



US Army Corps
of Engineers®
Seattle District

Public Notice Draft Environmental Assessment

Planning Branch
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Public Notice Date: September 9, 2010
Expiration Date: October 12, 2010
Reference: PL-10-12
Project Name: July 2010 Interim Risk Reduction
Measures Plan and Dam Safety
Modification Project

Interested parties are hereby notified that the U.S. Army Corps of Engineers, Seattle District (Corps) has prepared, pursuant to the National Environmental Policy Act (NEPA), a draft Environmental Assessment (EA) for a proposed project at Howard Hanson Dam (HHD), King County, Washington. HHD is located on the Green River at river mile 64.5 and influences flow in the river downstream to the river's terminus at Elliott Bay.

AUTHORITY

The authorization for the dam, initially named the Eagle Gorge Dam, came from the River and Harbor Act of 1950 (Public Law 516, 81st Congress, 2nd Session, 17 May 1950). The dam was completed in 1962. The original authorized and implemented project purposes were flood risk management and summer low flow augmentation. In May 1997, the HHD project was supplemented to include an additional 5,000 acre-feet of reservoir storage for later release as low-flow augmentation, and to implement various fish and wildlife habitat features. An additional supplementation of the original project was authorized through the HHD Additional Water Storage Project in 1999, for municipal and industrial water supply and ecosystem restoration.

PURPOSE AND NEED

The purpose of this Federal action is to remediate all significant and credible failure modes in support of the USACE's ultimate goal of having an adequately safe dam that can meet all authorized project purposes and which meets essential USACE guidelines and results in a tolerable total residual risk of dam failure. The project need is created by observations of the January 2009 pool that indicate that HAHD may be at an unacceptable risk of failure during normal flood hazard reduction operations.

PROPOSED ACTION

- Tunnel drainage improvements would address seepage and piping through the right abutment. The tunnel improvements would consist of installing approximately 38 new vertical drains, installing a dewatering system in 12 of the new vertical drains, installing approximately 23 horizontal drains from inside the drainage tunnel, abandoning horizontal drains, abandoning a drain pipe beneath the floor of a drainage tunnel,

converting 10 existing 6-inch vertical drains to piezometers, and installing 22 new piezometers along the dam embankment.

- A new tunnel spur would also address seepage and piping through the right abutment. This spur would connect approximately 240 feet from the existing drainage tunnel's outlet. The new tunnel would proceed south under the existing road entrance to the administration building and tie into the rock septum thus intercepting flow of water through overburden across a "saddle" of bedrock between the existing tunnel and the dam embankment/abutment interface.
- New debris booms and spillway gate alteration would address spillway flow restrictions. The debris booms would involve providing two new floating debris booms with ground anchors at or above an elevation of 1224 feet. The booms would be located in the reservoir "gullet", approximately 3000 feet upstream of the dam. The spillway gate alteration includes a mechanical alteration to the structure that would increase the bottom of the gate elevation by two feet and increase the spillway opening.
- Grouted rock anchors would address spillway stability. Prestressed grouted rock anchors would be installed at the spillway weir (elevation 1176 feet) to resist the design net uplift forces acting on the base of the spillway weir.
- Resizing and replacement of slope protection would address left embankment erosion. The slope protection would involve excavating the existing rip rap and replacing with larger rip rap.
- Data collection activities to facilitate the Dam Safety Modification Study were taken in the winter of 2010. These activities, including four exploratory borings and the installation of eight piezometers, were previously addressed in a NEPA Categorical Exclusion. Now that a recommended course of action for dam safety modification activities has been developed, and in recognition of the fact that the data collection activities are integrally related to the recommended construction activities, the environmental impacts of those prior activities are considered in conjunction with the proposed actions.

ANTICIPATED IMPACTS

Potential environmental impacts of the preferred alternative include vegetation and habitat disturbance due to construction of temporary access roads for the drainage tunnel improvements and debris booms. The drainage tunnel improvements including the spur would occur on existing staging areas, access roads and the tunnel itself, with the exception of a temporary access road to install three vertical wells on the slope; this area would be hydroseeded with a native seed mix and replanted with conifers. The installation of the debris boom anchors would disturb forested habitat for the north location and south location. The trees cleared in the vegetation management area would be left onsite to provide wildlife habitat or possibly instream habitat. The rootballs would remain in the ground to provide erosion control. Upon completion, the temporary access road would be removed and hydroseeded; and vegetation would be allowed to recolonize this area. The USACE would participate with Tacoma Water to restore an identified site that is of similar size and setting as compensatory mitigation, if required. Because the vegetation and habitat disturbance would be minimal in relation to the entire watershed and disturbed area would be hydroseeded and/or replanted of vegetation, the effects to vegetation or habitat would be less than significant. Wildlife species would be temporarily displaced during construction related to the drainage tunnel improvements and debris booms; however similar habitat exists in the nearby area of the watershed. Effects to wildlife, therefore, would be less than significant.

The work associated with the preferred alternative would not occur below ordinary high water and would not result in a discharge of fill material into waters of the United States and therefore does not require a Section 401 water quality certification or a 404(b)(1) evaluation. The work has been analyzed pursuant to the Coastal Zone Management Act. The proposed plan is consistent to the maximum extent practicable with the enforceable policies of the Washington Coastal Zone Management Program. USACE has determined the preferred alternative would have "no effect" on threatened or endangered species or critical habitat. A Memorandum for Record has been prepared and filed. Per Section 7 of the Endangered Species Act no further consultation with the National Marine Fisheries or U.S. Fish and Wildlife services is necessary.

EVALUATION

The decision whether to perform the proposed work will be based on an evaluation of the probable impact, including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

Any person who has an interest may request a public hearing. The request must be submitted in writing to the District Engineer within the comment period of this notice, and must clearly set forth the following: the interest that may be affected, the manner in which the interest may be affected by this activity, and the particular reason for holding a public hearing regarding this activity.

The Corps is soliciting comments from the public; Federal, State, and local agencies and officials; Indian tribes; and other interested parties in order to consider and evaluate the impacts of this activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition, or not proceed with the proposed work. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the activity. The Corps will consider all submissions received before the expiration date of this notice. The Corps will initiate an Environmental Impact Statement (EIS), and afford all the appropriate public participation opportunities attendant to an EIS, if significant effects on the quality of the human environment are identified and cannot be mitigated.

Submit comments to this office, Attn: Environmental Resources Section, no later than *October 12, 2010* to ensure consideration. In addition to sending comments via mail, comments may be e-mailed to hannah.f.hadley@usace.army.mil. The draft EA can be found at the following website: http://www.nws.usace.army.mil/ers/doc_table.cfm under "Howard A. Hanson Dam IRRMP and Safety Modification Project". Requests for additional information should be directed to Hannah Hadley at 206-764-6950 or the above e-mail address.