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

**APPROVING HDR CONTRACT SUPPLEMENTALS 9 AND 10 RELATING TO ENGINEERING** ) **RESOLUTION NO. 25-004**
)

**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 has progressed through successive rounds of funding and been correspondingly amendment in scope, cost, and duration, as approved by this Board; and

**WHEREAS,** there are two new contract supplementals, Supplementals 9 and 10, to reduce the scope and cost of the project to conform to the RCO funding for this work this biennium; and

**WHEREAS,** these Supplementals reduce the total contract cost by $1,430,000 and prioritize the scope of work the work most needed in the order most advisable for environmental review, given available funding; and

**NOW THEREFORE BE IT RESOLVED** that HDR Contract Supplementals 9 and 10 are hereby approved. The Chair 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 special open public meeting this 3rd day of February, 2025.

APPROVED AS TO FORM:

By Deputy Prosecuting Attorney
By: Interim District Counsel

ATTEST:

Tammy Martin, Interim Clerk of the Board

BOARD OF SUPERVISORS OF CHEHALIS RIVER BASIN FLOOD CONTROL ZONE DISTRICT

Scott Brummer, Chair

Sean Swope, Vice Chair

Lindsey R. Pollock, DVM, Supervisor

**Washington State Department of Transportation**

| **Supplemental Agreement Number** 09 & 10 | Organization and Address<br>HDR Engineering, Inc.<br>929 108th Ave. NE Suite 1300<br>Bellevue, WA 98004<br>Phone: | |
|---|---|---|
| Original Agreement Number<br>N/A | | |
| Project Number<br>N/A | Execution Date<br>Feb 3, 2025 | Completion Date<br>June 30, 2025 |
| Project Title<br>Water Retentional Facility Technical Services | New Maximum Amount Payable<br>$13,830,168 | |
| Description of Work<br>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 9 reduces the scope and cost by $80,000 to allow that task (Vegetation Management Plan completion) to be handled by another contractor (Kleinschmidt Associates). Supplemental 10 further reduces the scope and cost by $1,350,000 to allow $70,000 to be allocated to the District's purchase of storage containers for rock core samples; the remainder of the decrease was designed to conform to the RCO Contract funding for contract 23-1811 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: N/A [the completion date was previously amended to be 6/30/2025]

III

Section V, PAYMENT, shall be amended as follows:

The purpose of this supplement 9 and 10 is to amend the scope of work and decrease the total contract by $1,430,000 ($80,000 in Suppl. 9 and $1,350,000 in Suppl. 10).

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: Jerry Otto, Project Manager
Consultant Signature

By: Scott Brummer, Chair of Board of Supervisors
Scott Brummer
Approving Authority Signature

2-3-25
Date

DOT Form 140-063
Revised 09/2005

# Supplementals #9 and #10 - Attachment

30 January 2025

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**
**Coversheet for Supplemental Agreements 9 and 10 – Scope Modification and Reduction**

Dear Mr. Barrett:

HDR is pleased to provide supplemental proposals in response to a request by the District to reduce the total agreement fee by means of revising the existing scope while maintaining the integrity of HDR's overall services.

As requested by the District, Supplemental Amendment 09 (SA09) deobligated $80,000 in fee from Tasks 18.6 and 33 to support vegetation management plan efforts conducted by others. SA09 further deobligated $173,789 of remaining fees obligated under SA04 through SA07 and transferred those funds into Task 46, the SEPA/NEPA Coordination scoped in SA08.

Supplemental Amendment 10 (SA10) achieves a total reduction of **$1,350,000.00** in fees and were derived from ongoing conversations leading to direction provided by the District. The reductions to scope include a reduction of $70,000 from Task 36 for the District purchase of storage containers for the rock core samples. The other reductions were identified and prioritized based on three rescoping goals listed below, which were developed to align with the overall project goals agreed upon by the District:

1. **Primary Goal -** Informing the Revised SEPA EIS.
2. **Secondary Goal -** Supporting and informing the NEPA EIS including Section 106 and ESA Consultation.
3. **Tertiary Goal -** Refinement of the project cost estimate.

The proposed reductions and additions to the scope of work presented in SA10 are estimates only and are not presented in detail in this amendment. HDR will continue to coordinate with the District on the specific scope needs for each additional task identified within this amendment and will continue to identify adjustments to tasks necessary to support the District and Chehalis Basin Strategies' goals, which may include the addition of additional tasks, taking precedence over existing tasks.

Thank you for the opportunity to offer our services for this project. HDR is fully committed and vested in the successful completion of this project. Should you require further clarification of this proposal, please contact Jerry Otto at 208-387-7022 or jerry.otto@hdrinc.com.

Regards,
HDR Engineering, Inc.

Jerry Otto, P.E.
Project Manager

Attachments:

1. Supplemental Amendment 09 and Exhibit A dated 12 November 2024
2. Supplemental Amendment 10 and Exhibit A dated 02 December 2024

# SUPPLEMENTAL AMENDMENT 09

# EXHIBIT A

| Task No. | Task Description | Supplemental 8 (Authorized) | Supplemental 9 (Fee Change) | Supplemental 9 (Authorized) | Total Authorized Amount |
|---|---|---|---|---|---|
| 1 | Project Management (OCB Support) | $967,800 | $0 | $967,800 | $1,923,999 |
| 2 | Short Term Aquatic Species Benefits | | | $0 | $15,845 |
| 3 | Slope Stabilization Mitigation | | | $0 | $11,863 |
| 4 | Avoidance/Minimization of Falls and Fish Impacts | | | $0 | $20,827 |
| 5 | Revisit FRE Site Location | | | $0 | $22,801 |
| 6 | Construction Fish Passage Criteria | | | $0 | $4,199 |
| 7 | Construction Phase Fish Passage Design | | | $0 | $18,768 |
| 8 | Alternative Quarry Site Selection | | | $0 | $8,105 |
| 9 | Project Operational Review | | | $0 | $2,622 |
| 10 | Access Road | | | $0 | $17,779 |
| 11 | Sediment Transport and Geomorphology | | | $0 | $3,145 |
| 12 | Temporary Construction Facilities | | | $0 | $15,603 |
| 13 | Quarry Operations Advancement | | | $0 | $4,888 |
| 14 | Temporary Fish Passage | | | $0 | $101,489 |
| 14.1 | FRE AMM Alignment Alts. Fish Passage Design | | ($86) | $0 | $250,714 |
| 15 | Retention Facility Operations | | | $0 | $0 |
| 16 | Airport Levee - Phase 2 Support | | | $0 | $41,775 |
| 17 | Power Transmission Lines and Power | | | $0 | $4,589 |
| 18 | FRE Site Location/Site Selection | | ($48) | $0 | $42,710 |
| 18.1 | Kick-off Meeting | | ($305) | $0 | $20,695 |
| 18.2 | Geological Investigation | | ($9) | $0 | $1,053,891 |
| 18.3 | Phase 1 Design | | ($16) | $0 | $222,284 |
| 18.4 | Phase 1 Design and Geotech Tech Memo | | ($18) | $0 | $112,982 |
| 18.5 | Comparative Cost Tech Memo | | ($12) | $0 | $79,588 |
| 18.6 | Comparative Evaluation Tech Memo | | ($83,411) | $0 | $12,289 |
| 18.7 | Submittal for Ecology and Corps | | ($154) | $0 | $61,846 |
| 18.8 | Tech Support for Ecology and Corps Submittal | | ($22) | $0 | $17,778 |
| 18.9 | Environmental Coordination | | | $0 | $128,200 |
| 19 | Summary Dam Safety Standards | | | $0 | $12,484 |
| 20 | Consolidated Ongoing AMM Support | | ($164) | $0 | $261,664 |
| 21 | Hydrology | | ($208) | $0 | $849,792 |
| 22 | Data Collection | | ($93) | $0 | $6,807 |
| 23 | Geotechnical Design | | ($118) | $0 | $91,882 |
| 24 | Hydraulic Design | | ($127) | $0 | $28,273 |
| 25 | Structural Design | | ($13,078) | $0 | $381,922 |
| 26 | Hydro-Mechanical | | ($11) | $0 | $189,989 |
| 27 | Electrical I&C | | | $0 | $0 |
| 28 | Site Civil Design (Access Roads) | | ($17) | $0 | $198,383 |
| 29 | Constructability/Cost Estimate | | ($43,211) | $0 | $39,989 |
| 30 | Revised Project Description | | ($134) | $0 | $101,366 |
| 31 | Fish Passage Tech. Wrking Grp | | ($13) | $0 | $33,087 |
| 32 | Environmental Documentation Coordination | | ($42,217) | $0 | $23,283 |
| 33 | Update Vegetation Management Plan | | ($70,318) | $0 | $83,682 |
| 34 | Hydrology | $1,390,600 | | $1,390,600 | $1,390,600 |
| 35 | Topo and Bathy Data Collection | $120,700 | | $120,700 | $120,700 |
| 36 | Geotechnical Investigation and Design | $3,397,500 | | $3,397,500 | $3,397,500 |
| 37 | Hydraulic Design | $553,400 | | $553,400 | $553,400 |
| 38 | Structural Design | $619,500 | | $619,500 | $619,500 |
| 39 | Mechanical Design | $716,600 | | $716,600 | $716,600 |
| 40 | Electrical / I&C | $157,300 | | $157,300 | $157,300 |
| 41 | Advanced Project Drawings | $113,000 | | $113,000 | $113,000 |
| 42 | *Airport Levee 30% Design (OPTIONAL)* | $0 | | $0 | $0 |
| 43 | Advanced Constructability/Cost Estimate | $231,400 | | $231,400 | $231,400 |
| 44 | Preliminary Design Report | $284,400 | | $284,400 | $284,400 |
| 45 | Fish Passage TWG Collaboration | $311,000 | | $311,000 | $311,000 |
| 46 | SEPA/NEPA Coordination and DAPA Update | $149,100 | $173,789.00 | $322,889 | $322,889 |
| 47 | Update Biological & EFH Assessment | $297,600 | | $297,600 | $297,600 |
| 48 | FRE & Fish Passage Facility O&M Summary | $140,400 | | $140,400 | $140,400 |
| | **Contract/Supplemental Total:** | **$9,450,300** | **($80,000)** | **$9,624,089** | **$15,180,168** |
| | ***Contract Cumulative Total:*** | ***$15,260,168*** | ***$15,180,168*** | | |

12 November 2024

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 09 – Existing SOW Modification**

Dear Mr. Dillin:

HDR is pleased to provide this supplemental proposal that revises two existing tasks scoped under Supplemental Agreements 05 and 08.

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 Jerry Otto at 208-387-7022 or jerry.otto@hdrinc.com.

Regards,
HDR Engineering, Inc.

Jerry Otto, P.E.
Project Manager

# 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 reservoir 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's services under Contract No. #10264664, Engineering Services to Support Environmental Review, Avoidance, Mitigation and Mitigation Efforts (AMM) Support, and subsequent Supplemental Agreements 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 retention along with storage detention to provide flow augmentation (FRE-FC: Flood Retention Expandable-Future Condition) for environmental enhancement. Supplemental Agreements 04 and 05 (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 (NMFS) guidelines on fish passage and subsequently, a reassessment of the spillway and existing outlet works including gates and conduits was warranted. 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 original alignment and subsequent currently understood traditional cultural place.

The District retained HDR's services for Supplemental Agreements 06 and 07 (SA06 and SA07) to develop a Revised Project Description Report (RPDR) for the upstream minimization alignment. This effort is still underway. HDR and the District, during their review of agency comments on the SEPA and NEPA draft environmental impact statements (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 is currently working to update existing hydrologic and climate change datasets to better understand current and potential future conditions and

evaluate potential adaptive reservoir operations that also maintain the required flood reduction goals as described in the project's purpose and need. The development of the RPDR was completed in April, 2024.

Currently underway, and under Supplemental Agreement 08 (SA08), the District retained HDR services for the preliminary design advancement of the FRE structure (located at approximate latitude and longitude coordinates 46.542°N, 123.299°W) along with advanced operational analysis. This work includes selecting earthquake and hydrological loads based upon the information available at the time the analysis is conducted and based upon the industry standard of care. These loads will be accepted by District for use in the design. Preliminary design efforts for the FRE structure are built upon 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 are:

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) decision to initiate permitting and related tasks by providing advanced cost estimates, construction schedules and operational understanding.

# Approach

Supplemental Agreement 09 (SA09) modifies two tasks and closes out tasks 1 through 33 under all previous SAs prior to SA08.

Attachment A illustrates financial adjustments that are driven by the required closure of the District's Resource Conservation Office (RCO) Agreement that covered HDR's original agreement with the District and SAs 01 through 07.

SA 08 is covered under the District's new RCO Agreement No. 23-1811. SA09 transfers the remaining funds within tasks 1 through 33 to continuation tasks within Supplemental Amendment No. 8 as shown in Attachment A.

Furthermore, two previous awarded tasks below are herein modified and reduced in scope as a result of varying factors as described in the Scope of Services:

1. Task 18.6, Comparative Evaluation Technical Memorandum, previously scoped under SA05 and executed on October 10, 2022.

2. Task 33, Updated Vegetation Management Plan, previously scoped under SA07 and executed on June 1, 2023.

# Scope of Services

## TASK 18.6. Comparative Evaluation Technical Memorandum (Modification)

**OBJECTIVE**

Conduct a Comparative Evaluation of three FRE alignments (current alignment, upstream and downstream minimization alignments) based on HDR's Phase 1 analysis, present findings in a District Workshop and document the findings and alignment selection in a Technical Memorandum.

HDR's Phase 1 analysis and workshop has been completed and the Technical Memorandum is underway as of the writing of this modification.

The technical memorandum takes into consideration information gained from the geological investigation, river bypass alignments evaluation, preliminary comparative cost evaluation, other site constraints, and lessons learned from the initial alignment design development.

**HDR SERVICES**

- Consolidate Phase 1 analysis and documentation from the District Workshop into a Technical Memorandum.

**ASSUMPTIONS**

- Technical Memorandum will not exceed 10 pages in length.
- Remaining Funding within Task 18.6 will be transferred and funded under Task 36, Geotechnical Investigation and Design, in Supplemental Amendment No. 08.

**DELIVERABLES**

- Final Comparative Evaluation Technical Memorandum in Adobe .pdf format.

**CLIENT RESPONSIBILITIES**

- Review deliverables in a timely manner.

## TASK 33. Update Vegetation Management Plan (Modification)

**OBJECTIVE**

HDR developed a Conceptual Vegetation Management Plan (VMP) and submitted it to Ecology, USACE, and Quinault Indian Nation in December 2021. Since then, the Flood Retention Expandable (FRE) project location has changed and the District retained HDR to develop a revised project description and updated VMP.

During the development of the VMP, it was concluded that because the analysis and approach to vegetation management was significantly linked to the models used by Kleinschmidt Associates (KA) in the development of the mitigation plan, it would be more efficient for KA to finalize the VMP based on their own analysis and analysis and input from HDR.

The purpose of the revision to Task 33 is to provide supporting information to KA and to assist KA in updating the VMP to develop vegetation management strategies within and adjacent to the proposed project area. The VMP is a critical component of the mitigation plan KA is developing for the District.

HDR SERVICES

**Data and References:**

HDR will provide to KA the following existing information, supporting data, and references that HDR has already developed or gathered:

- GIS data for areas impacted by the project, including but not limited to: permanent impact areas (footprint), temporary impact areas (during construction outside of inundation area and within inundation area), river conveyance tunnel, sections of rivers to be bypassed, new and existing access roads for construction and maintenance/ops, quarries with access routes, designated debris evacuation/LWD staging area, areas where trees must be cleared for construction, safety, LWD storage area, etc.
- Field data HDR gathered during the Chehalis River Basin VMP Survey within the reservoir inundation area (RIA)
- Pdf files of references cited in the VMP
- Field data gathered at Mud Mountain, including photos, general field observations, plot surveys
- Mud Mountain operational data for each flood event, including timing, elevation, duration
- Mud Mountain power point presentation(s) presented at stakeholder meetings

**Inundation Regimes**

HDR will develop inundation regimes for the FRE Facility at 10-yr, 20-yr, 100-yr, and catastrophic flood events (spillway elevation of 628 ft). This work includes:

- Determining the elevations and inundation depth and duration for each of the four flood intervals based on the hydrology modeling HDR completed for the VMP, augment Table 2 and Table 3, and providing associated data, including GIS, if applicable. (HDR had previously modelled the four flood intervals, but the 20-year flood event was not summarized in the VMP tables and the catastrophic event was not at a full pool elevation of 628 ft.)

**Mud Mountain Dam Analysis**

HDR will prepare exhibits and data comparing proposed operations at the FRE facility to existing and historical operations of the Mud Mountain dam facility on the White River.

- Develop inundation regimes for Mud Mountain Dam at 10-yr, 20-yr, 100-yr, and 1000-yr flood events
- Determine elevations and inundation depth and duration for each flood interval based on hydrologic modelling.
- Determine existing tree stand heights and approximate ages throughout the inundated area using existing available information.
- Utilize existing vegetation data and developed inundation depths and durations to draw inferences to the FRE facility and inform the vegetation management plan. This will include qualitatively reporting species compositions by inundation depth/duration and frequency as well as estimated growth rate (current tree height divided by approximate years since previous clear cut).

**Continued VMP Coordination**

HDR will participate in and provide continued coordination and support for KA and District during the development of the Mitigation Plan.

**CLIENT RESPONSIBILITIES**

- Participate in team coordination meetings.
- Participate in planning and conducting meetings with consultants, agencies, and stakeholders.
- Lead communication and scheduling of meetings with external parties.
- Provide comments on draft deliverable in a timeframe consistent with the agreed upon timeline for this task.

**ASSUMPTIONS**

- Up to four HDR staff will attend up to six meetings with District and/or stakeholders. Meetings will be up to 2 hours each and will be held via conference call.
- One round of review and consolidated comments on draft deliverables is assumed.
- Upon delivery and resolution of draft and final deliverables, up to four HDR staff including GIS and Environmental Scientists will continue to participate in coordination meetings. HDR assumes up to 16 hrs each week for coordination.
- The remaining funds within Task 33 will be transferred to Task 46, SEPA/NEPA Coordination and DAPA Update in Supplemental Amendment No. 08.

**DELIVERABLES**

**Data and References:**

Existing information, supporting data and references already gathered, including but not limited to:

- GIS data for areas impacted by the project, including but not limited to: permanent impact areas (footprint), temporary impact areas (during construction outside of inundation area and within inundation area), river conveyance tunnel, sections of rivers to be bypassed, new and existing access roads for construction and maintenance/ops, quarries with access routes, designated debris evacuation/LWD staging area, areas where trees must be cleared for construction, safety, LWD storage area, etc.
- Field data HDR gathered during the Chehalis River Basin VMP Survey within the reservoir inundation area (RIA)
- PDF copies of literature cited in the 2021 VMP
- Mud Mountain data collected by HDR from the USACE for actual flood events – seasonal timing, inundation depths, and duration
- Original field data for Mud Mountain: transect locations and sample plot data (from 2023 field visit), to include:
    - Georeferenced photographs of sampled plots
    - Basic soils information (texture)
    - Vegetation species composition
    - Field data collected during the FRE temporary pool area and Mud Mountain field visit and at each sample plot

**Inundation Regimes**

VMP inundation regimes will include:

- Inundation regimes for FRE facility. Flood depth and duration for 10-yr, 20-yr, 100-yr, and catastrophic flood events
- Update to Table 2 and Table 3 of VMP with 20-year event with elevation, and inundation depths and durations
- Data, including GIS data, for extent and depth of 10-yr, 20-yr, 100-yr, and catastrophic flood events
- GIS slope data for the FRE facility (derived from DEM)

**Mud Mountain Dam Analysis**

- Inundation regimes for Mud Mountain Dam Facility. Flood depth and duration for 10-yr, 20-yr, 100-yr, and 1000-yr flood events
    - GIS data for extent and depth
    - Tabular format showing depth, duration, and recurrence
- Existing tree stand heights and growth rates for inundated areas
    - GIS data for tree stand heights
    - Plant species composition
    - Tabular format of growth rate by inundation area for each species
- GIS slope data (derived from DEM)
- Comparative analysis of existing vegetation conditions by flood depth, duration, and frequency
    - Tabular format of species composition by inundation area
    - Graphics with inundation depth and species composition
- Technical Memorandum documenting the data collected and methods of collection and conclusions.

# Schedule

HDR proposes to perform the work described in this modification in general accordance with the schedule provided in Table 1 below. Task durations are preliminary and subject to change depending on the outcome of portions of the work and review comments from the District and other project stakeholders. This Supplemental Amendment will remain in effect through the duration Supplemental Amendment No. 8.

**Table 1.** Schedule

| Task | Schedule |
|---|---|
| • Existing information, data and references | • Completed |
| • VMP inundation regimes | • Completed |
| • Mud Mountain Dam Analysis and TM | • Completed |
| • Continued VMP Coordination | • Completed |
| • Comparative Evaluation TM | • 31 Dec 2024 |

# Estimated Program Costs

HDR proposes to perform the remaining 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 2 below. Table 3 below provides a summary of changes in the authorized budgets for the Original Agreement and Supplemental Amendments 01 through 09. HDR's total estimated program costs are based on the assumptions provided, professional judgment, and what was known at the time the work 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 is not to exceed **$15,180,168**, unless mutually agreed upon by HDR and the District.

**Table 2.** Good Faith Estimate of Program Costs (Tasks 18.6 and 33)

| TASK | ORIGINAL BUDGET | CHANGE IN BUDGET | MODIFIED BUDGET |
|---|---|---|---|
| **Task 18.6 - Comparative Evaluation TM (Modification)** | $95,700 | ($20,000) | $75,700 |
| **Task 33 - Update Vegetation Management Plan (Modification)** | $154,000 | ($60,000) | $94,000 |
| **TOTAL:** | **$249,700** | **($80,000)** | **$169,700** |

**Table 3.** Good Faith Estimate of Program Costs (Supplemental Amendment Transfer Adjustments)

| AGREEMENT | ORIGINAL AUTHORIZED BUDGET | CHANGE IN AUTHORIZED BUDGET | TOTAL AUTHORIZED BUDGET |
|---|---|---|---|
| **Original Agreement** | $178,509 | $0 | $178,509 |
| **Supplemental Amendment 01** | $14,000 | $0 | $14,000 |
| **Supplemental Amendment 02** | $101,000 | $0 | $101,000 |
| **Supplemental Amendment 03** | $433,488 | ($48) | $433,440 |
| **Supplemental Amendment 04** | $1,369,000 | ($305) | $1,368,695 |
| **Supplemental Amendment 05** | $857,000 | ($83,728) | $773,272 |
| **Supplemental Amendment 06** | $299,500 | $0 | $299,500 |
| **Supplemental Amendment 07** | $2,500,000 | ($169,719) | $2,330,281 |
| **Supplemental Amendment 08** | $9,450,000 | $0 | $9,450,000 |
| **Supplemental Amendment 09** | $0 | $173,800 | $173,800 |
| **TOTAL:** | **$15,260,168** | **($80,000)** | **$15,180,168** |

# 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.

This proposal is valid for sixty (60) workdays from the date of submission. Thereafter, it may be subject to change.

SUPPLEMENTAL AMENDMENT 10

# EXHIBIT A

| Task No. | Task Description | Supplemental 7 (Authorized) | Supplemental 8 (Authorized) | Supplemental 9 (Fee Change) | Supplemental 9 (Authorized) | Supplemental 10 (Fee Change) | Supplemental 10 (Authorized) | Total Authorized Amount |
|---|---|---|---|---|---|---|---|---|
| 1 | Project Management (OCB Support) | $302,000 | $967,800 | $0 | $967,800 | ($120,000) | $847,800 | $1,803,999 |
| 2 | Short Term Aquatic Species Benefits | | | | | | | $15,845 |
| 3 | Slope Stabilization Mitigation | | | | | | | $11,863 |
| 4 | Avoidance/Minimization of Falls and Fish Impacts | | | | | | | $20,827 |
| 5 | Revisit FRE Site Location | | | | | | | $22,801 |
| 6 | Construction Fish Passage Criteria | | | | | | | $4,199 |
| 7 | Construction Phase Fish Passage Design | | | | | | | $18,768 |
| 8 | Alternative Quarry Site Selection | | | | | | | $8,105 |
| 9 | Project Operational Review | | | | | | | $2,622 |
| 10 | Access Road | | | | | | | $17,779 |
| 11 | Sediment Transport and Geomorphology | | | | | | | $3,145 |
| 12 | Temporary Construction Facilities | | | | | | | $15,603 |
| 13 | Quarry Operations Advancement | | | | | | | $4,888 |
| 14 | Temporary Fish Passage | | | | | | | $101,489 |
| 14.1 | FRE AMM Alignment Alts. Fish Passage Design | | | ($86) | | | | $250,714 |
| 15 | Retention Facility Operations | | | | | | | $0 |
| 16 | Airport Levee - Phase 2 Support | | | | | | | $41,775 |
| 17 | Power Transmission Lines and Power | | | | | | | $4,589 |
| 18 | FRE Site Location/Site Selection | | | ($48) | | | | $42,710 |
| 18.1 | Kick-off Meeting | | | ($305) | | | | $20,695 |
| 18.2 | Geological Investigation | | | ($9) | | | | $1,053,891 |
| 18.3 | Phase 1 Design | | | ($16) | | | | $222,284 |
| 18.4 | Phase 1 Design and Geotech Tech Memo | | | ($18) | | | | $112,982 |
| 18.5 | Comparative Cost Tech Memo | | | ($12) | | | | $79,588 |
| 18.6 | Comparative Evaluation Tech Memo | | | ($83,411) | | | | $12,289 |
| 18.7 | Submittal for Ecology and Corps | | | ($154) | | | | $61,846 |
| 18.8 | Tech Support for Ecology and Corps Submittal | | | ($22) | | | | $17,778 |
| 18.9 | Environmental Coordination | | | | | | | $128,200 |
| 19 | Summary Dam Safety Standards | | | | | | | $12,484 |
| 20 | Consolidated Ongoing AMM Support | | | ($164) | | | | $261,664 |
| 21 | Hydrology | $850,000 | | ($208) | | | | $849,792 |
| 22 | Data Collection | $6,900 | | ($93) | | | | $6,807 |
| 23 | Geotechnical Design | $92,000 | | ($118) | | | | $91,882 |
| 24 | Hydraulic Design | $28,400 | | ($127) | | | | $28,273 |
| 25 | Structural Design | $395,000 | | ($13,078) | | | | $381,922 |
| 26 | Hydro-Mechanical | $190,000 | | ($11) | | | | $189,989 |
| 27 | Electrical I&C | $0 | | | | | | $0 |
| 28 | Site Civil Design (Access Roads) | $198,400 | | ($17) | | | | $198,383 |
| 29 | Constructability/Cost Estimate | $83,200 | | ($43,211) | | | | $39,989 |
| 30 | Revised Project Description | $101,500 | | ($134) | | | | $101,366 |
| 31 | Fish Passage Tech. Wrking Grp | $33,100 | | ($13) | | | | $33,087 |
| 32 | Environmental Documentation Coordination | $65,500 | | ($42,217) | | | | $23,283 |
| 33 | Update Vegetation Management Plan | $154,000 | | ($70,318) | | | | $83,682 |
| 34 | Hydrology | | $1,390,600 | | $1,390,600 | $0 | $1,390,600 | $1,390,600 |
| 35 | Topo and Bathy Data Collection | | $120,700 | | $120,700 | $0 | $120,700 | $120,700 |
| 36 | Geotechnical Investigation and Design | | $3,397,500 | | $3,397,500 | ($195,324) | $3,202,176 | $3,202,176 |
| 37 | Hydraulic Design | | $553,400 | | $553,400 | ($130,426) | $422,974 | $422,974 |
| 38 | Structural Design | | $619,500 | | $619,500 | ($119,644) | $499,856 | $499,856 |
| 39 | Mechanical Design | | $716,600 | | $716,600 | ($664,760) | $51,840 | $51,840 |
| 40 | Electrical / I&C | | $157,300 | | $157,300 | ($120,000) | $37,300 | $37,300 |
| 41 | Advanced Project Drawings | | $113,000 | | $113,000 | $23,000 | $136,000 | $136,000 |
| 42 | *Airport Levee 30% Design (OPTIONAL)* | | $0 | | $0 | $0 | $0 | $0 |
| 43 | Advanced Constructability/Cost Estimate | | $231,400 | | $231,400 | ($74,446) | $156,954 | $156,954 |
| 44 | Preliminary Design Report | | $284,400 | | $284,400 | $0 | $284,400 | $284,400 |
| 45 | Fish Passage TWG Collaboration | | $311,000 | | $311,000 | ($63,000) | $248,000 | $248,000 |
| 46 | SEPA/NEPA Coordination and DAPA Update | | $149,100 | $173,789.00 | $322,889 | $0 | $322,889 | $322,889 |
| 47 | Update Biological & EFH Assessment | | $297,600 | | $297,600 | $0 | $297,600 | $297,600 |
| 48 | FRE & Fish Passage Facility O&M Summary | | $140,400 | | $140,400 | ($5,400) | $135,000 | $135,000 |
| 49 | StratComm Coordination | | | | | $120,000 | $120,000 | $120,000 |
| | **Contract/Supplemental Total:** | **$2,500,000** | **$9,450,300** | **($80,000)** | **$9,624,089** | **($1,350,000)** | **$8,274,089** | **$13,830,168** |
| | ***Contract Cumulative Total:*** | ***$5,809,868*** | ***$15,260,168*** | ***$15,180,168*** | | ***$13,830,168*** | | |

02 December 2024

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 10 – Scope Modification and Reduction**

Dear Mr. Barrett:

HDR is pleased to provide this supplemental proposal in response to a request by the District to reduce the total agreement fee by means of revising the existing scope while maintaining the integrity of HDR's overall services. Results of these efforts are presented in this modification request in accordance with the Terms and Conditions through identifying changes to the original and subsequently adjusted Supplemental Agreements undertaken by HDR Engineering, Inc. ("HDR") up to and including Supplemental Agreements 08 and 09 (SA08 and SA09).

As requested by the District, SA09 deobligated $80,000 in fee from Tasks 18.6 and 33 to support vegetation management plan efforts conducted by others. SA09 further deobligated $173,789 of remaining fees obligated under SA04 through SA07 and transferred those funds into Task 46, the SEPA/NEPA Coordination scoped in SA08.

The scope adjustments presented herein the proposed SA10 achieves a total reduction of **$1,350,000.00** in fees and were derived from ongoing conversations leading to direction provided by the District. The reductions to scope include a reduction of $70,000 from Task 36 for the District purchase of storage containers for the rock core samples. The other reductions were identified and prioritized based on three rescoping goals listed below, which were developed to align with the overall project goals agreed upon by the District:

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 ESA continued consultation and the development of the revised Biological Assessment. Respond to NEPA EIS review questions and support District's Section 106 consultation efforts.
3. **Tertiary Goal -** Refinement of the project cost estimate: Focus on the high-dollar construction

cost estimate adjustments such as the revised foundation objective and structural modeling. Do not advance design on components that are not necessary to support the primary and secondary goals.

SA10 proposes reductions in tasks and task-specific fees associated with the HDR Scope of Services provided in SA08, and as modified in SA09, as well as adds additional scope of work items that were determined necessary to meet the revised project goals or were requested by the District. Table 1, *Summary of Scope of Work Changes to Supplemental Amendment 08 – Preliminary Design,* provided below describes the reductions and additions to the current SA08 Scope of Work and subsequent SA09 fee adjustment. Table 2 provides a summary of fee changes.

Unless otherwise indicated, the overall scope adjustments herein are not anticipated to impact the overall project schedule established in Supplemental 08.

The proposed reductions and additions to the scope of work presented herein are estimates only and are not presented in detail in this amendment. HDR will continue to coordinate with the District on the specific scope needs for each additional task identified within this amendment and will continue to identify adjustments to tasks necessary to support the District and Chehalis Basin Strategies' goals, which may include the addition of additional tasks, taking precedence over existing tasks.

Thank you for the opportunity to offer our services for this project. HDR is fully committed and vested in the successful completion of this project. Should you require further clarification of this proposal, please contact Jerry Otto at 208-387-7022 or jerry.otto@hdrinc.com.

Regards,
HDR Engineering, Inc.

Jerry Otto, P.E.
Project Manager

| Table 1 - Summary of Scope of Work Changes to Supplemental Agreement 08 – Preliminary Design | | | | |
|---|---|---|---|---|
| **Supplemental Agreement 08 - Scope of Work Reduction & New Subtasks** | | | | |
| | **Subtask No.** | | | |
| **Task No.** | **ADD** | **DEDUCT** | **Task / Subtask Description** | **Supplemental Agreement 10 - Description of Scope Change** |
| **1** | **Project Management** | | | |
| *NEW* | ***N/A*** | | *Descope Remaining Stratcomm Effort - Move Funds to Task 49 to Cover Stratcomm Efforts* | *The District requested that The Strategic Communication effort for the remaining biennium be separated into a separate task aligned with an existing RCO task. This effort has been relocated to a new Task 49. This change removes the following items from SA08 Task 1 beginning on November 1, 2024:*<br>• *Support District with Office of Chehalis Basin Board coordination and presentations.*<br>• *Provide District website support and maintenance*<br>• *Develop and provide public outreach documentation.* |
| **34** | **Hydrology** | | | **No Change** |
| **35** | **Topo and Bathy Data Collection** | | | **No Change** |
| **36** | **Geotechnical Investigation and Design** | | | |
| | 36.1.1 | | Geologic Mapping | No Change |
| | 36.1.2 | | Geotechnical Drilling | No Change |
| | 36.1.3 | | Geophysical Survey | No Change |
| | 36.1.4 | | Lab Testing | No Change |
| | | | Geotechnical Data Report | No Change |
| | 36.1.5 | | Cultural Survey | No Change |

| Table 1 - Summary of Scope of Work Changes to Supplemental Agreement 08 – Preliminary Design | | | |
|---|---|---|---|
| | **36.2.1** | Quarry Evaluation | Reduced scope to only cover identification of a preferred quarry. The preferred quarry identification will allow for delineation of the area impacted and estimation of trucking efforts. A quarry development and operation plan will not be developed as part of this effort. |
| | **36.2.2** | Landslide Evaluation | Buttressing and drainage features to stabilize landslides will be conservatively estimated based on engineering judgement and the newly obtained geologic investigation data. The footprints and material quantities will be used to estimate impacts to the site. A stability analyses will not be developed as part of this effort. |
| | **36.2.3** | Dam Foundation Characterization | Additional scope for workshops to determine the appropriate dam foundation approach, foundation treatments, and excavation limits are now required. The exploration data has indicated geologic conditions which differ from the anticipated conditions. |
| | 36.2.4 | Foundation Excavation Objective | No Change |
| | 36.2.5 | Foundation Treatment Systems | No Change |
| | 36.2.6 | Seepage Analysis | No Change |
| | 36.2.7 | Site Characterization Uncertainty | No Change |
| | 36.3.1 | Geotechnical Design TM | No Change |
| | 36.4.1 | Cross Discipline Collaboration | No Change |
| *NEW* | ***N/A*** | *Reduce fee to cover cost of Rock Core Storage* | *District purchased Shipping Containers for storage of rock core samples. The modification reduces Task 36 by $70,000 to cover the District's cost for the facilities.* |
| *NEW* | ***N/A*** | *Descope ESA and Temp Access Roads (Subcontractor Estimates)* | *ESA (Tom Ostrander) performed the cultural survey for the geotechnical borings. This contract was less than the budget planned under Task 36 resulting in $35K in savings. New cultural work for the revised FRE and Section 106 coordination effort has been scoped under Task 46. Work to build temporary access roads was budgeted separately. The drilling contractor included access road construction in their bid, resulting in $85K of remaining excess budget.* |
| *NEW* | ***N/A*** | *Store drilling cores for perpetuity of project TM* | *Geotechnical site evaluation was a county requirement under permit approval to place storage containers on the Meskill Quarry site. This is an additional scope item, as it was not included in Supplemental Agreement 08.* |
| **37** | **Hydraulic Design** | | |
| | 37.1 | Spillway Hydraulic Design | No Change |

| Table 1 - Summary of Scope of Work Changes to Supplemental Agreement 08 – Preliminary Design | | | |
|---|---|---|---|
| | 37.2 | Conceptual Hydraulic Design of Conduits | The original intent of this subtask was to provide two updates to the 2D HEC-RAS model. Once before bathymetric data was collected and once after. The new scope will be limited to the model update after the bathymetric data is received. |
| | 37.3 | Preliminary Hydraulic Design of Conduits | Removal of NHC (Ed Zapel) scope under this task. A revised scope is in process for NHC limited to providing QC only. Removal of the CFD modeling work which was determined to not be necessary to carry forward the fish passage design this biennium. |
| | **37.4** | Selective Withdrawal Structure Massing | The design of the selective withdrawal structure massing will be moved to a later design stage. |
| *NEW* | ***N/A*** | *New Scope for NHC* | *NHC (Ed Zapel) will provide QC checks of the following draft TMs: stepped spillway, fish passage conduits and construction bypass channels.* |
| *NEW* | ***37.5*** | *Expand Boundary of Hydraulic Model & Fish Passage Design* | *Hydraulic characteristics of the river further upstream and downstream to spanning the reference reaches will be added because the district anticipates WDFW and NMFS will request this information.* |
| *NEW* | ***37.6*** | *Perform River sediment sampling* | *Task includes site visit to collect sediment sample, and process sample to incorporate in sedimentation modeling.* |
| *NEW* | ***37.7*** | *Perform emergency reservoir drawdown rates* | *Advance the conceptual design and layout of the emergency reservoir evacuation conduit and corresponding drawdown rates.* |
| *NEW* | ***37.8*** | *Perform evacuation conduit and fish passage conduit sensitivity analysis* | *Advanced evaluation of how the flow is transitioned from the fish passage conduits to the reservoir evacuation conduit during flood control operation was not originally scoped in SA08.* |
| **38** | **Structural Design** | | |
| | 38.1 | Dam and Spillway | No Change |
| | 38.2 | Stability Analysis | No Change |
| | 38.3 | Global Stability Analyses | No Change |
| | **38.4** | Response Spectrum Analyses | Removal of two-dimensional response spectrum analyses of the spillway and non-overflow sections from the scope to meet the overall budget reduction objective. These efforts overlapped with and are less critical than the response history analyses included in Task 38.5. |
| | 38.5 | Two-Dimensional Time History Analyses | No Change |
| | **38.6** | Spillway & Bridge | Reduction in design of the spillway and bridge scope to meet the overall budget reduction objective. Additional design advancement has been determined not to be required for ESA, SEPA and NEPA Support |

| Table 1 - Summary of Scope of Work Changes to Supplemental Agreement 08 – Preliminary Design | | | |
|---|---|---|---|
| | **38.7** | Conduit Structure | Reduction in design scope related to the conduit structure to meet the overall budget reduction objective, as this task has been determined to not be within the primary or secondary scope goals. |
| *NEW* | ***38.8*** | *Update Seismic Hazard Analysis (Doty fault)* | *Update to the seismic hazard analysis and development of ground motion time histories to address the major findings in The Washington Department of Natural Resources investigation of the existing Doty fault is necessary for the design to proceed and is added to this task to meet project goals. The major findings from this investigation include a fault MCE increase from M6.9 to M7.3, updates to fault slip rates, and increased fault length.* |
| **39** | **Mechanical Design** | | |
| | **39.1** | Gates | Descoping of this task as this effort has been deemed to not be on the critical path, nor required to meet the revised scope objectives. This scope now assumes that gate sizes would not increase and therefore, further gate feasibility level gate design is assumed to not be required at this time to meet current project goals. In anticipation of Agency, Tribal and Stakeholder comments on the Revised DEIS, the remaining funds in Task 39 will be utilized to support the SEPA, NEPA and ESA coordination through June 30, 2025. |
| | **39.1.1** | Updated Outlet Conduit Gate Analysis | |
| | **39.1.2** | Conduit Gate Detail Engineering (2 Gate sizes) | |
| | **39.1.3** | Produce Preliminary Primary Conduit Gate Mechanical Design Documentation | |
| | **39.1.4** | Produce Preliminary Temperature Control Conduit Design Documentation | |
| | **39.1.5** | Produce Preliminary Flood Fish Passage Mechanical Design Documentation | |
| | **39.1.6** | Updating Debris Management Plan at the conduit structure | |
| | **39.1.7** | Specification List - All Mechanical Items | |
| **40** | **Electrical / I&C** | | |
| | **40.1** | Prelim Design for Transmission | Advancement of the electrical, instrumentation, and controls designs is not anticipated to be needed to inform the Revised Draft SEPA EIS. Electrical and I&C support moving forward will be reduced in scope to focus on providing electrical and I&C information to other design disciplines. Technical memoranda and new drawings have |
| | **40.2** | Develop Electrical, Control and Monitoring needs for Gates and Valves | |

| Table 1 - Summary of Scope of Work Changes to Supplemental Agreement 08 – Preliminary Design | | | |
|---|---|---|---|
| | 40.3 | Identify Needs for Site & Operational Security | been removed from this scope, except for updates to electrical and I&C drawings in the RDPR that are deemed to meet the overall project goals which are limited to supporting other design disciplines. |
| | 40.4 | Develop Preliminary I&C Block Diagram | |
| 41 | Advanced Site Civil Design | | |
| | N/A | Preliminary Design Civil 3D drawings (33ea) | No Change |
| *NEW* | *N/A* | *Grade in access roads around dam and FFPF and site grading* | *The District has received multiple inquiries about the permanent access roads following delivery of the RPDR to Ecology. Responses to the inquiries inform the Revised Draft SEPA EIS. To respond to SEPA EIS inquires the access roads need to be developed to a greater level of detail; specifically, the establishment of grade and its incorporation into the final site grading. Grading of the permanent access roads will further the design development of the 3-dimensional renderings and descriptive videos provided in support of the Revised Draft SEPA EIS. HDR will grade in the permanent access roads at the FRE as shown in the RPDR.* |
| 42 | (Optional) Airport Levee 30% Design | | No Change |
| 43 | Advanced Constructability/Cost Estimate | | |
| | 43.1 | Construction Phasing | The SA08 scope of work included advancing construction phasing to a 30% design level. The revised project goals reduced design focus and subsequent refinement of cost and schedule. This subtask has been reduced in fee to focus on updates to the RPDR construction phasing based on the results of the new geotechnical information |
| | 43.2 | FRE Bypass Design | The design development of the construction bypass channel provided in the RPDR was informed the draft SEPA EIS. Further development of the construction bypass is necessary to inform the ESA consultation process and NEPA EIS but the timeline for this development extends beyond the current contract period. The level of development in the current preliminary design scope is therefore reduced to from this activity to support other project needs. |
| | 43.3 | FRE Diversion and Care of Water | No Change |
| | 43.4 | FRE Construction Staging | The construction staging provided in the RPDR informed the draft SEPA EIS. Further development of the construction staging is necessary to inform the ESA consultation process and NEPA EIS but the timeline for this development extends beyond the current contract period. The level of development in the current preliminary design scope can be reduced to support other project needs. |
| | 43.5 | FRE Construction Schedule | No Change |

| Table 1 - Summary of Scope of Work Changes to Supplemental Agreement 08 – Preliminary Design | | | |
|---|---|---|---|
| | **43.6** | FRE TM and OPCC | Refining the OPCC is being reduced to updating OPCC only. The original scope matched a progression into 30% design level. The new project goals, and hence reduced design focus, will no longer include OPCC advancement. |
| *NEW* | ***N/A*** | *Deobligate NHC Estimate* | *During the development of Supplemental Agreement 08, HDR assumed NHC (Ed Zapel) was going to be relied upon for design assistance. Since then HDR hired a Sr Hydraulics Engineer that will fulfill NHC's role and that effort is included in Task 37. NHC will remain for historic knowledge and QC efforts. A new scope and fee for NHC is included in Task 37.* |
| **44** | **Preliminary Design Report** | | **No Change** |
| **45** | **Fish Passage TWG Collaboration** | | |
| | 45.1 | NMFS Meetings | No Change |
| | **45.2** | TWG Meetings | Coordination with state and federal fisheries agencies will be reduced in the current preliminary design scope to free funds from this activity in order to support other project needs. Coordination with state and federal fisheries agencies will be performed less frequently than initially planned. Some design input from state and federal may be delayed to the next biennium but the delay is not anticipated to impact the ESA consultation or informing the NEPA EIS. |
| | 45.3 | Flood Fish Passage Facility Drawing Updates | No Change |
| *NEW* | ***45.4*** | *Fish sounding TM* | *WDFW / Ecology sent RFI 1-44 on June 10, 2024 requesting additional information on when fish will be passing through the conduits. A response to the question was provided, but supporting documentation was not. It is anticipated that WDFW will request supporting documentation, including reasoning and references, to support our position that very few fish are expected to sound to reach the evacuation conduit. This information will be required to inform the Revised Draft SEPA EIS.* |
| *NEW* | ***45.5*** | *Conduit lighting for fish passage TM* | *Anchor QEA, supporting USACE in the NEPA EIS, asked in the Jan 2024 TWG meeting if the fish passage conduits would be lit and what the impact of lighting & "a long, dark tunnel" would be on fish passage performance. A similar question was asked by WDFW/Ecology in the May 31, 2024 RPDR workshop. It is anticipated that WDFW and USACE/Anchor will ask for additional detail on how the conduits will be lit and what our anticipated performance will be for each species with supporting references. This information will inform the Revised Draft SEPA EIS, ESA consultation, and NEPA EIS.* |

| Table 1 - Summary of Scope of Work Changes to Supplemental Agreement 08 – Preliminary Design | | | |
|---|---|---|---|
| *NEW* | ***45.6*** | *FFPF Release Site Update* | *WDFW / Ecology sent RFI 1-46 on June 10, 2024 requesting clarification on how fish collected by the FFPF will be transported to release sites upstream. We responded to the question but we did not provide supporting documentation. In the May 31, 2024 RPDR workshop WDFW requested supporting documentation, including reasoning and references, to illustrate truck haul routes, tributaries, road design and maintenance practices, etc. This information is required to inform the Revised Draft SEPA EIS.* |
| *NEW* | ***45.7*** | *Fish protection/relocation during in-water work windows TM and presentation* | *In the May 31, 2024 RPDR workshop Ecology requested detail and illustration of specific steps that will be taken during the in-water work windows including fish salvage/protection, dewatering, and watering up channels. Under this task HDR will create a 1-2 pg TM with figures similar to those in Sept. 2019 Proposed Flood Retention Dam Construction Schedule Supplemental Information Appendix B. This information is required to inform the Revised Draft SEPA EIS.* |
| **46** | **SEPA/NEPA Coordination and DAPA Update** | | |
| | N/A | SEPA/NEPA coordination | No Change.<br>Note: $173,800 was reallocated to Task 46 from Supplement Agreements 04 through 07 through Supplemental Agreement 09 bringing the total fee under the task to $322,900 from $149,100. $127K of new scope items are described below. An additional $46,800 will be set aside to cover unforeseen revised DEIS/ESA coordination for the remainder of the current biennium. |
| | N/A | Internal draft revised DAPA | |
| | N/A | QA/QC and revisions | |
| | N/A | Prepare for submittal to USACE | |
| | N/A | DAPA meeting with USACE | |
| *NEW* | ***N/A*** | *Develop up to 20 tech memos to support SEPA/NEPA process* | *With the SEPA not going to a FEIS, additional TMs are likely to be required during agency review and public outreach process. HDR assumes an additional 20 TMs, with a maximum of two pages, are required to respond to agency comments.* |
| *NEW* | ***N/A*** | *Section 106 LiDAR Exhibit of Project Site* | *The District requested that HDR created a 3D exhibit of the proposed FRE and surrounding area from new bathymetry collected and existing LiDAR. The exhibit will illustrate the FRE's location relative to the surrounding area using bare earth (no vegetation) and high-hit (vegetation) LiDAR.* |
| *NEW* | ***N/A*** | *Cultural Resource Survey for new APE - ESA + Labor* | *The District indicated that the tribes inquired about an updated cultural survey of the FRE based on the recent changes. ESA provided HDR an estimate of $40K to perform the assessment and conduct the necessary coordination with the tribes. The additional $20K is within this task is set for HDR coordination and contingency.* |
| *NEW* | ***N/A*** | *Additional coordination with Kleinschmidt* | *HDR anticipates continued coordination throughout the remaining biennium to support KA in their continued development of the mitigation plan.* |
| **47** | **Update Biological & EFH Assessment** | | **No Change** |

| Table 1 - Summary of Scope of Work Changes to Supplemental Agreement 08 – Preliminary Design | | | |
|---|---|---|---|
| **48** | **FRE & Fish Passage Facility O&M Summary** | | |
| | 48.1 | FRE Structure and Fish Passage Facility O&M Summary | No Change |
| | 48.2 | Update Debris Management Memorandum | No Change |
| *NEW* | ***N/A*** | *Deobligate NHC Estimate* | *During the development of Supplemental Agreement 08, HDR assumed NHC (Ed Zapel) was going to be relied upon for design assistance. Since then HDR hired a Sr Hydraulics Engineer that will fulfill NHC's role and that effort is included in Task 37. NHC will remain for historic knowledge and QC. A new scope and fee for NHC is included in Task 37.* |
| **49** | **Agency/Tribes/OCB/Lewis County Coordination** | | |
| *NEW* | ***N/A*** | *Messaging* | *The following scope language was developed by the District: This task provides for Strategic Communications support for presentations and visuals developed to share project updates with agencies, tribes, OCB, community members, and County. Several OCB updates were presented during OCB Board meetings. Ongoing communication with community and County officials. Attending monthly Section 106 coordination calls and presenting updates and visuals to group. The period of performance for this estimated fee begins 1 November 2024 and concludes on 30 June 2025.* |
| *NEW* | ***N/A*** | *Presentation Development* | |
| *NEW* | ***N/A*** | *Review Engineering Deliverables* | |
| *NEW* | ***N/A*** | *Update Website* | |
| *NEW* | ***N/A*** | *Flood Risk Comms Toolkit* | |

# Schedule

HDR proposes to perform the work described in this proposal in general accordance with the schedule provided in SA08. Task durations are preliminary and subject to change depending on the outcome of portions of the work and review comments from the District and other project stakeholders.

No changes to the schedule for the primary deliverables described in SA08 are proposed, which include:

Draft Preliminary Design Report: June 20, 2025
Updated Biological Assessment: June 30, 2025
Final Preliminary Design Report: June 30, 2025

# 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 2 below. HDR's total estimated program costs are based on the assumptions provided, professional judgment, and what was known at the time the work 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 the scope presented in SA10 is not to exceed **$8,274,089**, unless mutually agreed upon by HDR and the District.

**Table 2.** Good Faith Estimate of Program Costs

| Task | SA09 FEE | FEE CHANGE | SA10 FEE |
|---|---|---|---|
| **1. Project Management** | $967,800 | | |
| **34. Hydrology** | $1,390,600 | $0 | $1,390,600 |
| **35. Data Collection** | $120,700 | $0 | $120,700 |
| **36. Phase 2 Geotechnical Investigation & Design** | $3,397,500 | ($195,324) | $3,202,176 |
| **37. Hydraulic Design** | $553,400 | ($130,426) | $422,974 |
| **38. Structural Design** | $619,500 | ($119,644) | $499,856 |
| **39. Mechanical Design** | $716,600 | ($664,760) | $51,840 |
| **40. Electrical I&C** | $157,300 | ($120,000) | $37,300 |
| **41. Advance Project Drawings** | $113,000 | $23,000 | $136,000 |
| **42. Airport Levee 30% Design** | $0 | $0 | $0 |
| **43. Advance Constructability/Cost Estimate** | $231,400 | ($74,446) | $156,954 |
| **44. Preliminary Design Report** | $284,400 | $0 | $284,400 |
| **45. Fish Passage TWG Collaboration** | $311,000 | ($63,000) | $248,000 |
| **46. SEPA & NEPA Coordination, DAPA Update** | $322,889 | $0 | $322,889 |
| **47. Final BA and EFH Assessment** | $297,600 | $0 | $297,600 |
| **48. FRE & Fish Passage Facility Operations** | $140,400 | ($5,400) | $135,000 |
| **49. Agency / Tribes / OCB / Lewis County Coordination** | $0 | $120,000 | $120,000 |
| **TOTAL** | **$9,624,089** | **$1,350,000** | **$8,274,089** |

Table 3 is provided as a crosswalk of the revised fees and tasks included in this agreement with the District's Recreation Conservation Office contract.

**Table 3.** District RCO Contract Crosswalk

| Supplemental Amendment 10 - RCO Contract 23-1811 Crosswalk | | | | | | | |
|---|---|---|---|---|---|---|---|
| **SA10 Tasks** | **RCO Tasks** | **SA09 Total Authorized** | **SA10 Fee Change** | **Revised RCO Authorized Total** | **PM (SA10 Task 1) Distribution** | **Total RCO Task Budget** | **Rounded Budget** |
| **1** | Distributed Equally Among 8 RCO Tasks | $967,800 | $(120,000) | $847,800 | N/A | N/A | N/A |
| **43** | Task 1: Cost Estimate Development | $231,400 | $(74,446) | $156,954 | $105,975 | $262,929 | **$263,000** |
| **35, 37, 45** | Task 2: Fish Passage Advancement | $985,100 | $(193,426) | $791,674 | $105,975 | $897,649 | **$898,000** |
| **36** | Task 3: Geotechnical Design Advancement | $3,397,500 | $(195,324) | $3,202,176 | $105,975 | $3,308,151 | **$3,305,000** |
| **34, 40, 48** | Task 4: Operations Plan Development | $1,688,300 | $(125,400) | $1,562,900 | $105,975 | $1,668,875 | **$1,668,000** |
| **38, 39, 41** | Task 5: Structural Design Advancement | $1,449,100 | $(761,404) | $687,696 | $105,975 | $793,671 | **$795,000** |
| **44** | Task 6: Preliminary Design Report | $284,400 | - | $284,400 | $105,975 | $390,375 | **$390,000** |
| **46** | Task 7: SEPA & NEPA Coordination | $322,889 | - | $322,889 | $105,975 | $428,864 | **$430,000** |
| **47** | Task 8: Updated BA | $297,600 | - | $297,600 | $105,975 | $403,575 | **$405,000** |
| **49** | Task 9: Agency/ Tribes/OCB/ County Coordination | - | $120,000 | $120,000 | - | $120,000 | **$120,000** |
| | | **$9,624,089** | **$(1,350,000)** | **$8,274,089** | **$847,800** | **$8,274,089** | **$8,274,000** |

# General Limitations

Geologic and Geotechnical Investigations and Design:

The opinions and conclusions presented in the Geologic/Geotechnical Data Report and Phase 2 Geotechnical Design TM described in Task 36 will be made in accordance with generally accepted principles and practices of the geotechnical engineering, geologic, and hydrogeologic professions. The conclusions and recommendations will be based on conditions of the project site at the time of this study. Human-induced or natural changes to the site could alter the analysis, findings, and recommendations Site changes or advancements in scientific knowledge and engineering practices may affect the validity of these reports.

The materials encountered in exploratory borings will be logged in the field by an engineering geologist/geological engineer. The unconsolidated materials (soil) will be visually classified using the Unified Soils Classification System (USCS) however, the actual characteristics may vary significantly between successive test points and sample intervals, and at locations other than where observations, explorations, and investigations have been made. In estimating subsurface conditions, the data, interpretation, and recommendations of the Engineer are based solely on the information obtained. The District acknowledges, however, that because of the inherent risks and uncertainties in subsurface evaluations, changed or unanticipated underground conditions may occur that could affect total project cost.

Geologists will use reconnaissance methods to conduct project area observations in conjunction with the use of existing geological mapping. The existing geological mapping studies are of a regional nature and are generally limited to information from surface exposures and review of previously published literature. The ability to show the geologic features observed on maps is limited by the scale of the maps. In most instances, maps at scales of 1:24,000 or larger usually do not show surficial deposits less than 20 to 40 feet deep. Deeper soil and rock layer thicknesses may have more uncertainty attributable to limited data.

Seismic Evaluation:

HDR has not performed a site-specific seismic evaluation of ground shaking intensity or duration. Recommendations in the Structural Technical Memorandum described in Task 38 are based on published mapping prepared by others and standard practices for the area.

Hydrology and Hydraulics:

The conclusions and recommendations to be provided in the Final Hydrologic Analysis Report and associated Technical Memorandums described in Task 34 will be based on the current science of extreme events (climate change, earthquakes, flood conditions, drought, or other hazard) and are based on the conditions of the project site and the associated watershed, known earthquake faults, scientific literature, and the referenced predictions of future climate and sea level trends available at the time of this study. The conclusions and recommendations to be presented in the Final Model and Dataset Package and Final Hydrologic Analysis Report and associated Technical Memorandums will be based on the conditions of the project site and the associated watershed at the time of the study. Any modifications to the site, human-induced or natural, could invalidate the analysis, findings, and recommendations contained in this report. Site conditions, completion of upstream or downstream projects, upstream or downstream land use, climate, vegetation, maintenance practices, or other factors may change over time. Additional analysis or updates may be required because of these changes.

Meteorology:

HDR is utilizing publicly available climate change data published by the University of Washington for the climate change analysis described in Task 34. UW is the leading organization in the northwestern United States for climate change data development. UW is one of few providers of climate change data that is accepted by NOAA Fisheries for use in the design of NOAA Fisheries compliant fish passages. HDR has not conducted a detailed analysis of or verified the data provided by UW.

Opinion of Probable Construction Costs:

The opinion of probable construction costs (OPCC) described in Task 43 will be based on information available at the time of the writing of this report and the engineer's experience and qualifications. Since the engineer has no control over the cost of labor, materials, equipment, or services furnished by others, or over the contractor's methods of determining prices, or over competitive bidding or market conditions, the engineer cannot guarantee that construction costs and/or bids will not vary from the OPCC.

## 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.

This proposal is valid for sixty (60) workdays from the date of submission. Thereafter, it may be subject to change.