



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

SEP 29 2009

In response refer to:
2009/04746

Mr. William Guthrie
Senior Project Manager
U.S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

Dear Mr. Guthrie:

This is in response to your letter of August 31, 2009, requesting the initiation of consultation under section 7 of the Endangered Species Act (ESA) and requesting concurrence from NOAA's National Marine Fisheries Service (NMFS) that the In-Water Geotechnical Drilling, Bay Delta Conservation Plan project [U.S. Army Corps of Engineers (Corps) project #SPK-2009-00938] may affect, but is not likely to adversely affect Federally listed endangered Sacramento River winter-run Chinook salmon (*Oncorhynchus tshawytscha*), threatened Central Valley spring-run Chinook salmon (*O. tshawytscha*), threatened Central Valley steelhead (*O. mykiss*), designated critical habitat for these salmonid species, the threatened Southern Distinct Population Segment (DPS) of North American green sturgeon (*Acipenser medirostris*) or its proposed critical habitat. The Corps has also determined that this project may affect Essential Fish Habitat (EFH) for Pacific salmon, pursuant to section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA). This letter also serves as consultation under the authority of, and in accordance with, the provisions of the Fish and Wildlife Coordination Act of 1934 (FWCA), as amended.

Action Area

The proposed geotechnical borings will occur in Sacramento, Yolo, Solano, San Joaquin, and Contra Costa Counties. The 16 project sites are located on the Sacramento River, San Joaquin River, Mokelumne River, Potato Slough, Columbia Cut, Dutch Cut, and Steamboat Slough. See the enclosure for more specific details of boring site locations.

The action area for each boring site will amount to less than three square feet. These sites are known to have Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon, Central Valley steelhead, and Southern DPS green sturgeon presence. Listed salmonid presence is presumed to occur primarily between October and June, based on the timing of adult and juvenile migrations through the Sacramento-San Joaquin Delta. Green sturgeon presence is presumed to occur year-round within the action area. The action area also includes designated critical habitat for the Central Valley steelhead DPS and proposed critical habitat for the Southern DPS of North American green sturgeon.



Proposed Project

The California Department of Water Resources is planning to conduct in-water geotechnical borings in the Sacramento-San Joaquin Delta in order to obtain geotechnical information relevant to conceptual intake structures and tunnels consistent with current alignment options of the water conveyance facilities associated with the Bay Delta Conservation Plan. The explorative drilling is scheduled to take place between August 1 and September 30 (either 2009 or 2010) when listed anadromous fish species are least likely to be present in the action area. The drilling at each of the 16 locations will be completed in approximately one 12-hour day for a total of approximately 30 days. Each drilling process causes minor vibrations and lasts for a short period (approximately 1 minute each, 10 to 15 times each day, for approximately 30 days). The drilling will be conducted through the use of a Mud Rotary Boring drill mounted on a shallow draft barge or ship. The barge or ship will be anchored to the channel bottom with steel spuds at each corner of the barge while the work is being performed in order to prevent the barge from drifting. The barge or ship will enter and exit the water through established marinas and will be secured to a dock overnight.

The drilling platform will use a rotary wash boring setup with an 8-inch conductor casing and an approximately 5- to 6 -inch diameter drill. The outer conductor casing will be driven by a vibratory hammer approximately 15 feet below the mud line. The drilling platform will form a closed system consisting of a drilling fluid recirculation tank, suction hose, "mud" pump, lead hose to the top swivel connection, drill rod, discharge bit at the cutting face of the drill, conductor casing up to the deck of the barge, and a tee connection to route drilling fluids back to the recirculation tank.

During the initial drilling phase, only water will be circulated through the closed system until the drill string is 15 feet below the mud line. Once the drill string is 15 feet below the mud line and the conductor casing has formed a tight seal to contain the drilling fluid, bentonite clay will be added to the circulating water to form the drilling "mud" that provides lubrication to the drill bit. Drilling mud will be pumped down the inner lumen of the drill rod to the cutting head of the drill. The drill fluid and the suspended cuttings return upwards through the conductor casing to the barge deck and then through the tee connector to the recirculation tank. The heavier drill cuttings settle out of the drilling fluids in the recirculation tank, allowing the drilling fluid to be reused as a lubricant. The heavier drill cuttings are eventually removed from the bottom of the recirculation tank and placed into steel drums for disposal. Spill containment plans are in place to prevent inadvertent release of drilling fluids into the environment. Upon completion of the boring, each test hole will be filled with grout according to construction standards for the county in which it occurred, and the drill conductor casing removed. Drilling crews will monitor for release of materials into the water column during the grouting and removal of the containment casing. All in-water work is scheduled to occur between August 1 and October 31, 2009.

Spill prevention plans for lubricants, oils, and fuels are incorporated into the overall plans for the drilling actions. Adequate materials to contain and clean up any spills are maintained on board the drilling barge and the service boat at all times. Protocols for notifying the U.S. Coast Guard should petroleum products enter the waterway are incorporated into the spill response plan. If

the spill exceeds the capability of the drilling crew to contain it, protocols for notifying and deploying private oil response companies are also incorporated into the spill response plan.

ESA Section 7 Consultation

In order for NMFS to consider a project as being not likely to adversely affect listed species, the effects upon the listed species must be discountable, insignificant, or completely beneficial. **Beneficial effects** are contemporaneous positive effects without any adverse effects to the species. **Insignificant effects** relate to the size of the impact and should never reach the scale where take occurs. **Discountable effects** are those that are extremely unlikely to occur. Based on best judgment, a person would not: (1) be able to meaningfully measure, detect, or evaluate insignificant effects; or (2) expect discountable effects to occur. The action area of the proposed project occurs within the known ranges of Sacramento River winter-run and Central Valley spring-run Chinook salmon Evolutionarily Significant Units, the Central Valley steelhead DPS, and the Southern DPS of North American green sturgeon. Furthermore, the action area occurs within the designated critical habitat for all of the previously mentioned salmonids, as well as that proposed for the Southern DPS of North American green sturgeon. However, based on the applicant's stated periods of construction activities, the presence of listed salmonids should be minimal within the action area due to the timing of seasonal run migrations. Effects to listed winter-run or spring-run Chinook salmon and Central Valley steelhead should therefore be discountable due to the low likelihood of their presence in the action area during the geotechnical boring activities. Green sturgeon may occur within the action area during the stated construction activities as they utilize the waters of the Delta year-round. The presence of green sturgeon in the action area is unpredictable; however, the level of exposure related to the drilling activity is likely to be insignificant due to the low energy production of the vibratory drilling and the very limited action area at each site during the construction period.

Avoidance and minimization measures incorporated into the project's operational protocol are intended to reduce the potential for exposure of listed fish and their habitats to the effects of the proposed project. These measures include the timing of in-water work (August 1 through October 31) when listed salmonids are least likely to be present in the action area, the use of a vibratory hammer in order to avoid potentially harmful acoustic effects to fish while driving the conductor casings into the channel bottom, the use of a closed system for the drilling fluid in order to minimize the potential for the loss of drilling fluids into the water column, spill response plans for both the drilling fluids and any petroleum products from the equipment or vessels, and sealing of the bore holes following removal of the drill string.

Therefore, NMFS concurs that the In-Water Technical Drilling, Bay Delta Conservation Plan project may affect, but is not likely to adversely affect Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon, Central Valley steelhead, and North American green sturgeon or their designated or proposed critical habitats. This concurrence is based on the applicant implementing all conservation and protective measures intended to avoid or minimize adverse effects to fish and fish habitat as identified above in the project description.

This concludes informal consultation for the proposed action. Reinitiation of consultation is required where discretionary Federal agency involvement or control over the action has been

retained (or is authorized by law) and if: (1) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (2) the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered; or (3) a new species is listed or critical habitat designated that may be affected by the action.

EFH Consultation

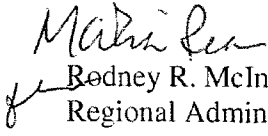
With regards to EFH consultation, the action area has been identified as EFH for Chinook salmon (*O. tshawytscha*), in Amendment 14 of the Pacific Salmon Fishery Management Plan pursuant to the MSA. Federal action agencies are mandated by the MSA (section 305(b)(2)) to consult with NMFS on all actions that may adversely affect EFH, and NMFS must provide EFH conservation recommendations to those agencies (section 305(b)(4)(A)). Based on our review of the project description and the avoidance and minimization measures incorporated therein, NMFS finds that the proposed project is not likely to adversely affect the EFH for Pacific salmon. These measures include the in-water work schedule that avoids salmonid presence in the action area during geotechnical boring operations, utilization of closed system drilling techniques that avoid the loss of materials to the surrounding water column during drilling operations, and the development and implementation of a spill prevention plan and cleanup protocols should a spill occur. These measures should adequately avoid or minimize any adverse effects to the EFH of Pacific salmon resulting from the proposed project, and additional EFH Conservation Recommendations are not being provided at this time and written response as required under section 305(b)(4)(B) of the MSA and Federal regulations (50 CFR § 600.920) will not be required; however, if there is substantial revision to the action, the lead Federal agency will need to re-initiate EFH consultation.

FWCA

The purpose of the FWCA is to ensure that wildlife conservation receives equal consideration, and is coordinated with other aspects of water resources development (16 U.S.C. 661). The FWCA establishes a consultation requirement for Federal departments and agencies that undertake any action that proposes to modify any stream or other body of water for any purpose, including navigation and drainage (16 U.S.C. 662(a)). Consistent with this consultation requirement, NMFS provides recommendations and comments to Federal action agencies for the purpose of conserving fish and wildlife resources. The FWCA allows the opportunity to offer recommendations for the conservation of species and habitats beyond those currently managed under the ESA and MSA. Because the proposed project is designed to avoid environmental impacts to aquatic habitat within the action area, NMFS has no additional FWCA comments to provide.

Please contact Kenneth Cumming at (916) 930-3656, or via e-mail at Kenneth.Cumming@noaa.gov if you have any questions concerning this project or require additional information.

Sincerely,


Rodney R. McInnis
Regional Administrator

Enclosure

Cc: Copy to File – ARN 151422SWR2009SA00465
NMFS-PRD, Long Beach, CA

Enclosure

Project Location. The Department of Water Resources is planning in-water geotechnical borings in the Sacramento-San Joaquin Delta (Figure 1). Six borings are located on the Sacramento River between Clarksburg and the Pocket area of Sacramento, two borings are located in the Sacramento River near Walnut Grove, one boring is located on Steamboat Slough near its confluence with the Sacramento River, one boring is located on Dutch Slough near its confluence with Taylor Slough, one boring is located on Columbia Cut near its confluence with Middle River, one boring is located in Potato Slough off Venice Island, one boring is located in San Joaquin River off Venice Island, one boring is located on the San Joaquin River near Fourteen Mile Slough, and two borings are located in the north Fork of Mokelumne River between Tyler Island and Staten Island (Figures 2 – 11). Sixteen sites have been identified; however, DWR may add additional locations as needed, but not to exceed 20 total. If additional drill locations are added, DWR Environmental Scientists will review each site to determine the potential impact to environmental resources. Drill locations will be moved as necessary to avoid any identified impacts to environmental resources or to bring impacts to a less than significant level.

Table 1. Location of Geotechnical Borings. Boring	Waterway	County	7.5 Quad	Point X/Y
DCR-DH-01	Sacramento River	Sac/Yol border	Clarksburg	6259537.26292/ 2367706.29340
DCR-DH-02	Sacramento River	Sac/Yol border	Clarksburg	6267319.15346/ 2360692.51826/
DCR-DH-03	Sacramento River	Sac/Yol border	Clarksburg	6268981.30484/ 2346551.63949
DCR-DH-04	Sacramento River	Sac/Yol border	Clarksburg	6266891.02356/ 2342887.35123
DCR-DH-05	Sacramento River	Sac/Yol border	Courtland	6268914.14721/ 2320805.08254
DCR-DH-06	Sacramento River	Sac/Yol border	Courtland	6265623.42327/ 2316624.51998
DCR-DH-07	Steamboat Slough	Sol/Sac border	Rio Vista	6229835.73003/ 2255122.52657
DCR-DH-08	Dutch Slough	Contra Costa	Jersey Island	6230935.87567/ 2194742.51339
DCR-DH-09	Columbia Cut	San Joaquin	Bouldin Island	6270178.32389/ 2196789.63914
DCR-DH-10	San Joaquin River	San Joaquin	Holt	6296168.28309/ 2186258.44797
DCR-DH-11	Sacramento River	Sacramento	Courtland	6268656.441675/ 2282847.599784
DCR-DH-12	Sacramento River	Sacramento	Isleton	6268104.399571/ 2275360.528758
DCR-DH-13	Mokelumne River	San Joaquin/ Sacramento	Isleton	6267014.870265/ 2260242.718689
DCR-DH-14	Mokelumne River	San Joaquin/ Sacramento	Isleton	6266253.408355/ 2250177.692707
DCR-DH-15	Potato Slough	San Joaquin	Bouldin Island	6263432.712534/ 2213043.783882
DCR-DH-16	San Joaquin River	San Joaquin	Bouldin Island	62213043.783882 / 263432.712534

