



— BUREAU OF —
RECLAMATION

California Aqueduct - San Luis Canal Geotechnical Investigations Project

**Finding of No Significant Impact
CGB-FONSI-2021-038**

Mission Statements

The U.S. Department of the Interior protects and manages the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors 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

CGB-FONSI-2021-038

**California Aqueduct - San Luis Canal Geotechnical
Investigations Project**

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Introduction

In accordance with the National Environmental Policy Act (NEPA) of 1969, as amended, the Bureau of Reclamation (Reclamation) prepared this Finding of No Significant Impact (FONSI) which is supported by Reclamation's attached Environmental Assessment/Initial Study (EA/IS) CGB-EA-2021-038, *California Aqueduct - San Luis Canal Geotechnical Investigations Project*, hereby incorporated by reference.

Background

Established in 1960 under Public Law 86-488, the SLC is a federal and State joint-use facility as part of the San Luis Unit (SLU) of the federal Central Valley Project (CVP). Reclamation was authorized to construct, operate, and maintain the SLU. The law also authorized Reclamation to enter in an agreement with the State of California for the construction and operation of the SLU, completed in the 1961 as the *Agreement between the United States of America and the Department of Water Resources of the State of California for the Construction and Operation of the Joint Use Facilities of the San Luis Unit*. The SLC was designed and constructed by Reclamation between 1963 and 1968, and is operated and maintained by DWR. As a joint-use facility, the SLC conveys water supplies for the CVP and the California State Water Project (SWP).

The SLC traverses portions of the Valley that have experienced subsidence¹. Land subsidence in the Valley was first noted near the Delano area in 1935. Since that time, the Valley has undergone several periods of regional aquifer compaction as a result of groundwater extraction, largely for agricultural uses. The resulting land subsidence has reduced the freeboard² and capacity of the Aqueduct system to transport floodwater and deliver irrigation water. The Aqueduct freeboard is used as a reservoir, storing water during low-cost high-pumping periods and drafting water for downstream delivery during high-cost low-pumping periods. The decrease in lined freeboard has decreased or eliminated the potential to store additional water in some Aqueduct pools. The reduced storage forces more pumping during expensive periods to meet direct downstream demand.

In June 2017, DWR prepared the California Aqueduct Subsidence Study, which summarized the magnitude, location, and effects of historic and current subsidence on the Aqueduct system. The study identified three significant subsidence "bowls" occurring within the SLC segment of the Aqueduct. The Aqueduct is divided into segments or "Pools" for operational purposes. The largest bowl, Panoche, is located in Pools 15 through 18; the second subsidence bowl, Los Gatos, is located in Pools 19 through 21; and Kern, the third bowl, is in Pools 23 through 25. The study determined that in order to maintain delivery capacity, portions of the Aqueduct that have experienced

¹ Local or regional drop in ground surface elevation

² Vertical distance between the design water surface and the top of the concrete canal lining

subsidence require retrofitting to extend the concrete liner within the Aqueduct prism to restore storage and conveyance capacity.

In coordination with Reclamation, DWR is proposing to perform geotechnical investigations along the SLC embankments of Pools 17, 18, 20 and 21, within adjacent borrow sites, near abandoned utility pipelines and specified bridges. The proposed geotechnical investigations would inform the design of SLC Embankment and Liner Raise Project, which would address subsidence by restoring the capacity of Pools 17, 18, 20 and 21 from Milepost (MP) 122 to MP 143 and MP 155 to MP 172 of the SLC portion of the Aqueduct in Fresno and Kings Counties.

Alternatives Considered

No Action Alternative

Under the No Action Alternative, Reclamation and DWR would not conduct geotechnical investigations, and therefore, would not provide information to inform engineering and design plans for retrofitting Pools 17, 18, 20 and 21 of the SLC. Without the information provided by the geotechnical exploration the subsequent embankment raise project would not proceed or would proceed in an uninformed way that could increase the risk of embankment issues or failures by constructing facilities in a non-engineered manner.

Proposed Action

Under the Proposed Action, Reclamation and DWR will conduct up to 520 geotechnical investigations (476 are currently planned with a max of 520), to characterize the foundational requirements and soil chemical properties within and adjacent to Pools 17, 18, 20 and 21 of the SLC. Most investigations would occur within the existing DWR/Reclamation right-of-way. A total of 10 geotechnical investigation locations may be located outside of DWR/Reclamation right-of-way and easements.

Investigation methods would be conducted using Cone Penetrometer Testing (CPT), Hollow Stem Auger (HSA), and Hand Auger (HA) drilling methods as described in Section 2.2 and 2.3 of CGB-EA-2021-038.

Environmental Commitments

Reclamation and DWR shall implement the monitoring and Environmental Commitments/Mitigation Measures included in Section 2.3.1 of CGB-EA-2021-035 to avoid and/or reduce the impacts to the surrounding environment. Environmental consequences for resource areas assume the measures specified would be fully implemented.

Comments on the EA

Reclamation and DWR provided the public with an opportunity to comment on the Draft EA/IS between July 9, 2021 and August 9, 2021. Reclamation did not receive any comments during the public comment period. DWR received two comment letters from private entities. The comment letters are included in Appendix A of CGB-EA-2021-038. None of the comments addressed the analysis in the EA/IS, identified new significant environmental effects, or proposed additional alternatives or mitigation measures, and as such, no response is necessary.

Findings

In accordance with NEPA, Reclamation considered potential short-term and long-term effects of the Proposed Action, both beneficial and adverse. Following are the reasons why the impacts of the Proposed Action are not significant, with respect to the affected environment and degree of effects of the action (40 CFR 1501.3(b)).

1. The Proposed Action will not significantly affect public health or safety (40 CFR 1501.3(b)(2)(iii)).
2. The Proposed Action will not violate federal, state, tribal, or local law protecting the environment (40 CFR 1501.3(b)(2)(iv)).
3. The Proposed Action will not affect any Indian Trust Assets (512 DM 2, Policy Memorandum – July 2, 1993).
4. Implementing the Proposed Action will not disproportionately affect minorities or low-income populations and communities (EO 12898 – February 11, 1994).
5. The Proposed Action will not limit access to, and ceremonial use of, Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (EO 13007 – May 24, 1996 and 512 DM 3 – June 5, 1998).