

Attachment E

U.S. Fish and Wildlife Service Concurrence Memorandum



United States Department of the Interior

FISH AND WILDLIFE SERVICE
San Francisco Bay-Delta Fish and Wildlife Office
650 Capitol Mall, Suite 8-300
Sacramento, California 95814



In reply refer to:
OXF8DT00-2015-100-ti

DEC 8 7 2015

Memorandum

To: Manager, Bureau of Reclamation, South-Central California Area Office, Fresno, California (Attn: David Hyatt)

From: Assistant Field Supervisor, San Francisco Bay-Delta Fish and Wildlife Office, Sacramento, California

Subject: Informal Consultation Under Section 7(a)(2) of the Endangered Species Act on the U.S. Bureau of Reclamation's North Valley Regional Recycled Water Program

This memorandum is in response to the U.S. Bureau of Reclamation's (Reclamation) September 4, 2015, request for informal consultation with the U.S. Fish & Wildlife Service (Service) for the proposed North Valley Regional Recycled Water Program. This document is issued under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) (Act).

Reclamation's request for informal consultation was received by the Service on September 8, 2015. At issue are the effects of the proposed project on the Federally-listed as threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), vernal pool fairy shrimp (*Branchinecta lynchi*), and giant garter snake (*Thamnophis gigas*) and the Federally-listed as endangered Least Bell's vireo (*Vireo bellii pusillus*), San Joaquin kit fox (*Vulpes macrotis mutica*), Conservancy fairy shrimp (*Branchinecta conservatio*), longhorn fairy shrimp (*Branchinecta longiantenna*), and vernal pool tadpole shrimp (*Lepidurus packardii*). Reclamation has requested the Service's concurrence with a determination that the proposed project is not likely to adversely affect these species.

The Service's response is based on: 1) the North Valley Regional Recycled Water Program Biological Assessment, September 2015; and 2) additional information on file at the San Francisco Bay-Delta Fish and Wildlife Office.

The proposed project includes construction and operation of infrastructure to deliver recycled water from the cities of Modesto and Turlock to the Delta-Mendota Canal (DMC). This water would be used to irrigate agricultural lands in the Del Puerto Water District's (DPWD) service area and for habitat management at wildlife refuges. The action area includes: the footprint of new infrastructure required to deliver recycled water to the DMC; agricultural lands within DPWD's service area; and South of Delta Central Valley Project Improvement Act (CVPIA)-

designated Federal National Wildlife Refuges, State Wildlife Areas, and the privately managed wetlands of the Grassland Resource Conservation District, collectively referred to as "refuges". Refuges include the San Luis National Wildlife Refuges complex, Kern National Wildlife Refuge, Mendota Wildlife Area, North Grasslands Wildlife Area, Volta Wildlife Area, Los Banos Wildlife Area, and the Grassland Resources Conservation District.

The vast majority of the infrastructure action area is comprised of roadways surrounded by intensively cultivated lands. The refuges that would receive supplemental water as part of the proposed project support a variety of plant, fish, and wildlife species and are an important part of the Pacific Flyway, a major migration route for migratory birds. The water quality of the recycled water that would be provided to the refuges is similar to the existing water quality of the DMC.

The pipelines would vary from 42 to 54 inches in diameter and would likely be constructed of steel or reinforced concrete pipe. The proposed pipeline alignment consists of two reaches totaling 69,800 linear feet. The Turlock-Modesto Link Reach would connect Turlock's Harding Drain Bypass Pipeline to Modesto's Jennings Plant outfall pump station. This reach would be a 42-inch diameter pipe beginning at the western end of the Harding Drain Bypass Pipeline near the existing standpipe structure on South Carpenter Road. The pipe would then parallel South Carpenter Road north to West Main Street, then turn west to Jennings Road. From Jennings Road, the pipeline would extend west along existing dirt roads through agricultural fields owned by the City of Modesto and terminate at the existing Jennings Plant outfall pump station near the southeastern end of the Jennings Plant where it would combine with the City of Modesto flow. Jennings Road, West Main Street, and South Carpenter Road range from 20-30 feet in width, with varying shoulder widths depending on location. From the pumping facility at the Jennings Plant, the Modesto-DMC Reach would cross under the San Joaquin River and extend west to the DMC along Lemon Avenue, through farmland, cross Highway 33, and along Zacharias Road.

The existing Jennings Treatment Plant outfall pump station would be improved to accommodate the combined flow. Recycled water from the Harding Drain Bypass Pipeline would be conveyed by gravity to the repurposed pump station at the Jennings Treatment Plant where it would combine with recycled flow from the City of Modesto and be delivered to the DMC.

Open-cut construction (also referred to as open trench with shoring or cut-and-cover) is the proposed option for installing the majority of the pipeline along existing roadways and private and municipal agricultural lands. The open-cut trench would range from 6 to 8 feet wide and approximately 8 to 10 feet deep, depending on the pipe size, existing utility locations, and pipe bedding requirements. Shoring would be required to provide trench stability. Open-cut construction would involve cutting, removing, and replacing pavement in existing paved areas. Where possible, the pipelines would be installed along the shoulder of the roads to minimize paving and traffic disruption.

Trenchless construction methods would be used for specific crossings to minimize area of surface disruption required for pipeline installation or where open cut construction is not practical or not allowed. Horizontal directional drilling (HOD) would likely be used for

crossing of Highway 33 and the California Northern Railroad provided that a suitable geometric profile can be designed taking into consideration entry/exit angles, bend radius of the pipe, and sufficient room for pipe assembly and laydown. Otherwise, a pipe jacking methodology would be considered for those installations. The San Joaquin River crossing may be completed using microtunneling or HDD, depending on soil conditions and other design factors. For the San Joaquin River crossing, the launching and receiving pits would be located on the land-side of flood control levees. The exact types of trenchless methods to be employed at irrigation canal crossings and natural drainages have not yet been determined, but could consist of HOD, jacking and boring, and microtunneling.

Modifications to the existing outfall pump station at Modesto's Jennings Plant would require removal and replacement of the three existing outdoor pumps, motors, and a power transformer within the same footprint. Existing pumps would be removed using a boom truck or small crane. A concrete saw would be used to enlarge the opening in the top slab of the pump station to accommodate the new pumps. The existing switchgear and motor control center housed in the existing control building would be replaced with higher capacity equipment to accommodate the new pumps. Equipment would be accommodated adjacent to the project site during construction. The construction zone, including the footprint of the pump station, would be 50 by 50 feet, mainly for storage of equipment. Minimal excavation would be required for the new power conduits and piping.

The project would deliver tertiary-treated recycled water from the cities of Turlock and Modesto to the DMC, where it would blend with the other sources of water in the canal. The water delivered to the DMC would be required to meet the standards of the National Pollutant Discharge Elimination System (NPDES) permit that would have to be issued by the Regional Water Quality Control Board (RWQCB) before discharge would be allowed. To meet discharge requirements, recycled water from both Modesto and Turlock would be oxidized, filtered, and adequately disinfected, pursuant to the California Department of Public Health (CDPH) reclamation criteria, California Code of Regulations, Title 22, division 4, chapter 3, (Title 22) or equivalent. Recycled water would be subject to strict water quality requirements for discharging into DMC, including Reclamation standards for acceptance of non-project water.

Conservation Measures

The following conservation measures will be implemented to avoid and minimize potential impacts associated with the implementation of the proposed action.

Vernal Pool Branchiopods

1. Project-related activities will avoid affecting the alkali pool and swale that potentially support vernal pool branchiopods. Avoidance is defined as no direct or indirect effects to suitable habitat. This shall be accomplished by avoiding construction within the microwatersheds of the alkali pool and swale.

Valley Elderberry Longhorn Beetle

The Project shall adhere to the following avoidance measures outlined in the Service's Conservation Guidelines for Valley Elderberry Longhorn Beetle (Service 1999).

- I. No less than 120 days prior to commencing construction, the locations of elderberry plants within 200 feet of open-cut construction areas shall be identified.
2. Fencing and flagging shall be installed around all areas to be avoided during construction including all elderberry plants within 200 feet of open-cut construction.
3. There shall be no open-cut construction within 100 feet of the dripline of elderberry shrubs containing stems measuring 1.0 inch or greater in diameter at ground level.
4. Provide environmental training for contractors to communicate the need to avoid damaging elderberry and the possible penalties for not complying with these requirements. The environmental training will instruct work crews about the status of the beetle and the need to protect its elderberry host plant.
5. Erect signs every 50 feet along the edge of the avoidance area with the following information: "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment." The signs will be maintained for the duration of construction.
6. No insecticides, herbicides, fertilizers, or other chemicals that might harm the beetle or its host plant would be used within 100 feet of any elderberry plant.

Giant Garter Snake

1. Trenchless construction techniques shall be used to construct the pipeline crossing in potential aquatic habitat for giant garter snake.
2. Construction personnel shall participate in a Contractor Environmental Awareness Training. Under this program, workers shall be informed about giant garter snake and habitat, the species life history, conservation goals, identification of the snake, and procedures to follow in the event of a possible sighting.
3. Within 24-hours prior to commencement of construction activities, the site shall be inspected by a Service-approved biologist. The biologist shall provide the Service with a field report form documenting the monitoring efforts within 24-hours of commencement of construction activities. A qualified biologist shall be on-site during all construction activity within 200 feet of potential habitat for giant garter snake. If a snake is encountered during construction activities, the biologist shall have the authority to stop construction activities until appropriate corrective measures have been completed or it is

determined that the snake would not be harmed.

4. Erosion control materials including silt curtains, silt fencing, and erosion control wattles shall be regularly inspected for entanglement or entrapment of the snake.
5. Stockpiling of construction materials, portable equipment, vehicles, and supplies shall be restricted to the designated construction staging areas which shall be greater than 200 feet from giant garter snake aquatic habitat.
6. Clearing of upland and wetland vegetation shall be confined to the minimal area necessary to construct the pipeline.
7. After completion of construction activities, any temporary fill and construction debris shall be removed. Disturbed areas shall be restored to pre-project conditions. Restoration work shall include replanting native emergent vegetation, where appropriate.
8. Water quality monitoring would be required as part of the NPDES permit for the Proposed Project, and would also be needed to ensure that recycled water quality meets Reclamation requirements for acceptance of non-project water into the DMC. The following parameters would be monitored:
 - Total Dissolved Solids
 - Electrical conductivity
 - Ammonia
 - Selenium
 - Boron
 - Arsenic
 - Mercury
 - Copper
 - Dissolved organic carbon
 - Constituents/Chemicals of Emerging Concern (CECs) including
 - N-nitrosodimethylamine
 - 17-beta-estradiol
 - Caffeine
 - triclosan
 - N,N-Diethyl-meta-toluamide (DEET)
 - Gemfibrozil
 - Iopromide
 - Sucralose
9. Water quality monitoring reports will be sent to the San Francisco Bay-Delta Fish and Wildlife Office and the refuges.

Least Bell's Vireo

1. No ground-disturbing activity would be conducted in areas that provide potentially suitable habitat for least Bell's vireo. Only HOD or equivalent trenchless techniques would be used.
2. Prior to commencing an HDD crossing of the San Joaquin River, Reclamation shall conduct surveys for least Bell's vireo in accordance with Service's Least Bell's Vireo Survey Guidelines (Service 201 1a). If least Bell's vireo are detected during the surveys, Reclamation will re-initiate consultation with the Service to determine appropriate avoidance and minimization measures .

San Joaquin Kit Fox

1. Project-related activities will avoid affecting the alkali scrub/flat habitat in the action area. Avoidance is defined as no direct or indirect effects to habitat.
2. A Service-approved biologist will conduct preconstruction surveys no less than 14 days and no more than 30 days before the commencement of activities to identify potential dens more than 5 inches in diameter. Reclamation will implement the Service's (201 1b) Standardized Recommendations for Protection of San Joaquin Kit Fox Prior to or During Ground Disturbance. Reclamation will notify the Service in writing of the results of the preconstruction survey within 30 days after these activities are completed .
3. If potential dens are located within the proposed work area and cannot be avoided during construction activities, a Service-approved biologist will determine if the dens are occupied. If occupied dens are present within the proposed work, their disturbance will be avoided. Exclusion zones will be implemented following the most current Service procedures (currently Service 201 1b). Reclamation will notify the Service immediately if a natal or pupping den is found in the survey area and will present the results of pre-activity den searches within 5 days after these activities are completed and before the start of construction activities in the area.

Birds Protected under the Migratory Bird Treaty Act (MBTA)

1. If ground and vegetation disturbing activities occur between February 1 and September 15, a survey for nesting birds shall be conducted within a 500-ft radius of the construction area.
2. If nests are detected, buffers around nests shall be established. No-disturbance buffers around special-status passerine nests shall be 500 feet and 250 feet for non-listed birds protected under the MBTA and Fish and Game Code sections 3503 and 3513, unless a qualified California Department of Fish and Wildlife biologist determines that smaller buffers shall be sufficient to minimize impacts to nesting birds. Factors to be considered for determining buffer size shall include: the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; and

baseline levels of noise and human activity.

3. Buffers shall be maintained until a qualified biologist has determined that young have fledged and are no longer reliant upon the nest or parental care for survival.

Based on our review of the information provided in the Biological Assessment, discussions between the Service and representatives from Reclamation, and photographs of the proposed project locations, the Service concurs that the proposed North Valley Regional Recycled Water Program is not likely to adversely affect any federally threatened or endangered species. This determination has been made due to the absence of suitable habitat and the implementation of the above mentioned conservation measures. Vernal pool branchiopods, valley elderberry longhorn beetle habitat, least Bell's vireos, San Joaquin kit fox, and giant garter snakes will all be avoided in the infrastructure action area. Due to the absence of records of giant garter snakes in the vicinity of the infrastructure action area and the quality of habitat that is present, this species is considered unlikely to occur in the infrastructure action area. Giant garter snakes in the refuges are expected to benefit from the additional water that this project will provide during the summer months. Therefore, unless new information reveals effects of the proposed project may result in adverse effects to federally listed species in a manner not identified to date, or if a new species is listed that may be affected by the proposed action, no further action pursuant to the Act is necessary for this proposed project.

This concludes the Service's review of the North Valley Regional Recycled Water Program. Please note that this informal consultation does not authorize the take of valley elderberry longhorn beetle, vernal pool fairy shrimp, Conservancy fairy shrimp, longhorn fairy shrimp, vernal pool tadpole shrimp, giant garter snake, Least Bell's vireo, or San Joaquin kit fox.

Any questions or comments regarding these comments should be directed to Andrew Raabe, Senior Biologist, Watershed Planning Branch at (916) 978-5463.

Literature Cited

- U.S. Fish and Wildlife Service (Service). 1999. Conservation Guidelines for Valley Elderberry Longhorn Beetle. U.S. Fish and Wildlife Service, Sacramento, California. 9 July 1999. Available at: [http://www.fws.gov/sacramento/es/Survey-Protocol-Guidelines/Documents/VELB conservation.pdf](http://www.fws.gov/sacramento/es/Survey-Protocol-Guidelines/Documents/VELB%20conservation.pdf).
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