

**Tecolote Tunnel Concrete Deterioration Investigation
(2005-2-55)**

Project Ranking

52%

Total Estimated Cost: \$100,000



Background

The Tecolote Tunnel was completed in 1956 to divert water from Lake Cachuma to the South Coast Conduit. The tunnel provides water delivery through the mountain to the South Portal. The tunnel structure consists of a modified circular horse-shoe shaped cross section constructed of steel encased in 12 inches of concrete and operates in open channel flow that is approximately 7’ inside and is 6.4 miles long with a gradual shallow slope to enable gravity feed. The only ingress and egress are at the North Portal and South Portal. During an inspection by the USBR in 2012, deterioration was discovered due to long-term exposure to hydrogen sulfide.

Need for Project

Hydrogen sulfide has caused some deterioration of the concrete lining of the tunnel. In areas, the interior concrete surface has peeled in sheets approximately 3/8 of an inch thick and fallen into the invert, creating sediment. The majority of the tunnel is in acceptable condition. However, a few locations exhibit small areas where leaching could affect the structural integrity of the concrete. Review is necessary.

Description

The Tecolote Tunnel is a 6.4 mile long tunnel which is considered a “confined space” location. The evaluation will require an engineer to identify the locations and extent of the concrete deterioration, severity of damage within the Tecolote Tunnel and recommend appropriate remediation.

Regulatory Compliance

This project has been identified by the USBR as a Category 2 recommendation.

Budget & Schedule

Internal Staff Estimate

Fiscal Year	Cost
2019-20	\$100,000
Total	\$100,000