

# IRVINE LAKE / SANTIAGO CREEK DAM OUTLET TOWER AND SPILLWAY IMPROVEMENT PROJECT

Irvine Ranch Water District is leading a project to replace the outlet tower and spillway at the Santiago Creek Dam that forms Irvine Lake.

The upgrades, planned in partnership with Serrano Water District, follow a Risk-Informed Decision-Making process known as RIDM, which uses a rigorous, systematic and thorough approach to dam safety that identifies and reduces risks. This process, which IRWD established as a core component of its dam safety program, introduces a heightened level of dam safety beyond the guidelines required by Division of Safety of Dams. The improvements are being designed to the state's dam safety standards along with the heightened RIDM guidelines.

The Santiago Creek Dam, outlet tower and spillway were built in 1932 to create Irvine Lake as a source of water for local agricultural and municipal use.

Today, Irvine Lake remains an important source of water for irrigation and agriculture. It is also a source of water to IRWD's Baker Water Treatment Plant and Serrano Water District's Walter Howler Filtration Plant, which provide drinking water to more than 85,000 homes in surrounding communities.

## PROJECT DETAILS

The improvements call for replacing the outlet tower to improve the regulation of flow and bolster the seismic performance of the structure. The spillway at the Santiago Reservoir Dam will also be improved according to state standards and RIDM guidelines.



*The outlet tower, which controls flow into and out of the reservoir, will be replaced for optimum flow control and seismic performance.*



*The spillway will be upgraded and modernized to meet or exceed the latest state and federal standards.*

Visit [IRWD.com/IrvineLakeProject](http://IRWD.com/IrvineLakeProject) for more information on the project and to learn about IRWD's dam safety program. Contact us at [Info@IRWD.com](mailto:Info@IRWD.com) or 949-453-5300.

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## ABOUT IRVINE LAKE

Irvine Lake is jointly owned by Irvine Ranch Water District and Serrano Water District. In 2017, the state Division of Safety of Dams requested a comprehensive assessment of the spillway, which concluded that while the spillway structure remains useable, it is nearing the end of its useful life.

The assessment was conducted while the districts were in the process of designing a new outlet tower to improve the seismic performance of the structure.

Based on the findings of the spillway assessment, the districts consolidated the spillway improvements with the outlet tower improvements and are now doing both simultaneously.

## PROJECT TIMELINE

The project is undergoing extensive engineering design and environmental analysis. Construction is expected to begin in 2025, with anticipated completion in 2027.

## A STRONG RECORD OF SAFETY

IRWD is an experienced reservoir operator with an exemplary record of reservoir construction, maintenance and performance, with a keen focus on safety. The District operates five reservoirs, including Irvine Lake. All of IRWD's reservoirs are well-maintained and meet state requirements for safe use.

## GOING ABOVE AND BEYOND

In addition to receiving annual state-mandated inspections, IRWD:

- Implemented a state-of-the-art dam safety program that uses a high degree of review and analysis.
- Monitors its dams daily.
- Conducts rigorous monthly inspections.
- Measures and analyzes dam performance, including drain flows, water surface elevation and movement.

Irvine Lake provides irrigation water and drinking water for local community needs.

For more information, visit [IRWD.com/IrvineLakeProject](https://www.irwd.com/IrvineLakeProject) or contact our Public Affairs department at **949-453-5500** or [info@irwd.com](mailto:info@irwd.com).