

**Howard A. Hanson Dam
Additional Water Storage Project**
Section 902 Post Authorization Change Validation
Study – Fish Passage
King County, Washington

**APPENDIX A
ENVIRONMENTAL COMPLIANCE**

DRAFT Integrated Validation Report and
Supplemental Environmental Impact Statement



**US Army Corps
of Engineers®**
Seattle District



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DEPARTMENT OF THE ARMY
SEATTLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 3755
SEATTLE, WASHINGTON 98124-3755

REPLY TO
ATTENTION OF

FEB 14 2014

Environmental and Cultural Resources Branch

Mr. Will Stelle
National Marine Fisheries Service
West Coast Region
7600 Sand Point Way Northeast
Seattle, WA 98115

Dear Mr. Stelle:

Pursuant to Sections 7(a)(2) and 7(c) of the Endangered Species Act (ESA) as amended, the U.S. Army Corps of Engineers (Corps) wishes to submit the enclosed supplemental Biological Assessment (SBA) for Howard Hanson Dam (HHD) Continued Operations on the Green River, King County, Washington, and to initiate formal consultation. Since 2000 there have been new species listed under the ESA including Puget Sound steelhead and Southern Resident killer whale and new critical habitat designations for Puget Sound Chinook salmon, Puget Sound/Coastal bull trout, Puget Sound steelhead (proposed), and Southern Resident killer whale. Moreover, there have been changes to cost sharing, re-designation of project elements from an ecosystem restoration focus to a mitigation focus, and changes in feasibility of specific project elements proposed within the 2000 BA. The Corps has produced a SBA to reflect these changes and to ensure that continued operation of HHD is in compliance with the ESA.

The proposed action is to operate HHD to provide 1) flood-risk management of the Green River; 2) low-flow augmentation for fish conservation during the summer and fall; 3) ecosystem restoration including additional flow augmentation, gravel, and wood nourishment; and 4) water storage for municipal and industrial purposes. In light of the changes introduced above, the Corps is modifying its proposed action for purposes of Section 7 consultation to not include the fish passage facility as was proposed under the Additional Water Storage Project (AWSP) and presented in the 2000 BA.

The proposed action presented in this SBA comprises several separate and distinct projects that were implemented at different points in time and have different purposes, authorizations, and funding mechanisms. These distinct projects can be further distinguished by their various funding sources and accounts and the nature of required cost-sharing imposed on non-Federal partners. Categorization of the separable elements of the proposed action may be crucial to the budgetary feasibility of the project. In order to apportion the effect of the provisions of the Biological Opinion among this mixture of authority bases and associated funding mechanisms, the consultation conclusions applicable to the proposed action need to be further allocated to individual project elements. In order to help the Corps conduct this allocation process, the Corps

requests that the Services allocate specific project effects and regulatory requirements to the appropriate project element to the degree possible. There are a total of five separable project elements as described in the SBA.

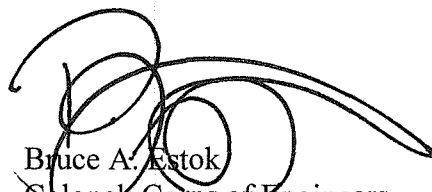
For the purpose of this SBA, the timeframe for the effects analysis is 30 years from implementation of the proposed action. This timeframe is based on the projected length of time that will pass before "Phase 2" of the authorized project is expected to be implemented. Phase 1 of the AWSP is included in the proposed action presented in this SBA. Tacoma has projected a need to implement Phase 2 of the AWSP in 30 years. Phase 2 includes additional water storage and habitat improvement projects. This change in operations would be initiated only following interagency coordination procedures prescribed in the project authorization, and would likely trigger the need to reinstate consultation under the ESA.

Your response in the form of a draft Biological Opinion (BiOp) by March 15, 2014, would be greatly appreciated so that the Corps may review it, respond, and have discussions with your agency by mid-April. While this timeline is aggressive, our agencies met for informal discussions on January 31 and February 10, 2014. Further, the first opportunity to fund any BiOp requirements will be Fiscal Year (FY) 2016. The Corps' present FY 2016 budget development schedule entails submission of Construction General requirements by May 2016 and Operations and Maintenance requirements by June 2016.

Please feel free to contact Mr. Scott Pozarycki at (206) 764-3316 or scott.v.pozarycki@usace.army.mil or Seattle District's Endangered Species Act Coordinator, Mr. Jeff Laufle, at (206) 764-6578 or jeffrey.c.laufle@usace.army.mil.

A copy of this letter is being sent to Mr. Ken Berg of the U.S. Fish and Wildlife Service, Washington Fish and Wildlife Office, 510 Desmond Drive SE, Suite 102, Lacey, WA 98503.

Sincerely,



Bruce A. Estok
Colonel, Corps of Engineers
District Commander

Enclosure



DEPARTMENT OF THE ARMY
SEATTLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 3755
SEATTLE, WASHINGTON 98124-3755

REPLY TO
ATTENTION OF

FEB 14 2014

Environmental and Cultural Resources Branch

Mr. Ken Berg
U.S. Fish and Wildlife Service
Washington Fish and Wildlife Office
510 Desmond Dr. SE, Suite 102
Lacey, WA 98503

Dear Mr. Berg:

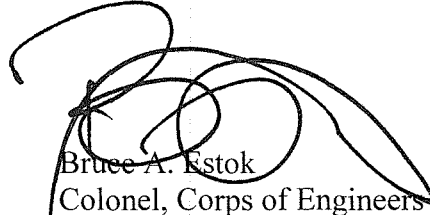
Pursuant to Sections 7(a)(2) and 7(c) of the Endangered Species Act (ESA) as amended, the U.S. Army Corps of Engineers (Corps) wishes to submit the enclosed Supplemental Biological Assessment (SBA) for Howard Hanson Dam (HHD) Continued Operations on the Green River, King County, Washington. Since 2000 there have been new species listed under the ESA including Puget Sound steelhead and Southern Resident killer whale and new critical habitat designations for Puget Sound Chinook salmon, Puget Sound/Coastal bull trout, Puget Sound steelhead (proposed), and Southern Resident killer whale. Moreover, there have been changes to cost-sharing, redesignation of project elements from an ecosystem restoration focus to a mitigation focus, and changes in feasibility of specific project elements proposed within the 2000 BA. The Corps has produced an SBA to reflect these changes and to ensure that continued operation of HHD is in compliance with the ESA.

The proposed action is to operate HHD to provide 1) flood-risk management of the Green River; 2) low-flow augmentation for fish conservation during the summer and fall; 3) ecosystem restoration including additional flow augmentation, gravel, and wood nourishment; and 4) water storage for municipal and industrial purposes. In light of the changes introduced above, the Corps is modifying its proposed action for purposes of Section 7 consultation to not include the fish passage facility as was proposed under the Additional Water Storage Project and presented in the 2000 BA.

The Corps has determined that the proposed action may affect and is likely to adversely affect designated critical habitat for Coastal/Puget Sound bull trout and desires to initiate formal consultation.

For any questions, please contact Mr. Scott Pozarycki at (206) 764-3316 or email scott.v.pozarycki@usace.army.mil or the Seattle District Endangered Species Act Coordinator, Mr. Jeff Laufle, at (206) 764-6578 or email jeffrey.c.laufle@usace.army.mil.

Sincerely,



Bruce A. Estok
Colonel, Corps of Engineers
District Commander

Enclosure



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

September 10, 2002
CERTIFIED MAIL

Philip L. Hoffman
Department of the Army
Seattle District, Corps of Engineers
PO Box 3755
Seattle, WA 98124-3755

Dear Mr. Hoffman:

RE: Order #02SEACR-4581 -- Water Quality Certification/Coastal Zone Consistency
Determination for U.S. Army Corps of Engineers, Howard Hanson Dam Fish Passage
Structure

The request for certification for proposed work in and adjacent to the Green River has been reviewed. On behalf of the State of Washington, we certify that the proposed work, as conditioned by the enclosed Order, will comply with applicable provisions of Sections 301, 302, 303, 306, and 307 of the Clean Water Act, as amended, and other appropriate requirements of state law. This letter also serves as the state response to the Corps of Engineers.

Pursuant to 16 U.S.C. 1456 et. seq. (Section 307(c)(3) of the Coastal Zone Management Act of 1972 as amended), Ecology concurs with the applicant's determination that this work will be consistent with the approved Washington State Coastal Zone Management Program. This concurrence is based upon the applicant's compliance with all applicable enforceable policies of the Coastal Zone Management Program, including Section 401 of the Federal Water Pollution Control Act.

This certification is subject to the conditions contained in the enclosed Order. If you have any questions, please contact Mark Schuppe at (509) 575-2384. Written comments can be sent to him at the Department of Ecology, Central Regional Office, 15 W. Yakima Avenue, Suite 200, Yakima, WA 98902, or at msch461@ecy.wa.gov. The enclosed Order may be appealed by following the procedures described in the Order.

Sincerely,

Derek I. Sandison, Section Manager
Shorelands and Environmental Assistance Program

Philip L. Hoffman
September 10, 2002
Page 2

DIS:MS:gh
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Enclosure: Order

[cc: Alice Kelly, Ecology - NWRO
Ron Devitt, Ecology - NWRO
Yvonne Oliva, Ecology - HQ
Larry Fisher, WA Department of Fish and Wildlife - Bellevue

**IN THE MATTER OF GRANTING
A WATER QUALITY
CERTIFICATION TO:**
U.S. Army Corps of Engineers
in accordance with 33 U.S.C. 1341
FWPCA § 401, RCW 90.48.260,
and Chapter 173-201A WAC

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ORDER #02SEACR-4581
U.S. Army Corps of Engineers Reference
No. PL-02-04. To construct a fish passage
facility at Howard Hanson Dam, within
Eagle Gorge Reservoir at river mile 64 of
the Green River, upstream of the City of
Auburn, King County, Washington.

TO: Phillip L. Hoffman
US Army Corps of Engineers
Seattle District
P.O. Box 3755
Seattle, WA 98124

On July 8, 2002, a public notice for a proposed water quality certification from the State of Washington was distributed for the above-referenced project pursuant to the provisions of 33 U.S.C. 1341 (FWPCA § 401). The proposed project entails installation of a cofferdam, including 50,000 cubic yards of rock excavation and removal, excavation of the left bank for hydraulic function augmentation, construction of the fish passage facility in the dry behind the cofferdam, construction of a new access road to the existing intake tower, and the construction and installation of new fish transport pipes in the flood control tunnel. The project is located on the reservoir side of Howard Hanson Dam at river mile 64 of the Green River, King County, Washington, and within Sections 27 and 28, Township 21 North, Range 8 East, W.M. The purpose of the project is to provide increased fish passage through the dam for anadromous fish listed under the Endangered Species Act.

AUTHORITIES:

In exercising authority under 33 U.S.C. 1341, 16 U.S.C. 1456, and RCW 90.48.260, Ecology has investigated this application pursuant to the following:

1. Conformance with applicable water quality-based, technology-based, and toxic or pretreatment effluent limitations as provided under 33 U.S.C. Sections 1311, 1312, 1313, 1316, and 1317 (FWPCA Sections 301, 303, 306, and 307);
2. Conformance with the state water quality standards as provided for in Chapter 173-201A WAC authorized by 33 U.S.C. 1313 and by Chapter 90.48 RCW, and with other appropriate requirements of state law; and
3. Conformance with the provision of using all known, available, and reasonable methods to prevent and control pollution of state waters as required by RCW 90.48.010.

*Order #02SEACR-4581, U.S. Army Corps of Engineers
September 10, 2002
Page 2 of 7*

CONDITIONS OF ORDER #02SEACR-4581 AND WATER QUALITY CERTIFICATION:

In view of the foregoing and in accordance with 33 U.S.C. 1341, RCW 90.48.260 and Chapter 173-201A WAC, water quality certification is granted to the U.S. Army Corps of Engineers subject to the following conditions:

A. No Impairment of Water Quality:

A1. The Green River and Eagle Gorge Reservoir (WRIA #9) are Class AA waters of the state. Certification of this proposal does not authorize the U.S. Army Corps of Engineers to exceed applicable state water quality standards (Chapter 173-201A WAC) or sediment quality standards (Chapter 173-204 WAC). Water quality criteria contained in WAC 173-201A-030(1) and WAC 173-201A-040 shall apply to this project, unless otherwise authorized by Ecology. This Order does not authorize temporary exceedances of water quality standards beyond the limits established in WAC 173-201A-110(3). Furthermore, nothing in this certification shall absolve the U.S. Army Corps of Engineers from liability for contamination and any subsequent cleanup of surface waters or sediments occurring as a result of project construction or operations.

The Green River (Segment YD05HE) has been identified on the current 303(d) list as exceeding state water quality standards for temperature. This proposed project shall not result in further exceedances of this standard. The water quality standard for the above-listed parameter is:

Temperature – Temperature shall not exceed 16.0° C due to human activities. When natural conditions exceed 16.0° C, no temperature increases will be allowed that will raise the receiving water temperature by greater than 0.3° C. Incremental temperature increases resulting from point source activities shall not, at any time, exceed $t = 23/(T+5)$, where:
 t = The maximum permissible temperature increase measured at a mixing zone boundary, and
 T = The background temperature as measured at a point or points unaffected by the discharge and representative of the highest ambient water temperature in the vicinity of the discharge.
 Incremental temperature increases resulting from nonpoint source activities shall not exceed 2.8° C.

B. Temporary Modification of Water Quality Standards:

B1. Conditions listed below are issued under the authority of Chapter 90.48 RCW and Chapter 173-201A WAC and are intended to allow short-term modification of state water quality standards. Except as specifically authorized by this Order, all applicable provisions of Chapter 173-201A WAC shall be met.

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B2. Certification of this project does not authorize the applicant to exceed the turbidity standard for Class AA waters beyond the mixing zone described below at condition B3. Turbidity in Class AA waters shall not exceed 5 NTU over background turbidity when the background turbidity is 50 NTU or less, or have more than a 10 percent increase in turbidity when the background turbidity is more than 50 NTU.

B3. Mixing Zone: Consistent with WAC 173-201A-100(7) and -110(3) a mixing zone is established within which the turbidity standard is waived. The mixing zone is established to allow only temporary exceedances of the turbidity criteria during and immediately after project construction. The temporary turbidity mixing zone shall be as follows:

For projects working within or along lakes, ponds, wetlands, estuaries, marine waters, or other non-flowing waters, the point of compliance is typically at a radius of 150 feet from the activity causing the turbidity exceedence. This will conflict with the U.S. Army Corps of Engineers operational safety requirements since it would put the point of compliance too close to the intake structure for boats to approach to conduct water quality monitoring. The point of compliance shall be at the closest point beyond 150 feet that does not encroach on the safety zone for the intake structure. The U.S. Army Corps of Engineers shall provide Ecology with the information that identifies the safety zone for the intake structure.

C. Water Quality and Supply Protection:

C1. All activities authorized by this certification shall comply with the June 2002 Water Quality and Supply Protection Plan, Howard Hanson Dam, Phase 1 Fish Passage Construction, prepared for the U.S. Army Corps of Engineers and Tacoma Public Utilities by Economic and Engineering Services, Inc.

C2. The following plans required to be developed by the contractor in the above-referenced plan, shall be submitted to Ecology. Activities authorized by this certification shall not begin until these plans have been approved by Ecology.

- Emergency Demobilization Submittal
- Erosion and Sediment Control Submittal
- Spill Prevention, Response, and Containment Submittal
- Pollution Control Submittal
- Emergency Response Submittal

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D. Construction:

D1. Construction Stormwater and Erosion Control:

- D1a. Work in or near waters of the state shall be done so as to minimize turbidity, erosion, and other water quality impacts. Construction stormwater, sediment, and erosion control Best Management Practices suitable to prevent exceedances of state water quality standards shall be in place before starting clearing, filling, and grading work at the impact sites.
- D1b. A construction stormwater general permit shall be obtained from Ecology's Water Quality Program prior to the commencement of any activities authorized by this certification.
- D1c. Prior to clearing and grading in wetlands, the adjacent wetlands shall be protected from construction impacts. Construction fencing or flagging (using brightly colored tape at no less than twenty-five foot (25') intervals) of the existing wetlands and stream channels to be protected shall be completed prior to clearing. All project staff shall be trained to recognize construction fencing or flagging that identifies wetland boundaries. Equipment shall not be moved into or operated in wetlands or stream channels that are not authorized to be filled.
- D2. During clearing and filling at the various project sites, the U.S. Army Corps of Engineers shall take all necessary measures to minimize the alteration or disturbance of existing wetland and upland vegetation.
- D3. Construction debris and excess excavated or dredged material shall be disposed of at an upland location so that it cannot enter a waterway and in a manner that prevents degradation of state waters.
- D4. Concrete and concrete by-products shall be completely sealed off from the ordinary high water mark (OHWM) and wetted perimeter of Eagle Gorge Reservoir and the Green River, totally contained through the use of sealed forms, and not allowed to contaminate or enter the OHWM.
- D5. Wash water containing oils, grease, or other hazardous materials resulting from wash down of equipment or working areas shall be contained for proper disposal, and shall not be discharged into state waters or storm drains.
- D6. A sand and gravel general permit shall be obtained from Ecology's Water Quality Program prior to the operation of any concrete batch plant, or prior to the initiation of any activity that would require authorization by a sand and gravel general permit.

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D7. The U.S. Army Corps of Engineers shall provide written notice to Ecology's, Mark Schuppe, at least 14 days prior to the start of placing fill in wetlands or other waters of the state, and within 14 days after completion of construction at each project site and mitigation site.

D8. Clean Fill Criteria: The U.S. Army Corps of Engineers shall ensure that fill placed for the proposed project does not contain toxic materials in toxic amounts.

E. Emergency/Contingency Measures:

E1. In the event the U.S. Army Corps of Engineers is unable to comply with any of this Order's terms and conditions due to any cause, the U.S. Army Corps of Engineers shall:

- Immediately take action to stop, contain, and clean up unauthorized discharges or otherwise stop the violation and correct the problem.
- Notify Ecology of the failure to comply. Spill events shall be reported immediately to Ecology's 24-Hour Spill Response Team at (425) 649-7000, and within 24 hours to Ecology's, Ron Devitt, at (425) 649-7028.
- Submit a detailed written report to Ecology within five days that describes the nature of the violation, corrective action taken and/or planned, steps to be taken to prevent a recurrence, results of any samples taken, and any other pertinent information.

Compliance with this condition does not relieve the U.S. Army Corps of Engineers from responsibility to maintain continuous compliance with the terms and conditions of this Order or the resulting liability from failure to comply.

E2. Fuel hoses, oil drums, oil or fuel transfer valves and fittings, etc., shall be checked regularly for drips or leaks, and shall be maintained and stored properly to prevent spills into state waters. No refueling of equipment shall occur over, or within 50 feet of rivers, creeks, or wetlands.

F. General Conditions:

F1. This certification does not exempt the U.S. Army Corps of Engineers or its contractors from compliance with other statutes and codes administered by federal, state, and local agencies.

F2. The U.S. Army Corps of Engineers will be out of compliance with this certification if the project is constructed and/or operated in a manner not consistent with the project description contained in the Public Notice for certification, or as otherwise approved by Ecology. Additional mitigation measures may be required through other local, state, or federal requirements.

*Order =02SEACR-4581. U.S. Army Corps of Engineers
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- F3. The U.S. Army Corps of Engineers will be out of compliance with this certification and must reapply with an updated application if five years elapse between the date of the issuance of this certification and the beginning of construction and/or discharge for which the federal license or permit is being sought.
- F4. The U.S. Army Corps of Engineers will be out of compliance with this certification and must reapply with an updated application if the information contained in the Public Notice is voided by subsequent submittals to the federal agency. Any future action at this project location, emergency or otherwise, that is not defined in the public notice, or has not been approved by Ecology, is not authorized by this Order. All future actions shall be coordinated with Ecology for approval prior to implementation of such action.
- F5. Copies of this Order shall be kept on the job site and readily available for reference by Ecology personnel, the construction superintendent, construction managers and foremen, and state and local government inspectors.

To avoid violations or non-compliance with this Order, the U.S. Army Corps of Engineers shall ensure that project managers, construction superintendents, and other responsible parties have read and understand relevant aspects of this Order and any subsequent revisions or Ecology-approved plans.

The U.S. Army Corps of Engineers shall provide to Ecology a signed statement from each project manager and construction superintendent working at the project and mitigation sites that they have read and understand the conditions of the above-referenced permits, plans, and approvals. These statements shall be provided to Ecology no less than seven (7) days before construction begins at each project or mitigation site.

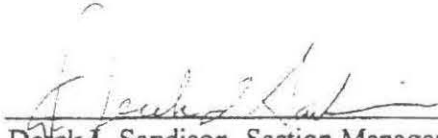
- F6. The U.S. Army Corps of Engineers shall provide access to the project site and all mitigation sites upon request by Ecology personnel for site inspections, monitoring, necessary data collection, or to ensure that conditions of this Order are being met.
- F7. Nothing in this Order waives Ecology's authority to issue additional orders if Ecology determines further actions are necessary to implement the water quality laws of the state. Further, Ecology retains continuing jurisdiction to make modifications hereto through supplemental order, if additional impacts due to project construction or operation are identified (e.g., violations of water quality standards, downstream erosion, etc.), or if additional conditions are necessary to further protect the public interest.
- F8. Liability: Any person who fails to comply with any provision of this Order shall be liable for a penalty of up to ten thousand dollars (\$10,000) per violation for each day of continuing noncompliance.

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September 10, 2002
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Appeal Process:

Any person aggrieved by this Order may obtain review thereof by appeal, within thirty (30) days of receipt of this Order, to the Washington Pollution Control Hearings Board, P.O. Box 40903, Olympia, WA 98504-0903. Concurrently, a copy of the appeal must be sent to the Department of Ecology, Enforcement Section, P.O. Box 47600, Olympia, WA 98504-7600. These procedures are consistent with the provisions of Chapter 43.21B RCW and the rules and regulations adopted thereunder.

Dated September 10, 2002 at Yakima, Washington.


Derek I. Sandison, Section Manager
Shorelands and Environmental Assistance Program
Department of Ecology
State of Washington

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Substantive Compliance with Section 404 of the Clean Water Act
Howard A. Hanson Dam Fish Passage Facility
Part of the Additional Water Storage Project
Howard Hanson Dam, King County, Washington

1 INTRODUCTION

The purpose of this document is to record the U.S. Army Corps of Engineers' (Corps) evaluation and findings regarding this project pursuant to Section 404 of the Clean Water Act (CWA). The actions covered by this document are the following: construction of a fish passage facility (FPF) at the Howard A. Hanson Dam (HAHD) including excavation behind the cofferdam, construction of the tunnel(s) to facilitate fish passage downstream, and construction of the downstream tunnel outlet, which includes streambank stabilization. In addition, the Corps will implement an interim measure to reduce outflow rates at the dam to a maximum of 5,000 cubic feet per second (cfs) during most instances of moderately high inflow events during winter. The FPF and the interim measure are Reasonable and Prudent Alternatives described in detail in the 2019 Biological Opinion (BiOp) from the National Marine Fisheries Service (NMFS). Tacoma Public Utilities (TPU) is the non-Federal sponsor in partnership with the Corps for this project. The information contained in this document reflects the findings of the project record. Specific sources of information included the following:

1. Final Feasibility Study Report and Final Environmental Impact Statement (EIS) 1998 and the 2001 Record of Decision
2. U.S. Fish and Wildlife Service (USFWS) Biological Opinion (BiOp), Reference No. 1-3-00-F-1381. 2000
3. National Marine Fisheries Service (NMFS) BiOp, Reference No. WSB-00-198. 2000
4. Substantive Compliance with Section 404 of the Clean Water Act, Howard Hanson Dam Fish Passage Structure. 2005
5. NMFS Anadromous Salmonid Passage Facility Design. 2011
6. NMFS BiOp, Reference No. WCR-2014-997. 2019
7. USFWS BiOp, pending

This document contains the substantive compliance issues from the CWA 404(b)(1) Guidelines [40 CFR §230.12(a)] and the Regulatory Program of the Corps [33 CFR §320.4(a)].

As part of the ecosystem restoration and mitigation for the Additional Water Storage Project (AWSP), the Corps began engineering design and construction of a downstream FPF in 2003. Contractors were able to complete excavation of the site and construction of the temporary cofferdam on the left bank of the river just upstream of and connected to HAHD. This cofferdam would serve to separate the construction site from the reservoir during construction of the FPF. However, due to anticipation of exceeding the cost limit, the project was placed on hold in 2011, all construction was halted, and the cofferdam has remained in place. After NMFS issued their 2019 BiOp with a requirement to provide downstream fish passage at HAHD by

2030, the Corps initiated the process to reevaluate the FPF design to comply with the provisions of the Reasonable and Prudent Alternative, taking in consideration new technologies in fish passage, and selected a new design.

2 DESCRIPTION OF THE PROPOSED DISCHARGE

The updated design is a fixed multiport collection structure (Figure 1) that would allow fish collection and passage from a set of five intake ports at multiple water levels as the reservoir elevation changes. At low forebay elevations, the lower intake ports would be used. As the forebay elevation increases, the lower intake ports would be closed, and the higher elevation intake ports would be opened. Depending on forebay elevation, either one or two of the five intake ports may be used at one time. The intake port shape would be designed to meet required water flows for fish attraction. Each intake port would be designed to withdraw up to 600 cubic feet per second (cfs) of water from the reservoir, so two intake ports could operate at once for a total withdrawal of 1,200 cfs. Inclined screens would be used to reduce the flow with fish from up to 600 cfs per intake port decreasing to about 25-35 cfs per intake port to safely screen and pass fish based on NMFS fish passage design criteria.

Once collected into the multiport structure, fish are transported downstream using one or more steep bypass pipes. The passage route connecting the multiport collector to the release site can run along the downstream side of the dam, cut through the left abutment, or connect to an existing bypass structure. Although water velocities in these types of systems exceed the NMFS fish passage criteria, if the bypass is designed so the velocities are slowed gradually before discharging to the tailrace, then exposure to abrasion, shear, and impacts are minimized to acceptable levels. The bypass pipe(s) would include a shallow bend at the base before going horizontal or would use some other feature to dissipate energy and slow down velocities before release.

The transport pipe exit needs to meet the NMFS bypass fish release location criteria as established in their 2011 document "Anadromous Salmonid Passage Facility Design". The location must minimize predation, be free of eddies and reverse flow, be at a sufficient depth to avoid injuries at all river and bypass flows, have river velocities that are greater than 4 feet per second (fps), and provide controls for avian predation if necessary. The segment of river that is immediately downstream from the stilling basin at the base of the dam is a suitable location. The outlet will likely be within this section at approximately 1,000 feet downstream from the base of the dam. This outlet would require excavation and installation in the left bank below the ordinary high water mark, with installation of an open box-like structure at its outlet in the river.

The FPF must be able to handle debris that enters the reservoir from upstream sources. Debris typically consists of organic, woody material. A submerged Modular Inclined Screen (MIS) would likely be used to allow for an increase to total attraction flow rate. These screens are designed to be cleaned by periodically tilting the screens so accumulated debris can be

removed by backflushing water out of the entrance. The conceptual-level design has one MIS in each of the intake ports of the structure.

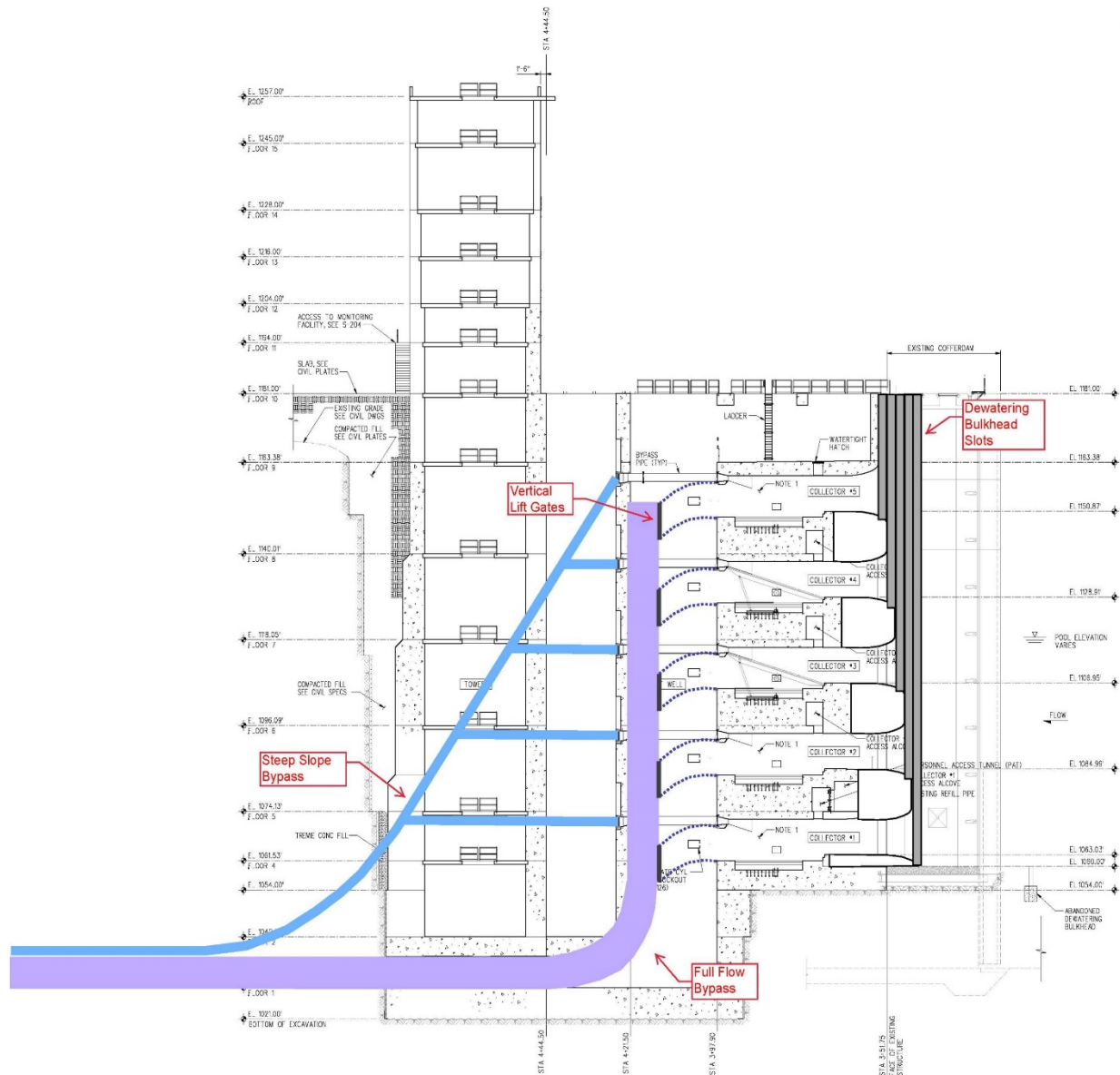


Figure 1. Conceptual drawing of a multiport collection and steep slope bypass structure.

3 PROJECT PURPOSE AND NEED

The overall purpose for the proposed action is to restore downstream fish passage past HAHD as authorized in WRDA 1999 as component of the AWSP. The “action” is defined as updating the design of the FPF to be constructed at HAHD. The need for this action arises from the determination that the design evaluation in the 1998 EIS and the project authorization via WRDA 1999 are not expected to meet the performance criteria in RPA 1 of the 2019 National Marine Fisheries Service (NMFS) jeopardy Biological Opinion, as a reasonable and prudent

alternative necessary to prevent the likelihood of jeopardy to listed species or the destruction or adverse modification of designated critical habitat, as committed by the Seattle District in the required response to that BiOp. Downstream fish passage would improve abundance and productivity of ESA-listed salmon in the Green/Duwamish basin and contribute to the survival and recovery of Southern Resident killer whales (*Orcinus orca*) by increasing the productivity of their primary prey item.

Outmigrating juvenile salmonids in the upper Green River must pass through the existing intake at HAHD. Depending on season, pool height, depth to outlet, and other factors, between 5 and 25% of juveniles survive. Construction of the FPF is expected to increase the survival rate by meeting the BiOp criteria of 95% attraction of juvenile outmigrating fish and 98% survival through the facility.

4 PROPOSED ACTION AND ALTERNATIVES CONSIDERED

The Corps is proposing to update the design of the FPF, which was one component of the overall AWSP described in the 1998 EIS, and the CWA 404 analysis completed for the original design in 2005. The National Environmental Policy Act (NEPA) requires that the action alternative be compared to a no-action alternative. Because the FPF component of the preferred alternative in the 1998 EIS has not yet been constructed, the no-action alternative for comparison in this document is to leave the facility unconstructed and to not restore downstream fish passage at HAHD.

4.1 Alternative 1 No Action

Under this alternative, downstream salmonid migration would not be restored because an FPF would not be constructed. The excavated hole (Figure 2) would be filled in for dam structural integrity, and the tunnel for fish passage would not be built. The area behind the cofferdam would continue to fluctuate with the reservoir level from water seepage through the cofferdam and rainfall until the construction to fill the hole is completed. No fish have been planted in the upper watershed for many years due to the low survival rate. If any Tribe or fisheries agency planted fish above the dam, juvenile fish would have to locate the existing HAHD outlet tunnel for downstream fish passage. These surface-oriented fish would still struggle with downstream passage due to the depth to the outlet tunnel of the dam. Mortality rates would remain high. Therefore, this alternative fails to meet the project purpose and is not in compliance with the ESA and the NMFS 2019 BiOp. The Corps rejected this alternative from further evaluation.



Figure 2. Fish passage facility excavation.

4.2 Alternative 2 Updated Design Fish Passage Facility

Under this alternative, the FPF would be constructed using the updated design. The upstream portion would be constructed inside the cofferdam that was previously constructed. Water currently within the boundaries of the cofferdam would be pumped out and the site would be cleaned of debris and sediments. The FPF will include pipes for fish passage with the most likely pathway being a tunnel through the dam's left bank abutment with the outlet approximately 1,000 feet downstream of the base of HAHD. Once the tunnel exits the left bank from underground, it will daylight into a stilling basin approximately 150 feet long by 40 feet wide at a 30-degree angle pointing downstream along the bank into the river. The downstream end of the basin will transition into a flat grade as it approaches the river, and the bottom of the box-like structure will be underwater at all river flows.

Construction duration is expected to be 3-4 years with limited work during the 4 months of flood season (November through February). The new FPF is expected to be fully operational in 2030.

5 SIGNIFICANT DEGRADATION, EITHER INDIVIDUALLY OR CUMULATIVELY, OF THE AQUATIC ENVIRONMENT.

a) *Effects on Physical, Chemical, or Biological Characteristics of the Aquatic Ecosystem.*

The proposed action includes the removal of mature trees and shrubs at the tunnel outlet site. Clearing and grubbing will be limited to the maximum extent practicable.

After the outlet and the supporting crib wall is completed, the site will be replanted with native vegetation.

Construction related turbidity may occur during any in-water work. Turbidity would be monitored during construction. Water quality monitoring for turbidity will be performed for a minimum of one day at the start of each new sediment-generating activity. If significant sediment enters the river and high levels of turbidity occur, work will be halted until the situation can be assessed and corrected. The Corps will prepare a comprehensive Care and Diversion of Water Plan to be strictly followed during construction.

b) Effects on Recreational, Aesthetic, Historical, and Economic Values.

The FPF above the dam and the outlet below the dam are located in restricted areas at an active Corps project within a closed municipal watershed with no recreational opportunities at the project site. The outlet will be a large pipe with a supporting crib wall, which will be a small footprint on the left bank. The action will not degrade any recreational, aesthetic, or economic values for the importance of fish passage. The change to the HAHD landmark's historical values will be accounted for in a programmatic agreement under Section 106 of the National Historic Preservation Act.

c) Finding

The Corps has determined that adverse impacts to aquatic ecosystem function and values will not occur.

6 APPROPRIATE AND PRACTICABLE MEASURES TO MINIMIZE POTENTIAL HARM TO THE AQUATIC ECOSYSTEM.

a) Impact Avoidance and Minimization Measures

Through the evaluation of alternatives, the project will avoid continued adverse impacts to the fishery resources of the HAHD reservoir and the Green River.

The project will take all steps during construction to minimize impacts to aquatic resources and will outline these steps in a formal Care and Diversion of Water Plan as well as a Stormwater Pollution Prevention Plan (SWPPP). The Corps will employ pollution prevention measures for storm and surface waters during construction. All storm and surface waters will be collected and treated prior to discharge into the reservoir. The project area already has an extensive surface water diversion and filtration system installed as part of the initial construction process in 2005-2011. The Corps will monitor water quality during construction to assure that any impacts to water quality will be temporary in nature and minimal in overall impact. Contingencies will be

in place if any of the primary minimization measures fail to achieve their intended function.

In-water work will be limited to the in-water work window of July 1 to September 30 for the Green River upper watershed above the limit of anadromous fish occupancy. Should additional time be required, the Corps will coordinate the time extension with NMFS, Washington Department of Fish and Wildlife, and Washington State Department of Ecology (Ecology).

Disturbance of existing vegetation will be minimized, and vegetation removal will be limited to the tunnel outlet site and temporary access road (if required) for its construction. Noxious weeds will be disposed of separately from other organic materials at an approved off-site location.

b) Compensatory Mitigation

The Corps has determined that the project, with a purpose of restoration of access to habitat for listed anadromous fish, meeting performance standards of collection and passage survival prescribed by NMFS's Reasonable and Prudent Alternative, requires no mitigation through compensation.

c) Findings

The Corps has determined that all appropriate and practicable measures have been taken to minimize potential harm to the aquatic ecosystem.

7 OTHER FACTORS IN THE PUBLIC INTEREST

a. Fish and Wildlife

The Corps coordinated with USFWS and NMFS. In 2019 NMFS issued a BiOp with Reasonable and Prudent measures, one of which is Action Item #1: "To avoid long-term jeopardy and restore adversely modified critical habitat, the Corps must: Design and build a permanent downstream fish passage system for HAHD according to the project development milestones requiring construction of an FPF. Implementing the proposed action and RPA will take many years before the permanent downstream fish passage system is complete. The Corps must meet the design and construction schedule milestones provided in Appendix A in order to avoid delays in meeting the completion date of 2030."

b. Water Quality

The Corps coordinated the original design with Ecology through the CWA Section 401 certification process and received a permit in September 2002 (Order #02SEACR-4581). In that permit, Ecology concluded that there are no permanent impacts to water quality from the project, and construction impacts will be of short duration and minimal in nature. The Order expired by its terms after five years, and due to the update in the

facility's design and length of time passed since construction stopped, the Corps will complete a new CWA Section 401 process prior to construction.

c. Historical and Cultural Resources

The Corps coordinated the original project with the Washington State Historic Preservation Office (SHPO), Tacoma Public Utilities (TPU), and the Muckleshoot Indian Tribe, concluding with a Memorandum of Agreement in August 2003. The Corps is consulting with SHPO, TPU, and the Muckleshoot Tribe on the updated design including the tunnel outlet. A new Programmatic Agreement will be developed to address the change to the design of the fish passage, the phased Section 106 process, and to address potential effects to historic properties. The Corps will be in full compliance with the National Historic Preservation Act prior to construction.

d. Activities Affecting Coastal Zones

The Corps completed a Coastal Zone Consistency Determination for the original project concluding that it is consistent with the Coastal Zone Management Act and is consistent to the maximum extent practicable with the State of Washington's Shoreline Management Act and the King County Shoreline Master Program. In their 2002 Order #02SEACR-4581, Ecology concurred with this determination. The Corps has updated the Consistency Determination considering the updated design, updates to King County's Shoreline Master Program, and updates to the enforceable policies of the Washington Shoreline Management Plan. The Corps has maintained the determination that the project is consistent to the maximum extent practicable with the State's Shoreline Management Act and King County Shoreline Master Program.

The upstream part of the updated FPF will be within the footprint inside the previously constructed cofferdam. Modern design features include tunnels through the dam's left bank abutment to the Green River. The upstream facility, tunnels, and outlet will be constructed solely on Federal property.

e. Environmental Benefits

Completion of the project will restore fish passage for migrating juvenile salmonids, including federally protected species, and provide access for adult salmon spawning and juvenile rearing to over 60 miles of undeveloped habitat in the watershed above HAHD. The restoration is expected to contribute to recovery of ESA-listed Puget Sound Chinook salmon (*Oncorhynchus tshawytscha*), and steelhead (*O. mykiss*). The Green River ecosystem will benefit from recovery of keystone species. Additionally, recovery of Chinook salmon is anticipated to aid in recovery of ESA-listed Southern Resident killer whales by increasing the abundance of their primary prey item.

f. Navigation

Waters between HAHD and the TPU's Water Headworks are closed to the public; therefore, any boating activities would be incidental by personnel allowed in the area for required work or study purposes. The FPF will not change total flows released from HAHD downstream to the Green River, thus, the Corps has determined that this project will not affect navigation.

g. Finding

Based on the analyses presented in the Supplemental Environmental Impact Statement, as well as the following 404(b)(1) Evaluation and Application by Analogy of the General Policies for the Evaluation of the Public Interest, the Corps finds that this project complies with the substantive elements of Section 404 of the CWA.

8 CONCLUSION

Based on the analyses presented in the Supplemental Environmental Impact Statement, as well as the following 404(b)(1) Evaluation, the Corps finds that this project complies with the substantive elements of Section 404 of the CWA.

Attachment A
Clean Water Act 404(b)(1) Evaluation [40CFR §230]
404(b)(1) Evaluation [40 CFR §230]

Potential Impacts on Physical and Chemical Characteristics [Subpart C]:

1. Substrate [230.20]

Excavation and fill will occur on the left bank downstream of HAHD for the FPF tunnel outlet, supporting crib wall, and new stilling basin for the fish release site. Construction will require some excavation of native sediments and fill with imported materials to stabilize the new pipe's outlet; quantities will be determined at a later stage of design. Any materials not required for reuse on-site will be disposed of in an established upland disposal area approximately 2 miles east of the dam. Establishment of the new stilling basin within the river's substrate will alter the type of aquatic insects that dwell in this small area from those that live within interstitial spaces of gravel to those that cling to surfaces. The area of change is extremely small relative to the total riverbed habitat available in this reach. The scope of change is not expected to alter other trophic levels of the river's ecosystem.

2. Suspended particulates/turbidity [230.21]

Minimal turbidity is expected during construction. Best management practices (BMPs) for sediment control will be used throughout construction to minimize turbidity. Turbidity monitoring of activities that may cause discharge or substrate disturbance will ensure compliance with State standards throughout construction.

3. Water [230.22]

The project is not expected to add any nutrients to the water that could affect the clarity, color, odor, or aesthetic value of the water, or that could reduce the suitability of the Green River for aquatic organisms. Adding fish passage will benefit the aquatic organisms throughout the watershed and will not add any contaminants to the water body. No direct discharge of surface or storm water will occur from the construction site to the reservoir because all surfaces are slanted to direct surface water to a drainage system. Site-derived stormwater will be captured and treated in an enhanced retention pond system before discharge back to the reservoir. The Corps will be monitoring the site before and during construction for a variety of water quality parameters.

4. Current patterns and water circulation [230.23]

A minor and temporary disruption of current pattern and water circulation can be expected during construction, but no permanent changes will occur in the HAHD reservoir. The pathway for water to flow from the reservoir to the river downstream of the dam will have additional pipes to facilitate fish passage. All water management practices for quantities of

water release are expected to remain the same as prior to construction; any changes to water management would be coordinated through the Green River Flow Management Coordination Committee. After construction, flow will be split between the HAHD outflow pipe and the FPF outlet pipe for the months the FPF is passing fish. No adverse changes are expected due to the new outlet for water for water and fish. Aquatic communities are expected to benefit from restoring fish passage.

5. Normal water fluctuations [230.24]

Normal water fluctuations in conjunction with the operation of HAHD for flood risk reduction will not be affected by the project. Water management practices are expected to remain the same for water levels in the reservoir and for discharge according to allocations.

6. Salinity gradients [230.25]

Not applicable.

Potential Impacts on Biological Characteristics of the Aquatic Ecosystem [Subpart D]:

1. Threatened and endangered species [230.30]

This work will not kill any species, impair or destroy habitat, nor facilitate activities incompatible with preserving threatened and endangered species. Construction of the FPF has a purpose of benefiting threatened and endangered species. USFWS and NMFS issued BiOps in 2000, and NMFS provided a new BiOp in 2019 resulting in the requirement for the FPF. USFWS expects to provide an updated BiOp in late 2021. The Corps will comply with all reasonable and prudent alternatives and measures identified in the NMFS BiOp.

Construction of an FPF and having it operational in 2030 is to conform to a Reasonable and Prudent Alternative in a jeopardy decision by NMFS for three species: Puget Sound Chinook salmon, Puget Sound steelhead, and Southern Resident killer whale.

2. Fish, crustaceans, mollusks, and other aquatic organisms in the food web [230.31]

Fish, crustaceans, mollusks, and other aquatic organisms may be displaced by short-term turbidity and pH increases during construction, and a small, localized permanent change to the substrate type and texture at the site of the pipe outlet for fish transport. Miles of natural habitat extend downstream for dispersal of organisms from the site of the outlet pipe's bank stabilization. Construction is not expected to interrupt any reproductive processes of organisms. After construction is complete, the small area of fill would recolonize quickly by surrounding aquatic organisms.

3. Other wildlife [230.32]

The FPF will be built adjacent to the existing intake tower on the Dam. The FPF outlet will be constructed approximately 1,000 feet downstream of the base of HAHD. The final phase of

the tunnel outlet construction will be replanting areas impacted (such as clearing and grubbing) with native vegetation. Overall, only temporary and localized impacts to wildlife and their habitat will occur. Once construction is completed, no long-term impacts to wildlife or biodiversity would remain. The goal of the project is to increase biological productivity of salmonids, thereby improving ecosystem functions.

Potential Impacts on Special Aquatic Sites [Subpart E]:

1. Sanctuaries and refuges [230.40]

The proposed action will have no effect on sanctuaries and refuges.

2. Wetlands [230.41]

The proposed action will have no effect on wetlands.

3. Mud flats [230.42]

The proposed action would have no effect on mudflats.

4. Vegetated shallows [230.43]

The proposed action would have no effect on vegetated shallows.

5. Coral reefs [230.44]

Not applicable, the proposed action is not in marine waters.

6. Riffle and pool complexes [230.45]

The proposed FPF will divert flow from the HAHD outlet tunnel, but it will not affect total quantity of discharge from HAHD. FPF flows are expected to be a maximum of 1,200 cfs, which will be discharged through the outlet pipe approximately 1,000 feet downstream from the base of HAHD. The tunnel outlet will be designed and placed to have no deleterious effects to riffle and pool complexes. The stilling basin at the outlet will function as a pool and will be placed in a reach that is a long riffle; therefore, the new artificial pool area would improve the mix of pool and riffle habitat in this section of river.

Potential Effects on Human Use Characteristics [Subpart F]:

1. Municipal and private water supplies [230.50]

A portion of the water stored at HAHD is for TPU's municipal and industrial water supply. The FPF will not change water allocations nor have any impact to municipal or private water supplies. The proposed construction would not change any water quality parameters affecting potability.

2. Recreational and commercial fisheries [230.51]

There are no effects to commercial and recreational fishing at the project site, as the adjacent watershed is closed to public access. Downstream fishing opportunities may eventually be enhanced by the restoration of fish passage through the HAHD because the purpose of the project is to restore fish populations. The fill associated with construction would not introduce chemical contamination of aquatic organisms.

3. Water related recreation [230.52]

Because the watershed is closed to public access, there is no effect on water-related recreation from the project.

4. Aesthetics [230.53]

During construction, disturbances will come from tunnel blasting, excavation, and heavy equipment noise and exhaust. A change in character of the stream bank from vegetated to stabilized with rock will occur at the tunnel outlet and potentially the opposite bank if bank stabilization is required. The overall aesthetics of the aquatic ecosystem will not be changed with the construction of a new structure adjacent to the current intake tower. The only people who are able to view the project area are employees of the Corps and TPU; no private property owners or members of the public would see a change to the aesthetics of the area.

5. Parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar preserves [230.54]

The project site is not located in a preserve of these types.

Evaluation and Testing [Subpart G]:

1. General evaluation of dredged or fill material [230.60]

Any fill required will be locally sourced either from a local quarry providing clean material, or from an HAHD borrow site, and thus presents no additional impacts. Fill material will be free of contaminants.

2. Chemical, biological, and physical evaluation and testing [230.61]

Because of origin of the fill material, the Corps determined that no further testing is required.

Actions to Minimize Adverse Effects [Subpart H]:

1. Actions concerning the location of the discharge [230.70]

The location of the tunnel outlet will be placed for optimum survival of the juvenile salmonids. The construction management plan will ensure that the minimum footprint

required for construction, including clearing and grubbing, is marked. The Corps will use BMPs to minimize the extent of any turbidity plume during construction.

2. Actions concerning the material to be discharged [230.71]

Any fill required will be locally sourced either from a local quarry providing clean material, or from an HAHD borrow site, and thus presents no additional impacts. Fill material will be free of contaminants.

3. Actions controlling the material after discharge [230.72]

No pollutants will be discharged. The FPF is designed to pass juvenile fish in native waters. Construction of the pipe outlet and any required bank stabilization will have clean, stabilized materials that are intended to remain in place and not erode, slump, or leach into the surrounding aquatic ecosystem. Construction would not occur during unusually high water flows due to considerations of safety and accessibility of the worksite.

4. Actions affecting the method of dispersion [230.73]

The fill material for construction of the FPF will primarily be concrete to build the vertical structure. The fill material on the left bank and in the bed of the river to construct the pipe outlet will have some concrete for a support structure and retaining wall as well as a new stilling basin to transition the fish from the pipe into the river habitat. Through the implementation of BMPs, this discharge is not intended to disperse into the aquatic ecosystem outside the specific area of construction.

5. Actions related to technology [230.74]

The Corps will employ appropriate equipment and machinery for the type of work required for construction of the FPF, blasting and excavating for the fish passage tunnel, and for bank stabilization to support the pipe outlet and new stilling basin. Machinery and methods of transporting the material for discharge will be appropriate for the types of materials and will minimize damage to the environment.

6. Actions affecting plant and animal populations [230.75]

The Corps will coordinate construction activities and features with state and Federal natural resource agencies as well as the Muckleshoot Tribe to minimize impacts to fishery, wildlife, and plant resources. There will be temporary disturbance to wildlife in the project vicinity due to noise from operation of machinery. All areas cleared for staging, access, and construction will be replanted with native species. All typical movement of animals is expected to return to normal around HAHD after construction. Any vegetation removed for construction staging and access would be replanted to the maximum extent practicable. Construction timing will avoid spawning and migration seasons.

7. Actions affecting human use [230.76]

The Corps has taken all appropriate and practicable steps to assure minimal impacts to human use, safety, and use of the area. The area is closed to public access. The construction site is 3 miles upstream from a public water supply intake; therefore, extreme care will be taken to protect water quality. During construction, the Corps will coordinate at least on a weekly basis and likely on a daily basis with TPU, the non-Federal sponsor, for protection of water quality upstream from the public water supply intake.

8. Other actions [230.77]

The Corps will use all applicable BMPs control runoff and other discharges in the proposed construction. HAHD water management protocols have provisions for the needs of fish and wildlife. Protection of the aquatic environment will be incorporated into the designs and specifications for construction.

Application by Analogy of the General Policies for the Evaluation of the Public Interest [33 CFR § 320.4, used as a reference]

1. Public Interest Review [320.4(a)]

All factors relevant to the proposal have been considered. The Corps finds this action to be in compliance with the 404(b)(1) Guidelines and not contrary to the public interest.

2. Effects on wetlands [320.4(b)]

No loss or alteration of wetlands is expected. See 404(b)(1) evaluation above.

3. Fish and wildlife [320.4(c)]

The Corps has consulted with USFWS, NMFS, the Washington Department of Fish and Wildlife, and the Muckleshoot Tribe for this project. All entities are in favor of the construction of the FPF. The Corps completed the Fish and Wildlife Coordination Act process as documented in the 1998 Environmental Impact Statement for the Additional Water Storage Project.

4. Water quality [302.4(d)]

This work is not exempt from Section 404 of the CWA. The Corps does not issue permits for its own civil works activities. Nevertheless, the Corps has accepted responsibility for the compliance of its civil works projects with Section 404 of the CWA, as well as the obligation to seek water quality certification under Section 401.

5. Historic, cultural, scenic, and recreational values [320.4(e)]

The Corps has consulted with the Muckleshoot Tribe and the Washington State Historic Preservation Office (SHPO). The site of the FPF is within the footprint of HAHD, an existing Federal flood damage reduction project. Construction was completed in 1962. Since completion of the EIS in 1998 and signing the ROD in 2001, HAHD has been determined

eligible to the National Register of Historic Places. The Corps will update the 2003 Memorandum of Agreement with Washington SHPO and the Muckleshoot Tribe for the construction of the revised design of the FPF and tunnel outlet.

6. Effects on limits of the Territorial Sea [320.4(f)]

Not applicable.

7. Consideration of property ownership [320.4(g)]

The site is on Federal property, and is surrounded by the Upper Green River Watershed, which is owned by the city of Tacoma to protect water supply controlled by TPU. The project will have no adverse effects to property held by these entities.

8. Activities affecting coastal zones [320.4(h)]

The FPF is located in a State of Washington designated coastal county, and as such must comply to the maximum extent practicable with the State of Washington Shoreline Management Act. The project will be located on Federal property and thus all development activity lies outside the State's coastal zone, although effects are reasonably anticipated to be generated on the uses and resources of the coastal zone. The FPF does not constitute new or additional adverse effects to the site, with respect to shoreline function. In addition, the completion of the FPF will enhance fisheries resources, which is an objective of the Coastal Zone Management Act. Therefore, the Corps has determined that this project is consistent to the maximum extent practicable with the approved State management policies as required by the Coastal Zone Management Act, and will provide documentation of this consistency determination to the Washington State Department of Ecology for their review and concurrence prior to initiating construction.

9. Activities in marine sanctuaries [320.4(i)]

Not applicable.

10. Other federal, state, or local requirements [320.4(j)]

Because this is a federally authorized project at a Federal facility, there are no additional requirements to be met that were not already discussed in this document.

11. Safety of impoundment structures [320.4(k)]

The FPF will be designed and built to ensure that it will not compromise the safety of the dam. Dam safety experts will review all design plans and specifications prior to finalization.

12. Floodplain Management [320.4(l)]

This project is in compliance. HAHD constitutes one of the components of the cumulative impacts that have degraded the Green River watershed's floodplain values and functions. It represents a long-term significant adverse impact; however, restoring downstream fish passage for salmon and steelhead will substantially improve watershed functions and

values. The FPF will not affect potential flooding, safety, or welfare; the new structure will enhance natural and beneficial values of the floodplains associated with the Green River. The project is in compliance with Executive Order 11988 as documented in the Validation Report and Supplemental Environmental Impact Statement.

13. Water supply and conservation [320.4(m)]

The flow of water through the FPF will be taken into account with HAHD water management. All water management practices for quantities of water release are expected to remain the same as prior to construction; any changes to water management would be coordinated with the Green River Flow Management Coordination Committee.

14. Energy conservation and development [320.4(n)]

Not applicable.

15. Navigation [320.4(o)]

This project will not result in any permanent restriction to the use of, or access to, navigable waters of the United States.

16. Environmental benefits [320.4(p)]

The FPF will benefit the environment by restoring downstream fish passage of juvenile salmonids. Passing juvenile salmon and steelhead safely through the dam will assist with restoring these species' populations as well as those that require them for their prey.

17. Economics [320.4(q)]

Not applicable.

18. Mitigation [320.4(r)]

The proposed FPF, with a purpose of restoration of access to habitat for listed anadromous fish, meeting performance standards of collection and passage survival prescribed by NMFS's Reasonable and Prudent Alternative, requires no mitigation through compensation for impacts from the dam and the AWSP. The following list of BMPs are examples of measures the Corps would implement to minimize and mitigate for impacts from the FPF project:

- In-water work (defined by WDFW and Ecology as any activity below the wetted perimeter) will be limited to July 1 - September 30 for the protection of fish.
- The timing of the most disruptive activities of construction, such as rock blasting for excavation, would consider the timing and location of the nesting pair of loons and other nesting birds.
- A pre-construction meeting will be conducted to look at existing conditions and any possible fine-tuning that could be done for BMPs or environmental requirements.

The pre-construction meeting may include outside resource agencies like USFWS or NMFS.

- The contractor will be required to submit an SWPPP and obtain a Construction Stormwater General Permit prior to construction, which will list best management practices pursuant to the 2019 Stormwater Management Manual for Western Washington to control stormwater impacts during construction.
- Measures to minimize erosion and sedimentation caused by runoff from disturbed soils or from in-water work will be implemented (e.g., silt fencing, swamp mats, covering stockpiles if rain is forecasted, coir logs, etc.). Accumulation of sediment in any adjacent swales or storm drains will be monitored daily and cleared to ensure continued service throughout construction.
- Turbidity monitoring of any activities that may cause discharge or substrate disturbance will ensure compliance with state standards throughout construction. The Corps anticipates the need for a Water Quality Certification from Ecology, which will be obtained during design phase.
- The construction management plan will ensure that the minimum footprint required for construction, including clearing and grubbing, is marked. Vegetation removal will be limited to the construction site and to provide access. After construction is complete, the sites cleared and grubbed will be revegetated using native plant species.
- Noxious weeds will be disposed of separately from other organic materials at an approved off-site location.
- All trash and unauthorized fill will be removed from the entire project area, including concrete blocks or pieces, bricks, asphalt, metal, treated wood, glass, floating debris, and paper and dispose of material properly after work is completed to prevent items from entering waterways.

SUPPLEMENTAL COASTAL ZONE MANAGEMENT ACT CONSISTENCY DETERMINATION

Howard A. Hanson Dam Fish Passage Facility An Element of the Additional Water Storage Project King County, Washington

Introduction

The Howard A. Hanson Dam (HAHD), Green River, King County, Washington is a flood control and Municipal and Industrial (M&I) water supply project constructed by the U.S. Army Corps of Engineers (Corps) between 1959 and 1962. The Corps and the city of Tacoma as the non-federal sponsor are undertaking an Additional Water Storage Project (AWSP), which constitutes an increase in water storage of 25,000 acre-feet. The project is also designed to enhance fish habitat, restore fish passage, and improve downstream water quality through better flow control and augmentation. All aspects of the AWSP have already been implemented except for a downstream fish passage facility (FPF).

Having met all environmental compliance requirements, the Corps initiated engineering design and construction of the FPF in 2003. Contractors were able to complete construction of the cofferdam and excavation for the FPF on the left bank of the river just upstream of and connected to HAHD. This cofferdam would serve to separate the construction site from the reservoir during construction of the FPF. However, due to an anticipated exceedance of the budget limit in 2011, the project was placed on hold, all construction was halted, and the cofferdam has remained in place. In 2014, the Corps reinitiated Endangered Species Act (ESA) consultation for operation of HAHD. After the National Marine Fisheries Service (NMFS) issued their 2019 Biological Opinion (BiOp), the design was reevaluated to comply with the provisions of the BiOp and taking into consideration new technologies in fish passage. The Corps has updated the FPF's design.

An FPF was previously evaluated by the Washington State Department of Ecology (Ecology) in their September 10, 2002 Order No. 02SEARCR-4581, which provided Clean Water Act Section 401 Certification as well as concurrence with the Corps' CZMA Consistency Determination. The construction activities will take place on Federal property and thus will not constitute a development activity within the State's coastal zone. The scope of this Supplement to the Corps' 2002 Coastal Zone Management Act (CZMA) Consistency Determination extends only to the reasonably anticipated effects on the uses and resources of the coastal zone arising from updates in project description made since Ecology's concurrence: i.e., the consequences of the refinement in fish passage facility design associated with construction and operation of the new design features for the HAHD FPF and appurtenant work. The objective of the fish passage structure is to increase downstream fish passage and survival for out-migrating juvenile anadromous fish. For this reason, the FPF accords with Washington Administrative Code (WAC) 173-27-040-2P beneficial use guidelines for fish passage.

Specific construction activities covered by this Supplemental CZMA Consistency Determination are the following:

- a) Construction of an FPF of updated design, at HAHD within the excavation that is behind the cofferdam.
- b) Install a fish transport pipe with the most likely pathway being excavation of a tunnel via controlled blasting through rock of the left bank to the downstream outlet to the Green River
- c) Construct the fish transport pipe outlet at the Green River approximately 1,000 to 2,000 feet downstream of the toe of HAHD.
- d) Fill and bank stabilization around the FPF and the pipe outlet. Revegetate any areas cleared and grubbed with native vegetation.

Proposed Action

The updated design is a fixed multiport collection structure (Figure 1), which would allow fish collection and passage from a set of five intake ports at multiple water levels as the

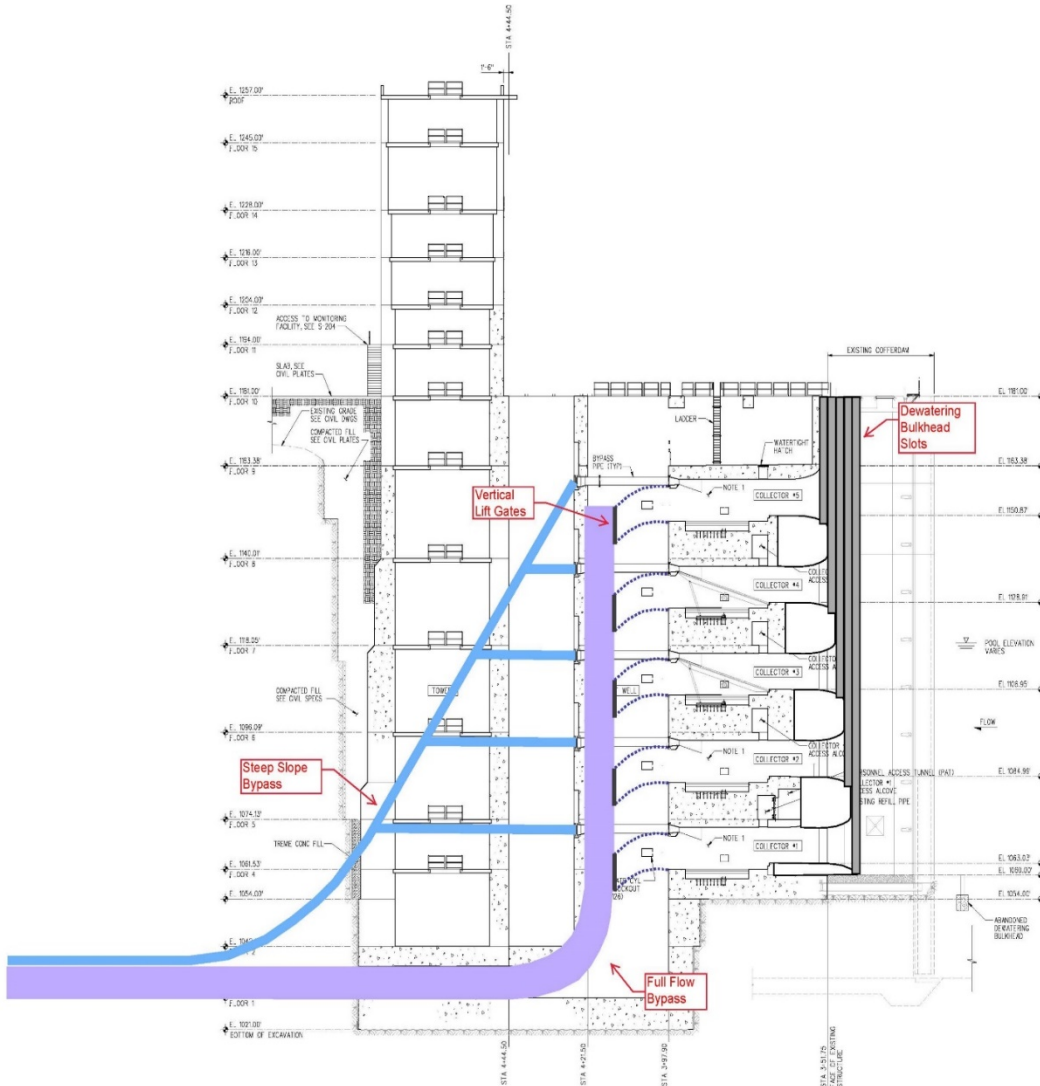


Figure 1. Conceptual drawing of a multiport collection and steep slope bypass

reservoir elevation changes. At low forebay elevations, the lower intake ports would be used. As the forebay elevation increases, the lower intake ports would be closed, and the higher elevation intake ports would be opened. Depending on forebay elevation, either one or two of the five intake ports may be used at one time. The intake port shape would be designed to meet desired water flows for fish attraction depending on forebay elevation. Each intake port would be designed to withdraw up to 600 cubic feet per second (cfs) of water from the reservoir, so two intake ports could operate at once for a total withdrawal of 1,200 cfs. Inclined screens would be used to reduce the flow with fish from approximately 600 cfs per intake port to about 25-35 cfs per intake port to safely screen and pass fish based on NMFS fish passage design criteria. The maximum design flow capacity is 1,200 cfs, which can be supplied by keeping two of the five intake ports open to achieve the requirement of 95% fish attraction throughout the range of flows during fish collection season.

Construction duration is expected to be 3-4 years with limited work during the 4 months of flood season (November through February). The new FPF is expected to be fully operational by the end of 2030. Dredging and blasting activities will be performed on site from construction start in approximately 2027 through 2030. Because of the scope of this project, the Corps expects to work year-round during the project timeframe. The Corps will adhere to the in-water work window of July 1 to September 30; for any work that must occur below the wetted perimeter outside that work window, the Corps would coordinate with NMFS and Ecology.

Once collected into the multiport structure, fish are transported downstream using one or more steep bypass pipes. The passage route connecting the multiport collector to the release site could run along the downstream side of the dam, cut through the left abutment, or connect to an existing bypass structure. Although water velocities in these types of systems exceed the NMFS fish passage criteria, if the bypass is designed so the velocities are slowed gradually before discharging to the tailrace, then exposure to abrasion, shear, and impacts are minimized to acceptable levels. The bypass pipe(s) would include a shallow bend at the base before going horizontal or would use some other feature to dissipate energy and slow down velocities before release.

The transport pipe exit must meet the NMFS fish release location criteria. The location must minimize predation, be free of eddies and reverse flow, be at a sufficient depth to avoid injuries at all river and bypass flows, have river velocities that are greater than 4 feet per second (fps), and provide controls for avian predation if necessary. Once the transport pipe exits the left bank from underground, it will daylight into a stilling basin approximately 150 feet long by 40 feet wide at a 30-degree angle pointing downstream along the bank into the river. The downstream end of the basin will slope into a flat grade as it approaches the river.

The FPF must be able to handle debris that enters the reservoir from upstream sources. Debris typically consists of organic, woody material. A submerged Modular Inclined Screen (MIS) would likely be used to allow for an increase to total attraction flow rate.

These screens are designed to be cleaned by periodically tilting the screens so accumulated debris can be removed by backflushing water out of the entrance.

Consistency Review

The CZMA requires states to identify and obtain approval of “Enforceable Policies.” Washington’s authorities and their implementing regulations contain the state’s Coastal Zone Management Program’s (CZMP) six enforceable policies:

- The Shoreline Management Act (SMA)
- The Clean Water Act (CWA)
- The Clean Air Act (CAA)
- The State Environmental Policy Act (SEPA)
- The Energy Facility Site Evaluation Council law (EFSEC)
- The Ocean Resources Management Act (ORMA)

Shoreline Management Act, chapter 90.58 RCW

The Shoreline Management Act (“SMA”), chapter 90.58 RCW is the core authority of Washington’s CZMP. The Corps does not obtain a shoreline permit from King County because other applicable Federal law prohibits application of the permit system to Federal agencies. The Federal Government cannot be regulated or required to obtain a permit by a state or local government unless the Federal Government has clearly and expressly waived its sovereign immunity (ref: Supremacy Clause of the U.S. Constitution, article VI, clause 2). The CZMA does not contain such a waiver.

State Policy

RCW 90.58.020 enunciates the following state policy:

- ***To provide for the management of shorelines of the state by planning for and fostering all reasonable and appropriate uses.***
- ***To ensure the development of shorelines in a manner that promotes and enhances the public interest while allowing only limited reduction of rights in the public in the navigable waters***
- ***To protect against adverse effects to the public health, the land and its vegetation and wildlife, and the waters of the state and their aquatic life, while protecting generally public rights of navigation and corollary rights.***

The update to the design of the FPF does not constitute new or additional adverse effects to the site, with respect to shoreline function. In addition, the completion of the FPF will enhance fisheries resources, which is an objective of the CZMA. Therefore, the Corps has determined that this project is consistent to the maximum extent practicable with this approved enforceable policy pursuant to the CZMA.

Shorelines of Statewide Significance

The SMA establishes use preferences for shorelines of state-wide significance. The proposed activities are consistent with the criteria for activities within shorelines of statewide significance as follows:

1. Recognize and protect the statewide interest over local interest.

The overall purpose for the proposed action is to restore downstream fish passage past HAHD as authorized in WRDA 1999 as a restoration component of the AWSP. Out-migrating juvenile salmonids in the upper Green River must pass through the existing intake at HAHD. Depending on season and pool height, only 5-25% of juveniles survive depending on pool levels, depth, and other factors. The need for restored fish passage arises from the status and population trajectory of anadromous salmon species in the Green River watershed. As stated above, the one remaining unconstructed component of the AWSP is the FPF. Downstream fish passage would improve abundance and productivity of Endangered Species Act (ESA)-listed salmon in the Green-Duwamish basin and contribute to the survival and recovery of Southern Resident killer whales.

2. Preserve the natural character of the shoreline and minimize human-made intrusions on shorelines.

The new FPF will be designed and constructed based on current standards for fish passage structures: NMFS Anadromous Salmonid Passage Facility Design, 2011 edition. During construction, disturbance will result from tunnel blasting, excavation, and heavy equipment noise and exhaust. A minor change in character of the stream bank will result at the tunnel outlet to support the transport pipe and potentially the opposite bank if bank stabilization is required. The overall aesthetics of the dam will not be changed with the construction of a new structure adjacent to the current intake tower. Once FPF construction is completed, exposed soils from construction will be revegetated with native plants.

3. Plan for long term over short term benefit.

The FPF will have a long-term benefit to the environment by passing juvenile salmonids safely through HAHD and will aid survivability of the species as well as those that require them for their prey.

4. Protect the resource and ecology of the shoreline

Best management practices (BMPs) and conservation measures will be in place to limit impacts from construction, including downstream turbidity. Once completed, bare soils will be replanted with native vegetation.

5. Increase public access to publicly owned areas of the shorelines

The reservoir above HAHD and the Green River downstream to the City of Tacoma's Water Headworks are closed to public access, and the project therefore will not change public access to Washington state shorelines. The Green River flows off Federal property to King County and State of Washington lands.

6. Increase recreational opportunities for the public on the shorelines

There are no effects to commercial and recreational fishing at the project site as the adjacent watershed is closed to public access. Downstream fishing opportunities may be increased by the restoration of fish passage through HAHD.

General Use Preferences

RCW 90.58.020 also states that alterations of the natural condition of the shorelines of the state, in those limited instances when authorized, shall be given priority for single family residences and their appurtenant structures, port, shoreline recreation use, and other improvement facilitating public access to shorelines of the state, industrial and commercial developments which are particularly dependent on their location on or use of the shorelines of the state.

The FPF above the dam and the outlet below the dam are located in restricted areas at an active Corps project within a closed municipal watershed. The outlet will be a large pipe with a supporting crib wall, which will use a small footprint for the improvement of fish passage.

The Clean Water Act

The Corps coordinated the original design with the Washington State Department of Ecology (Ecology) under CWA Section 401 and received a water quality certification in September 2002 (Order #02SEACR-4581). In that certification, Ecology concluded there are no permanent impacts to water quality from the project, and construction impacts will be short-term and minimal in nature. Due to the updated design of the FPF, the Corps will complete CWA Section 401 process prior to construction.

The Corps has prepared a Section 404(b)(1) evaluation to document findings regarding this action pursuant to Section 404 of the CWA. The Corps will distribute a Section 404 public notice for public comment along with the draft Supplemental Environmental Impact Statement (SEIS) prepared for the updated design. Based on the analyses presented in the SEIS, as well as in the Section 404(b)(1) Evaluation and Application by Analogy of the General Policies for the Evaluation of the Public Interest, the Corps finds that this project complies with the substantive elements of Section 404 of the CWA.

Washington Air Quality Requirements

This project does not require air quality permits.

State Environmental Policy Act

This Corps project will comply with the National Environmental Policy Act and is not subject to SEPA.

The Energy Facility Site Evaluation Council Law (EFSEC)

The proposed activities do not require an EFSEC permit.

Ocean Resources Management Act

The enforceable policies of the Ocean Resources Management Act and the WAC 173-26-360 Part IV: Ocean Use Guidelines do not apply to the project because the proposed action does not include sites in or adjacent to the Pacific Ocean.

King County Shoreline Master Program

The CZMA requires Federal activities that may affect coastal resources or uses be evaluated for consistency with relevant local Shoreline Master Program(s) (SMP). King County implemented the SMA through the adoption of goals and policies in Chapter 21A.25.10 (SMP Elements) of the development regulations in the County's Code. This Coastal Zone Consistency Determination is based on review of applicable policies and standards of the King County SMP. Applicable portions of the shoreline environment guidelines are presented below in ***bold italics***, and the Corps' consistency determination response is indicated in normal text.

The proposed project footprint is adjacent to an area designated as *Rural Environment*. The land use designation surrounding HAHD and the reservoir is *Forestry*. Active logging by the city of Tacoma occurs in the upland areas surrounding the dam.

21A.25.090 Shoreline use and modification – defined – no net loss of shoreline ecological functions allowed – sequencing compliance.

B. Shoreline modification is construction of a physical element such as a bulkhead, groin, berm, jetty, breakwater, dredging, filling, vegetation removal or alteration or application of chemicals that changes the natural or existing shoreline conditions. Shoreline modifications are identified in K.C.C. 21A.25.160.

C. King County shall ensure that uses and modifications within the shoreline jurisdiction do not cause a net loss of shoreline ecological functions and comply with the sequencing requirements under K.C.C. 21A.25.080.

All features and aspects of constructing the proposed FPF were previously approved by Ecology in their 2002 Order No. 02SEARCR-4581, which provided concurrence with the Corps' CZMA consistency determination. The updated design of the FPF adds a new tunnel with transport pipe outlet and a supporting crib wall within the reach of river that is 1,000 to 2,000 feet downstream from HAHD. This new pipe outlet with bank stabilization will be discussed in 21A.25.170 below. The consequences to shoreline ecological functions, as compared with those evaluated for Order 02SEARCR-4581, will be unchanged.

21A.25.160 Shoreline modification.

A. The shoreline modification table in this section determines whether a specific shoreline modification is allowed within each of the shoreline environments.

B. Shoreline modification table

- 7. a. If the department determines the primary purpose is restoration of the natural character and ecological functions of the shoreline, a shoreline habitat and natural systems enhancement project may include shoreline modification of vegetation, removal of nonnative or invasive plants, shoreline stabilization, including the installation of large woody debris, dredging and filling. Mitigation actions identified through biological assessments required by the National Marine Fisheries Services and applied to flood hazard mitigation projects may include shoreline modifications of vegetation, removal of nonnative or invasive plants,***

shoreline stabilization, including the installation of large woody debris, dredging and filling.

The updated FPF overall function fits best as a “Habitat and Natural Systems Enhancement Project” as the purpose is to address the 2019 jeopardy determination by NMFS. Modification of the shoreline is designated P7 according to Table B. According to the Table, designation “P” allows modification in Forestry and Rural areas. Designation “7” is meeting a mitigation requirement by NMFS. Therefore, the proposed modification is consistent with this element.

21A.25.170 Shoreline stabilization.

A. Shoreline stabilization shall not be considered an outright use and shall be permitted only when the department determines that shoreline protection is necessary for the protection of existing legally established primary structures, new or existing non-water-dependent development, new or existing water-dependent development or projects restoring ecological functions or remediating hazardous substance discharges. Vegetation, berms, bioengineering techniques and other nonstructural alternatives that preserve the natural character of the shore shall be preferred over riprap, concrete revetments, bulkheads, breakwaters and other structural stabilization. Riprap using rock or other natural materials shall be preferred over concrete revetments, bulkheads, breakwaters and other structural stabilization. Lesser impacting measures should be used before more impacting measures.

The updated design for the HAHD FPF meets the 2011 NMFS Anadromous Salmonid Passage Facility Design criteria and is intended to meet the Reasonable and Prudent Alternative contained in the 2019 NMFS BiOp for the AWSP. The fish tunnel outlet is expected to be a large fish transport pipe, with up to 1,200 cfs flow, and will be positioned to ensure the best opportunities for juvenile salmonid survivability. A crib wall will be constructed at the outlet for stability of the pipe. Additional stability in the form of riprap or a concrete wall maybe be used along approximately 400 linear feet of shoreline. The transport pipe’s outlet will flow into a constructed stilling basin that would be 150 feet long by 40 feet wide gently sloping into the river channel. The proposed modification is consistent with this element.

B. Structural shoreline stabilization may be permitted subject to the standards in this chapter and as follows:

- 4. The proposal is the minimum necessary to protect existing legally established primary structures, new or existing non-water-dependent development, new or existing water-dependent development or projects restoring ecological functions or remediating hazardous substance discharges; and***
- 5. Adequate mitigation measures will be provided to maintain existing shoreline processes and critical fish and wildlife habitat and ensure no net loss or function of intertidal or riparian habitat***

The proposed crib wall and riprap bank stabilization are intended to be constructed to stabilize the transport pipe outlet, which is part of the HAHD FPF action. A stilling basin will be constructed on the left bank and into the river channel to meet NMFS

fish passage criteria for fish passage outlets. As part of the post-construction clean-up, disturbed soils will be replanted with native vegetation. Therefore, it is consistent with this for bank stabilization requirements.

21A.25.190 Excavation, dredging and filling. Excavation, dredging and filling may be permitted in the rural environment subject to the provisions of K.C.C.

25.16.190 of the urban environment provided:

A. Fill or excavation landward of the ordinary high-water mark shall be subject to K.C.C. chapters 16.82 and 21A.24;

B. Fill may be permitted below the ordinary high-water mark only:

1. When necessary to support a water dependent use.

Since fish passage is water dependent by nature, the operation of the FPF will depend on outflows from the Eagle Gorge Reservoir of a specific minimum volume during times of migratory activity.

7. As part of mitigation actions, environmental restoration projects and habitat enhancement projects;

The updated design for the FPF is to meet current standards for Anadromous Fish Passage (NMFS 2011) and with the Reasonable and Prudent Alternative of the NMFS 2019 BiOp.

C. Fill or excavations shall be permitted only when technical information demonstrates water circulation, littoral drift, aquatic life and water quality will not be substantially impaired and that the fill or excavation will not obstruct the flow of the ordinary high water, flood waters or cutoff or isolate hydrolic features from each other;

The Corps has completed an Environmental Impact Statement (EIS) for the original design with the Record of Decision signed in 2001. A draft SEIS for the updated design has been completed in 2021. The actual construction of the FPF will not harm aquatic life, nor will it impede circulation through the Dam's existing intake structure. Water quality will be protected to the extent practical through the Section 401, CWA certification, the development and implementation of a water quality management plan, and full use and adherence to All Known and Reasonable pollution prevention and mitigation Technologies (AKART) as defined in Ch. 173-27 WAC.

D. Dredging and dredged material disposal below the ordinary high-water mark shall be permitted only:

1. When necessary for the operation of a water dependent use;

2. When necessary to mitigate conditions that endanger public safety or fisheries resources;

The construction of the tunnel for the FPF will require both drill and blast rock removal and some mechanical sediment removal. These activities will be behind the previously installed cofferdam with the outlet on the downstream side. Rock materials will be removed and disposed of in an adjacent upland site. Sediment will be contained by use of Reasonable and Prudent Measures (RPMs) as specified by the Section 7, ESA consultation that the Corps has obtained, and the Section 401, CWA. These RPMs include but are not limited to the following: develop a sediment management plan for the reservoir; require a contractor's sediment erosion control

plan; meet annually with the USFWS and NMFS during project construction. Since the purpose of this project is to increase downstream fish passage and survival, this project will decrease danger to fisheries resources.

F. Disposal of dredged material shall be done only in approved deep water disposal sites or approved upland disposal sites and is not allowed within wetlands or channel migration zones;

Materials created during the excavation of the tunnel will be disposed of at an upland material disposal and staging site owned by the city of Tacoma approximately 2 miles upstream from HAHD, in accordance with local, state, and Federal regulations.

H. In order to ensure that operations involving dredged material disposal and maintenance dredging are consistent with the King County shoreline master program as required by RCW 90.58.140(1), no dredging may commence in any shoreline environment without the responsible person having first obtained either a substantial development permit or a statement of exemption when required under K.C.C. 21A.25.290. A statement of exemption or shoreline permit is not required before emergency dredging needed to protect property from imminent damage by the elements, if statement of exemption or substantial development permit is subsequently obtained following the procedures in K.C.C. 16.82.065. (Ord. 16985 § 45, 2010: Ord. 16172 § 7, 2008: Ord. 13247 § 3, 1998: Ord. 5734 § 6, 1981: Ord. 3688 § 414, 1978. Formerly K.C.C. 25.16.190).

This is a Federal construction project on a congressionally authorized Federal facility. Dredging and drill and blast rock removal are only one part of the project. As the Federal Government has not waived sovereign immunity on projects of this nature, no construction permit or shoreline permit is required to be obtained by the Corps (WAC 173-27-060 –1 & 2). In addition, Ch. 173-27-40-2(p) specifically states that exemptions to the permit rule will be granted for projects that reduce or improve impediments to fish passage. Since the FPF is solely for the purpose of improving downstream fish passage at HAHD, it meets this requirement for an exemption.

Statement of Consistency

Based on the above evaluation, the Corps has determined that the proposed action, implementing the updated design for the HAHD FPF, is consistent with the enforceable policies of the approved CZMP of Washington, including the enforceable policies as specified in the local planning documents for King County that are incorporated in the approved programs. The action is therefore consistent with the State of Washington's CZMP to the maximum extent practicable.



DEPARTMENT OF THE ARMY
U.S ARMY CORPS OF ENGINEERS, SEATTLE DISTRICT
4735 EAST MARGINAL WAY SOUTH BLDG 1202
SEATTLE, WA 98134-2388

8 November 2021

The Honorable Jaison Elkins, Chairman
Muckleshoot Indian Tribe
39015 172nd AVE SE
Auburn, WA 98092

SUBJECT: Howard A. Hanson Dam Additional Water Storage Project Downstream Fish Passage, King County, WA

Dear Chairman Elkins:

The U.S. Army Corps of Engineers, Seattle District (Corps) proposes to restore downstream fish passage past Howard A. Hanson Dam (HAHD) by constructing a fish passage facility located in King County, Washington. A downstream fish passage structure is a component of the HAHD Additional Water Storage Project (AWSP) originally authorized in Section 101(b)(15) of the Water Resources Development Act (WRDA) of 1999. The purpose of this letter is to provide project information to you and to invite you and your staff to participate in the project evaluation and design process. The Corps appreciates the earlier participation of tribal staff in our fish passage facility design option workshops that occurred December 8-10, 2020 and May 18-20, 2021. We also value the continuing coordination with your fisheries staff throughout 2021.

The Corps prepared an Environmental Impact Statement in 1998 and signed a Record of Decision on July 25, 2001 for the AWSP in compliance with the National Environmental Policy Act. Phase I of the AWSP has been implemented and raised the reservoir elevation from 1,147 feet to 1,167 feet. However, the fish passage facility included in the Phase I recommendation has not been completed. Construction of the facility started in 2003; however, in 2011 construction was halted because of the likelihood of exceeding the authorized cost limit. To restart the effort, the Corps is preparing a Validation Report and Supplemental Environmental Impact Statement (VR/SEIS) to present a revised cost estimate and updated analysis of the authorized project. Congressional action is required to increase the total cost limit for the project. If new funding is authorized, full design and construction will begin on the authorized fish passage facility.

The Corps will provide a copy of our draft VR/SEIS to your staff for review in advance of the public comment period anticipated to begin mid-November 2021. The public comment period will be open for 45 days with an expected end date in late December 2021 or early January 2022. We are interested in your comments on the proposed action and will fully consider any comments we receive. We would appreciate receiving your comments by the anticipated end date of the document's public comment period so we may give full consideration of any proposed changes prior to finalizing our report.

We wish to maintain assurance of your interests and be apprised of any objections, requests, or requirements you may have. The Corps welcomes the opportunity to work with your Tribe on the technical issues of this study as well. Should you decide to engage any of your technical staff on this study, please provide the name(s) and contact information of any person(s) with whom you wish us to work directly on technical matters of concern to your Tribe.

A copy of this letter has also been sent to the following Tribal staff: Melissa Calvert and Isabel Tinoco. The Corps is also formally coordinating with the Suquamish Tribe, Snoqualmie Indian Tribe, and the Confederated Tribes and Bands of the Yakama Nation regarding this same matter. If you are aware of any other Tribes that may also be interested, please inform the Corps.

For additional information regarding the HAHD Fish Passage Facility project, please contact Ms. Katherine LaPonte, Project Manager, at (206) 316-3894 or Katherine.M.Laponte@usace.army.mil. For assistance with general information regarding tribal coordination or to request a government-to-government meeting, please contact Ms. Melissa Leslie, Acting Tribal Liaison, at (206) 764-6587 or melissa.l.leslie@usace.army.mil.

Sincerely,

Laura Boerner, LG, LHG
Chief, Planning, Environmental, and
Cultural Resources Branch



DEPARTMENT OF THE ARMY
U.S ARMY CORPS OF ENGINEERS, SEATTLE DISTRICT
4735 EAST MARGINAL WAY SOUTH BLDG 1202
SEATTLE, WA 98134-2388

8 November 2021

The Honorable Robert de los Angeles
Snoqualmie Indian Tribe
9571 Ethan Wade Lane SE
P.O. Box 969
Snoqualmie, WA 98065

SUBJECT: Howard A. Hanson Dam Additional Water Storage Project Downstream Fish Passage, King County, WA

Dear Chairman de los Angeles:

The U.S. Army Corps of Engineers, Seattle District (Corps) proposes to restore downstream fish passage past Howard A. Hanson Dam (HAHD) by constructing a fish passage facility located in King County, Washington. A downstream fish passage structure is a component of the HAHD Additional Water Storage Project (AWSP) originally authorized in Section 101(b)(15) of the Water Resources Development Act (WRDA) of 1999. The purpose of this letter is to provide project information to you and to invite you and your staff to participate in the project evaluation and design process.

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The Corps will publish our draft VR/SEIS for a public comment period anticipated to begin mid-November 2021. The public comment period will be open for 45 days with an expected end date in late December 2021 or early January 2022. You and your staff will receive email notification as soon as it becomes available. The document will be available online at our website: <https://www.nws.usace.army.mil/Missions/Environmental/Environmental-Documents/>. We are interested in your comments on the proposed action and will fully consider any comments we receive. We would appreciate receiving your comments by the anticipated end

date of the document's public comment period so we may give full consideration of any proposed changes prior to finalizing our report.

We wish to maintain assurance of your interests and be apprised of any objections, requests, or requirements you may have. The Corps welcomes the opportunity to work with your Tribe on the technical issues of this study as well. Should you decide to engage any of your technical staff on this study, please provide the name(s) and contact information of any person(s) with whom you wish us to work directly on technical matters of concern to your Tribe.

A copy of this letter has also been sent to the following Tribal staff: Cindy Spiry and Steven Mullen-Moses. The Corps is also formally coordinating with the Muckleshoot Indian Tribe, Suquamish Tribe, and Confederated Tribes and Bands of the Yakama Nation regarding this same matter. If you are aware of any other Tribes that may also be interested, please inform the Corps.

For additional information regarding the HAHD Fish Passage Facility project, please contact Ms. Katherine LaPonte, Project Manager, at (206) 316-3894 or Katherine.M.Laponte@usace.army.mil. For assistance with general information regarding tribal coordination or to request a government-to-government meeting, please contact Ms. Melissa Leslie, Acting Tribal Liaison, at (206) 764-6587 or melissa.l.leslie@usace.army.mil.

Sincerely,

Laura Boerner, LG, LHG
Chief, Planning, Environmental, and
Cultural Resources Branch



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SEATTLE DISTRICT
4735 EAST MARGINAL WAY SOUTH BLDG 1202
SEATTLE, WA 98134-2388

8 November 2021

The Honorable Leonard Forsman
Suquamish Indian Tribe of the Port Madison Reservation
18490 Suquamish Way NE
Suquamish, WA 98392

SUBJECT: Howard A. Hanson Dam Additional Water Storage Project Downstream Fish Passage, King County, WA

Dear Chairman Forsman:

The U.S. Army Corps of Engineers, Seattle District (Corps) proposes to restore downstream fish passage past Howard A. Hanson Dam (HAHD) by constructing a fish passage facility located in King County, Washington. A downstream fish passage structure is a component of the HAHD Additional Water Storage Project (AWSP) originally authorized in Section 101(b)(15) of the Water Resources Development Act (WRDA) of 1999. The purpose of this letter is to provide project information to you and to invite you and your staff to participate in the project evaluation and design process.

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The Corps will provide a copy of our draft VR/SEIS to your staff for review in advance of the public comment period anticipated to begin mid-November 2021. The public comment period will be open for 45 days with an expected end date in late December 2021 or early January 2022. We are interested in your comments on the proposed action and will fully consider any comments we receive. We would appreciate receiving your comments by the anticipated end date of the document's public comment period so we may give full consideration of any proposed changes prior to finalizing our report.

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A copy of this letter has also been sent to the following Tribal staff: Tom Ostrom, Dennis Lewarch, and Rob Purser. The Corps is also formally coordinating with the Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, and the Confederated Tribes and Bands of the Yakama Nation regarding this same matter. If you are aware of any other Tribes that may also be interested, please inform the Corps.

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Laura Boerner, LG, LHG
Chief, Planning, Environmental, and
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DEPARTMENT OF THE ARMY
U.S ARMY CORPS OF ENGINEERS, SEATTLE DISTRICT
4735 EAST MARGINAL WAY SOUTH BLDG 1202
SEATTLE, WA 98134-2388

8 November 2021

The Honorable Delano Saluskin
Confederated Tribes and Bands of the Yakama Nation
P.O. Box 151
401 Fort Road
Toppenish, WA 98948-0151

SUBJECT: Howard A. Hanson Dam Additional Water Storage Project Downstream Fish Passage, King County, WA

Dear Chairman Saluskin:

The U.S. Army Corps of Engineers, Seattle District (Corps) proposes to restore downstream fish passage past Howard A. Hanson Dam (HAHD) by constructing a fish passage facility located in King County, Washington. A downstream fish passage structure is a component of the HAHD Additional Water Storage Project (AWSP) originally authorized in Section 101(b)(15) of the Water Resources Development Act (WRDA) of 1999. The purpose of this letter is to provide project information to you and to invite you and your staff to participate in the project evaluation and design process.

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The Corps will publish our draft VR/SEIS for a public comment period anticipated to begin mid-November 2021. The public comment period will be open for 45 days with an expected end date in late December 2021 or early January 2022. You and your staff will receive email notification as soon as it becomes available. The document will be available online at our website: <https://www.nws.usace.army.mil/Missions/Environmental/Environmental-Documents/>. We are interested in your comments on the proposed action and will fully consider any comments we receive. We would appreciate receiving your comments by the anticipated end

date of the document's public comment period so we may give full consideration of any proposed changes prior to finalizing our report.

We wish to maintain assurance of your interests and be apprised of any objections, requests, or requirements you may have. The Corps welcomes the opportunity to work with your Tribe on the technical issues of this study as well. Should you decide to engage any of your technical staff on this study, please provide the name(s) and contact information of any person(s) with whom you wish us to work directly on technical matters of concern to your Tribe.

A copy of this letter has also been sent to the following Tribal staff: Phillip Rigdon and Casey Barney. The Corps is also formally coordinating with the Muckleshoot Indian Tribe, Suquamish Tribe, and Snoqualmie Indian Tribe regarding this same matter. If you are aware of any other Tribes that may also be interested, please inform the Corps.

For additional information regarding the HAHD Fish Passage Facility project, please contact Ms. Katherine LaPonte, Project Manager, at (206) 316-3894 or Katherine.M.Laponte@usace.army.mil. For assistance with general information regarding tribal coordination or to request a government-to-government meeting, please contact Ms. Ms. Melissa Leslie, Acting Tribal Liaison, at (206) 764-6587 or melissa.l.leslie@usace.army.mil.

Sincerely,

Laura Boerner, LG, LHG
Chief, Planning, Environmental, and
Cultural Resources Branch



DEPARTMENT OF THE ARMY
U.S ARMY CORPS OF ENGINEERS, SEATTLE DISTRICT
4735 EAST MARGINAL WAY SOUTH BLDG 1202
SEATTLE, WA 98134-2388

22 September 2021

The Honorable Jaison Elkins, Chairman
Muckleshoot Indian Tribe
39015 172nd AVE SE
Auburn, WA 98092

SUBJECT: Howard A. Hanson Dam Additional Water Storage Project Fish Passage, King County, WA (DAHP Log.: 2021-08-05899)

Dear Chairman Elkins:

The U.S. Army Corps of Engineers (Corps) proposes to restore downstream fish passage, past Howard A. Hanson Dam (HAHD), by constructing a fish passage facility (undertaking) located in King County, Washington (Enclosure 1). In accordance with 36 C.F.R. § 800, the implementing regulations for Section 106 of the National Historic Preservation Act (NHPA), the Corps is conducting a review to determine potential effects to historic properties. As specified by 36 C.F.R. § 800.4(a)(4) we are requesting your assistance in gathering information on knowledge or concerns with historic properties with religious or cultural significance that may be affected by this project. The Corps is inviting you to participate in a Programmatic Agreement for the current undertaking. The objective of the agreement will be to develop a path forward to complete our responsibilities under section 106 of the National Historic Preservation Act.

Initial consultation for the HAHD Additional Water Storage Project (AWSP) began in 1998. Our consultation led to a Memorandum of Agreement (MOA) signed by the Corps, the City of Tacoma, and DAHP as signatories regarding construction and operation activities at the HAHD reservoir. The Muckleshoot Indian Tribe participated in the MOA as a consulting party. We have completed all the requirements of this MOA. In 2011 construction of the undertaking was halted because of cost overrun. No work has been conducted on the undertaking since this time. Currently the Corps is preparing a Validation Report and will present a revised cost estimate and updated analysis of the authorized project. Congressional action to increase the total cost limit for the project. If new funding is authorized full design and construction will begin on the authorized fish passage facility. The Corps requests your participation in a new Programmatic Agreement for the current undertaking, which is required for the Validation Report.

The 1998 consultation analyzed effects to the upper and lower watershed, but construction and redesign of the fish passage facility would not have any effects to the lower watershed. Therefore, the geographical scope of the 2021 consultation is limited to the upper watershed. The Corps has identified the APE (Enclosure 2) to include the previous excavation for the fish passage facility located near the HAHD Outlet Tower; the potential alignment for the fish

passage pipeline which will cut through the left abutment (Enclosure 3) and run along the left embankment of the spillway. The pipe will release the fish downstream of the dam; however the exact location has not been determined so the APE map will show a general area along the streambank, which will be refined as the construction design is finalized.

The project area is located in the East ½ of Section 28, Township 21 North, Range 08 East, Willamette Meridian, King County, Washington as shown on the Eagle Gorge, WA [2017] 7.5' quadrangle. The Corps has determined the APE to include the access road, staging area, and the Howard A. Hanson Dam (completed in 1962, determined eligible in 2009) built structures near where proposed construction will take place. The APE encompasses 77 acres, and the Corps believes the APE is sufficient to identify and consider both direct and indirect effects of the proposed project.

We would like to summarize efforts taken to date to identify cultural resources within the APE. The Corps staff archaeologist has conducted a records search and literature review of the Washington Information System Architectural and Archaeological Records Database. The literature review and records search indicates that four previous archaeological surveys have been conducted within ½-mile of the current project area. All four surveys were conducted within portions of the current APE and resulted in negative reports.

If you have information or concerns regarding properties which may be of religious or cultural significance that you believe may be affected by this project, please contact us as soon as possible. A copy of this letter with enclosures will be furnished to: Laura Murphy, Cultural Resources, Muckleshoot Indian Tribe, 39015 172nd AVE SE, Auburn, WA 98092.

If you have any questions or desire additional information, please contact the Project Archaeologist, Agnes F Castronuevo at agnes.f.castronuevo@usace.army.mil or (206) (316-3096), or the Architectural Historian, Lys Opp-Beckman at lys.opp-beckman@usace.army.mil or (206) 708-5899. I may be contacted at laura.a.boerner@usace.army.mil or (206) 764-6761. Thank you for your assistance with this undertaking.

Sincerely,

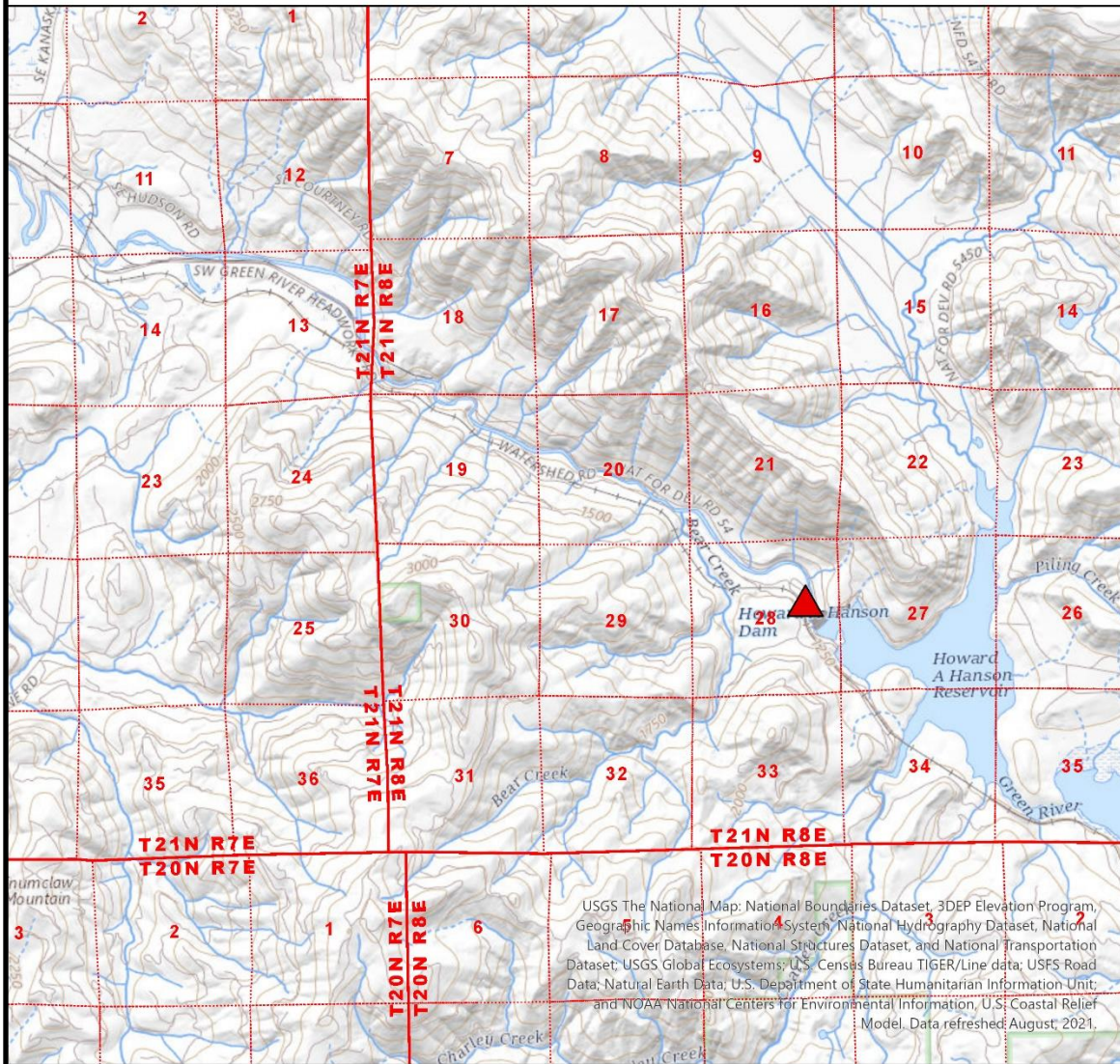
Laura Boerner, LG, LHG
Chief, Planning, Environmental, and
Cultural Resources Branch

Enclosure/s



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Seattle District

HOWARD A HANSON DAM AWS FISH PASSAGE PROJECT LOCATION MAP



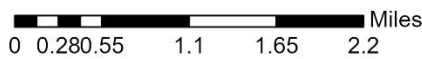
USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed August, 2021.

1:54000

E 1/2 SECTION 28, TOWNSHIP 21 NORTH, RANGE 08 EAST, W.M.
KING COUNTY, WASHINGTON
EAGLE GORGE, WASHINGTON [2017] 7.5' USGS QUAD



PROJECT
LOCATION



Enclosure 1. Location Map



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HOWARD A HANSON DAM AWS FISH PASSAGE PROJECT APE / STUDY AREA



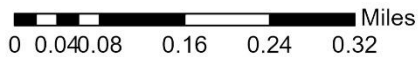
Bureau of Land Management, Oregon State Office, Maxar, Microsoft, Esri
Community Maps Contributors, King County, WA State Parks GIS, Esri Canada, Esri,
HERE, Garmin, SafeGraph, INCREMENT P, METI/NASA, USGS, Bureau of Land
Management, EPA, NPS, US Census Bureau, USDA



APE / STUDY AREA

1:8000

E 1/2 Section 28, Township 21 North, Range 08 East, W.M.
King County, Washington
Eagle Gorge, Washington [2017] 7.5' USGS quad



Enclosure 2. APE and Study Area



Enclosure 3. Built environment site features previously identified in EIS.



DEPARTMENT OF THE ARMY
U.S ARMY CORPS OF ENGINEERS, SEATTLE DISTRICT
4735 EAST MARGINAL WAY SOUTH BLDG 1202
SEATTLE, WA 98134-2388

22 September 2021

The Honorable Leonard Forsman, Chairman
Suquamish Indian Tribe of the Port Madison Reservation
18490 Suquamish Way NE
Suquamish, WA 98392

SUBJECT: Howard A. Hanson Dam Additional Water Storage Project Fish Passage, King County, WA (DAHP Log.: 2021-08-05899)

Dear Chairman Forsman:

The U.S. Army Corps of Engineers (Corps) proposes to restore downstream fish passage, past Howard A. Hanson Dam (HAHD), by constructing a fish passage facility (undertaking) located in King County, Washington (Enclosure 1). In accordance with 36 C.F.R. §800, the implementing regulations for Section 106 of the National Historic Preservation Act (NHPA), the Corps is conducting a review to determine potential effects to historic properties. As specified by 36 C.F.R. § 800.4(a)(4) we are requesting your assistance in gathering information on knowledge or concerns with historic properties with religious or cultural significance that may be affected by this project. The Corps is inviting you to participate in a Programmatic Agreement for the current undertaking. The objective of the agreement will be to develop a path forward to complete our responsibilities under section 106 of the National Historic Preservation Act.

Initial consultation for the HAHD Additional Water Storage Project (AWSP) began in 1998. Our consultation led to a Memorandum of Agreement (MOA) signed by the Corps, the City of Tacoma, and DAHP as signatories regarding construction and operation activities at the HAHD reservoir. The Muckleshoot Indian Tribe participated in the MOA as a consulting party. We have completed all the requirements of this MOA. In 2011 construction of the undertaking was halted because of cost overrun. No work has been conducted on the undertaking since this time. Currently the Corps is preparing a Validation Report and will present a revised cost estimate and updated analysis of the authorized project. Congressional action to increase the total cost limit for the project. If new funding is authorized full design and construction will begin on the authorized fish passage facility. The Corps requests your participation in a new Programmatic Agreement for the current undertaking, which is required for the Validation Report.

The 1998 consultation analyzed effects to the upper and lower watershed, but construction and redesign of the fish passage facility would not have any effects to the lower watershed. Therefore, the geographical scope of the 2021 consultation is limited to the upper watershed. The Corps has identified the APE (Enclosure 2) to include the previous excavation for the fish passage facility located near the HAHD Outlet Tower; the potential alignment for the fish

passage pipeline which will cut through the left abutment and run along the left embankment of the spillway. The pipe will release the fish downstream of the dam; however the exact location has not been determined so the APE map will show a general area along the streambank, which will be refined as the construction design is finalized.

The project area is located in the East ½ of Section 28, Township 21 North, Range 08 East, Willamette Meridian, King County, Washington as shown on the Eagle Gorge, WA [2017] 7.5' quadrangle. The Corps has determined the APE to include the access road, staging area, and the Howard A. Hanson Dam (completed in 1962, determined eligible in 2009) built structures near where proposed construction will take place. The APE encompasses 77 acres, and the Corps believes the APE is sufficient to identify and consider both direct and indirect effects of the proposed project.

We would like to summarize efforts taken to date to identify cultural resources within the APE. The Corps staff archaeologist has conducted a records search and literature review of the Washington Information System Architectural and Archaeological Records Database. The literature review and records search indicates that four previous archaeological surveys have been conducted within ½-mile of the current project area. All four surveys were conducted within portions of the current APE and resulted in negative reports.

If you have information or concerns regarding properties which may be of religious or cultural significance that you believe may be affected by this project, please contact us as soon as possible. A copy of this letter with enclosures will be furnished to: Dennis Lewarch, Tribal Historic Preservation Officer, Suquamish Indian Tribe of the Port Madison Reservation, 18490 Suquamish Way NE, Suquamish, WA 98392.

If you have any questions or desire additional information, please contact the Project Archaeologist, Agnes F Castronuevo at agnes.f.castronuevo@usace.army.mil or (206) (316-3096), or the Architectural Historian, Lys Opp-Beckman at lys.opp-beckman@usace.army.mil or (206) 708-5899. I may be contacted at laura.a.boerner@usace.army.mil or (206) 764-6761. Thank you for your assistance with this undertaking.

Sincerely,

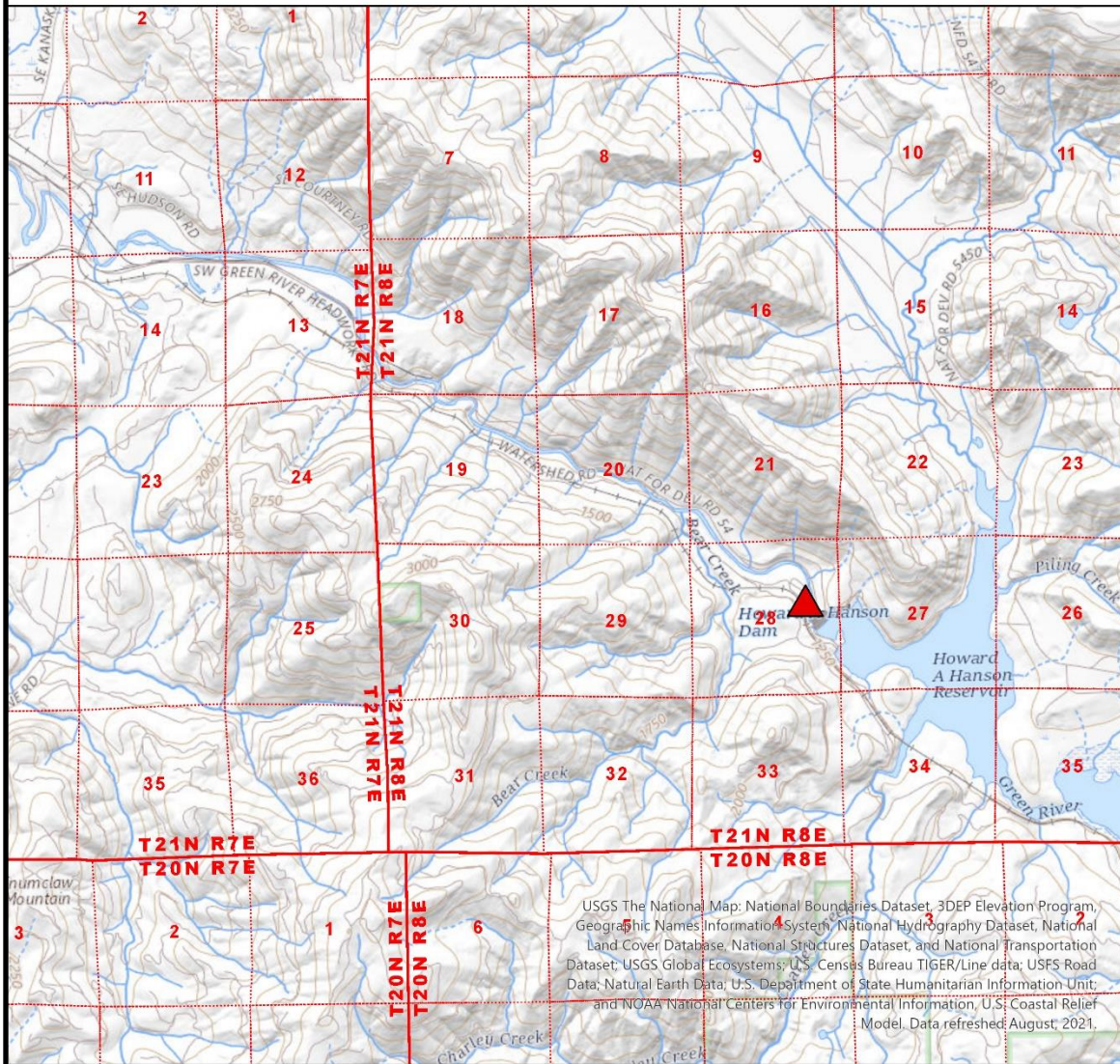
Laura Boerner, LG, LHG
Chief, Planning, Environmental, and
Cultural Resources Branch

Enclosure/s



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HOWARD A HANSON DAM AWS FISH PASSAGE PROJECT LOCATION MAP



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed August, 2021.

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E 1/2 SECTION 28, TOWNSHIP 21 NORTH, RANGE 08 EAST, W.M.
KING COUNTY, WASHINGTON
EAGLE GORGE, WASHINGTON [2017] 7.5' USGS QUAD

 PROJECT LOCATION



Enclosure 1. Location Map



US Army Corps
of Engineers®
Seattle District

HOWARD A HANSON DAM AWS FISH PASSAGE PROJECT APE / STUDY AREA



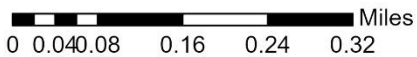
Bureau of Land Management, Oregon State Office, Maxar, Microsoft, Esri
Community Maps Contributors, King County, WA State Parks GIS, Esri Canada, Esri,
HERE, Garmin, SafeGraph, INCREMENT P, METI/NASA, USGS, Bureau of Land
Management, EPA, NPS, US Census Bureau, USDA



APE / STUDY AREA

1:8000

E 1/2 Section 28, Township 21 North, Range 08 East, W.M.
King County, Washington
Eagle Gorge, Washington [2017] 7.5' USGS quad



Enclosure 2. APE and Study Area



Enclosure 3. Built environment site features previously identified in EIS.



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, SEATTLE DISTRICT
PO BOX 3755
SEATTLE, WA 98124-3755

Planning, Environmental and Cultural Resources Branch

22 September 2021

Tyler H. Patterson
Environmental Programs Manager
Tacoma Public Utilities, Tacoma Water
3628 South 35th Street
Tacoma, Washington 98409
tpatterson@cityoftacoma.org

SUBJECT: Consultation for the Howard A. Hanson Dam Additional Water Storage Project Fish Passage, King County, WA

Dear Mr. Patterson:

The U.S. Army Corps of Engineers (Corps) proposes to restore downstream fish passage, past Howard A. Hanson Dam (HAHD), by constructing a fish passage facility (undertaking) located in King County, Washington (Enclosure 1). The Corps has determined and documented the area of potential effect (APE) for the undertaking. We are consulting with your office under Section 106 as provided at 36 C.F.R. § 800.3(f)(1). The Corps has also determined this project has the potential to cause effects to cultural resources, though the extent and nature of possible effects is unknown at this time. The letter requests any information you or your agency might have on historic properties within the APE and agreement to enter into a Programmatic Agreement as Per 36 C.F.R. § 800.14.

Initial consultation for the HAHD Additional Water Storage Project (AWSP) began in 1998. Our consultation led to a Memorandum of Agreement (MOA) signed by the Corps, the City of Tacoma, and DAHP as signatories regarding construction and operation activities at the HAHD reservoir. The Muckleshoot Indian Tribe as signed the MOA as a concurring party. We have completed all the requirements of this MOA. In 2011 construction of the undertaking was halted because of cost overrun. No work has been conducted on the undertaking since this time. Currently the Corps is preparing a Validation Report and will present a revised cost estimate and updated analysis of the authorized project. Congressional action to increase the total cost limit for the project. If new funding is authorized full design and construction will begin on the authorized fish passage facility.

The 1998 consultation analyzed effects to the upper and lower watershed, but construction and redesign of the fish passage facility would not have any effects to the lower watershed. Therefore, the geographical scope of the 2021 consultation is limited to the upper watershed. The Corps has identified the APE (Enclosure 2) to include the previous excavation for the fish

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On September 2nd, 2021 Corps representatives, Matthew Punke, Agnes Castronuevo, and Lys Opp-Beckman met virtually with Tacoma Water staff. The purpose of this meeting was a brief overview of past section 106 consultation and to familiarize Tacoma Water staff with the need enter into a Programmatic Agreement as per 36 CFR 800.14. The Corps is requesting that Tacoma Water enter into a Programmatic Agreement that will guide all parties through the 106 process when and if the Corps receives funding to complete the fish passage facility.

If you have any questions or desire additional information, please contact the project Archaeologist, Agnes F. Castronuevo at agnes.f.castronuevo@usace.army.mil or (206) (316-3096), or the Architectural Historian, Lys Opp-Beckman at lys.opp-beckman@usace.army.mil or (206) 708-5899. I may be contacted at laura.a.boerner@usace.army.mil or (206) 764-6761.

Sincerely,

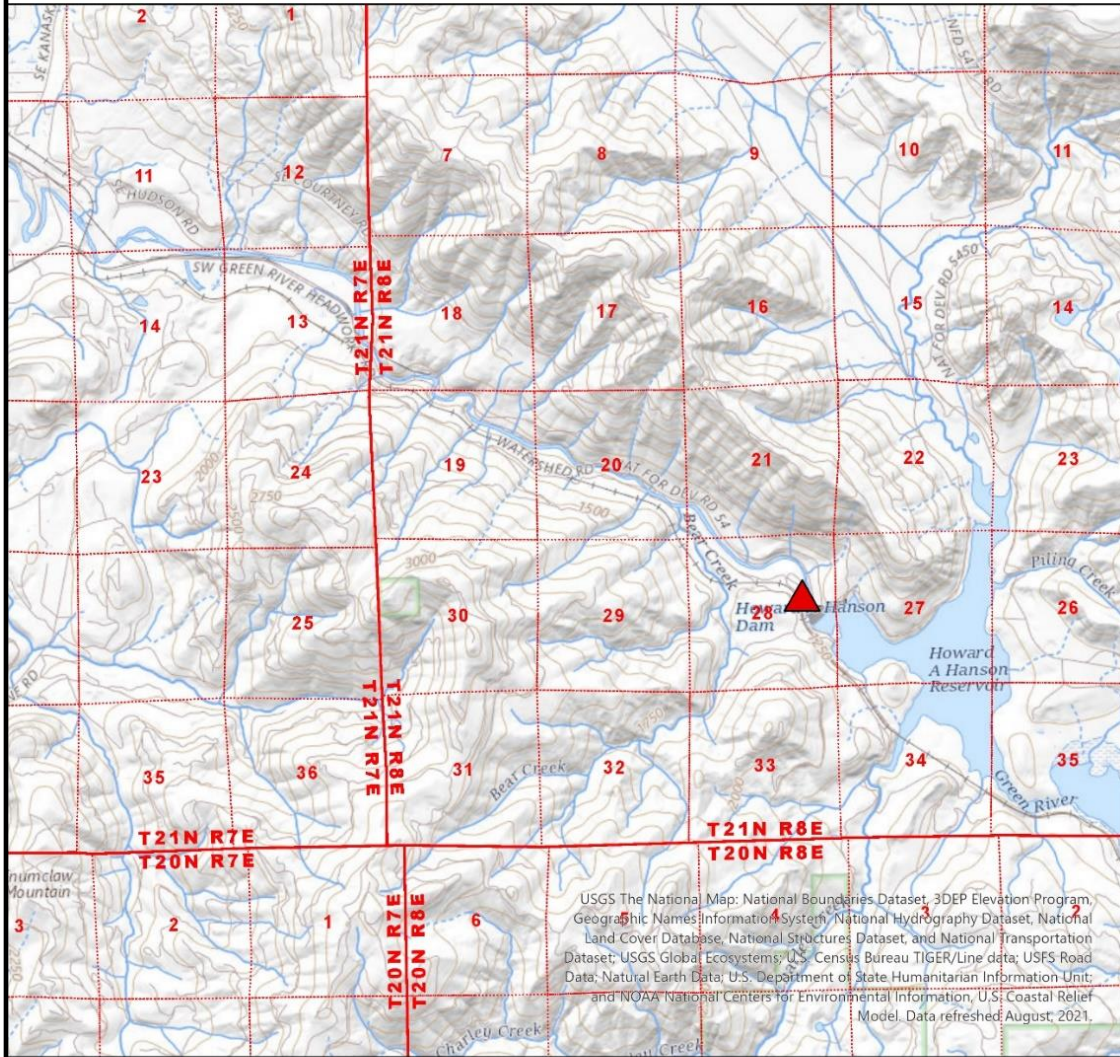
Laura Boerner, LG, LHG
Chief, Planning, Environmental and
Cultural Resources Branch

Enclosure/s



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Seattle District

HOWARD A HANSON DAM AWS FISH PASSAGE PROJECT LOCATION MAP



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed August, 2021.

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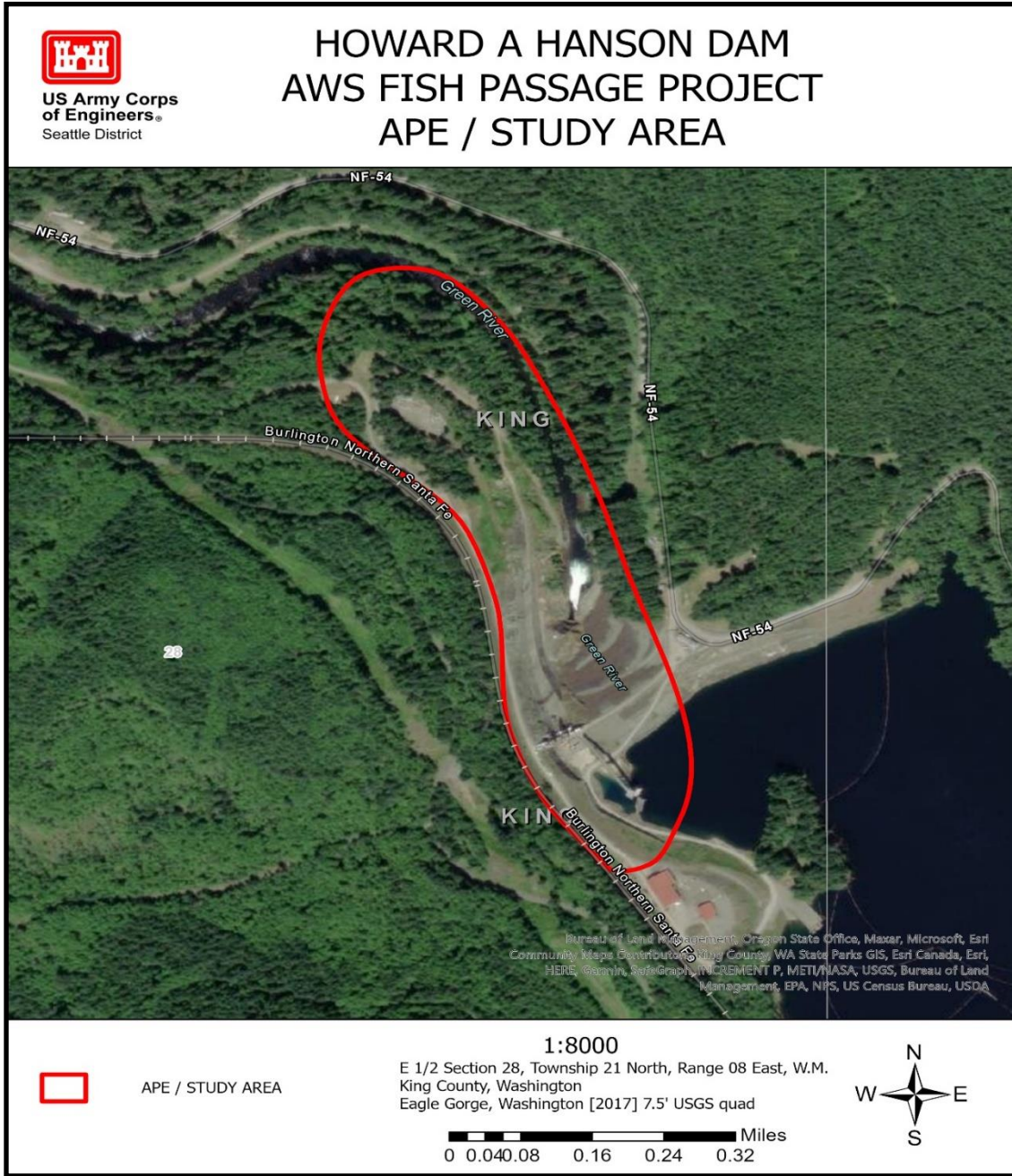
E 1/2 SECTION 28, TOWNSHIP 21 NORTH, RANGE 08 EAST, W.M.
KING COUNTY, WASHINGTON
EAGLE GORGE, WASHINGTON [2017] 7.5' USGS QUAD



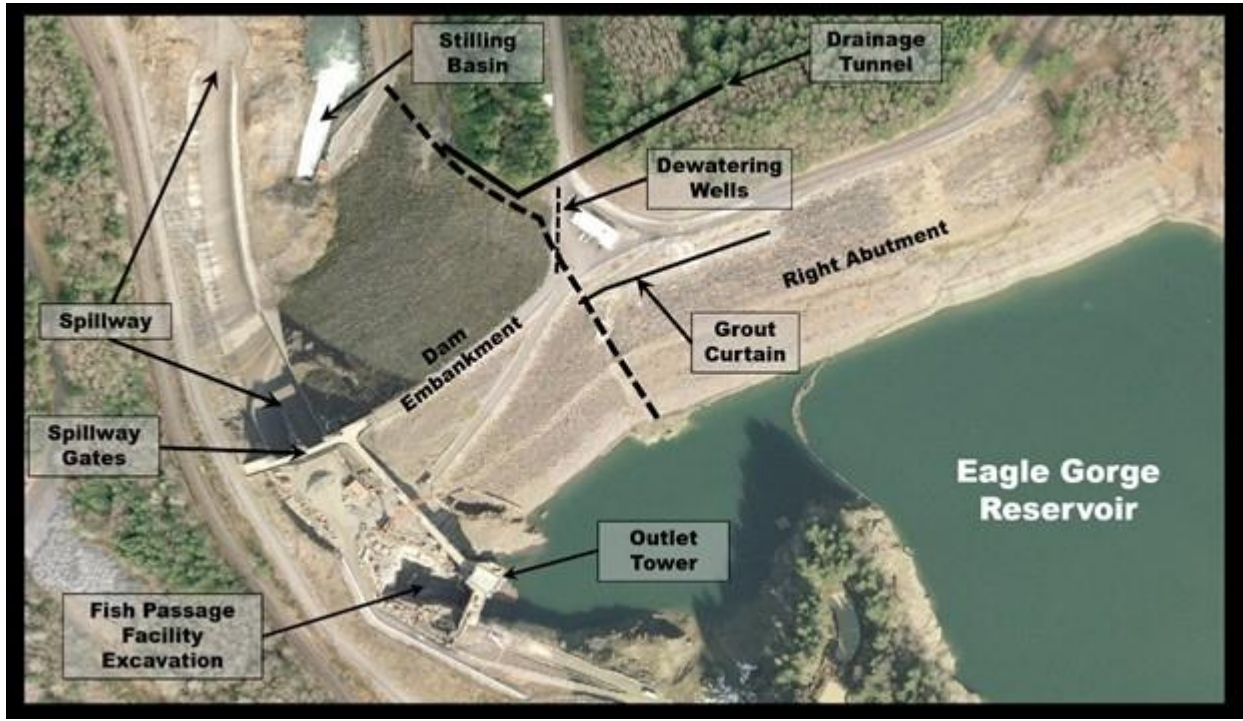
PROJECT
LOCATION



Enclosure 1. Location Map



Enclosure 2. APE



Enclosure 3. Built environment site features previously identified in EIS.



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, SEATTLE DISTRICT
PO BOX 3755
SEATTLE, WA 98124-3755

9/21/2021

Allyson Brooks, Ph.D.
State Historic Preservation Officer
Department of Archaeology and Historic Preservation (DAHP)
Post Office Box 48343
Olympia, Washington 98504-8343

SUBJECT: Section 106 Consultation for the Howard A. Hanson Dam Additional Water Storage Project Fish Passage, King County, WA (DAHP Log.: 2021-08-05899)

Dear Dr. Brooks:

The U.S. Army Corps of Engineers (Corps) proposes to restore downstream fish passage, past Howard A. Hanson Dam (HAHD), by constructing a fish passage facility (undertaking) located in King County, Washington (Enclosure 1). Downstream fish passage would improve the abundance and productivity of Endangered Species Act-listed salmon. The increase in salmon would contribute to the survival and recovery of Southern Resident killer whales. The Corps has determined and documented the area of potential effect (APE) for the undertaking and is consulting with your office under Section 106 as provided at 36 C.F.R. § 800.4(a). The Corps has also determined this project has the potential to cause effects to cultural resources, though the extent and nature of possible effects is unknown at this time. The letter requests agreement with the Corps' APE determination and agreement to enter into a Programmatic Agreement as Per 36 C.F.R. § 800.14.

Initial consultation for the HAHD Additional Water Storage Project (AWSP) began in 1998. Our consultation led to a Memorandum of Agreement (MOA) signed by the Corps, the City of Tacoma, and DAHP as signatories regarding construction and operation activities at the HAHD reservoir. The Muckleshoot Indian Tribe signed the MOA as concurring party. We have completed all the requirements of this MOA. In 2011 construction of the undertaking was halted because of cost overrun. No work has been conducted on the undertaking since this time. Currently the Corps is preparing a Validation Report and will present a revised cost estimate and updated analysis of the authorized project. Congressional action to increase the total cost limit for the project. If new funding is authorized full design and construction will begin on the authorized fish passage facility.

The 1998 consultation analyzed effects to the upper and lower watershed, but construction and redesign of the fish passage facility would not have any effects to the lower watershed. Therefore, the geographical scope of the 2021 consultation is limited to the upper watershed.

The Corps has identified the APE (Enclosure 2) to include the previous excavation for the fish passage facility located near the HAHD Outlet Tower; the potential alignment for the fish passage pipeline which will cut through the left abutment and run along the left embankment of the spillway (Enclosure 3.). The pipe will release the fish downstream of the dam; however the exact location has not been determined so the APE map will show a general area along the streambank, which will be refined as the construction design is finalized.

On August 25th, 2021 Corps representatives, Laura Boerner, Matthew Punke and Nancy Gleason, met virtually with Nick Vann, Holly Borth, and Rob Whitlam of the DAHP. The meeting was conducted to re-introduce the proposed construction of the HHD AWS Fish Passage facility, discuss the status of the 2003 MOA, discuss the Corps process for funding the project, and potential paths forward for completing section 106. It was noted the HAHD was found eligible for National Register listing in 2009. The Corps discussed the expeditious nature of this project and asked for SHPO support to help facilitate Section 106 compliance. Because we are only in our conceptual design stage, 10% design, the Corps does not fully know or understand the nature of any potential effects this undertaking may have. However, to receive funding the Corps is required to demonstrate a path forward to complete our legal obligations under Section 106 of the NHPA, per ER-1105-2-100. The Corps is requesting that Washington State Historic Preservation Officer enter into a Programmatic Agreement that will guide all parties through the 106 process when and if the Corps receives funding to complete the fish passage facility.

The project area is located in the East ½ of Section 28, Township 21 North, Range 08 East, Willamette Meridian, King County, Washington as shown on the Eagle Gorge, WA [2017] 7.5' quadrangle. The Corps has determined the APE to include the access road, staging area, and the Howard A. Hanson Dam (completed in 1962, determined eligible in 2009) built structures near where proposed construction will take place. The APE encompasses 77 acres, and the Corps believes the APE is sufficient to identify and consider both direct and indirect effects of the proposed project. The Corps is making a good faith effort to gather information from affected Tribes identified pursuant to 36 C.F.R. § 800.3(f). We have notified the Muckleshoot Indian Tribe and the Suquamish Indian Tribe to assist in identifying properties which may be of religious and cultural significance.

The Corps requests your review and agreement with our determination of the APE. The corps further requests concurrence with the potential to cause unknown effects to cultural resources and entry into a PA. If you have any questions or desire additional information, please contact the project Archaeologist, Agnes F. Castronuevo at agnes.f.castronuevo@usace.army.mil or (206) (316-3096), or the Architectural Historian, Lys Opp-Beckman at lys.opp-beckman@usace.army.mil or (206) 708-5899. I may be contacted at laura.a.boerner@usace.army.mil or (206) 764-6761.

-3-

Sincerely,

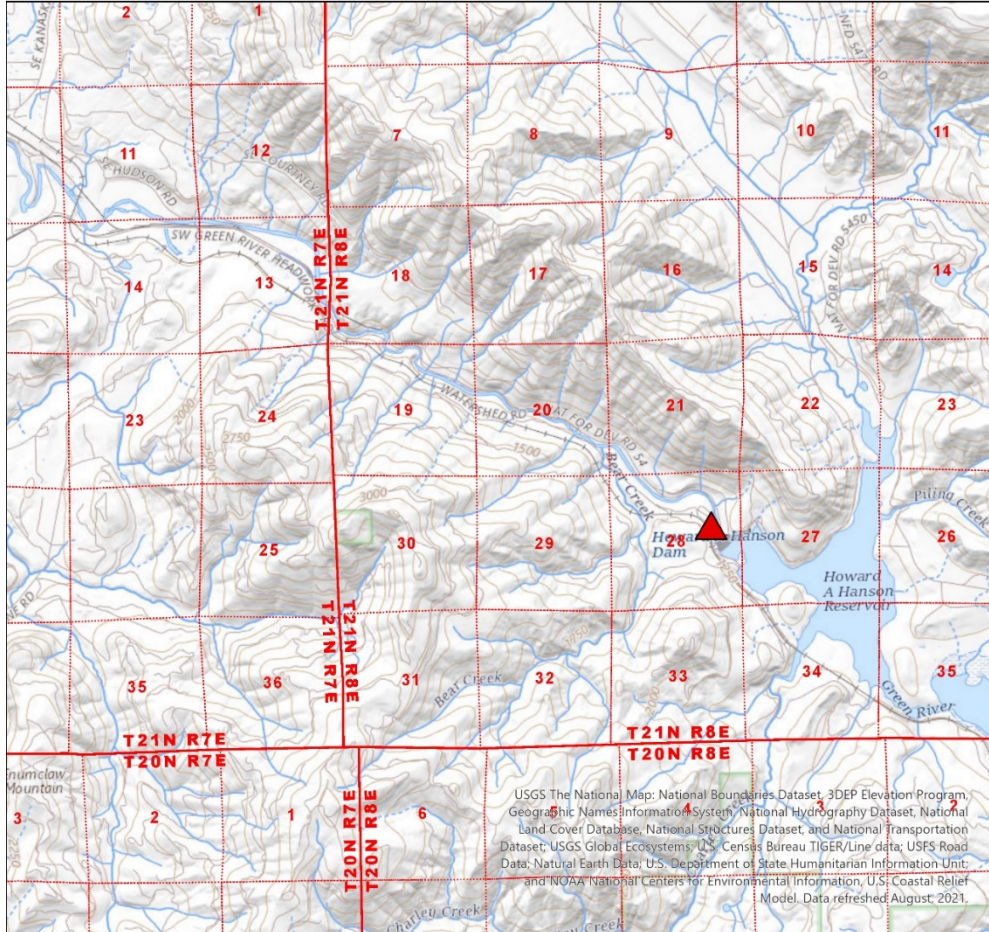
Laura Boerner, LG, LHG
Chief, Planning, Environmental and
Cultural Resources Branch

Enclosure/s




US Army Corps
of Engineers
Seattle District

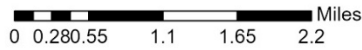
HOWARD A HANSON DAM AWS FISH PASSAGE PROJECT LOCATION MAP



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E 1/2 SECTION 28, TOWNSHIP 21 NORTH, RANGE 08 EAST, W.M.
KING COUNTY, WASHINGTON
EAGLE GORGE, WASHINGTON [2017] 7.5' USGS QUAD

 PROJECT
LOCATION



Enclosure 1. Location Map



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HOWARD A HANSON DAM AWS FISH PASSAGE PROJECT APE / STUDY AREA



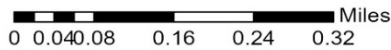
Bureau of Land Management, Oregon State Office, Maxar, Microsoft, Esri
Community Maps Contributors, King County WA State Parks GIS, Esri Canada, Esri,
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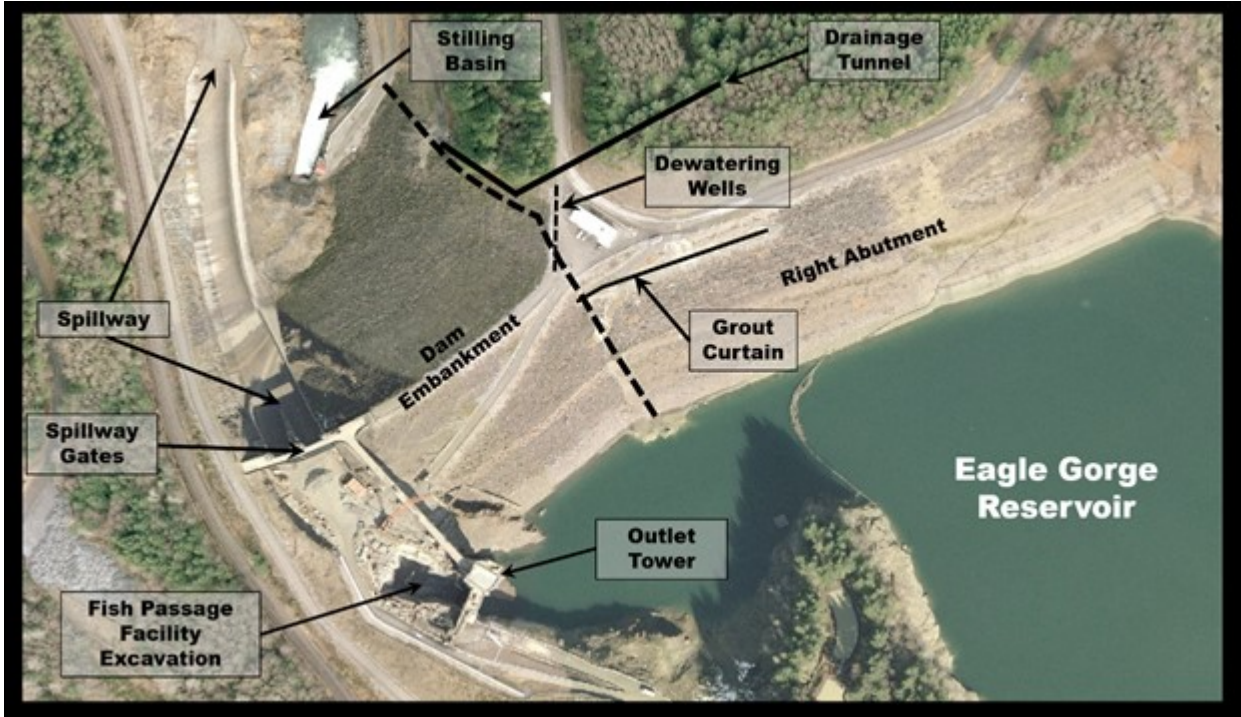
APE / STUDY AREA

1:8000

E 1/2 Section 28, Township 21 North, Range 08 East, W.M.
King County, Washington
Eagle Gorge, Washington [2017] 7.5' USGS quad



Enclosure 2. APE



Enclosure 3. Built environment site features previously identified in EIS.

