



PYRAMID DAM MODERNIZATION PROGRAM

PYRAMID DAM AND LAKE are located about 60 miles northwest of Los Angeles and provide water storage for the greater LA area. The dam was built between 1969 and 1973 as part of the California Department of Water Resources (DWR) State Water Project (SWP).

DWR is modernizing its SWP portfolio across the state. This includes identifying and proactively addressing any issues that could impact the delivery of water or the safety of surrounding communities. As part of these efforts, DWR in 2019 launched the Pyramid Dam Modernization Program (PYDMP) to address improvements that could be made to mitigate impacts due to an extreme weather event or large earthquake.

STATUS OF PYRAMID DAM

Based on prior Division of Safety of Dams (DSOD) findings as well as other DWR inspection and assessment activities, the initial focus of the Pyramid Dam



Moderization (PYDMP) will be to assess the impacts of an extreme weather event and to conduct earthquake analyses to identify improvements for the gated spillway, emergency spillway, and inlet structure. The primary objective of the PYDMP is to ensure that these appurtenances continue to function, and work appropriately during use, and establish a path forward to completely modernize the facility.

EXTREME WEATHER

- The gated spillway at Pyramid Dam is used approximately once per year to release natural inflows and whenever inflows exceed stream release capacity.
- The emergency spillway at Pyramid Dam has never been used.
- Climate models show different precipitation patterns, which

PYRAMID DAM

Location:

Los Angeles County

Construction Completion:

1973

Type of dam:

Earth and Rock Embankment

Height:

400 feet

Length:

1,090 feet

Operating Storage Capacity:

169,900 acre feet

Outlet Works:

- Angeles Tunnel – 7.15-mile long, 30-foot diameter tunnel connected to Castaic Powerplant
- Stream Release – 15-foot diameter under right abutment

Spillway Types:

Concrete flood gate-control spillway and unlined emergency spillway

Function of Storage:

- Regulatory storage and forebay/afterbay for Castaic Powerplant
- Afterbay for William E. Warne Powerplant
- Water deliveries
- Recreation
- Fishery enhancement

State Water Project:

Storage for water deliveries from the West Branch of the SWP



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This aerial view looks north toward Pyramid Dam and Pyramid Lake located on Piru Creek in Los Angeles County. Source: Florence Low – California Department of Water Resources

may change river flows in the State and could impact how DWR operates SWP facilities, including Pyramid Dam, to manage extreme weather scenarios.

EARTHQUAKE RESILIENCY

■ In 2019, DWR initiated an in-depth analysis of the expected performance of the outlet works inlet structure (the structure that is used to release water from the reservoir through the stream release) in the event of an earthquake. Damage to the inlet structure during an earthquake would not cause

the dam to fail; however it may significantly reduce DWR's ability to release water.

■ DWR is also conducting seismic evaluations of the gated and emergency spillways to determine if any retrofits are necessary to ensure they will work appropriately in the event of an earthquake. DWR expects the evaluations to be completed in 2023.

WHAT TO EXPECT?

During the modernization process, DWR will be operating construction equipment which

will result in some localized noise and increased activity may be expected.

DWR anticipates that the modernization of the dam will take a decade or more to complete.

HOW TO CONTACT US

For more information, on the Pyramid Lake Moderization Program, contact

SWPdamsafety@water.ca.gov

