

RECLAMATION

Managing Water in the West

FINDING OF NO SIGNIFICANT IMPACT

Firebaugh Canal Water District 2nd Lift Canal Lining Project

FONSI 12-12-MP

Recommended by:

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BACKGROUND

In conformance with the National Environmental Policy Act of 1969 (NEPA), as amended, the Bureau of Reclamation (Reclamation) has prepared an Environmental Assessment (EA) to evaluate and disclose any potential environmental impacts associated with implementation of the Firebaugh Canal Water District's (FCWD) 2nd Lift Canal Lining Phase III Project. Reclamation proposes to disburse grant funds to FCWD to support construction of the Proposed Action. The Proposed Action is located west of the community of Firebaugh within the FCWD, which encompasses approximately 22,000 acres on the Westside of the San Joaquin Valley in Fresno, California.

Reclamation proposes to provide a Department of the Interior (DOI) Bay-Delta Restoration Program: Agricultural Water Conservation and Efficiency (BDRP) grant to the FCWD to support implementation of the Proposed Action. To facilitate and coordinate Federal responses to the California water supply crisis, six Federal agencies signed the California Bay-Delta Memorandum of Understanding (MOU) on September 29, 2009. The MOU creates a partnership among Federal agencies, the State of California, and other local authorities to develop long and short term actions that contribute to a sustainable water supply and ecosystem. An Interim Federal Action Plan (IFAP) describes in detail, actions to be taken to address the current water crisis. The IFAP specifically addresses water conservation and the alignment and coordination of Federal water conservation programs to leverage limited resources and maximize benefits of water conservation in areas served by the Central Valley Project (CVP) and State Water Project. To meet these objectives, Reclamation and the Natural Resources Conservation Service are partnering to provide complementary funding opportunities for improving water supply reliability through water conservation or improved water management and improving energy efficiency.

Currently the unlined 2nd Lift Canal loses approximately 145 acre feet per year (AFY) through seepage to a perched saline sink. This amounts to 2.0 percent of the water conveyed by the canal and 0.6 percent of the FCWD's total annual water supply. FCWD lies within the Grassland Drainage Area (GDA) and is a participating agency in the Grassland Bypass Project (GBP), through which, subsurface drain water generated within the region is discharged to the San Joaquin River. Most of the GDA is underlain with a saline perched water table, which is managed with on-farm tile systems and regional deep drains. Deep percolation from irrigation and seepage from unlined canal systems is collected

by the tile systems and regional drains, where it is managed and eventually discharged to the San Joaquin River. To manage these discharges, FCWD participated in the development of an In-Valley Drainage Solution such that no subsurface drain water leaves the GDA boundary. Because the regional perched water table is high in salts, boron, and selenium, it is not usable for irrigation.

ALTERNATIVES INCLUDING PROPOSED ACTION

No Action Alternative

The No Action Alternative would consist of Reclamation not providing grant funding to facilitate water conservation measures at FCWD. Although it is possible that FCWD may find alternative sources of funding for the Proposed Action, for the purposes of this EA, the consequence of Reclamation not funding the Proposed Action would be no construction of the Proposed Action. The irrigation system currently in place would continue to operate. FCWD would continue to provide irrigation service to the FCWD and its users via the unlined 2nd lift canal. Deep percolation from irrigation and seepage from the unlined canal would continue to be collected by the tile systems and regional drains, managed and eventually discharged into the San Joaquin River.

Proposed Action Alternative

The Proposed Action Alternative consists of providing grant funds to replace approximately 2.2 miles of an existing earthen channel with a concrete lined canal. The existing channel is a primary lift canal for FCWD with a capacity of 110 cubic feet per second (cfs) for this reach of the canal. Full water allocation is 85,000 AFY. The canal's operating season is approximately 340 days, supplying water for irrigation needs. Because the canal is unlined, it loses approximately 145 AFY through seepage to a perched saline sink.

The Proposed Action would raise the canal banks and place concrete lining on 2.2 miles of main lift canal, eliminate an existing booster station on the 2nd Lift Canal, reducing the District's electrical consumption by almost 22,000 Kwh, and construct a new check structure with SCADA-integrated controls.

Construction Activities would include:

- Cleanout and Site Preparation: The existing canal would be dewatered and cleaned of silt and debris. Sufficient time would be provided to allow the existing channel to dry. During this process, the existing booster pump station and an existing check structure would be demolished and removed from the site. One to three excavators would be used to perform this work and a dump truck would be used to haul removed features from the site.

- Earthwork: The existing channel would be backfilled and compacted to the final design grade according to the drawings. Backfill would be performed in lifts to ensure proper soil density and moisture levels. Surveyed construction stakes would be placed along the project alignment and final grade would be checked against those stakes. If high groundwater conditions inhibit proper grading and compaction in the canal invert, a dewatering interceptor line and/or soil conditioning (such as lime treating) may be used. Approximately 76,000 cubic yards of fill would be placed and compacted to form the final cross-section. Fill would be placed with excavators and scrapers and compacted with rollers. Water trucks would be used to manage fugitive dust and maintain moisture level.
- Prism Excavation and Placement of Lining: The channel prism would be excavated to the appropriate lines and grade according to the drawings. Concrete lining would be placed in accordance with the drawings and specifications. Excavation would be completed by a specialized trencher and the excavated material would be graded into the canal bank by a scraper. A paving sled built to fit the canal geometry would be pulled by the trencher or other construction equipment to place the lining along the canal alignment at a uniform thickness. At existing culverts or other structures, the paving sled would be removed from the canal approximately 20 feet upstream of the feature. At these locations, hand-placed lining would be installed to make a smooth transition to the culvert. Concrete trucks would follow the paving sled on both sides to provide the concrete for the lining.
- Turnout installations: Where turnouts are located, the concrete lining would be removed and a precast concrete gate structure and canal gate would be placed such that the invert of the gate is near the canal invert. A 24-inch high density polyethylene (HDPE) corrugated or PVC pipe would be installed to connect the gate to existing turnout boxes for water deliveries. Hand-placed transition lining would be poured to make a smooth transition from the canal to the gate structure. An excavator or backhoe would be used for this work.
- New Check Structure: A new, reinforced concrete check structure would be constructed to replace the structure demolished during clean-out operations. The new structure would include automated water level control gates and be integrated with the District's SCADA system.

FINDINGS

Based on the attached EA, Reclamation finds that the Proposed Action is not a major federal action that will significantly affect the quality of the human environment. The attached EA describes the existing environmental resources in the Proposed Action area, evaluates the effects of the No Action and Proposed Action alternatives on the resources, and proposes measures to avoid, minimize, or mitigate any adverse effects. This EA was prepared in accordance with NEPA, Council on Environmental Quality (CEQ) regulations (40 CFR 1500-1508), and DOI Regulations (43 CFR Part 46). Effects on several environmental resources were examined and found to be absent or minor. This analysis is provided in the attached EA, and is hereby incorporated by reference.

Cultural Resources

The Proposed Action will have no significant impact on historic properties. The proposed activities are consistent with the original function and operation of the 2nd Lift Canal which is the only historic property within the area of potential effects. Reclamation consulted with the California State Historic Preservation Officer under Section 106 of the National Historic Preservation Act, receiving concurrence on a finding of no adverse effect on August 15, 2012.

Indian Trust Assets

There are no Indian Reservations, Rancherias or allotments in the project area. The Proposed Action does not have a potential to affect ITAs.

Indian Sacred Sites

No identified Indian Sacred Sites are within or near the action area of the Proposed Action and therefore, this project would not inhibit use or access to Indian Sacred Sites.

Environmental Justice

No significant changes in agricultural communities or practices would result from the Proposed Action, other than potential changes to individual irrigation systems. These changes are not likely to affect agricultural employment, which employs a higher proportion of low-income and minority workers than are employed in the general workforce. Accordingly, the Proposed Action would not have any significant or disproportionately negative impact on low-income or minority individuals within the project area.

Endangered Species Considerations

The Proposed Action area is annually excavated, graded, and sprayed for maintenance purposes resulting in the absence of sufficient habitat criteria required to support special-status species. Based on the habitat requirements of the listed species that could potentially occur within the Proposed Action area, the Proposed Action does not provide suitable habitat for the Vernal pool fairy shrimp, Valley elderberry longhorn beetle, Blunt-nosed leopard lizard, California red-legged frog, delta smelt, Central Valley steelhead, Giant kangaroo rat, and the Fresno kangaroo rat. Therefore, these species are not discussed in this EA.

Though occurrences of neither listed sensitive species nor migratory birds have been observed during the implementation of previous projects within the FCWD area, an analysis of potential impacts and associated avoidance measures for both giant garter snake and San Joaquin kit fox are discussed below due to the Proposed Action area providing a potential migratory corridor that could conceivably be utilized by these species.

Avoidance and Minimization Measures for Giant Garter Snake

The following Avoidance and Minimization Measures would be applied for giant garter snake. Since giant garter snake habitat is not being directly impacted, there are no mitigation or conservation measures, or compensation/set-asides proposed.

- The Proposed Action area will be surveyed for giant garter snakes 24 hours before construction activities. Survey of the Proposed Action project area will be repeated if a lapse in construction activity for two weeks or greater has occurred. If a snake is encountered during construction, activities shall cease until appropriate corrective measures have been completed or it has been determined that the snake will not be harmed.
- After completion of construction activities, removal of any temporary fill and construction debris will be completed.
- The disturbed areas will be restored to pre-project conditions.
- Confine movement of heavy equipment to existing roadways.
- Clearing of vegetation will not occur under the Proposed Action.
- Construction personnel will receive environmental awareness training that instructs workers to recognize giant garter snake and its habitat(s).

Avoidance and Minimization Measures for San Joaquin Kit Fox

The following Avoidance and Minimization Measures would be applied for San Joaquin kit fox. Since kit fox habitat is not being directly impacted, there are no mitigation or conservation measures, or compensation/set-asides proposed.

- All project-related vehicle traffic will be restricted to established roads, construction areas, and other designated areas. In order to reduce impacts by project-related vehicles, workers will observe the following:
 - Maintain a daytime speed of 20-mph throughout the site
 - Minimize construction to the extent possible at night and when kit foxes would be most active.
- Inadvertent entrapment will be prevented via the following activities:
 - Cover all excavated, steep-walled holes or trenches more than two feet deep with plywood or similar materials at the close of each working day.
 - Construct one or more escape ramps of earthen-fill or wooden planks if the trenches cannot be closed.
 - Thoroughly inspect all construction pipes, culverts, or similar structures with a diameter of four inches or greater that are stored at a construction site overnight before the pipe is subsequently buried, capped or otherwise used in any way.
 - All food-related trash items will be disposed of in securely closed containers and removed at least once a week from the project site.

With the lack of suitable habitat in the area coupled with implementation of the previously described avoidance and minimization measures for the San Joaquin kit fox and giant garter snake, Reclamation has determined that the Project Action would not affect either species.