BEFORE THE BOARD OF SUPERVISORS OF THE
CHEHALIS RIVER BASIN FLOOD CONTROL ZONE DISTRICT

APPROVING HDR CONTRACT SUPPLEMENTAL 15 RELATING TO ENGINEERING) **RESOLUTION NO. 26-012**
)

WHEREAS, the Chehalis River Basin Flood Control Zone District (District) and HDR initially contracted in 2020 for engineering for water retention facility technical services, now more commonly called avoidance, minimization, and mitigation for a proposed flow-through dam for flood control and airport levee improvements to support environmental review of the project; and

WHEREAS, the project's environmental review has been continuously ongoing, and through successive rounds of funding work has been correspondingly amended in scope, cost, and duration, as approved by this Board; and

WHEREAS, a new contract Supplemental 15 will adjust the HDR contract scope of work and compensation to conform to additional funding received by the District through its contract with the Washington Department of Ecology to support the engineering for this project (IAA No C2600039); and

WHEREAS, the attached Supplemental 15 reallocates funds within the previous scope of work and adds new scope of work, resulting in an increase to the total contract compensation of $2,009,100, and prioritizes the work most needed in the order most advisable for environmental review, given available funding, as set forth in its Exhibit A; and

NOW THEREFORE BE IT RESOLVED that HDR Contract Supplemental 15 is hereby approved. The Administrator is authorized to sign.

The foregoing resolution was ADOPTED by the Board of Supervisors of the Chehalis River Basin Flood Control Zone District at a regular open public meeting this September 15, 2026.

APPROVED AS TO FORM:

By: Interim District Counsel

ATTEST:

Tammy Martin, District Clerk

BOARD OF SUPERVISORS OF CHEHALIS RIVER BASIN FLOOD CONTROL ZONE DISTRICT

Scott Brummer, Chair

Lindsey R. Pollock, DVM, Vice Chair

Sean Swope, Supervisor

Washington State Department of Transportation

Supplemental Agreement Number 15	Organization and Address HDR Engineering, Inc. 555 110th Ave NE, Suite 1200 Bellevue, WA 98004	
Original Agreement Number N/A	Phone:	
Project Number N/A	Execution Date September 15, 2026	Completion Date June 30, 2027
Project Title Water Retentional Facility Technical Services	New Maximum Amount Payable $19,105,981.29	
Description of Work Technical support services for the Water Retention Facility and Airport Levee Project. This work is associated with providing information for use in the environmental review of the project (SEPA, NEPA, and associated review and consultation processes). See attached SOW for more information.		

The Local Agency of Chehalis River Basin Flood Control Zone District
desires to supplement the agreement entered in to with HDR Engineering, Inc.
and executed on 12/3/2020 and identified as Agreement No. N/A
All provisions in the basic agreement remain in effect except as expressly modified by this supplement.
The changes to the agreement are described as follows:

I

Section 1, SCOPE OF WORK, is hereby changed to read:

See the attachment for the amended scope of work. In summary, Supplemental 15 adjusts the scope of work and increases the cost by $2,009,100.00 to conform to the Ecology Engineering Contract funding (Amendment 2to IAA No. 2600039) and to prioritize the work most needed, in the order most advisable, given available funding.

II

Section IV, TIME FOR BEGINNING AND COMPLETION, is amended to change the number of calendar days for completion of the work to read: [No change].

III

Section V, PAYMENT, shall be amended as follows:

The purpose of this supplement 15 is to amend the scope of work and increase the total contract by $2,009,100.00. Work may proceed up to the maximum amount payable ($19,105,981.29).

as set forth in the attached Exhibit A, and by this reference made a part of this supplement.
If you concur with this supplement and agree to the changes as stated above, please sign in the Appropriate spaces below and return to this office for final action.

By: _____ By: Ryan Barrett, District Administrator

Consultant Signature

Approving Authority Signature

Date

Exhibit A

September 11, 2026

Mr. Ryan Barrett
District Administrator
Chehalis River Basin Flood Control Zone District
351 NW North St
Chehalis, WA 98532

Subject: **Chehalis River Basin Flood Control Zone District Chehalis Basin Strategy Supplemental Agreement 15 – 2026-2027 Continued Support SEPA and NEPA Process and Analysis**

Dear Mr. Barrett:

HDR is pleased to provide this supplemental proposal to provide continued support for State and National Environmental Policy and associated Endangered Species Act, National Historic Preservation Act Section 106, and Strategic Communications in connection with the proposed roller-compacted concrete flood retention expandable curved gravity structure and airport levee system improvements, including floodwall.

Our proposed Scope of Services will support the remainder of the 2025-2027 biennium through June 30, 2027. It is intended to continue supporting and providing responses to the anticipated release of supplemental Draft Environmental Impact Statement from the U.S. Army Corps of Engineers as well as continued strategic support for the upcoming Final Environmental Impact Statement published by the Washington Department of Ecology. Further, the proposed work also includes items that are intended to continue support for Chehalis Basin decision makers and stakeholders.

Preliminary design efforts for the FRE structure will build on the conceptual and preliminary design efforts accomplished under Supplemental Agreements 07 through 14.

HDR is fully committed and vested in the successful completion of this project. Thank you for the opportunity to offer our services for this project. Should you require further clarification of this proposal, please contact Erik Martin at 360-556-9093 or erik.martin@hdrinc.com.

Regards,

HDR Engineering, Inc.

Erik Martin, P.E.
Project Manager

Olivia Williams, P.E.
Vice President

Contents

Background

The Chehalis River Basin Flood Control Zone District (District) is participating in a basin-wide planning effort referred to as the Chehalis Basin Strategy (Strategy), the purpose of which is to improve river habitat and reduce flood damage in the Chehalis River Basin. The proposed Chehalis River Basin Flood Damage Reduction Project (proposed project) has been developed through the Strategy and includes construction of a new flood retention facility and temporary inundation pool near the town of Pe Ell, Washington, as well as levee improvements around the Chehalis-Centralia Airport in Chehalis, Washington. The U.S. Army Corps of Engineers (USACE) and the Washington Department of Ecology (Ecology) are preparing environmental impact statements (EISs) under the National Environmental Policy Act (NEPA) and the Washington State Environmental Policy Act (SEPA), respectively, to evaluate potential environmental impacts of the proposed project.

The District originally procured HDR Engineering, Inc. (HDR) under Contract No. #10264664, Engineering Services to Support Environmental Review, Avoidance, Minimization, and Mitigation Efforts (AMM) Support, and subsequent Supplemental Agreements (SAs) 01, 02, and 03 (SA01, SA02, and SA03) to support the current flood retention expandable (FRE) and multi-purpose detention/retention structures that provided flood risk reduction along with storage detention to provide flow augmentation (FRE-FC: Flood Retention Expandable-Future Condition) for environmental enhancement. SA04 and SA05 were executed to support an initial comparative analysis of two FRE structure minimization alignments, one upstream and one downstream of the original alignment, and development of temporary open-channel fish bypass features for each alignment. The agreements further included the development of a Revised Project Description (submittal for Ecology and USACE) to support both the state and federal EIS processes.

SA04 and SA05 further assumed that due to the local proximity of the proposed minimization FRE structure alignments to the original project alignment, the effort would not involve development of new spillway, flow release structure, or permanent fish passage structure configurations. During execution of SA04 and SA05, it was determined that further technical analysis was required to support new National Marine Fisheries Service (NOAA Fisheries) guidelines on fish passage and subsequently, warranting reassessment of the spillway and existing outlet works including gates and conduits. During this effort, the upstream alignment was selected as the new FRE structure alignment. Further, the upstream minimization alignment needed to be configured in a curved shape to avoid direct impacts to the traditional cultural place as it was understood at the time.

The District procured HDR for SA06 and SA07 to develop a Revised Project Description Report (RPDR) for the upstream minimization alignment. The RPDR was produced to inform the state and federal EIS processes and delivered in April 2024. HDR and the District, during their review of agency comments on the SEPA and NEPA Draft EISs (DEISs), concluded that an advanced understanding of FRE operations is needed to address many of the comments. It was further identified that additional operational analysis is needed to assess avoidance and minimization operational measures and seek opportunities to provide operational flexibility to reduce adverse impacts to sediment transport, vegetation management, and ultimately, aquatic species. Within the efforts outlined in SA07, HDR worked to update existing hydrologic and climate change datasets to understand current and potential future conditions better and to evaluate potential adaptive reservoir operations that also maintain the required flood risk reduction goals as described in the proposed project's purpose and need.

In addition to advancing hydrologic and hydraulic analyses, HDR advanced the FRE structure and foundation design to the level needed to support the Revised Project Description. This included advancing the structural design of the FRE roller-compacted concrete structure, temporary open-channel fish passage, fish passage conduits, spillway, and future FRE-FC temperature control (selective withdrawal) outlets along with associated gates and valves. The foundation treatment and design advancement were based on phase 1 geophysical and geotechnical data collected on the site but relied primarily on the geotechnical data collected by Shannon and Wilson for the original FRE alignment. HDR assessed existing conditions and measures to maintain access around the FRE pool through proposed erosion treatments and drainage features, and supported Kleinschmidt Associates (the District's mitigation consultant) with its sediment transport analysis and mitigation plan refinements.

Under SA08, the District retained HDR for the preliminary design advancement of the FRE structure (located at approximate latitude and longitude coordinates 46.542°N, 123.299°W) and Biological Assessment (BA) update along with advanced operational analysis. This work included selecting earthquake and hydrological loads based on the information available at the time the analysis was conducted and industry standard of care. These loads were accepted by the District for use in the design. Preliminary design efforts for the FRE structure were built on the conceptual design efforts accomplished for the RPDR under SA06 and SA07. The two primary goals associated with the advancement of the FRE structure preliminary design were:

1. Support coordination and consultation activities associated with Section 7 of the Endangered Species Act (ESA) and Section 106 of the National Historic Preservation Act (NHPA).

2. Support District and Office of Chehalis Basin (OCB) Board decision to initiate permitting and related tasks by providing advanced cost estimates, construction schedules, and operational understanding.

It should be noted that both tasks above remained continuations of the project's ongoing environmental review, to produce work product for consideration in the still-ongoing SEPA and NEPA processes.

Summary of Changes to SA04 through SA10: SA09 deobligated $80,000 in fee from SA08 Tasks 18.6 and 33 to support vegetation management plan efforts conducted by others. SA09 further deobligated $173,789 of remaining funds within the fee obligated for SA04 through SA07 and transferred those funds into Task 46, the SEPA/NEPA Coordination scoped in SA08. SA10 deobligated a total of $1,280,000.00 from the overall agreement funds.

SA11 included a fee increase of $323,700. This increase in fee included the addition of scope offset by proposed reduction in scope in SA10 and addition of fees to the fee limit authorized by the District**.** Scope adjustments presented in SA11 were identified by both the District and HDR and aligned with the overall project goals agreed upon by the District. The following goals were established for SA10 and reflected the goals for SA11:

1. **Primary Goal -** Informing the Revised SEPA EIS: Provide the resources and expertise to respond to agency, tribal, and public questions regarding the revised SEPA EIS.

2. **Secondary Goal -** Supporting and informing the NEPA EIS including Section 106 and ESA Consultation: Continue operational analysis and fish passage design in support of continued ESA consultation and the development of the revised BA. Respond to NEPA EIS review questions and support District's Section 106 consultation efforts.

3. **Tertiary Goal -** Refinement of the project opinion of probable construction cost (OPCC): Focus on the high-dollar construction cost estimate adjustments such as the revised foundation objective and structural modeling. The refined OPCC was necessary to inform Chehalis Basin Board decisionmakers in their review and consideration of the results of the SEPA and NEPA analyses.

SA11 concluded adjustments and modifications to SA07 and SA08 and for the 2023-2025 biennium. SA12 was issued in July 2025 as a no-cost time extension to extend the SA11 period of performance from July 31, 2025 to August 31, 2025. The draft Preliminary Design Report submitted in June 2025 summarized the design as it stood at the time, including design advancements that occurred since the 2024 RPDR.

The SA13 scope of services supported the first half of the 2025-2027 biennium and focused on continuing advancing design and supporting the development of responses for the state supplemental DEIS released in fall 2025 as well as continued advancement of climate change operations and fish passage design to support ESA coordination and BA finalization. SA13 further initiated the development of an economic and organizational framework that describes alternatives and opportunities for advancing the FRE through final design, construction, and long-term project operations; strategic communications support; Section 106 engineering support; construction water supply analysis; and debris management analysis. These tasks were supported with new biennium and carryover funding and aligned with the OCB Board approved scope and budget approved in fall 2024.

SA14 continued similar efforts scoped within SA13 with a period of performance of July 1, 2026 through December 31, 2026 (July 1 through September 9 for Project Management and Owner's Assistant Services). These efforts include Project Management and Owner's Assistant Services, SEPA and NEPA EIS and ESA Review and Engineering Support, and Section 106 Consultation and Engineering Support. These tasks aligned with the District's Ecology tasks 2, 3 and 4.

Similarly, SA15 will continue with PM and District Support as well as Strategic Communications, Section 106 Consultation and Engineering Support, and Program Management Support. An additional emphasis within SA15 is initiating and advancing various elements of the proposed project to improve the District's ability to respond to SEPA comments provided by the Chehalis Tribe, Quinault Indian Nation, and others. The SEPA Revised DEIS (RDEIS) and tribal comments thereon have identified a wide variety of subjects on which the agencies or the tribes noted a desire for additional engineering information, or were uncertain about the design, as a reason for concern about potential impacts. This process will likely be repeated with the release of the NEPA Supplemental EIS (SEIS).

Basis of Design

The basis of design for the FRE structure under SA15 will be a continuance of, and based on, the current preliminary design and incorporate new information developed and analyzed. The June 2025

Draft Preliminary Design Report and subsequent updates contain the current design criteria for the project.

Approach

The technical approach in SA15 will remain as stated under the Basis of Design when responding to agency or tribal inquiries that require technical analysis or development.

Technical design advancement will focus on constructability, fish passage design, sediment transport modeling, and operation and maintenance of the constructed FRE facilities in an effort to provide information requested by tribes and others in their comments on the SEPA RDEIS.

HDR will approach strategic communications support, SEPA and NEPA FEIS and DEIS support, and Section 106 engineering support with flexibility and the ability to adapt quickly to address unforeseen needs from the District, OCB Board, and agencies within the bounds of the contracted scope of services.

For the scope of services items that are inherently unforeseen, HDR will work closely with the District and provide a brief scope, budget, and schedule for each of the tasks prior to executing and will continually document and track the unforeseen tasks throughout the period of performance.

Scope of Services

Task 1. Project Management and District Support

OBJECTIVE

HDR will monitor, manage, and adjust scope, schedule, and budget, as well as provide monthly progress reporting, accounting, and invoicing, prepare contract amendments associated with this scope of services. Task 1.1 – District Support has been added as a separate line item under Project Management and will be tracked separately. Task 1.1 is described below Task 1 – Project Management and District Support.

HDR SERVICES

- Update project management plan with additional staff and services provided in this amendment.
- Monitor and adjust the health & safety plan.
- Monitor and adjust the quality assurance/quality control (QA/QC) plan and track quality assurance of deliverables.
- Attend project status calls with District.
- Attend interagency coordination calls with District.
- Attend ESA project coordination calls with District.
- Provide existing District website maintenance.
- Maintain project files and schedule.
- Monitor scope, schedule, and budget.
- Prepare monthly invoices and progress reports.

CLIENT RESPONSIBILITIES

- Review and process invoices in accordance with the District's Terms and Conditions.

The following Client Responsibilities under Task 1 should be considered general scope Client Responsibilities and will apply to all applicable tasks included in this scope:

- Review SA15 deliverables within 10 business days of receipt unless otherwise noted in the individual tasks.
- District edits and review comments on draft HDR reports and technical memos (TMs) will be provided to HDR in MS Word file using track changes.
- Where District review is identified for deliverables, the District will perform one review of the deliverable. District comments will be consolidated and provided in a single document for each deliverable.

ASSUMPTIONS

- Invoices will be provided electronically.
- Project Management and District Support services will occur October 01, 2026 through June 30, 2027 unless otherwise directed by the District to reallocate funds from Tasks 59 through 66 listed below.
- Attend up to 38 weekly virtual project management status calls led by the District. Meetings will be up to 30 minutes in duration discussing topics identified by the District. Meeting attendance to be determined prior to meeting and will be attended by up to four HDR participants for each meeting.
- Attend up to 38 weekly technical topic calls led by the District. Meetings will be up to 1 hour duration discussing topics identified by the District and will be attended by up to four HDR staff for each meeting.
- Lead up to 38 weekly virtual project management project status calls. Meeting will be up to 60 minutes duration and attended by up to four HDR staff. Meeting discussions will address topics identified by the HDR project team and District subconsultants.
- Attend up to 38 weekly project leadership coordination calls. Each wall will be up to 30 minutes in duration and attended by the District PM, HDR PM, and HDR deputy PM.
- Attend up to nine virtual interagency meetings, 90 minutes in duration each. Up to four HDR staff will attend each meeting. HDR will spend up to 8 hours per meeting preparing presentation material for the meeting, coordinating on meeting content and agenda prior to the meeting, and providing meeting notes following the meeting.
- Fees for Task 1 Project Management and District Support may be billed under Tasks 59 through 66 proportionally such that the budgets for Ecology Tasks 2, 3, and 4 in Table 2 are not exceeded without written authorization from the District.

The following assumptions under Task 1 should be considered general scope assumptions and will apply to all applicable tasks included in this scope:

- Meetings will be held virtually unless specifically stated otherwise.
- Meeting notes will not be provided as a deliverable for meetings unless specifically stated otherwise.
- Draft meeting notes, reports, and TMs identified in this scope will be provided to the District for review in MS Word and PDF formats.
- The District will not review meeting notes unless specifically noted in this scope.

- Time to review and incorporate District comments on a deliverable will be agreed upon by both the District and HDR but will vary by size and scope of the document. In general, time for HDR to review and incorporate District comments on deliverables will be no less than 10 business days.
- Response to District review comments and edits by HDR in response to District comments will be using track changes will be provided in MS Word format.
- QA/QC of deliverables will be performed in accordance with the project QA/QC plan and efforts for the reviews are included in the respective tasks.
- Final documents will be provided in PDF format.

DELIVERABLES

- Draft email summaries for project management status calls.
- Draft meeting notes for Interagency Meetings in MS Word format.
- Monthly invoices and progress reports in Adobe PDF format.

1.1 District Support

SUBTASK OBJECTIVE

HDR will continue supporting the District on items such as strategic planning, and budget and approach development. The District is frequently called upon to respond to time-sensitive and unforeseen requests from the OCB, Washington State Department of Ecology, U.S. Army Corps of Engineers, Tribes and Nations, and other partners, often requiring timely technical support from HDR. A brief list of services is provided below, however, these services are not all-inclusive and can be expanded to incorporate the District's needs through the end of the current biennium based on available budget and agreement in writing from HDR.

HDR SERVICES

- Support District with Weyerhaeuser, O'Neill, and Panesko properties coordination.
- Support District with stakeholder and agency outreach.
- Support District with Board of Supervisors coordination and presentations.
- Support District with OCB Board coordination and presentations.
- Other tasks or services as requested by the District and agreed to in writing by HDR.

CLIENT RESPONSIBILITIES

- Identification of District support needs.

ASSUMPTIONS

- SEPA and NEPA EISs and related documents may be released during the period of performance. Effort under this budget may be used to support the District in review of SEPA or NEPA documents and provide clarifications based on information contained therein. HDR may also assist the District with state and federal agency questions that may arise during public comment periods occurring during the period of performance.

DELIVERABLES

- Deliverables may include schedules, planning-level budget estimates, emails, letters, memos, or other products and services requested by the District and agreed to, in writing, by HDR produced within the available task budget.

1.2 Document Control and Record Retention

OBJECTIVE

The District requested a centralized and collaborative environment for managing project documentation, design records, communications materials, and project information. As project development advances, the District would like to establish and maintain this environment.

HDR will collaboratively develop and execute a Document Control Plan that establishes document management procedures, governance requirements, naming conventions, metadata standards, records retention requirements, quality management procedures, and administrative responsibilities.

HDR SERVICES

- Facilitate coordination meetings with District staff.
- Identify project-specific document control requirements and constraints.
- Develop document control workflows and governance procedures.
- Define metadata standards, naming conventions, version control processes, and retention requirements.
- Develop record retention framework.
- Develop user administration, onboarding, maintenance, and change management procedures.
- Incorporate District comments and finalize the plan for implementation.

CLIENT RESPONSIBILITIES

- Participate in coordination meeting/workshops.

ASSUMPTIONS

- Coordination meetings and workshops with District staff will be virtual and include one 1-hour meeting for information gathering purposes. Two HDR staff will attend the meetings, and time is included to take information gathered from the meetings and incorporate it in the Document Control Plan.
- Upon completion of the Document Control Plan HDR will work with the District to execute the document control and record retention actions identified in the Document Control Plan.

DELIVERABLES

- Draft and Final Document Control Plan.

Task 59. Revised Draft/Final SEPA and Draft NEPA EIS – Engineering Support – Facility Details

OBJECTIVE

Review agency analysis, address questions; provide support for SEPA and NEPA processes. Provide information to state and federal agencies necessary to support the EIS processes. Substantially add to the important and useful information available for decision makers in the Chehalis Basin. This effort will provide information to tribes/nations and other SEPA RDEIS commentors deemed necessary for a final EIS, such as detailed quantification of construction transportation types/trips, refined excavation and grading, more detailed access road design, more defined dewatering and stormwater requirements.

HDR SERVICES

59.1 Truck Trip Estimate Refinement and Construction Transport Requirement Development

SUBTASK OBJECTIVE

HDR will update the existing truck trips that were calculated and presented in the November 2025 "Temporary Construction Facilities and Trucking Information" memo for construction of the FRE structure. This task also includes updating and refining the memo to address comments related to truck trips from the SEPA review.

HDR SERVICES

- Update truck trip calculation and diesel consumption estimate during construction
- Refine access road design assumptions in support of updates to truck trip and diesel consumption estimates.

CLIENT RESPONSIBILITIES

- Participate in team coordination meetings.

ASSUMPTIONS

- Truck trips will differentiate between light- and heavy-duty vehicles.
- Truck trip distances will be shown as assumed ranges.
- Diesel consumptions will be based on equivalent equipment to what may be used during construction. Actual diesel consumption could vary depending on the contractor and actual equipment used for transport.
- The determination of daily truck trips requires assumed durations. These durations will be based on HDR's judgement and will be in accordance with the overall anticipated schedule. The construction schedule will not be refined in this effort, but HDR will take current project information, at the time of task, (such as construction water planning) into account.
- Appendix G Access Roads and Best Management Practices will be updated and delivered under Subtask 59.4
- Level of detail will be appropriate with the current design level.

DELIVERABLES

- Updated Temporary Construction Facilities and Trucking Information Memo
- Updated Appendix K Constructability Report November 2025 Draft Preliminary Design Report with the information developed in this subtask.

59.2 FRE Operation and Maintenance Organizational Development

SUBTASK OBJECTIVE

HDR will develop some of the additional detail requested by the tribes/nations in their comments on the SEPA RDEIS related to the operation and maintenance of the proposed FRE structure and appurtenant facilities. The same effort will be performed for the airport levee and floodwall portion of the project so that the components of the project – FRE structure and airport levee/floodwall – are brought to the same level of development for services performed under this task.

HDR SERVICES

- Identify potential funding sources for long-term operation and maintenance of the FRE facility.
- Identify potential staffing needs and structure to operate and maintain the FRE facilities.
- Estimate costs for operation and maintenance staff in 2026 dollars.
- Identify federal, state, and local government or other entities that are anticipated to have operation and maintenance oversight of the FRE facility.

CLIENT RESPONSIBILITIES

- Meet with and provide input to the HDR team.
- Solicit information from and facilitate meetings with the District strategic team, stakeholders, and government entities in support of this task.

ASSUMPTIONS

- Tribe/nation comments on the SEPA RDEIS related to operation and maintenance pertain exclusively to the FRE structure and related features, but it is anticipated that similar questions will be asked of the airport levee and floodwall once design development of the airport levee and floodwall currently under development is shared outside the District. Therefore, the services performed under this task will address both the FRE and airport levee/floodwall portions of the project.
- Revisit the staffing estimate, professional qualifications and training requirements for the Flood Fish Passage Facility will be required. Revise estimates and assumptions in the PDR if also required.
- Staff tasks and professional qualifications will need to be identified, including tasks specific to operation of the FRE structure gates during Flood Operation and debris removal during Normal and Flood Operation.
- Staff needs and structure will address the periodic and short-term nature of Flood Operation as well as long periods of Normal Operation.
- Staff tasks, organizational structure, and potential practices to capture and pass on institutional knowledge regarding the operation and maintenance of the FRE structure and appurtenant facilities and the airport levee and floodwall will be considered.
- Estimated staffing costs will be commensurate with an early preliminary design level of development (e.g., about 10-20% level of design).
- A list of permits that may be required for long-term operation and maintenance of the FRE facility and the airport levee and floodwall will need to be developed. The entity issuing each permit will be provided.
- Entities issuing permits required for long-term operation and maintenance will also be the entity enforcing compliance with the permit.
- A list of compliance actions that may be required by long-term operation and maintenance permits, as well as the permits, regulatory authorities, and frequency of occurrence associated with each, will need to be developed.

DELIVERABLES

- Revised draft and final FRE structure Draft Operations and Maintenance TM.
- Draft and final operations and maintenance section of the Airport Levee and Floodwall Project Description.

59.3 Refine Phase 1, 2 and 3 Construction Phase Grading Temp

SUBTASK OBJECTIVE

Revise existing diversion and construction phasing and establish grading and quantities for construction Phases 1, 2, and 3.

HDR SERVICES

- Review and revise construction phasing based on design development that has occurred since submittal of the 2025 PDR.
- Develop excavation surfaces for construction Phases 1, 2, and 3.
- Develop excavation and fill quantities for construction Phases 1, 2, and 3.
- Update figures and drawings in PDR Appendix K: Constructability Report and PDR Appendix A: Maps and Drawings.
- Provide cut and fill volume and area quantities for Phases 1, 2, and 3 to PDR Appendix K: Constructability Report.

CLIENT RESPONSIBILITIES

- Meet with and provide input to the HDR team.

ASSUMPTIONS

- Excavation surfaces and cut and fill quantities will be developed using AutoCAD Civil 3D and reflect temporary and permeant access roads developed in Task 59.4 Advance Temporary and Permanent Access Road Design.
- Left and right bank construction extents will be revised and Phase 1, 2, and 3 grading surfaces will reflect updated Chehalis River and Crim Creek bypass and permanent channel alignments, side slopes, and top of riverbank elevations updated under Task 62.2 Nature Like Construction Bypass and Permanent Channel Design Refinement.
- Up to five design drawings in Appendix A: Maps and Drawings will be updated.
- Excavation surfaces and cut and fill quantities are estimates that will change throughout design development. Actual cut and fill quantities and excavation surfaces during construction (e.g., Phases 1, 2, and 3) will be determined by the construction contractor based on their means and methods and the requirements of the construction contract; as such, engineer estimates of Phase 1, 2, and 3 quantities should be considered one possible future condition (e.g., set of quantities) and may not be representative of the actual condition during construction.
- Task 59.3 will consider recently obtained cultural information.

DELIVERABLES

- Draft and final design drawings in Adobe PDF format.
- Draft and final Appendix K Constructability Report

59.4 Advance Temporary and Permanent Access Road Design

SUBTASK OBJECTIVE

Refine alignment, grading, and cross sections of permanent and temporary construction access roads. Develop conceptual-level drainage design for permanent and temporary construction access roads.

HDR SERVICES

- Develop possible temporary access road alignments for construction Phases 1, 2, and 3.
- Provide grading for permanent access roads and adjust permanent access road alignment based on the revised grading.
- Refine and develop additional access road cross sections.
- Develop drainage concepts for permanent and temporary access roads.

CLIENT RESPONSIBILITIES

- Meet with and provide input to the HDR team.

ASSUMPTIONS

- HDR will conduct one, 8-hour site visit for two HDR staff.
- Temporary access road alignments will use existing, historic, and proposed permanent access road alignments where practicable and efficient. The creation of new temporary access roads and temporary access roads that exist only during the construction period will be avoided.
- Temporary access roads that do not become permanent access roads will be restored to vegetated condition in accordance with the permanent vegetation plan developed by Kleinschmidt.
- Temporary and permanent access roads will not be paved asphalt or concrete roads, nor will they be paved using drivable impervious surfaces; they will be paved aggregate (e.g., gravel) roads.
- Access road alignments and grading will be developed and modeled using AutoCAD Civil 3D.
- Access road alignments and grading will be coordinated with the temporary excavation grading surfaces developed in Task 59.3 Refine Phase 1, 2 and 3 Construction Phase Grading Temp and the finished grading plan shown on sheet 3C-02 of PDR Appendix A: Maps and Drawings dated June 2025.
- The following sheets from PDR Appendix A: Maps and Drawings dated June 2025 will be revised: 0G-15, 0G-22, 3C-02, 4C-01, 4C-02, 4C-03, 4C-04, and 3E-02.
- PDR Appendix G: Access Roads and Best Management Practices TM will be revised to:
    - Reflect updated permanent and temporary access road alignments, grading, and cross sections.
    - Add description of the conceptual-level drainage design.
    - Add one additional figure depicting the temporary access roads for each construction phase – Phases 1, 2, and 3 (three new figures).
    - Add additional figures depicting additional permanent or temporary road cross sections for different portions of the permanent and temporary access road alignments.
    - Define temporary access road alignments and design for construction Phases 1, 2, and 3.
    - Update attachments to reflect work performed under this subtask.
    - Consider recently obtained cultural information.

DELIVERABLES

- Draft and final design drawings in Adobe PDF format.
- Draft and final PDR Appendix G: Access Roads and Best Management Practices TM

Task 60. Revised Draft/Final SEPA and Draft NEPA EIS – Engineering Support – Fish Passage and Operations

OBJECTIVE

Coordinate with and solicit input from federal and state agencies and tribes and address comments from tribes on the SEPA RDEIS in support of the SEPA and NEPA processes. Information developed in this task will be provided to state and federal agencies to support the EIS processes and substantially add to the important and useful information available for decision makers in the Chehalis Basin. This effort will provide information to tribes/nations and other SEPA RDEIS commentors deemed necessary for a final EIS, and to federal agencies upon request to inform the federal EIS, BA/Biological Opinion, or other NEPA processes, such as additional reservoir operations model runs.

60.1 Provide Fisheries Services Coordination

SUBTASK OBJECTIVE

HDR will reconvene the Fish Passage Technical Work Group (TWG) to reach agreement on design flows, design criteria, performance requirements, and preliminary sizing and layout for permanent- and construction-phase FRE structure fish passage features; and on design requirements that may apply to the airport levee and floodwall. The TWG last met in 2024. The fish passage design will be developed to support collaboration with the TWG and provide input to other tasks in this scope.

HDR SERVICES

- Reengage state and federal regulatory agencies and tribes/nations to participate in the TWG.
- Coordinate and facilitate TWG meetings.
- Provide fish passage input to other tasks in this scope.

CLIENT RESPONSIBILITIES

- The District will contact the following groups to request each group provide a dedicated individual or individuals to participate in a TWG. The District will make the initial contact to each of the groups. The District and HDR will work collaboratively to secure members until the TWG groups dedicate individuals to the TWG or opt out of participation in the TWG.
    - Chehalis Basin Flood Control Zone District
    - Washington state Department of Fish and Wildlife
    - Washington state Department of Ecology
    - NOAA Fisheries
    - United States Fish and Wildlife Service
    - Quinault Indian Nation
    - Chehalis Tribe

ASSUMPTIONS

- Meeting agendas and meeting notes will be distributed to attendees.
- Meetings are anticipated to focus on confirming fish passage design flows established with NOAA Fisheries in 2025 and design criteria; confirming risk mitigation measures established in 2025 with NOAA Fisheries as part of the 2023 NOAA Fisheries climate change design guideline process; discussing the preliminary size and layout of fish passage facilities; and foster the

exchange of information between meeting attendees. Discussions will address the permanent project as well as construction phase features.

- The duration of this task is from execution of this scope to June 30, 2027.
- HDR is not responsible for the participation of TWG members or their attendance at TWG meetings.
- HDR will hold up to four, 2-hour TWG meetings.
    - Three TWG meetings will be held virtually via MS Teams. One meeting will be held in-person in Olympia, Washington
    - Up to three HDR staff will attend each meeting.
    - HDR will facilitate the TWG meetings.
    - HDR will develop draft and final meeting notes for each TWG meeting. TWG meeting attendees will respond to the draft meeting notes with edits and comments within 5 business days. HDR will issue final meeting notes to the attendees following incorporation of comments on the draft meeting notes.
- HDR will work with the Fish Passage TWG to reach consensus on fish passage design criteria, fish passage.
- TWG meeting notes will be included as an appendix to the Fish Passage Design Report.
- Up to 400 hours and $70,000 are allocated to provide fish passage design input to other tasks in this scope and develop the fish passage design in support of the TWG meetings.

DELIVERABLES

- Draft and Final Fish Passage Technical Subcommittee Meeting Notes

60.2 Hydrologic Data Synthesis, Design Hydrograph Development, and Forecast Uncertainty Considerations

SUBTASK OBJECTIVE

HDR will review hydrologic datasets and modeling results generated under previous supplemental agreements and preliminary design efforts and post-process those results to support airport levee and other design objectives. The effort will develop graphical comparisons of regulated and unregulated flow-frequency information, identify representative design hydrographs for engineering applications, and prepare a TM describing approaches for incorporating forecast uncertainty into future operational and hydrologic analyses. This work will leverage existing analyses and datasets to support decision-making while eliminating the need to conduct new hydrologic, hydraulic, or reservoir operations modeling efforts.

HDR SERVICES

- Review hydrologic datasets and model results generated under prior supplemental agreements and revised project/preliminary design modeling efforts.
- Compile, organize, and evaluate available event- and frequency-based hydrologic information.
- Develop graphical depictions and comparisons of regulated and unregulated flow-frequency information at locations identified by the District and design team.
- Prepare summary plots, figures, and supporting tables illustrating differences between regulated and unregulated hydrologic conditions.
- Develop representative hydrographs appropriate for airport levee and other design objectives.

- Review existing assumptions regarding forecast-informed reservoir operations and regulated frequency analyses.
- Document limitations associated with the current perfect-forecast assumption.
- Describe approaches for generating regulated flow-frequency information that more appropriately reflects operational decision-making under forecast uncertainty.
- Identify data requirements, analytical considerations, and potential future modeling enhancements necessary to implement uncertainty-based evaluations.
- Prepare a TM documenting findings, recommendations, and future implementation considerations.

CLIENT RESPONSIBILITIES

- Review and provide comments on draft technical products and TM.
- Participate in coordination meetings regarding design hydrograph selection and future forecast uncertainty analyses.

ASSUMPTIONS

- The work will use existing hydrologic modeling results and datasets developed under previous project phases.
- New hydrologic, hydraulic, reservoir operations, stochastic storm transposition, or forecast uncertainty simulations are not included in this scope.
- Recommendations regarding forecast uncertainty will be planning-level and not include implementation or testing of proposed methodologies.
- Work products will be developed using available project information, relevant guidance, and accepted industry standards of practice.

DELIVERABLES

- Adobe PDF format of regulated and unregulated flow-frequency figures, graphical comparisons, and supporting technical exhibits.
- Electronic files of supporting tables, figures, and recommended design hydrographs.
- Draft TM summarizing hydrologic data post-processing and synthesis; design hydrograph development, refinement, and selection; and forecast uncertainty evaluation methodology.
- Final TM incorporating District review comments.
- Presentations and technical briefings in MS PowerPoint format, subject to budget availability for the task.

Task 61. Advance Airport Levee Avoidance Design

TASK OBJECTIVE

HDR will advance the levee design and proposed floodwall and assist the District in responding to questions from USSACE. Develop a set of “practicable alternatives” compliant with 404(b)(1) Guidelines and NEPA Requirements, as applicable, and screen the alternatives down to a smaller set of alternative plans for flood risk reduction. Conduct a comparative analysis of the existing conditions and each of the remaining alternatives and present findings to the District to select a preferred alternative.

HDR SERVICES

- Host and facilitate two alternatives analysis meetings with the District and interagency partners.

- Evaluate the No Action (existing conditions) alternative and each of the remaining alternatives using a two-dimensional (2D) HEC-RAS v6.6 model to develop a water surface elevation and flow paths used for design and informing environmental review.
- Compare up to three options based on HDR's (2022) Airport Levee Wetland Avoidance TM including Type 1 levee fill, mechanically stabilized backfill, and a concrete floodwall. Options will be evaluated on impacts to the environment in terms of footprint area, flexibility for future levee improvements, impacts to airport operations in terms of inundation time, and estimated construction and maintenance cost.
- Prepare Draft and Final Levee Alternatives Analysis TM with exhibits and schematic drawings (up to three) showing the project alignment and wall-type options.
- A preferred alternative for each reach of the levee will be selected based on District feedback.
- Conduct internal QA/QC on the Alternatives Analysis TM.

CLIENT RESPONSIBILITIES

- Provide a set of compiled comments on to the Alternatives Analysis TM within 15 business days of receipt.

ASSUMPTIONS

- Alternatives Analysis meetings with the District and interagency partners will occur virtually on MS Teams.
- The development and comparative analysis of each alternative will meet USACE EM 1110-2-1913 for Design and Construction of Levees.
- The preferred alternative for modification to the existing levee will be reviewed by USACE per 33 USC 408 and EC 1165-2-220.

DELIVERABLES

- Draft and final Alternatives Analysis TM (electronic PDF).

Task 62. ESA, Section 106, and FRE Construction Water Support

OBJECTIVE

Tribes/Nations, as well as other public commentors, questioned in comments to the SEPA RDEIS whether the District could obtain enough water to support construction of the FRE and whether the designed river and creek channels could provide adequate depth during low river flow periods when water withdrawal for construction could exacerbate challenges to fish passage. This task would continue the District's ongoing effort to answer these questions by exploring the feasibility of improving the town of Pe Ell's existing raw water intake(s) and pipeline(s) to provide water for construction and developing additional design detail for the designed river and creek channels. Details including hydraulic modeling, nature-like channel design, and intake/pipeline improvement feasibility would be developed to provide the information necessary to respond to tribe/nation concerns in the SEPA RDEIS comments.

Section 106 support is included in this task to support conversations necessary to advance the technical work under this task. This detail is also anticipated to be requested by federal fisheries agencies as part of ESA consultation.

62.1 Section 106 Consultation and Engineering Support

SUBTASK OBJECTIVE

The District will continue supporting USACE's Section 106 Consultation process into the second half of the biennium. HDR will continue to support the District through the Section 106 process by developing and providing information to the tribes and state and federal agencies necessary to support and substantially add to the important and useful information available for decision makers in the basin including providing additional archeologist support.

HDR SERVICES

- Support the District through the Section 106 process by providing information as requested by the District.
- Coordinate with the District and HDR team regarding cultural resources and consultation requirements.

CLIENT RESPONSIBILITIES

- Participate in team coordination meetings.

ASSUMPTIONS

- Section 106 consultation support to the District is assumed to not exceed approximately 180 hours of HDR staff time. Services provided under this task, including possible subconsultant support from Environmental Science Associates (ESA), will not exceed $30,000 in total.
- Environmental Science Associates will continue to provide historic and cultural survey services as well as services directly for the District upon request.
- Specific support tasks for the District are unknown at this time but may include:
    - Conduct onsite historic and cultural surveys within the identified budget.
    - Develop and participate in project tribal presentations.
    - Develop light detection and ranging (LiDAR) exhibits of the project site.
    - Develop narratives and exhibits describing proposed actions that are focused on potential impacts to historic or cultural resources.

DELIVERABLES

- None

62.2 Nature Like Construction Bypass and Permanent Channel Design Refinement

SUBTASK OBJECTIVE

HDR will advance the design of the nature-like construction bypass and permanent channel design. Design development of the bypass and permanent channels will provide additional detail needed to respond to tribe/nation comments on the SEPA RDEIS regarding the ability of the bypass channel and permanent channels to pass fish during construction during low, summertime flows and when water is being withdrawn from the Chehalis River to support construction. The permanent Chehalis River and Crim Creek channels provide fish passage during the final two phases of construction (Phases 3 and 4) so design development of the permanent channels is also necessary to address these tribe/nation comments. The bypass channel design will further refine channel dimensions, channel slopes, cross-sectional geometry, bed material gradations, habitat features, and roughness characteristics. Primary tasks will include evaluating and refining the channel design to provide velocities within accepted industry criteria for target fish species, provide resting and refuge habitat,

maintain adequate water depths during low-flow conditions, and promote channel stability during high-flow events.

A 2D hydraulic model will be developed and applied to evaluate hydraulic performance, including water surface profiles, velocity distributions, flow depth, upstream and downstream fish passage routes, and channel stability under a range of operational and hydrologic conditions. The 2D model results will be used to refine the bypass and permanent channel designs and identify areas requiring additional design development. This effort is intended to establish the hydraulic framework necessary for future advancement to three-dimensional (3D) hydraulic modeling and fish passage design development. The future 3D analysis is anticipated to provide a more detailed evaluation of localized hydraulic conditions influencing fish passage suitability, attraction, holding, and movement through critical channel features.

HDR SERVICES

- Update construction bypass and permanent channel designs.
- Perform hydraulic modeling to show hydraulic and fish passage performance of the bypass and permanent channels.
- Update and revise Construction Bypass Hydraulic Modeling TM.

CLIENT RESPONSIBILITIES

- Review draft and final deliverables.
- Participate in team coordination meetings.

ASSUMPTIONS

- Up to 12 runs in the 2D hydraulic model will be performed, ranging from the 95% Flow Exceedance with climate change scalers to an identified flood flow.
- Only one geometry for the nature-like construction bypass channel will be reported, even though multiple will have been evaluated.
- The existing Chehalis Construction Bypass Hydraulic Modeling TM will be updated to reflect the design development performed in this subtask. The existing TM will likely be renamed to better reflect both the construction bypass and permanent river/creek channels.

DELIVERABLES

- Draft and Final Chehalis Construction Bypass Hydraulic Modeling TM.

62.3 Mitigating Construction Water Supply Impacts: Advance Development of Pe Ell Raw Water Supply Improvements

SUBTASK OBJECTIVE

HDR will evaluate the town of Pe Ell's existing Lester Creek and Chehalis River intakes and associated pipelines, and identify opportunities, constraints, and considerations related to maintaining water service during and following FRE construction. The feasibility of maintaining the continuous raw water supply to Pe Ell's drinking water plant and modifying the Lester Creek and Chehalis River water supply system(s) to provide temporary water service for construction of the FRE will be evaluated. Findings, recommendations, and data collection needs for future alternative evaluation and development will be documented in a Pe Ell Raw Water Supply Feasibility TM.

HDR SERVICES

- Collect and review information on the existing Lester Creek and Chehalis River intakes and pipelines.
- Develop feasibility-level options for maintaining a continuous supply of raw water to the town of Pe Ell during and following completion of construction of the FRE facilities, and during FRE operation.
- Evaluate options for using, modifying, protecting, or replacing existing intakes and pipelines to support continued water raw supply to the Town of Pe Ell and construction of the FRE.
- Develop Class V construction engineer's opinion of probable construction costs (OPCC) for each alternative.
- Summarize findings, options, and planning-level recommendations in the Pe Ell Raw Water Supply Feasibility TM.
- Identify additional surveying, modeling, coordination, and data collection needs to support future options evaluation and design of improvements to the Pe Ell raw water supply system.

CLIENT RESPONSIBILITIES

- Review draft TM and provide consolidated comments.
- Participate in team coordination meetings.
- Assist HDR in obtaining available GIS data, as-builts, flow records, repair records, raw water supply/drinking water master plan, and latest condition assessments for Chehalis River and Lester Creek intakes and pipelines from the town of Pe Ell, regulatory agencies, and other data sources.

ASSUMPTIONS

- Evaluation will be performed at a feasibility level and will not include detailed engineering design.
- Up to five intake, pipeline, or water supply options will be considered.
- Current and future water consumption estimates will be provided by the Town of Pe Ell.
- Water supply options will be evaluated assuming water availability and Pe Ell water demand similar to recent historic conditions.
- If water demand and availability projections are included in the current Pe Ell drinking water master plan, they will be considered.
- Feasible options for improvements to the existing Pe Ell raw water supply system must provide continuous raw water supply to the town of Pe Ell during flow-through and flood operations.
- Existing Lester Creek intake and associated pipeline will be drafted using as-built information from the town of Pe Ell and incorporated into the project existing conditions base map using AutoCAD Civil 3D.
- Hydraulic calculations using hydraulic modeling software and/or MS Excel spreadsheets will be performed for feasibility-level modeling of existing and potentially feasible raw water supply improvement options.
- The TM will be no more than 20 pages long including tables and figures.
- Up to four HDR staff will visit the existing Lester Creek and Chehalis River intakes and pipelines.
- The site visit and travel to and from the site will occur on a single day.
- Staff will travel to and from the HDR Seattle office.
- A single site visit memo summarizing the findings, no more than three pages long, will be developed.

DELIVERABLES

- Draft and Final Pe Ell Raw Water Supply Feasibility TM.
- Site visit memo.

Task 63. Advance Fish Passage Analysis and Documentation Consistent with BA

OBJECTIVE

The Final BA was submitted in June 2026. NOAA Fisheries will likely require additional design development and modeling for fish passage and other topics. Technical work likely needed in support of continued NOAA Fisheries consultation is also necessary to respond to tribe/nation comments in the SEPA RDEIS, many of which were concerning fish passage. Additional definition supporting an in-water work window extension and fish passage efficiency, and sediment transport performance of the proposed fish pathways will directly address the information needs of tribes/nations and federal agencies.

63.1 Conduct Fish Passage Survival Research

SUBTASK OBJECTIVE

HDR will evaluate whether project construction or long-term operation is expected to decrease each affected population over time relative to no action, and the likely relative magnitude of potential decrease. The review will address spring-run Chinook salmon, fall-run Chinook salmon, coho salmon, steelhead, coastal cutthroat trout, Pacific lamprey, and western brook lamprey using a structured weight-of-evidence approach.

HDR SERVICES

- Facility, operations, and exposure review. Summarize routes and operating sequences for construction Phases 1-4, normal operation, flood-pool filling, storage/holding, controlled release, and evacuation. Characterize route availability, frequency, duration, seasonal overlap, and life-stage exposure associated with the Flood Fish Passage Facility, fishways, conduits, gates, stilling basin, low-flow endsill, and shallow-pool transition near 30 feet of temporary inundation pool depth above the highest open hydraulic outlet.
- Targeted evidence and survival review. Review existing project estimates, relevant surrogate facilities, published studies, agency criteria, and species behavior. Evaluate route selection, delay, fallback, injury, entrainment, predation, and event-scale survival, and reconcile the 2020 and 2025 SEPA estimates, flow-range discrepancies, and route-versus-full-cycle survival.
- High-level population-effects analysis. For each target group, combine expected exposure and survival effects with available population status, productivity, life-history importance, event frequency, and recovery potential. Apply simple, transparent bounding or sensitivity calculations where supportable and otherwise use documented professional judgment to determine effect direction, relative magnitude, causal pathway, and confidence.
- Findings, documentation, and review. Prepare a concise decision-oriented technical report and executive comparison matrix; present preliminary findings; resolve one consolidated District set of comments; and deliver the final report and supporting tables.

CLIENT RESPONSIBILITIES

- Facilitate and relay communication between HDR and NOAA Fisheries as needed, including scheduling meetings and coordination with USACE.

- District PM will attend scheduled NOAA Fisheries meetings as requested and practicable.
- Participate in team coordination meetings.
- Provide one consolidated set of comments within 10 business days of receiving the draft report.

ASSUMPTIONS

- The work under this subtask will build upon the work published in Section 6 Fish Passage Performance of Appendix I Fish Passage Design Report dated January 9, 2026.
- Existing information. Available project information is adequate to characterize the principal routes, operating cases, exposure pathways, and reasonable survival ranges without new data collection.
- Research boundary. The evidence review will be targeted to information likely to affect the decision, rather than a formal systematic literature review. Surrogate evidence and documented professional judgment may be used where direct information is unavailable.
- Analytical boundary. The scope includes review of existing models and results and simple spreadsheet bounding calculations.

DELIVERABLES

- Evidence matrix. Species-, life-stage-, and route-specific evidence summary identifying selected survival inputs or ranges, applicability, limitations, and reconciliation of the 2020 and 2025 SEPA estimates.
- Draft report. Decision-oriented technical report, including a separate finding for each target group, an executive comparison matrix, and supporting evidence and calculation tables.
- Final report. Revised technical report, executive comparison matrix, supporting tables, and recommended design/operational/monitoring actions needed to address material uncertainty.

63.2 Advance Sediment Transport Modeling and Fluvial Geomorphology

SUBTASK OBJECTIVE

HDR will advance initial sediment transport analysis that was performed for the Chehalis FRE existing conditions, interim construction bypass conditions, and ultimate design conditions as documented in Appendix D Draft Sediment Transport Analysis TM dated January 9, 2026 and appended to the January 9, 2026 Appendix D Hydraulic Design Report. The initial analysis was focused on conditions supporting incipient mobilization and transport of spawning gravel sized bedload material (gravel mobilizing event). A one-dimensional (1D), quasi-unsteady hydraulic and sediment transport model was developed in HEC-RAS version 6.6 to characterize the transport of sediments under proposed project conditions along the Chehalis River channel.

During this phase, the previous efforts will be expanded to better address SEPA comments and to build an improved set of models for answering future sediment transport related comments. Sediment transport analyses are expected to continue through each project phase and the current scope effort is an initial step. During this phase, the previous sediment transport model will be extended and sensitivity testing will be completed (with respect to inflowing sediment load, bed material gradation, transport function, and full range of flow scenarios). Additionally, a detailed two-dimensional (2D) model focusing on the FRE facility itself will be initiated to better assess the transport mechanisms post-construction.

HDR SERVICES

- Update the initial 1D sediment transport model to latest HEC-RAS version 7.0.1.
- Extend the 1D sediment transport model upstream beyond the pool inundation limits and encompass Crim Creek elements of the bypass channel.
- Develop HEC-RAS 2D sediment transport model for the immediate FRE facility vicinity to support refinement of the nature-like construction bypass and permanent stable channel design.
- Run design storm scenarios through reservoir operations model to provide flow and sediment supply estimates to downstream reaches.
- Perform sediment transport sensitivity testing for a range of operation scenarios including pressure flows through FRE conduits.
- Update and revise Sediment Transport Modeling TM.

CLIENT RESPONSIBILITIES

- Participate in team coordination meetings.

ASSUMPTIONS

- Up to two 2D sediment transport model runs will be performed for the selected alternative, ranging from the 95% Flow Exceedance to the 10-year Annual Exceedance Probability flow.
- 1D sediment transport model will provide sediment supply information to detailed 2D sediment transport model.
- 1D sediment transport model will provide initial insight into degradation and aggradation induced by flood operations within the pool limits, but is not intended to replicate reservoir turbidity, siltation, or induced erosion through the held pool.
- No sediment transport model calibration will be performed. The parametric uncertainties will be quantified through sensitivity testing.
- Results, assumptions, and limitations from the 1D and 2D sediment transport analysis will be documented within the deliverables to . The scoped level of effort is commensurate with the current level of design and will be continued in subsequent phases with additional design conditions and flow events.
- No physical hydraulic or sediment transport modeling will be conducted in this phase.
- Subsequent phases may include long-term scenarios based upon the latest design and reservoir operation plans but are not included in this scope.
- Appendix I Fish Passage Design Report, Appendix D Hydraulic Design Report, and the Preliminary Design Report will not be updated as part of the work performed in this scope of work. Updates to these reports are intended to be updated in the next phase of work following additional modeling and design refinements performed in that phase.

DELIVERABLES

- Draft and Final Draft Sediment Transport Modeling TM.

63.3 Develop In-water Work Window Extension Request

SUBTASK OBJECTIVE

HDR will address tribal comments regarding concerns about the proposed three-month in-water work window to accommodate development of phased temporary in-river bypasses during construction of the proposed facility. Specifically, the objective is to provide an analysis of effects on spring Chinook Salmon from extending the window from July-August through September.

HDR SERVICES

- Develop TM that addresses comments, using information in the Biological Assessment, recent (i.e., past 5 years) of redd data, and existing (baseline) conditions in the proposed construction reach.
- Coordinate with Kleinschmidt as required, including meeting attendance, to confirm and collaborate on spring Chinook Salmon habitat use and availability under baseline conditions.
- Respond to District comments on draft TM.
- Revise TM for inclusion in tribal response to comments.

CLIENT RESPONSIBILITIES

- Facilitate and relay communication between HDR and Kleinschmidt, including scheduling meetings.
- The District PM will attend scheduled meetings on this topic.

ASSUMPTIONS

- Recent redd survey data will be available from WDFW for inclusion in TM.
- Updated scour TM results will be available from Kleinschmidt for inclusion in TM.

DELIVERABLES

- Draft and Revised TM

Task 64. Fish Passage Analysis & Documentation Consistent with BA (Fishways and Conduits)

OBJECTIVE

HDR will advance the hydraulic design of the upstream and downstream channel systems associated with the proposed fish passage facilities and support continued coordination with NOAA Fisheries. Additional design development is anticipated to be necessary to address agency, tribal, and stakeholder comments received during the SEPA process regarding fish passage performance and long-term operation of the facility.

This task will focus on refinement of the permanent nature-like channel, fishway, and conduit features that connect the natural river channel to the proposed fishways and outlet works. Emphasis will be placed on advancing the downstream channel design and evaluating the hydraulic conditions that influence fish attraction to the fishway entrances. The design effort will further refine channel geometries, slopes, roughness characteristics, and hydraulic control features to provide conditions conducive to effective passage for target fish species.

Work under this task will be performed in conjunction with design refinement and modeling performed under Task 62.2 Nature Like Construction Bypass and Permanent Channel Design Refinement. The 2D hydraulic model developed in Task 62.2 will be utilized to evaluate water surface elevations, flow distributions, flow depths, velocity patterns, and attraction flow conditions within the upstream and downstream channel systems under a range of operational and hydraulic conditions. The modeling effort will also be used to verify that water surface elevations at fishway entrances, exits, and hydraulic control features remain within the design criteria established for fish passage operation.

The results of the 2D hydraulic modeling will support continued advancement of the fish passage design of the fishways and outlet works and identify areas requiring further refinement. This work is intended to establish the hydraulic framework necessary for a 3D hydraulic model. The 3D analysis is anticipated to provide a more detailed evaluation of attraction flow patterns, localized hydraulic conditions, fish passage suitability, and fish movement pathways through critical channel transitions and fishway approach and exit areas.

HDR SERVICES

- Run hydraulic design scenarios and evaluate model output from 2D hydraulic model of fishways, conduits, and upstream and downstream channels.
- Update Appendix F Outlet Works Layout Option Evaluation TM dated November 21, 2025 (appendix to Appendix I Fish Passage Design Report of the Preliminary Design Report) and Appendix B Low-Level Conduits Hydraulic Design TM dated November 21, 2025 (appendix to Appendix D Hydraulic Design Report of the Preliminary Design Report.

CLIENT RESPONSIBILITIES

- Facilitate and relay communication between HDR and state and federal agencies and tribes, including WDFW and USACE, as necessary.
- Participate in team coordination meetings and provide input on design refinements.

ASSUMPTIONS

- Up to 20 2D hydraulic model runs will be performed, ranging from the 95% Flow Exceedance with climate change scalers to an identified flood flow. Flows modeled will be within the identified fish passage flows (95% to 5% exceedance flows) to establish fish attraction flow and fish passage compliance.
- The Computational Fluid Dynamics (CFD) model will be focused on key locations for fish attraction and fish passage. The key locations are anticipated to be the fish inlet and fish exit locations. Up to 10 flow rates will be evaluated at each location in the CFD model.
- Appendix I Fish Passage Design Report, Appendix D Hydraulic Design Report, and the Preliminary Design Report will not be updated as part of the work performed in this scope of work. Updates to these reports are intended to be updated in the next phase of work following additional modeling and design refinements performed in that phase.

DELIVERABLES

- Draft and final Low-Level Conduits Hydraulic Design TM.
- Draft and final Outlet Works Layout Option Evaluation TM.

Task 65. Strategic Communications Support (On-Call)

OBJECTIVE

HDR will provide strategic communications support for presentations and visuals developed to share project updates with agencies, tribes, OCB Board, community members, and Lewis County. It may include presenting during OCB Board meetings and monthly Section 106 coordination calls, creating or editing web content, drafting outreach, and ongoing communication with community and County officials.

HDR SERVICES

- Management and support for District website updates. This effort will include minor content development.
- Virtual attendance at up to 5, two-hour Section 106 calls, for one HDR staff member.
- Virtual attendance at up to 24 weekly, 30-minute District coordination meetings, for one HDR staff member.
- On an as-needed basis:

Develop public outreach talking points and press releases focused on the design uniqueness and climate resiliency features of the FRE.
Virtual or in-person attendance at community, OCB, and/or County meetings, including meeting preparation.
Develop public, county, OCB and tribal outreach documentation and presentations.

CLIENT RESPONSIBILITIES

- Distribution of press releases.
- Identification of presentation and visual needs and opportunities.
- Scheduling and coordination with agencies, OCB Board, tribes, or others.

ASSUMPTIONS

- As-needed services will be provided up to 190 hours and will not to exceed **$26,000** in total fee.
- Initial content for strategic communications deliverables will be provided by technical team members as part of their work under other tasks and subtasks or gathered from existing sources, including technical work needed to update figures and graphics (e.g., estimating costs, modeling, design plans, etc.). Under this task the Strategic Communications team will coordinate with appropriate HDR/Kleinschmidt team members and Subject Matter Experts to translate technical content into visuals and documents tailored to the specified audience.
- Deliverables will be submitted to the District for one round of review and edits.

DELIVERABLES

- Deliverables will be determined with the District during execution of the scope. Deliverables under this task may include:

  Draft and final visuals in appropriate format (e.g., JPEG, Adobe PDF, PNG).
  Draft and final talking points/press releases in MS Word and Adobe PDF format.
  Draft and final presentations in MS PowerPoint and Adobe PDF format.
  Other deliverables as requested by the District and agreed to, in writing, by HDR.

Task 66. Program Management Delivery Framework Development

OBJECTIVE

This is a continuation of previous work to generate information about opportunities and processes the District may use to develop organizational structure and economic models supporting the construction, ownership, and operation of the project as well as other elements of the Chehalis Basin Strategy, potentially. Also, District anticipates providing some additional program management information to the OCB staff and its consultants for their use in developing options for the OCB Board to consider when implementing its long-term strategy.

HDR SERVICES

HDR will continue to research, revise, and advance delivery program frameworks with the goal of bringing clarity to and informing the District, the OCB Board and other basin stakeholders of future project economic and organizational model options, alternatives, and opportunities.

The data researched and presented will serve to accommodate collaborative District and external stakeholder coordination and conversations to identify, and then expand upon, alternatives and opportunities to secure economic resources and summarize organizational development that could be employed for future organizational models and subsequent project execution.

If identified and requested, HDR will facilitate public and stakeholder outreach and incorporate community leader and project stakeholder input, coordinated and approved by the District, to address community and stakeholder questions and concerns while further garnering community and stakeholder support.

HDR will develop assumptions and constraints to support economic and organizational structure framework development.

As part of the delivery framework development, HDR will continue to advance and refine estimated timeframes for executing and delivering actions that support securing economic resources and organizational development (i.e., identify when actions need to be initiated and when they should be fully developed).

Both economic and organizational models will consider, to the extent possible, relevant and successful project examples. HDR will continue to critically review previous projects of a similar nature to support the development of organization and funding alternatives and recommendations.

The research necessary to advance and tailor economic and organizational models will be accomplished using HDR senior planners, program managers, project managers, economists, and project funding professionals (federal and local) with experience in large scale civil infrastructure and water resource projects. This framework will include identification of programmatic, economic, and organizational needs for future phases of the project including:

- Preliminary/Final Design
- Construction (Dam, Airport Levee, and Mitigation)
- Project Implementation, Operations, and Maintenance

As an anticipated continued priority for the District, an emphasis will be to bring additional clarity and information regarding the development of economic and organizational opportunities and alternatives for the project implementation, operations and maintenance phase and subsequent presentation materials.

HDR anticipates involving the following expertise, as needed, to develop the organizational and economic model frameworks:

- Sr. Program Manager with large civil works/water resources project development experience
- Sr. Project Consultant with experience in planning/permitting, design, and construction on projects involving large dams
- Sr. Funding/Grant Expert with experience in helping clients connect with project funding

- Sr. Federal Funding Expert with experience in USACE authorities and funding processes
- Economist with experience or familiarity with owning/maintaining a large water infrastructure project
- Dams Practice Technical Leadership
- Project Management, strategic and technical resources as needed
- Advisory Services – Unified Management Services Teams (operation and maintenance) aka Management Consulting
- Sr. Cultural Resources Archeologist with Section 106 consultation experience

CLIENT RESPONSIBILITIES

- Participate in workshops and meetings.
- Coordinate and communicate questions posed by District, OCB Board or other interested parties.
- Review draft deliverables and provide consolidated comments.

ASSUMPTIONS

- It is anticipated that this task will include providing additional information to the District regarding potential project funding and organizational options necessary to implement the project. Implementation as used here includes the final design, construction, and operation and maintenance of the FRE structure, airport levee modifications and floodwall, and related project components.
- Anticipate up to two presentations to address comments and questions from the District and/or OCB staff.

DELIVERABLES

- Organizational and Funding Model Framework TM in MS Word and Adobe PDF format (If requested).
- Presentation Materials to Support Communications with District and Stakeholders.

Schedule

HDR proposes to perform the work described in this proposal between October 1, 2026 and June 30, 2027 (period of performance). Task durations will be variable depending on the outcome of portions of the work and review comments from the District, agencies, and other project stakeholders.

Estimated Program Costs

HDR proposes to perform the services described in the work scope on a time and expenses basis. A good faith estimate of program costs by task is provided in Table 1. HDR's total estimated program costs are based on the assumptions provided, professional judgment, and what was known at the time the scope was developed. Accordingly, HDR's recommended budget does not cover or accommodate any and every circumstance that may arise. If additional tasks, unforeseen conditions, delays, or unforeseen project circumstances arise, additional budget may be needed. Such a request would be the subject of an addendum to this scope, with additional or out-of-scope work performed on a time-and-expense basis.

The total fee for these services includes a new not to exceed funding amount of **$2,009,100**.

Table 1. Good Faith Estimate of Program Costs

Task	Total Fee Amount
Task 1. Project Management and District Support This task consists of: • Project Management .....$100,000 • District Support .....$300,000 • Meetings & Coordination .....$150,000 • Document Control Plan.....$58,500	$608,500
Task 59. Revised Draft/Final SEPA and Draft NEPA EIS – Engineering Support – Facility Details	$284,500
Task 60. Revised Draft/Final SEPA and Draft NEPA EIS – Engineering Support – Fish Passage and Operations	$215,000
Task 61. Advance Airport Levee Avoidance Design	$103,000
Task 62. ESA, Section 106, and FRE Construction Water	$159,500
Task 63. Advance Fish Passage Analysis and Documentation Consistent with BA	$307,000
Task 64. Fish Passage Analysis & Documentation Consistent with BA (Fishways and Conduits)	$242,500
Task 65. Strategic Communications Support (On-Call)	$31,000
Task 66. Program Management Delivery Framework Development	$58,100
TOTAL	**$2,009,100**

Table 2 is provided as a crosswalk of the fees and tasks included in this agreement with the District's Ecology Contract.

Table 2. District Ecology Contract Crosswalk

Supplemental Agreement 15 - Ecology Contract Crosswalk				
SA15 Tasks	**Ecology Tasks**	**Ecology Task Budget**	**PM/DS (Suppl 15) Distribution**	**Supplemental 15 Task Budget**
59, 60, 61	**Task 2:** FRE Environmental Impact Statement Process and Support	$ 826,500	$ (224,181)	$ 602,319
62, 63, 64	**Task 3:** FRE Endangered Species Act Consultation Review and Engagement	$ 1,042,600	$ (333,487)	$ 709,113
65, 66	**Task 4:** Support Chehalis Basin Partners	$ 140,000	$ (50,766)	$ 89,234
	Ecology Task Budget Total:	***$ 2,009,100***		
Task 1: Project Management & District Support				$ 608,434

Terms and Conditions

These services are proposed to be completed under the District's Services Agreement; Engineering Support for Chehalis Basin Avoidance, Mitigation, and Mitigation Efforts (AMM) and associated Terms and Conditions, executed on December 4, 2020 and subsequent amendments.

This proposal is valid for 60 business days from the date of submission. Thereafter, it may be subject to change.