

**CLEAN WATER ACT SECTION 404 STATEMENT OF FINDINGS
ICE HARBOR DAM NAVIGATION LOCK
UPSTREAM FLOATING GUIDEWALL CABLE REPAIR
SNAKE RIVER
BURBANK, WASHINGTON
FEBRUARY 2020**

1 INTRODUCTION/PROPOSED ACTION

The U.S. Army Corps of Engineers, Walla Walla District (Corps) proposes to repair the cable system used to anchor the floating guidewall for the upstream navigation lock gate at Ice Harbor Dam. The guidewall protects commercial and recreational vessels entering and exiting the lock from wind and wave action as well as helping to guide the vessels into the lock chamber and away from the spillway. The upstream end of the guidewall is held in place by steel cables attached to two anchors. The anchors are large concrete blocks, one along the right bank of the river and one on the river bottom in the forebay. The cables have deteriorated and need to be replaced before they fail. Should the cables fail, the floating guidewall could swing across the upstream end of the navigation lock or into the spillway. This could damage the dam and halt navigation into and out of the lower Snake River.

The Corps plans to use divers to disconnect the existing cables from the two anchors and attach the new cables. The attachment point on the shoreline anchor is easily accessible, but the river bottom anchor is located in a trench excavated through the old coffer dam used during construction of the navigation lock. The anchor is about 75 - 100 feet below the surface of the reservoir and is buried under an estimated 20 feet of accumulated sediment, some of which would need to be removed to allow the divers to access the cable attachment point.

The Corps proposes to remove up to 2,000 cubic yards of the sediment using hydraulic dredging. The dredging would be performed using a pump with a suction hose to remove the sediment. The resulting slurry of dredged material and water would be pumped through a hose to an in-water disposal area in the forebay about 400 feet northwest of the anchor. The in-water disposal area would be located in water 75-100 feet deep on the downstream side of the old the coffer dam. The discharge end of the hose from the pump would be placed on the river bottom at the upstream edge of the disposal area so the dredged material slurry would flow into the deepwater area between the coffer dam and Ice Harbor Dam. The Corps anticipates the coffer dam would act as a berm to help contain the sediment and reduce adverse effects on water quality.

2 COORDINATION AND PUBLIC INVOLVEMENT

2.1 Coordination with Agencies

The Corps coordinated this project with the Seattle District Dredged Material Management Office (DMMO), the Washington state Dredged Material Management Program (DMMP) agencies (the DMMO, U.S. Environmental Protection Agency Region 10, Washington Department of Ecology, Washington Department of Natural Resources), Washington Department of Ecology (Ecology), U.S. Fish and Wildlife (USFWS), and National Marine Fisheries Service (NMFS). The coordination with the DMMO and DMMP agencies was regarding the suitability of the dredged sediment for in-water placement and is described in Section 3 below. The coordination with Ecology was primarily to obtain Clean Water Act Section 401 water quality certification. Part of that coordination included review and revision of the Corps' water quality monitoring plan. Coordination with USFWS and NMFS was regarding compliance with the Endangered Species Act (ESA).

2.2 Public Notice and Comments

Public involvement for this action was through the Corps' release of Public Notice CENWW-PPL-C 2019-0104 for a 30-day review and comment period of December 12, 2019 – January 13, 2020. The Corps received two comment documents in response to the Public Notice. One comment was the Corps should use the dredged material to improve an upland area and to create habitat. The Corps response is the Corps did consider upland disposal, but determined it was not feasible or practicable.

The other comment was the Corps should delay spending money on maintenance of Ice Harbor Dam until the Record of Decision (ROD) is signed for the Columbia River System Operations Environmental Impact Statement (EIS) as breaching the dam is being considered in the EIS. The Corps response is the Corps must maintain the dam for all authorized project purposes (including navigation) unless and until Congress directs otherwise. Even if dam breaching becomes part of the alternative chosen in the ROD, that decision would be conditioned on receiving authority and funding from Congress.

3 ENVIRONMENTAL EFFECTS

The Corps identified potential effects on water quality as the main environmental concern with this proposed action. To help address this concern, the Corps took sediment samples from the dredging site and analyzed the sediment following the 2016 *Dredged Material Evaluation and Disposal Procedures*, and the 2018 *Sediment Evaluation Framework for the Pacific Northwest* guidelines. The analyses showed that the concentrations of the chemicals of concern were either classified as non-detectable or, when present, less than the freshwater screening levels. The Corps provided the sediment sampling results to the Corps' Seattle District DMMO and the DMMP agencies

and requested a determination that the sediment is suitable for unconfined in-water disposal. The DMMO provided a February 10, 2020 memorandum signed by the DMMP agencies stating the dredged material is suitable for open-water disposal.

Because the sediment is fine sand and silt and the dredged material would be a slurry placed in-water, there is the potential for adverse effects to water quality. The Corps anticipates there would be a turbidity plume at the discharge site that probably would not dissipate quickly as the fine silt particles would tend to stay suspended rather than precipitating out and there is little flow in the forebay to disperse the plume. The slurry would have the potential to reduce dissolved oxygen levels at the discharge site and the reservoir (Lake Sacajawea) is on the state of Washington's 303d list for dissolved oxygen. However, the Corps does not anticipate the proposed dredging or in-water disposal would reduce dissolved oxygen to levels below the state standard. This is because the dredging would take place during the winter when water temperatures are cold and dissolved oxygen levels in the water would be higher.

The Corps anticipates any effects on water quality in the lower Snake River would be reduced as the old coffer dam, Ice Harbor Dam, and the shoreline would act as barriers to contain the dredged material. The Corps has also adjusted the size and location of the disposal area to minimize the potential for turbidity to enter the navigation lock during lock operation.

The Corps determined the proposed action would have a minor effect on biological resources, including species listed under the Endangered Species Act (ESA). The dredging and disposal action would have a negligible effect on benthic organisms as few organisms would be present at the 75-100 foot depth of the dredging and disposal sites. The proposed dredging action would affect a very small part of the reservoir for a short period (up to 2-3 weeks) and would have no significant contribution to cumulative effects. The only environmental effect for the cable replacement itself would be the temporary displacement of fish or wildlife that would move away from the work area while divers are present and dredging is occurring. This effect would be minimized as the work would take place during the winter when fish and wildlife use of the area is low.

4 COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS

The Corps reviewed this project for compliance with applicable Federal laws and regulations and determined the proposed action complies with the applicable laws and regulations. This review is contained in an internal *Record of Environmental Consideration* report on file.

The Corps determined the proposed action is categorically excluded from National Environmental Policy Act documentation as the cable repair is a routine maintenance action and it would not have any significant effects on the quality of the human environment. The associated sediment removal has the potential to cause

temporary adverse effects on water quality, but would not elevate the project to an action requiring an environmental assessment or EIS.

The Corps determined the proposed action is subject to the requirements of Section 404 of the Clean Water Act and prepared a Section 404(b)(1) evaluation for the in-water discharge of dredged material. The Corps determined in-water disposal was the least environmentally damaging practicable alternative. The Corps received Section 401 Water Quality Certification from Ecology for the proposed action on February 3, 2020.

In compliance with Section 7 of ESA, the Corps prepared a biological assessment that addresses the effects of the proposed action on ESA-listed species and their designated critical habitat. The Corps would limit all dredging and in-water disposal to the in-water work window of December 15 – March 1 to minimize effects to ESA-listed fish that may be in or near the work area. The Corps determined the proposed action “may affect and is not likely to adversely affect” bull trout and their critical habitat, and would have “no effect” on yellow-billed cuckoo. The Corps provided its biological assessment to USFWS and requested informal consultation. The Corps received a letter from USFWS dated December 23, 2019 concurring with the Corps’ effect determination.

The Corps coordinated this maintenance action with NMFS through the Fish Passage Operation and Maintenance Work Group (FPOM) for the effects of the proposed action on Snake River fall Chinook, Snake River spring/summer Chinook, Snake River Basin steelhead, and Snake River sockeye, all of which are species listed under ESA. No further coordination with NMFS is needed as maintenance actions are addressed in the 2019 Columbia River System Supplemental Biological Opinion.

The Corps determined the proposed action had “No Potential to Cause Effects” on historic properties and documented this in a memo dated November 22, 2019. The Corps has no further obligations under Section 106 of the National Historic Preservation Act (NHPA).

5 DETERMINATION

5.1 Alternatives

The Corps considered several alternatives for repairing the floating guidewall anchor system:

- Replace the cables using the existing anchor block and expose the anchor point on the forebay anchor block using either hydraulic or mechanical dredging with either in-water or upland disposal.

- Replace the cables, but abandon the existing forebay anchor block and install a new block.
- Abandon the cable system and construct a drilled shaft to hold the downstream end of the guidewall in place.

The Corps eliminated alternatives based on safety, feasibility, practicability, and cost. The Corps determined mechanical (clamshell) dredging would have an unacceptable safety risk as the clamshell bucket could accidentally break the existing anchor cables. The Corps determined upland disposal was not feasible or practicable because of hydraulic pump equipment limitations and the lack of suitable upland disposal sites.

The Corps determined installing a new anchor block was not practicable or feasible as a new concrete block would likely not cure in time to meet the schedule and any uncured concrete would have an adverse effect on water quality.

The Corps determined constructing a drilled shaft was not practicable as it would exceed available funding and the Corps was concerned the shaft would not be able to withstand the force that would be placed on it during use.

The Corps determined hydraulic dredging with in-water disposal near the dredging site was the only practicable alternative.

5.2 Conditions in the Water Quality Certification


The Corps received Section 401 Water Quality Certification from Ecology. The Section 401 certification included conditions addressing water quality conditions, water quality monitoring, dredging and disposal, timing requirements, notification requirements, and emergency/contingency measures. The Corps will comply with these conditions including following the water quality monitoring plan approved by Ecology and providing weekly turbidity monitoring reports to Ecology.

6 CONCLUSION/FINDING

Having reviewed the internal Record of Consideration, the Clean Water Act Section 404(b)(1) Evaluation and associated Section 401 Certification, the Biological Assessment, the NHPA effects memo, and the other supporting documentation, I find the documents provide sufficient discussions on the purpose of the proposed action, alternatives, the environmental effects of the proposed action and coordination with agencies and the public. I have taken into consideration the technical aspects of the project, best scientific information available, and public comments received. These documents provide sufficient evidence and analysis to meet the Corps' requirements pursuant to 33 C.F.R 336, Factors to be Considered in the Evaluation of Army Corps of Engineers Dredging Projects Involving the Discharge of Dredged or Fill Material into Waters of the U.S. and Ocean Waters.

The selected dredged material disposal alternative represents the least costly and least environmentally damaging practicable alternative and meets the environmental standards established by the Clean Water Act Section 404(b)(1) evaluation process.

The Corps will implement the proposed cable repair at Ice Harbor Dam at the earliest opportunity, subject to availability of funding and competing project priorities.

Prepared by: 
Sandra Shelin
Environmental Resources Specialist


Date

Approved by: 
CHRISTIAN N. DIETZ
Lieutenant Colonel, EN
Commanding

FEB 12, 2020
Date