



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT
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SACRAMENTO CA 95814-2922

Operations and Readiness Branch

PUBLIC NOTICE

**REQUEST FOR PERMISSION TO ALTER A U.S. ARMY CORPS OF ENGINEERS
PROJECT UNDER SECTION 408**

TITLE: Fremont Weir Adult Fish Passage Modification Project (19160)

PUBLIC NOTICE COMMENT PERIOD:

Begins: March 15, 2017

Ends: April 14, 2017

REQUESTER: In compliance with U.S.C. Title 33, Chapter 9, Subchapter 1, Section 408, the California Department of Water Resources (Requester) has requested permission through the Central Valley Flood Protection Board (non-federal sponsor of the federally authorized project) from the U.S. Army Corps of Engineers (USACE) to alter the Sacramento River Flood Control Project, an existing federal flood risk management project, authorized by the Flood Control Act of 1917.

LOCATION: The proposed project is located along the northern boundary of the Yolo Bypass on the south bank of the Sacramento River, approximately 2 miles southwest of Verona, Yolo County, California (Attachment 1). There are three discrete locations where construction is proposed, including the existing Fremont Weir, and two agricultural road crossings over the Tule Canal. The northern boundary of the project area is the Sacramento River bank immediately north of the existing Fremont Weir fish ladder. The Fremont Weir fish ladder is located between River Mile (RM) 82 and RM 84 and is approximately 0.62 mile west of the Yolo Bypass east levee. The southern boundary of the project area is an existing agricultural road crossing located in the Tule Canal, approximately 2.8 miles south of Fremont Weir (Attachment 1).

REQUESTER'S PROPOSED ACTION: The California Department of Water Resources (DWR) proposes to modify the existing Fremont Weir fish ladder and stilling basin, modify the existing upstream and downstream channels connected to the weir, and modify two agricultural road crossings over the Tule Canal (Attachment 2). Modifications would include: the installation of a fish passage structure including a sheet pile wall, concrete wing walls, concrete rectangular gate housing, a concrete box culvert, a raised equipment platform, channel grading, installation of rock slope protection, replacement of an agricultural road crossing with box culverts, and the removal of an existing agricultural road. Spoils from project construction would be placed in either an area outside of the Yolo Bypass (Elkhorn Area Spoil Site), or Mt. Meixner, an existing hill located within the Fremont Weir Wildlife Area in the Yolo Bypass (Attachment 3).

DWR proposes to:

- Modify the existing Fremont Weir fish ladder to provide improved upstream passage for salmonids and sturgeon when the Sacramento River overtops Fremont Weir and immediately after the Sacramento River recedes below Fremont Weir.
- Improve fish passage conditions in the channel that extends from the existing fish ladder upstream to the Sacramento River.
- Improve fish passage conditions in the scour channel that extends from the existing fish ladder downstream to an existing deep pond.

- Remove one earthen agricultural road crossing and replace one earthen agricultural road crossing with a structure that allows for improved fish passage through the Tule Canal and continued agricultural utility.

The existing fish ladder would be lowered from a bottom elevation of 26 feet to an elevation of 22 feet. The existing 4-foot-wide ladder would be replaced by a fish passage structure. The components of the fish passage structure would include a sheet pile wall, concrete wing walls, concrete rectangular gate housing, and a concrete box culvert (Attachment 4). In addition to more favorable depth and velocity, the increased cross-sectional area would provide a greater attraction flow, making it easier for fish to find and ascend the fish passage structure. A raised equipment platform would be approximately 50 feet northwest of the fish passage structure, upstream of Fremont Weir. The steel equipment platform, measuring 15- by 15-feet, would be elevated by four 30-inch wide steel columns. A power supply would enable operation of an adaptive resolution imaging sonar (ARIS) system that would monitor how fish behave at the fish passage structure. Concrete encased duct bank would connect all electrical and air lines from the platform to the fish passage structure.

The portion of the Fremont Weir stilling basin in line with the fish passage structure location would be lowered to an invert elevation of 22 feet, with a 15-foot bottom width and 3:1 side slopes that tie into the existing bottom of the stilling basin. The modified area would become the deepest portion of the stilling basin. As the deepest point, it would be likely to attract fish as the stilling basin drains. This configuration is predicted to further reduce current fish stranding issues in the stilling basin by increasing the likelihood of connecting with the Sacramento River.

The proposed Upstream Channel would provide connection from the fish passage structure to the Sacramento River for salmonids and sturgeon in the bypass as flood waters recede (Attachment 2). The Upstream Channel would be excavated, compacted, lined with filter fabric, and include 1 foot of aggregate-base-rock slope protection, with 1 foot of engineered streambed material to final grade (12-inch D100 round riprap). The channel would be 400 feet long, with a 10-foot-wide bottom and 3:1 side slopes. It would start at the Sacramento River, with a final grade bottom elevation of 21 feet. It would slope upward toward Fremont Weir and, at an elevation of 22 feet, would terminate at the upstream end of the fish passage structure. Starting at the wing walls of the fish passage structure, the channel would transition from a 10-foot-wide bottom to a 15-foot-wide bottom, to match the width of the opening of the concrete gate housing. This negative upstream slope would allow the fish passage structure to drain toward the Sacramento River at lower stages. The area where the Upstream Channel meets the Sacramento River would be lined with Class 3 round riprap down to an elevation of 17 feet, which is the estimated average maximum stage elevation of the river in the summer. The dimension of the lined area would be approximately 175 feet long by 75 feet wide. No in-water work is planned because the limit of work is anticipated to be above the estimated average stage elevation in the summer.

The area between the stilling basin and the deep pond would be realigned and deepened to connect the fish passage structure to the deep pond south (Attachment 2). The majority of the channel would be excavated, compacted, and lined with filter fabric, and would include 1 foot of aggregate-base-rock slope protection, with 1 foot of engineered streambed material to final grade. A 100-foot segment of the channel, near the deep pond, would be backfilled with approved fill material and compacted to raise the elevation to the proposed final grade prior to placing filter fabric, 1 foot of aggregate-base-rock slope protection, and 1 foot of engineered streambed material. To better meet fish passage criteria, the outlet of the deep pond would be raised (Attachment 2). The raised section would be 75 feet wide and would be raised with approved backfill material and compacted prior to placing filter fabric armored with 1 foot of engineered streambed material.

The hydraulic capacity of Agricultural Road Crossing 2 would be increased to more closely match that of the Tule Canal, by replacing the earthen road crossing with a bridge (Attachment 4). This design would ensure that fish could pass the structure when hydraulic conditions allow fish to reach the structure. The bridge would be constructed with six precast concrete box culverts. Each culvert would have a 24-foot inside width, with a 9-foot, 4-inch inside height and an 18-foot total length, likely in 6-foot segments. The wall thickness would be 1 foot, 10 inches at the top and bottom and 1 foot on the sides. The culverts would be placed side by side and sealed with 3 inches of slurry cement. The total length of the bridge would be 157 feet, 3 inches. Cast-in-place wing walls would be placed at either end of the bridge. The wing walls would be 1 foot thick; 10 feet long; and 14 foot, 6 inches tall. The bridge would be traffic-rated for heavy farm equipment. Both sides of the bridge would have a 6-inch-tall curb affixed with removable 3-foot-tall metal guard rails along the entire bridge length. Within the armored portion of channel upstream of the bridge, a 12-foot-wide segment of the Tule Canal banks would be graded to have a slope of 5:1 to the channel bottom to allow maintenance access.

Given the close proximity to Agricultural Road Crossing 2 and the lack of a need for a water control structure at this site, Agricultural Road Crossing 3 is considered unnecessary and would be removed (Attachment 4). The existing Agricultural Road Crossing 3 is at an elevation of 15.6 feet. This earthen crossing would be removed and the upstream and downstream channels adjacent to the site would be modified to create a consistent Tule Canal channel bottom profile of approximately 34.1 feet through the area.

ENVIRONMENTAL IMPACTS OF PROPOSED ACTION: The proposed project area provides potential habitat for the federally threatened giant garter snake (*Thamnophis gigas*) and Western yellow-billed cuckoo (*Coccyzus americanus*), and the federally endangered least Bell's vireo (*Vireo bellii pusillus*). Additionally, the project vicinity contains elderberry shrubs (*Sambucus* sp.), the host plant for the federally threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). See Attachment 5 for a map of elderberry shrub locations and Attachment 6 for a map of giant garter snake habitat within the project area. The proposed project area also provides potential habitat for the federally threatened California Central Valley distinct population segment (DPS) of steelhead (*Oncorhynchus mykiss*), Central Valley spring-run Chinook salmon (*O. tshawytscha*), and the Southern DPS of North American green sturgeon (*Acipenser medirostris*), and the federally endangered Sacramento River winter-run Chinook salmon (*O. tshawytscha*). The Yolo Bypass is designated critical habitat for the California Central Valley steelhead, the Southern DPS of North American green sturgeon, and Central Valley spring-run Chinook salmon. The Yolo Bypass is also identified as essential fish habitat under the Magnuson-Stevens Fishery Conservation and Management Act. A number of conservation measures (Attachment 7) have been incorporated into the project design to minimize potential effects to listed species and critical habitat. The U.S. Bureau of Reclamation (BOR) has been designated lead federal agency for the proposed project and has assumed responsibility for consultation under Section 7 of the Endangered Species Act. Formal consultation with both the U.S. Fish and Wildlife Service and the National Marine Fisheries Service has been initiated.

The proposed project area is currently being evaluated for cultural resources under Section 106 of the National Historic Preservation Act. BOR has initiated consultation with local tribes and individuals identified by the Native American Heritage Commission as being potentially interested in the area. A cultural resources inventory report is being prepared and BOR will initiate consultation with the State Historic Preservation Officer under Section 106.

See Attachment 8 for photographs of site conditions.

Portions of the proposed project are located within the Fremont Weir Wildlife Area (FWWA), a state wildlife area that is generally used for hunting, fishing, wildlife viewing, hiking, and other miscellaneous activities. Recreation use of the FWWA is estimated to be 1,500 recreation-days annually, of which about two-thirds are used by hunters during the respective open seasons for various game species. Temporary closures of portions of the FWWA and areas of private land near the agricultural road crossings would be necessary during the construction period, anticipated to occur from May 1 through November 1. Proposed project construction would have minor, temporary effects on existing public and private recreation use in the project area. These effects would be mitigated through coordination with the California Department of Fish and Wildlife to avoid closures during the opening days of respective hunting seasons. The construction contractor shall post and distribute notifications at the main FWWA entrance parking area, and at any other local access points, notifying of any scheduled closure of FWWA lands or features at least 30 days in advance of the construction work. Additionally, the construction contractor, in coordination with DWR, shall notify any affected private property owners or lessees if there will be a closure, or other conditions imposed upon entry of their respective private property, in the vicinity of project activities.

AUTHORITY: The authority to grant permission for temporary or permanent use, occupation or alteration of any U.S. Army Corps of Engineers (USACE) civil works project is contained in Section 14 of the Rivers and Harbors Act of 1899, as amended, codified at 33 USC 408 ("Section 408"). Section 408 authorizes the Secretary of the Army, on the recommendation of the Chief of Engineers, to grant permission for the alteration or occupation or use of a USACE project if the Secretary determines that the activity will not be injurious to the public interest and will not impair the usefulness of the project. The Secretary of Army's authority under Section 408 has been delegated to the USACE, Chief of Engineers. The USACE Chief of Engineers has further delegated the authority to the USACE, Directorate of Civil Works and Division and District Engineers, depending upon the nature of the activity.

LIMITS OF SECTION 408 AUTHORITY: A requester has the responsibility to acquire all other permissions or authorizations required by federal, state, and local laws or regulations, including any required permits from the USACE Regulatory Program under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403), Section 404 of the Clean Water Act (33 USC Section 1344), and/or Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 USC 1413). In addition, an approval under Section 408 does not grant any property rights or exclusive privileges nor does it authorize any injury to the property or rights of others.

EVALUATION FACTORS: The decision whether to grant the requested permission for project alteration under Section 408 will be based on several factors. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. Review of requests for alteration will be reviewed by a USACE technical review team considering the following factors:

1) Impair the Usefulness of the Project Determination. The review team will determine if the proposed alteration would limit the ability of the USACE project to function as authorized, or would compromise or change any authorized project conditions, purposes or outputs. In order for an alteration to be approved, the Requester must demonstrate that the alteration does not impair the usefulness of the federally authorized project.

2) Injurious to the Public Interest Determination. Proposed alterations will be reviewed to determine the probable impacts, including cumulative impacts, on the public interest. Factors that may be relevant to the public interest evaluation depend upon the type of USACE project being altered and the nature of the proposed alteration and may include, but are not limited to,

such things as conservation, economic development, historic properties, cultural resources, environmental impacts, water supply, water quality, flood hazards, floodplains, residual risk, induced damages, navigation, shore erosion or accretion, and recreation. This evaluation will consider information received from the interested parties, including tribes, agencies, and the public. The benefits that reasonably may be expected to accrue from the proposal must be compared against its reasonably foreseeable detriments. The decision whether to approve an alteration will be determined by the consideration of whether benefits are commensurate with risks and by the net impact of the alteration on the public interest using the public interest factors.

3) Environmental Compliance. A decision on a Section 408 request is a federal action, and therefore subject to the National Environmental Policy Act (NEPA) and other environmental compliance requirements. While USACE is responsible for ensuring environmental compliance, the requester is responsible for providing all information that the district identifies as necessary to satisfy all applicable federal laws, executive orders, regulations, policies, and procedures. NEPA and other analysis completed to comply with other environmental statutes (e.g. Endangered Species Act) should be commensurate with the scale and potential effects of the activity that would alter the USACE project. The district will work with the requester to determine the requirements, which will be scaled to the likely impacts of the proposed alteration and should convey the relevant considerations and impacts in a concise and effective manner.

PUBLIC INVOLVEMENT: The purpose of this notice is to solicit comments from the public; federal, state, and local agencies and officials; tribes; and other interested parties regarding the Fremont Weir Adult Fish Passage Modification Project, a proposed alteration to an existing federally authorized project. Comments received within 30 days of publication of this notice will be used in the evaluation of potential impacts of the proposed action on important resources and in the evaluation of whether the proposed alteration would be injurious to the public interest and/or would impair the usefulness of the authorized project. Only the specific activities that have the potential to occupy, use or alter the Sacramento Flood Control Project will be evaluated. Please limit comments to the area of the alteration and those adjacent areas that would be directly or indirectly affected by the alteration to the Sacramento Flood Control Project.

SUBMITTING COMMENTS: Written comments, referencing Identification Number 19160 must be submitted to the office listed below on or before April 14, 2017.

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Email: Brian.J.Luke@usace.army.mil

Attachments:

- 1) Vicinity map
- 2) Site maps
- 3) Spoils sites map
- 4) Project plans
- 5) Elderberry shrub locations
- 6) Giant garter snake habitat maps
- 7) Conservation measures for Biological Resources
- 8) Site photographs