



US Army Corps
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Regulatory Branch
1455 Market Street
San Francisco, CA 94103-1398

SAN FRANCISCO DISTRICT

PUBLIC NOTICE

Project: Freshwater County Park Summer Dam & Fish Ladder

NUMBER: 2007-00751 & 2007-00873 DATE: 3 April 2008 RESPONSE REQUIRED BY: 5 May 2008

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1. **INTRODUCTION:** The Humboldt County Department of Public Works, Natural Resources Division, 1106 Second Street, Eureka, California 95501-0579 (Contact: Mr. Andrew Bundschuh, Environmental Analyst at 707-4457741) has applied for a Department of the Army permit to discharge fill in to waters of the United States for the purpose of the annual installation of a summer dam and the one time new construction of a permanent fish ladder and associated fish habitat improvements in Freshwater Creek, within Freshwater County Park, in Humboldt County, California (See Sheets 1 through 10). The applicant has requested a ten-year duration permit for the summer dam installation. This application is being processed pursuant to the provisions of Section 404 of the Clean Water Act (33 U.S.C. Section 1344).

2. **PROPOSED PROJECT:** There are two separate but related projects described in this Public Notice: (1) fill discharge activities associated with the annual installation (and removal) of a summer dam over a ten year permit duration (File No. 2007-00873), and (2) one time construction of a new fish ladder structure at Freshwater County Park's summer dam, and in stream fish habitat and floodplain improvements downstream of the summer dam (File No. 2007-00751).

Freshwater Park Seasonal Dam Installation

As stated in the Humboldt County Department of Public Works' (DPW) permit application, Freshwater County Park has been owned and operated by the County of Humboldt since 1939. Freshwater Creek

meanders through the park, and the park's main attraction during the summer is a swimming area created by a seasonal dam, which has been annually installed since the 1920's. The dam's structure includes permanent concrete wing walls, a concrete sill, concrete retaining walls, and removable steel I-beams, flashboards and a gate valve. U.S. Army Corps of Engineers' (Corps) permits are not required for the actual dam installation but permits are required for the grading and fill activities associated with preparing the site for installation. In past years no Corps permit was issued, but due to the recent disclosure to the Corps of specific preparation activities, it was determined that a Corps individual Section 404 permit is necessary.

Prior to dam installation, a fish exclusion fence would be placed approximately 50 feet upstream of the dam or in a more favorable location where the channel is most confined. This fence would prevent fish from entering the dam installation area from the upstream portion of the creek. Two silt fences would be installed at different locations downstream of the dam. One silt fence would be placed immediately below the dam (approximately 50 feet) and another silt fence would be placed approximately 500 feet downstream near the Park Bridge. The silt fences would help catch sediment, silt or fines stirred up in the water column during dam installation preparation activities. The silt screens would also help prevent fish from entering the installation area from the downstream portion of the creek. A qualified fish biologist would be assigned onsite during installation to remove any fish that may be present by seine or

electro-fishing methods. Captured salmonids would be returned to the creek up or downstream of the work area.

Grading is performed on the right bank upstream of the dam to allow heavy equipment (including a crane) to drive down to a location near the dam for installing the flashboards (Sheet 5 of 10). Approximately 50-200 cubic yards (cy) of sediment is removed during the grading process. The removed gravel would be disposed of at an upland site outside of the park and outside of Corps jurisdiction. Surface area of impact is 2,500 square feet.

Before installing the flashboards, the concrete foundation that houses the flashboards must be cleared of gravel that has accumulated during high winter flows (Sheet 5 of 10). Approximately 1 to 2 cy of gravel would be removed by hand tools. Surface area of impact is 64 square feet.

A back hoe would be used to remove 1 to 5 cy of sediment in front of and behind a 36-inch long by 24-inch diameter corrugated metal pipe to clear the area for installation of the gate valve at this location (Sheet 5 of 10). The gate valve is used to control the flow of water through the dam. Surface area of impact is 18 square feet.

Prior to installation of the I-beams that support the flashboards, sediment must be removed from the I-beam sockets located on top of the dam, with a sediment volume estimated at 0.25 cy of material. In past years, a suction dredge was used to remove this material, but the DPW anticipates doing this by hand during 2008 (Sheet 5 of 10).

Just upstream of the dam on the left bank is a diving platform. This diving platform is used by swimmers to jump off of and into the swimming pool formed by the dam closure (Underneath the label, "Fish Bypass Structure" in Sheet 4 of 10). For safety, a deeper area is cleared out from underneath the diving platform. A back hoe would remove 3 to 6 cy of sediment forming a pool area 8 feet by 8 feet square (and roughly three to four feet deep).

A "Toddler's Pool" is created on the right bank 100 feet upstream of the dam above the Ordinary High Water mark of the creek (Sheet 5 of 10 and 6 of 10). The 30 foot square Toddler's Pool is formed with fill taken from excavations for preparation activities near the dam. This area is staked off and varies in depth from 0 to 24 inches when the impoundment behind the dam is full (the impoundment when full extends for approximately 1,000 feet upstream of the dam). This pool used by small children so they can wade and swim without falling into deeper waters.

In some years, 10 to 20 cy of gravel is removed from the creek and placed along the east side foundation/wing wall adjacent to the dam (Sheet 5 of 10). Purpose of this is to add support and cover any scoured areas that may have formed from strong winter flows. If unattended, water from the impoundment could seep through or flow around the wing wall, causing additional scour near the dam.

In some years, when a double channel forms in the creek upstream of the dam, a sand bag diversion dam is installed to divert the concentration of water towards the main channel on the left bank in order to allow equipment access on the right bank. It is unknown if this would be necessary for 2008 (Sheet 5 of 10).

Once all the preparation work above is complete, installation of the dam with the flashboards and I-beams begins and the water pool behind the dam is gradually impounded with the gate valve. The amount of opening on the gate valve is evaluated each year and is dependent on the amount of creek flow in cubic feet per second. A minimum amount of flow is released downstream of the dam during filling of the lake behind the dam. The dam is usually installed no earlier than June 15 and removed before October 15. Removal of the dam and draining of the impoundment is done in a gradual reverse process from dam installation. After the dam is installed, the temporary fish exclusion fence, silt fences and sand bag dam is removed before the lake pool forms.

Fish ladder construction and other fish habitat improvement activities at Freshwater County Park Summer Dam.

The DPW has proposed the Freshwater County Park Environmental, Recreational, and Educational Improvement Project which includes a new seasonal dam bypass structure for fish, an observation platform, creek side access ramp, installation of four fish habitat structures, removal of non-native invasive plants from the riparian zone, replanting of native vegetation, installation of a new fence to protect the riparian zone, and removal of a portion of an earthen berm to restore flood conveyance or capacity. Other recreation aspects include construction of a removable boardwalk, creek side stairs, woods trail, gazebo, and shade canopy. Educational aspects include installation of a series of kiosks to provide information on the function and form of the riparian zone, wildlife natural history, and resource management.

In July 2002, cooperative efforts between the County, local fisheries professionals, local community groups, state (the California Department of Fish and Game and Humboldt State University), and federal agencies (National Marine Fisheries Service) designed, constructed, operated and monitored a temporary wood dam bypass structure (similar to a fish ladder) to allow juvenile salmonid fish to move upstream and downstream of the seasonal dam. The bypass structure met its objectives, but was not intended as a permanent solution. In addition, after several years of operation, design features have been identified that would improve performance.

A new, permanent fish bypass structure is proposed by DPW (Sheets 4, 7, 8 and 9 of 10). This bypass would be a concrete structure embedded in the stream bank, following the same general design and flow specifications as the temporary wooden structure. A creek side access ramp and observation platform would be molded around the permanent portion of the dam bypass structure. The bypass structure would contain two concrete raceways parallel to each other, running along the bank at an approximate 8 degree

slope. The raceways would contain adjustable baffles for differing flow rates so that pool widths and water velocities can be tested and the survivability of juvenile fish maximized. The end of the structure (downstream exit/entrance) would contain a removable aluminum trough that can be adjusted to promote the most effective passage ability of juvenile fish both entering and exiting the dam bypass structure.

A creek side access ramp (Sheet 7 of 10) would run from the top of the dam abutment down to the creek below the dam. The ramp would be built into the bank and would measure approximately 40 feet long, five feet wide, and contain a grade slope meeting American with Disabilities Act (ADA) requirements (8%). The ramp would be supported on the down slope side by the new dam bypass structure. The ramp would have short curb and removable safety rails running along the perimeter. The access ramp would lead to an observation platform (Sheet 7 of 10) that would extend another 8 to 10 feet off the bottom of the access ramp and would be approximately 14 feet wide. Construction of the access ramp, observation platform and dam bypass structure would require excavation of a portion of the stream bank 60 feet long, 10 feet wide and ten feet deep (115 cy of material would be removed). A portion of excavated stream bank material would be reused as fill under and behind the access ramp and bypass structure. The remainder of the material would be hauled off site.

Usage of the creek side access ramp, observation platform, and seasonal dam fish bypass structure would coincide with installation of the summer dam (June 15 through the first weekend in September. Installation and removal of the safety rails on the ramp and observation platform, along with the internal workings of the fish bypass structure, would match the same schedule. DPW proposes to construct fish bypass structure, access ramp and observation platform in the summer of 2008. It is unknown at this time how this would impact the seasonal installation of the flashboard dam. Once permits are obtained, construction timing may delay either project.

A location about 200 feet upstream of the dam and along the right bank has sustained erosion scour for creek high flows (Just to the right of the label, "Parking Area" in Sheet 4 of 10). Approximately 10 cubic yards of two ton rock slope protection would be placed along 20 lineal feet of bank covering an area of 80 square feet. A second location located downstream of the dam on the left bank has also sustained erosion scour and undermining of the stream bank from winter high flows (General location near the label, "Creek" in Sheet 4 of 10). Approximately 90 cy of two ton and one and a half ton rock slope protection would be placed along 150 lineal feet of stream bank spread out over a 300 lineal foot reach of Freshwater Creek. The rock slope protection placed starting near the confluence of Cloney Gulch with Freshwater Creek and running upstream of the confluence, covering 600 square feet of area. In addition, four fish habitat structures (combination log and rock structures) would be installed along a total 20 lineal feet of stream bank at this second location.

An artificial earthen berm built in decades past, would be removed by excavating 10 cy of soil adjacent to 40 lineal feet of stream bank (Sheet 4 of 10, near the rock slope protection area). The purpose of the berm removal is to reduce channel confinement during flood flows in Freshwater Creek, reducing water velocity and scour in the active or wetted channel. Excavated soil would be removed off site and out of the park property.

Three sets of stairs would be constructed along the left bank downstream from the park bridge in order to provide access to the creek and replace the existing an unauthorized trail system (Sheet 4 of 10). The stairs would be placed areas where the public has worn trails down to the creek. The top surface of each step would be filled with gravel and held in place by simulated wood sideboards (i.e., Trex vinyl deck boards or similar material). The gravel would protect the native soil while still allowing a permeable surface. The stairs would lead from the top of the bank down to the gravel bar (descending approximately 12 vertical feet). The stairs may

require annual maintenance by replacing any gravel that may have been removed during high flow events or lost over time.

A table of itemized and total fill and excavation volumes for the above work is attached to this Public Notice as Sheet 10 of 10.

3. COMPLIANCE WITH VARIOUS FEDERAL LAWS:

National Environmental Policy Act of 1969 (NEPA): The Corps will assess the environmental impacts of the proposed action in accordance with the requirements of the National Environmental Policy Act of 1969 (42 U.S.C. Section 4371 et. seq.), the Council on Environmental Quality's Regulations (40 C.F.R. Parts 1500-1508), and the Corps' Regulations (33 C.F.R. Part 230 and Part 325, Appendix B). Unless otherwise stated, the Environmental Assessment will describe only the impacts (direct, indirect, and cumulative) resulting from activities within the Corps' jurisdiction. The documents used in the preparation of the Environmental Assessment will be on file with the U.S. Army Corps of Engineers, San Francisco District, Regulatory Branch, 1455 Market Street, San Francisco, California 94103-1398.

Endangered Species Act of 1973 (ESA): Section 7 of the Endangered Species Act requires formal consultation with the U.S. Fish and Wildlife Service (FWS) and/or the National Marine Fisheries Service (NMFS) if a Corps permitted project may adversely affect any Federally listed threatened or endangered species or its designated critical habitat. Freshwater Creek and its tributaries are critical habitat for three salmonid species listed as threatened by NMFS: the coho salmon (*Oncorhynchus kisutch*), steelhead (*O. mykiss*), and Chinook salmon (*O. tshawytscha*). The Corps is initiating Section 7 consultation with NMFS regarding the potential impacts of the summer dam installation activities and fish bypass structure/fish habitat improvements project to the listed fish and their critical habitat.

Magnuson-Stevens Fisheries Conservation and Management Act: Essential Fish Habitat - The Magnuson-Stevens Fishery Conservation and Management Act requires all Federal agencies to consult with the National Marine Fisheries Service (NMFS) on all actions, or proposed actions permitted by the agency that may adversely affect Essential Fish Habitat (EFH). This notice initiates the EFH consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. The proposed project would impact approximately 3.25 acres of EFH utilized by coho salmon and Chinook salmon. The Corps' initial determination is that the proposed action would not have a substantial adverse impact on EFH or federally managed fisheries in California Waters. Our final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the NMFS.

Clean Water Act of 1972 (CWA):

a. Water Quality: Under Section 401 of the Clean Water Act (33 U.S.C. Section 1341), an applicant for a Corps permit must first obtain a State water quality certification before a Corps permit may be issued. The applicant has applied for a Section 401 Water Quality Certification from the California Regional Water Quality Control Board (RWQCB), North Coast Region. No Corps permit will be granted until the applicant obtains the required water quality certification. The Corps may assume that water quality certification has been obtained if the State fails or refuses to act on a valid request for certification within 60 days after the receipt of a valid request, unless the District Engineer determines a shorter or longer period is reasonable for the State to act.

Those parties concerned with any water quality issue that may be associated with this project should write to the Executive Officer, California Regional Water Quality Control Board, North Coast Region, 5550 Skylane Boulevard, Suite A, Santa Rosa, California 95403, by the close of the comment period of this Public Notice.

b. Alternatives: Evaluation of this proposed activity's impact includes application of the guidelines promulgated by the Administrator of the Environmental Protection Agency under Section 404(b)(1) of the Clean Water Act (33 U.S.C. Section 1344(b)). An evaluation has been made by this office under the guidelines and it was determined that the proposed project is water dependent.

Coastal Zone Management Act of 1972 (CZMA): Section 307 of the Coastal Zone Management Act requires the applicant to certify that the proposed project is consistent with the State's Coastal Zone Management Program, if applicable. The proposed project is not within the Coastal Zone.

National Historic Preservation Act of 1966 (NHPA): The County of Humboldt, Natural Resources Division of Public Works states that no recorded archaeological resources at this site in the data bank maintained by the County. If unrecorded resources are discovered during construction of the project, operations will be suspended until the Corps completes consultation with the State Historic Preservation Office (SHPO) in accordance with Section 106 of the National Historic Preservation Act.

4. PUBLIC INTEREST EVALUATION: The decision whether to issue a permit will be based on an evaluation of the probable impact, including cumulative impact, 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 that reasonably may be expected to accrue from the proposed activity must be balanced against its reasonably foreseeable detriments. All factors that may be relevant to the proposal will be considered, including its cumulative effects. Among those factors 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.

5. CONSIDERATION OF COMMENTS: The Corps of Engineers 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 proposed activity. Any comments received will be considered by the Corps to determine whether to issue, condition or deny a permit for this proposal. 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 used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest in the proposed activity.

6. SUBMISSION OF COMMENTS: Interested parties may submit, in writing, any comments concerning this activity. Comments should include the applicant's name and the number and the date of this Public Notice, and should be forwarded so as to reach this office within the comment period specified on Page 1. Comments should be sent to the U.S. Army Corps of Engineers, San Francisco District, Regulatory Division, Eureka Field Office, 601 Startare Drive, Box 14, Eureka, California 95501. It is the Corps' policy to forward any such comments that include objections to the applicant for resolution or rebuttal. Any person may also request, in writing, within the comment period of this Public Notice that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. Additional details may be obtained by contacting the applicant whose name and address are indicated in the first paragraph of this Public Notice or by contacting David Ammerman of our Eureka Field Office at telephone 707-443-0855 or by electronic mail at: David.A.Ammerman@spd02.usace.army.mil. Details on any changes of a minor nature that are made in the final permit action will be provided upon request.