

RECLAMATION

Managing Water in the West

Draft FINDING OF NO SIGNIFICANT IMPACT

Cantua Creek Stream Group Improvement Project

FONSI-13-001



U.S. Department of the Interior
Bureau of Reclamation

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Mission Statements

The mission of the Department of the Interior is to protect and manage the Nation's natural resources and cultural heritage; provide scientific and other information about those resources; and honor its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

BUREAU OF RECLAMATION
South-Central California Area Office, Fresno, California

FONSI-13-001

**Cantua Creek Stream Group
Improvement Project**

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Introduction

In accordance with section 102(2)(c) of the National Environmental Policy Act of 1969, as amended, the South-Central California Area Office of the Bureau of Reclamation (Reclamation), has determined that approving and providing partial funding to the California Department of Water Resources (DWR) for the Cantua Creek Stream Group Improvements Project is not a major federal action that will significantly affect the quality of the human environment and an environmental impact statement is not required. This Finding of No Significant Impact (FONSI) is supported by Reclamation's Environmental Assessment (EA) Number EA-13-001, *Cantua Creek Stream Group Improvement Project*, and is hereby incorporated by reference.

Background

The Cantua Creek Stream Group watershed originates on the eastern side of the California Coast Range and has a drainage area of approximately 201 square miles. The watershed consists of five major creeks: Arroyo Hondo, Cantua, Salt, Martinez, and Domengine Creeks. These creeks drain a portion of the Coast Range and generally flow easterly into the western San Joaquin Valley where they enter the San Luis Canal through drain inlet structures.

The San Luis Canal, constructed by Reclamation in 1967 as a component of the Central Valley Project (CVP), is the federally-built and operated section of the California Aqueduct and extends 102.5 miles from O'Neill Forebay in a southeasterly direction to a point west of Kettleman City. Since construction, DWR operates and maintains the San Luis Canal on Reclamation's behalf pursuant to an operating agreement.

The San Luis Canal is concrete-lined canal with a capacity ranging from 8,350 to 13,100 cubic feet per second (cfs), of which only 10 percent or less are floodwater flows, and serves both the CVP and the State Water Project. Because the San Luis Canal was designed with fewer cross-drainage features than other sections of the California Aqueduct, more floodwaters are accepted into the San Luis Canal than any other stretch of the Aqueduct. Cantua and Salt Creeks accounted for 88 percent of the total inflow volume between 1987 and 1994.

The original flood-easement lands obtained during canal construction and the inlet drains were thought to be sufficient to protect the San Luis Canal from floodwaters resulting from a 50-year flood and to accommodate 50 years of sediment deposition. However, as early as 1969, large runoff and sediment volumes from Cantua and Salt Creeks indicated that the original hydrologic and sediment transport estimates were significantly underestimated and that existing flood control measures for the Cantua Creek Stream Group watershed are insufficient to handle large flood events. Flooding in the watershed resulted in ponding of floodwater along a 13-mile stretch of the San Luis Canal. Two significant storms sent a total of 3,600 acre-feet (AF) of floodwaters from all five creeks into the canal during January and February of 1969. The peak discharge on record for Cantua Creek is 3,400 cfs (March 1, 1983), when approximately 4,800

AF of floodwater entered the canal. However, the most damaging flood in the watershed occurred in March 1995 when flows from Cantua and Salt Creeks overtopped the San Luis Canal embankments at Mount Whitney Avenue, causing damage to over 600 feet of the canal liner and depositing over 750,000 cubic yards of sediment into the canal.

Large floods pose an increasing threat to the integrity, supply reliability, and water quality of the San Luis Canal and present an annual operation and maintenance challenge to DWR staff. In 2011, DWR completed a feasibility-level hydrologic analysis and determined that additional flood easements and modifications to embankments, roads, and pump pads are needed to protect the integrity of the San Luis Canal. In the absence of improvements, future floods continue to pose a threat to the integrity, supply reliability, and water quality of the San Luis Canal.

Proposed Action

Reclamation proposes to approve and provide partial funding to DWR for construction activities to create storage in the ponding basins adjacent to the San Luis Canal segment of the California Aqueduct to protect the canal from flooding and sediment deposition.

Environmental Commitments

DWR shall implement the environmental protection measures listed in Table 4 of EA-13-001 to reduce environmental consequences associated with the Proposed Action. Environmental consequences for resource areas assume the measures specified would be fully implemented.

Findings

Reclamation's finding that implementation of the Proposed Action will result in no significant impact to the quality of the human environment is supported by the following findings:

Resources Eliminated from Detailed Analysis

As described in Table 5 of EA-13-001, Reclamation analyzed the affected environment and determined that the Proposed Action does not have the potential to cause direct, indirect, or cumulative adverse effects to the following resources: Indian Sacred Sites, Indian Trust Assets, and environmental justice.

Water Resources

The Proposed Action would not alter hydrology or groundwater recharge such that the groundwater table would be significantly altered. There would be no additional impervious surfaces created as part of the Proposed Action that would reduce surface area capable of percolation.

The Proposed Action would not substantially alter the existing drainage pattern of the area, which is the stormwater runoff/flood flows that run easterly into the existing flood basins along the San Luis Canal right-of-way. Modifications to these basins, construction of a weir into the San Luis Canal, and other small modifications would not result in an altered drainage pattern that would result in substantial erosion or siltation on- or off-site post-construction. Existing

modeled 50-year flood patterns would be maintained in a 50-year storm event and/or be more thoroughly contained by the modified existing flood basins on-site.

The Proposed Action's modifications to the existing flood basins' storage, construction of a weir, and other modifications would enhance the capacity of the flood basins to hold sediment and silt contained in floodwaters. Excess floodwater that would exceed current capacity of floodwater basins could result in a levee embankment failure, thus resulting in the discharge of sediment-laden flows to the San Luis Canal. The Proposed Action would be a beneficial impact to the surrounding areas as it would enhance the protection to the San Luis Canal and prevent a levee embankment failure in an event of a 50-year flood.

Improvements to the flood basins and construction of a weir along the San Luis Canal would improve existing flood conditions in the area. The Proposed Action would enhance flood capacity in existing flood basins, correct deficiencies in the San Luis Canal embankment/levee, and correct deficiencies in the existing flood infrastructure. With implementation of the Environmental Protection Measures mentioned above, there would be no substantial changes.

Land Resources

The Proposed Action would provide a 50-year level of flood protection to the San Luis Canal and adjacent farmlands in the Cantua Creek watershed. Although some temporary construction-related traffic disturbances affecting access from one side of the San Luis Canal to the other could occur, the Proposed Action would not physically divide an established community because the Proposed Action is outside the boundaries of any city or community. No long-term operational effects would occur.

Construction within the Proposed Action footprint would involve restoring/improving storage in the existing ponding basins, improving infrastructure capacity, and acquiring easements or properties in close vicinity to existing ponding basins. Private properties within or in the vicinity of the Proposed Action footprint are on land currently designated and zoned by Fresno county as agriculture and rangeland. Easements maintaining existing or similar land use would be acquired on over 800 acres of lands in the vicinity of the Proposed Action. Neither construction nor the easement acquisition would result in the conflict with local regulations regarding land use. Thus, there would be no change in land use as a result of the Proposed Action.

Biological Resources

Although sparse within most of the Proposed Action area, any small mammal burrows occurring in the project area may contain potential special-status kangaroo rats. These burrows could be affected during construction activities through direct equipment use and ground vibration. However, special-status kangaroo rats are unlikely to inhabit the Proposed Action area due to the ongoing disturbance of the embankment areas where the burrows occur. With the incorporation of environmental protection measures listed in Table 4 f EA-13-001, there would be no effect to special-status kangaroo rats.

San Joaquin kit fox have been reported southwest of the Proposed Action area along the rangelands of the Coast Range. During construction or subsequent operation, it is unlikely that a San Joaquin kit fox would be present in the Proposed Action area due to the ongoing disturbance in the area and high traffic along the right-of-way. No potential dens have been observed along

this portion of the San Luis Canal right-of-way. With the incorporation of environmental protection measures listed in Table 4 of EA-13-001, potential impacts to San Joaquin kit fox and their habitat would be avoided.

Burrowing owl and Swainson's Hawk may occur within and/or near the Proposed Action. The nests of all raptor species are protected under Section 3503.5 of the California Fish and Game Code and the Migratory Bird Treaty Act. The Proposed Action would not remove any known or potential nesting trees for special-status birds and/or common raptors. However, if a nest/burrow occurs in close proximity (varies by species and individuals); noise, vibration, and presence of personnel and equipment due to construction could result in abandonment of nest(s) or burrow(s) and/or reduced parental care of chicks. Loss of an active special-status bird nest or raptor nest or individual of the species by the Proposed Action would be avoided. Implementation of the environmental protection measures listed in Table 4 of EA-13-001 would reduce the potential for construction-related disturbance of nesting and foraging special-status birds, including raptors.

As a result, Reclamation has determined there would be No Effect to proposed or listed species or critical habitat under the Endangered Species Act of 1973, as amended (16 U.S.C. §1531 et seq.), and there would be no take of birds protected under the Migratory Bird Treaty Act (16 U.S.C. §703 et seq.).

Cultural Resources

Reclamation's proposed approval and partially funding to DWR for construction activities to create storage in the ponding basins adjacent to the San Luis Canal segment of the California Aqueduct to protect the canal from flooding and sediment deposition would be a federal undertaking as defined in Section 301(7) of the National Historic Preservation Act (16 USC 470), as amended, and requires compliance with Section 106 of the National Historic Preservation Act.

Reclamation applied the criteria of adverse effect [36 CFR § 800.5(a)] for the proposed project and determined that the proposed activities would result in no significant alterations to the function and character-defining features of the San Luis Canal (e.g., its open trapezoidal shape, concrete lining, and ancillary infrastructure) that would make it eligible for listing under Criteria A and C. As required, Reclamation notified California the State Historic Preservation Officer of this finding of effect.

Air Quality

The Proposed Action involves temporary earthmoving and minor appurtenance improvements in the San Joaquin Valley area. The air quality impacts of the Proposed Action would primarily be construction-related emissions that are temporary and short-term in nature. Construction under the Proposed Action would result in the temporary generation of reactive organic gases, nitrogen oxides, particulate matter between 2.5 and 10 microns in diameter, and particulate matter less than 2.5 microns in diameter emissions.

Based on predicted construction emissions for the Proposed Action within the affected air district, the Proposed Action would not impact the air district's plans to achieve or maintain attainment for various air quality pollutants. As such, the Proposed Action would not obstruct implementation of applicable air quality plans.

Global Climate Change

Greenhouse gas emissions would be produced by the vehicles and equipment necessary to raise embankments and roadways, grading roads and lands with flood easements, and sediment movement. Estimated greenhouse gas emissions due to the proposed action is 597.41 metric tons per year, which is less than the greenhouse gas emissions reporting requirements for stationary facilities. There are no reporting requirements for emissions during construction.

Cumulative Impacts

Cumulative impacts result from incremental impacts of the Proposed Action or No Action alternative when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. To determine whether cumulatively significant impacts are anticipated from the Proposed Action or the No Action alternative, the incremental effect of both alternatives were examined together with impacts from past, present, and reasonably foreseeable future actions in the same geographic area.

Water Resources

As described above under the Proposed Action, correction of deficiencies in the San Luis Canal embankment and other infrastructure improvements would have a net beneficial effect on the hydrology and drainage pattern/flood-related conditions of the area surrounding the Proposed Action.

Land Resources

Over time, the Proposed Action would reduce or minimize effects of small flood events up to 50-year flood events in the area immediately surrounding and nearby to the San Luis Canal in the Cantua Creek watershed. Land uses would be protected to the extent possible as maintenance and damage would be minimized. Cumulatively they are expected to provide a benefit to existing land uses.

Biological Resources

Past impacts to biological resources include habitat loss because of canal construction and the conversion of native lands into agricultural use. A riparian area on the right-of-way that was used by Swainson's Hawks was burned in the recent past, and is no longer used for nesting. Current impacts that are expected to continue include routine disturbance and pesticide use on neighboring agricultural lands and routine operations and maintenance along the San Luis Canal. The measures incorporated into the Proposed Action would reduce the cumulative contribution toward impacts to biological resources.

Cultural Resources

As there would be no effects to cultural resources or historic properties under either alternative, there would be no cumulative impacts.

Air Quality

The Proposed Action would not contribute to an exceedance of applicable air quality standards and thresholds via emissions. The emissions would be temporary and would not substantially contribute to a cumulative impact within the San Joaquin Valley Air Basin.

Global Climate Change

Greenhouse gases emissions generated by the Proposed Action are expected to be extremely small. While any increase in greenhouse gases emissions would add to the global inventory of gases that would contribute to global climate change, the Proposed Action would result in potentially minimal to no increases in greenhouse gases emissions and a net increase in greenhouse gases emissions among the pool of greenhouse gases would not be detectable.