

# Cachuma Project History



The Creation of Our  
Santa Barbara Water Supply

# Cachuma Project History

- Santa Barbara was first settled by Europeans in the late 18th century when the Spanish established the Presidio of SB in 1782.
- SB Mission was founded in 1786.
- In 1806, the Padres brought irrigation in by diverting waters from Mission Creek for purposes of grinding grain.
- That small dam and reservoir is still in use by the City – one of the oldest “reclamation projects” in the country.



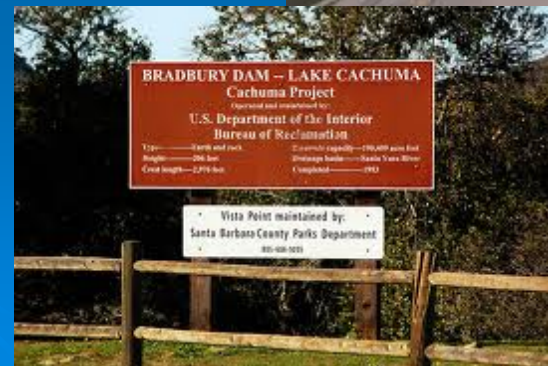
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- As early as 1903 the SY River watershed was recognized by the USGS Reclamation Service as only dependable water supply.
- First diversion of SY River took place in 1920 with the construction of Gibraltar Dam and Mission Tunnel by the City.
- City and County studies for the Cachuma Project started in 1938.
- Anti-growth opportunists laughed at the Cachuma concept, declaring “never would enough water flow in the SY River to fill Cachuma.



# Cachuma Project History

- The Cachuma Project was proclaimed by Commissioner Michael Straus in 1949 as “Reclamations first Seacoast Project”
- The Cachuma Dam name was changed to Bradbury Dam in 1971 to honor local water proponent Brad Bradbury
- E.R. Crocker was the manager of the Cachuma Project which called for construction of a 206 foot high earthfill Dam with a capacity of 210,000 af.



# Cachuma Project History

- Awarded the contract to construct the \$4.75m Tecolote Tunnel was Carl M. Halverson, Inc. of Portland Oregon.
- Responsibility for construction of the \$6.7m dam was awarded to Mittry Construction of Los Angeles.
- The American Pipe and Construction Company from LA built the SCC for \$1.58m
- Although relatively short in length the TT proved to be one of the most difficult jobs undertaken.



# Cachuma Project History

- Inflows of underground streams reached 9000 gal / minute with temperatures up to 117 degrees (F).
- Dangerous accumulations of methane gas and long reaches of rock swelled and squeezed beam supports.
- Setbacks hospitalized mine workers, delayed the project, increased costs, and forced a change in contractors.



# Cachuma Project History

- First of these problems was in 1951 when, after averaging 870 linear feet per month, at 7500 feet in the tunnel, an explosion of methane gas occurred sending 11 miners to the hospital.
- Work was also interrupted often where large inflows of water were encountered of 300-500 lbs/psi pressure.
- Worker were forced to construct concrete bulkheads to work behind.



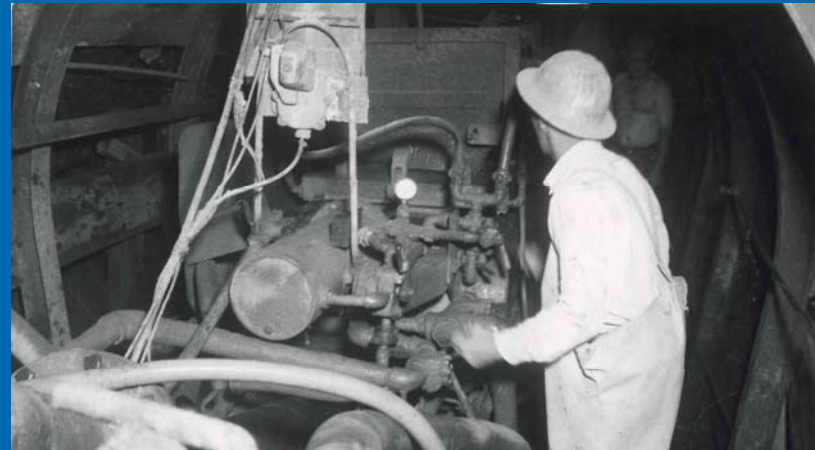
# Cachuma Project History

- By March 1953, the tunnel lied up to 2400 feet below the coast range.
- Water inflows were 106 degrees and discharging at a rate of 3600 gpm.
- Several hundred yards of shale were sluiced into the tunnel along with massive outflow of water.
- On July 21<sup>st</sup>, with 4700 feet to go, Halverson suspended tunneling operations for the year.
- After many contemplating meetings, Halverson finally negotiated to subcontract the remainder of tunnel work to Coker Construction Company and Peter Kiewit & Sons.
- Contract changes were made to substantially increase payments for the nearly impossible work conditions encountered.



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- Coker rehabbed the working conditions in the tunnel by installing new discharge and ventilation lines and power cables.
- Mining resumed on April 12, 1954 with the installation of 4 Turbinair motors for pumping and ventilation.
- Miners rode into the tunnel in muck cars filled with tepid water.
- One of the toughest tunnel drilling jobs of its time had been accomplished by January 1955.



# Cachuma Project History

- Construction of Bradbury Dam and the SCC posed no problems anywhere near the Tecolote Tunnel.
- Bradbury Dam is an earthfill structure that is 206 feet above the stream bed with a crest length of 2,975 feet.
- 6,695,000 cu/yds of earthfill were used in its construction.
- Beneath the dam is a 7 foot horseshoe tunnel containing the outlet works.
- This special outlet works apparatus allows for the protection and recognition of downstream water users rights.



# Cachuma Project History

- The SCC was constructed by the American Pipe and Construction Company.
- AP&C began laying the 26 mile, 48 inch pipeline in June 1950.
- The 10 mile section of the Goleta reach was the first to be finished.
- The 16 mile Carpinteria section completed the conduit including 36, 30, and 27 inch pipeline which terminates at the Carpinteria Reservoir.
- All facets of the SCC were completed in 1956.

