SANTA FELICIA DAM Safety Improvement Project

The Santa Felicia Dam Safety Improvement Project (SFD SIP) strengthens the dam's most critical operating systems to address:

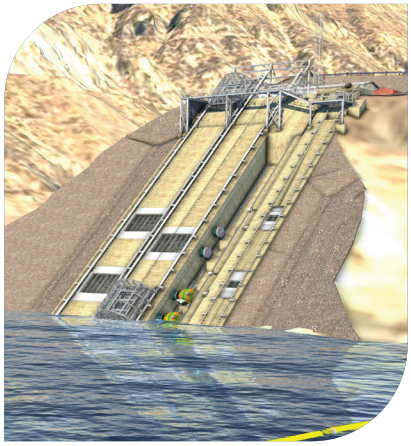
Seismic Risk

Sediment Accumulation

Storm Event Management

Together, these improvements protect downstream communities while preserving the long-term functionality of Lake Piru Reservoir as a regional water supply and recharge asset.

PROJECT DESCRIPTION: SFD SIP consists of three integrated improvements



Seismic-Resilient Outlet Works

Unlike the existing configuration where the outlet works run through the dam embankment, the new system will be routed through bedrock on the dam's east abutment, eliminating the risk that seismic deformation could compromise its structural integrity or functionality.

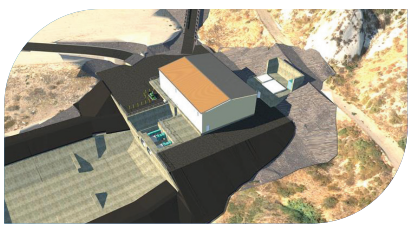
The upgraded multi-level intake configuration also addresses long-term sediment accumulation, preserves operational flexibility, and allows for selective withdrawal of reservoir water at various elevations. Additionally, the construction phase creates the operational conditions needed to evaluate sediment removal options that could potentially recover 2,700 acre-feet of lost reservoir storage capacity.



Spillway Improvements for Storm Events

The Division of Safety of Dams (DSOD) requires Santa Felicia Dam's spillway to pass an inflow design flood of 220,000 cubic feet per second (cfs). The existing spillway falls short at 146,000 cfs. To meet this requirement, the spillway chute will be lowered by 15.5 feet, reinforced with a new chute slab, side walls, and rock anchors, and protected at its downstream end with a concrete cutoff wall to prevent scour.

The existing ogee spillway crest and walls will be preserved where feasible. The embankment dam crest will also be raised by 6.5 feet using a mechanically stabilized earth wall, ensuring that extreme storm flows are directed to the spillway rather than over the dam.



Hydropower Facility

The project updates the existing 1.4-megawatt hydropower facility, allowing continued renewable energy generation as part of normal reservoir operations. Because Santa Felicia Dam operates a hydropower facility, it is licensed and regulated by the Federal Energy Regulatory Commission (FERC).

March 2026

United Water CONSERVATION DISTRICT

What's at Stake?

Santa Felicia Dam has served the Santa Clara River Valley for seven decades. The dam rises 213 feet above Piru Creek's streambed, stretches 1,275 feet in length, and creates Lake Piru, approximately 80,524 acre-feet, or roughly 26.2 billion gallons. What that water supports is far-reaching:



Agricultural, municipal, and industrial users across the valley and the Oxnard Coastal Plain



Groundwater recharge for overdrafted basins and aquifers throughout the region

Imported State Water Project supplies storage



Wildfire response, firefighting support, and post-fire water quality protection

Camping, boating, fishing, and hiking at Lake Piru, an outdoor haven for Southern California families

Maintaining all of this requires meeting modern regulatory standards set by FERC and DSOD. The Santa Felicia Dam Safety Improvement Project ensures the dam can continue doing what it has always done reliably and safely, while positioning the region for the challenges ahead.

PROJECT BENEFITS



Increases dam resilience against seismic events and extreme storm flows, protecting the operational continuity of a critical regional water supply asset.



Secures continued operational flexibility for sustainable groundwater recharge and direct water delivery within United Water's service area, helping address overdrafted groundwater basin conditions across the region.



Provides operational flexibility and redundancy, allowing selective withdrawal of reservoir water at various elevations for water quality management while accommodating future sediment level rise.

Positions United Water to evaluate sediment removal options that could potentially recover thousands of acre-feet of lost reservoir storage capacity.



Modernizes the dam's hydropower facility, supporting continued generation of clean, low greenhouse gas energy in Southern California.



Preserves access to Lake Piru's recreational amenities, including camping, boating, fishing, and hiking, supporting community wellness and the local outdoor economy that depends on continued reservoir operations.



Creates new construction job opportunities, with an estimated daily need for 37 to 46 skilled laborers.

Potential Santa Felicia Dam Failure Impacts

Santa Felicia Dam is located in a moderately active seismic region of Southern California and is classified as an extremely high-hazard dam by the California Department of Water Resources' Division of Safety of Dams (DSOD) and as a high-hazard facility by the Federal Energy Regulatory Commission (FERC). These classifications reflect the large population located within the dam inundation zone, not the condition of the dam itself.

The consequences of a dam failure, while highly unlikely, would be severe. Floodwaters could rapidly inundate downstream communities, including large portions of Ventura County and Naval Base Ventura County, threatening lives, property, and critical infrastructure. These potential impacts underscore the importance of the Santa Felicia Dam Safety Improvement Project in protecting public safety and maintaining the reliability of regional water supplies.

County Population
835,430

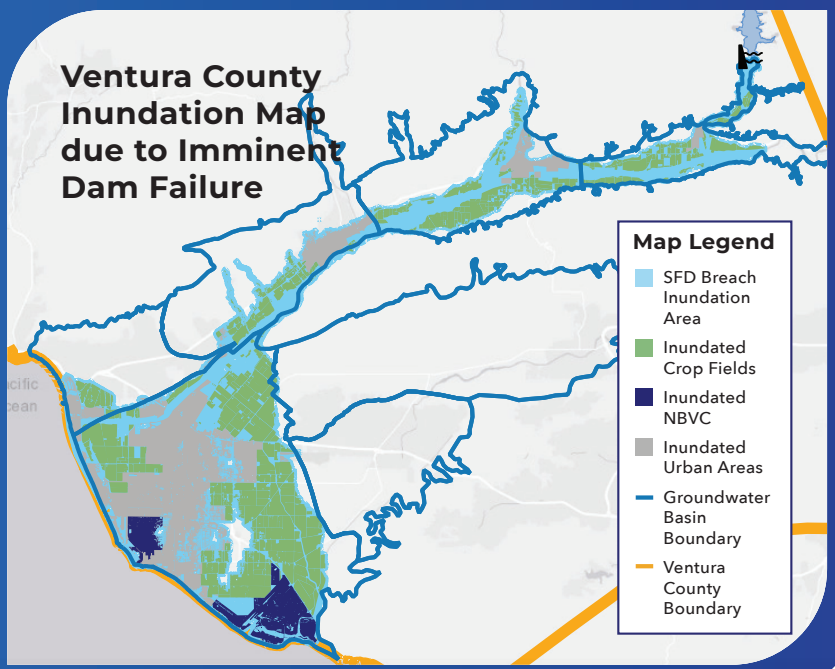
Population Impacted
236,768

Economic Losses
more than $19 Billion

Agricultural Losses
more than $2 Billion

Structures Impacted
more than 68,000

Infrastructure Damages
more than $15 Billion



THE COST OF INACTION

The risks facing Santa Felicia Dam present two paths, and both lead to the same devastating outcome if this project does not move forward.

In the unlikely event of a dam failure, the consequences are catastrophic. But failure is not the only risk.

FERC and DSOD have the authority to require decommissioning of Santa Felicia Dam if regulatory requirements are not met.

That outcome, while less dramatic, would be equally devastating. Lake Piru disappears. Water supply infrastructure built over decades vanish. Groundwater recharge efforts suffer significantly. 80,500 acre-feet of storage is gone. A recreational resource is lost. And the cost of decommissioning alone could rival or exceed the cost of the improvements needed to prevent it, as California has already seen with projects like the $532 million Potter Valley Dam decommissioning effort.

The Santa Felicia Dam Safety Improvement Project is a choice between protecting everything the dam provides, or losing it all.

AN UNFUNDED MANDATE

The Case for Federal Support

United Water Conservation District bears the full financial burden of a $314 million infrastructure project driven by federal regulatory requirements, with no viable path to federal funding. The District is committed to meeting every standard FERC and DSOD require, but the current federal framework leaves privately owned dams like Santa Felicia without the resources needed to do so. Congressional action is needed to close this gap.

Funding Phases

The Santa Felicia Dam Safety Improvement Project will be executed in four phases over nine years.

1

$109 Million
Pre-construction activities, tunnel excavation, pipe installation, and sloping intake structure to elevation 995 feet

2

$50 Million
Completion of the sloping intake structure to elevation 1,085 feet and downstream control facility

3

$45 Million
Startup testing and outlet works project closeout

4

$110 Million
Spillway construction

A GAP IN THE FEDERAL FUNDING FRAMEWORK

When Santa Felicia Dam was built in 1955, the local community bore the full cost of construction, an investment in infrastructure that has delivered public benefit for seven decades. Today, that same community is being asked to shoulder the full cost of federally-mandated safety improvements, without access to the federal funding mechanisms that exist for government-owned facilities.

United Water has made progress, securing a low-interest WIFIA loan and a minor federal grant, and is actively working with the State of California to fund a portion of this work. Yet even combining all available resources, the District remains far short of the $314 million needed to complete the project.

The path to federal funding has been exhausted at every turn. Santa Felicia Dam lacks a federal nexus to the Bureau of Reclamation (USBR), making it ineligible under the Energy and Water appropriations bill and USBR grant programs apply exclusively to Bureau-owned facilities. U.S. Army Corps of Engineers funding is similarly unavailable.

The result is a policy gap that deserves attention: United Water must meet federal standards and protect federal interests, yet has no mechanism to access the federal resources needed to do so.



Call to Action

United Water is requesting congressional support to identify funding mechanisms for privately-owned dams that meet federal safety standards and protect federal interests.

United Water CONSERVATION DISTRICT

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