittal? For example, in an earlier document the applicant agreed not to burn vegetation. The current Appendix K mentions approved burning.	Mitigation Details	6/10/2024	6/28/2024	6/28/2024	Complete	For past applicant memos and commitments relate to the new submittal, see RPDR cover letter and RPDR Table 1-1, Information Submittals Associated with RPRD Submitted Post-Issuance of DEIS. The reference to 'burn vegetation' in Appendix K is in error. Please strike 'burning,' in Section 5.2.1 on page 11 of Appendix K. The updated Vegetation Management Plan to be submitted in July will carry forward the commitment for no burning of vegetation.	None. Questioned answered. FCZD to update RPD.	Ecology	Matt Dillin, FCZD		