

NEWELL CREEK DAM INLET / OUTLET GATE REPAIR PROJECT



By Ryan Ernst, SCWD Assistant Engineer

Newell Creek – before 1960



History of the Santa Cruz City Water Department 1960

Newell Creek Dam Construction - 1960



History of the Santa Cruz City Water Department (WD-042) 1960



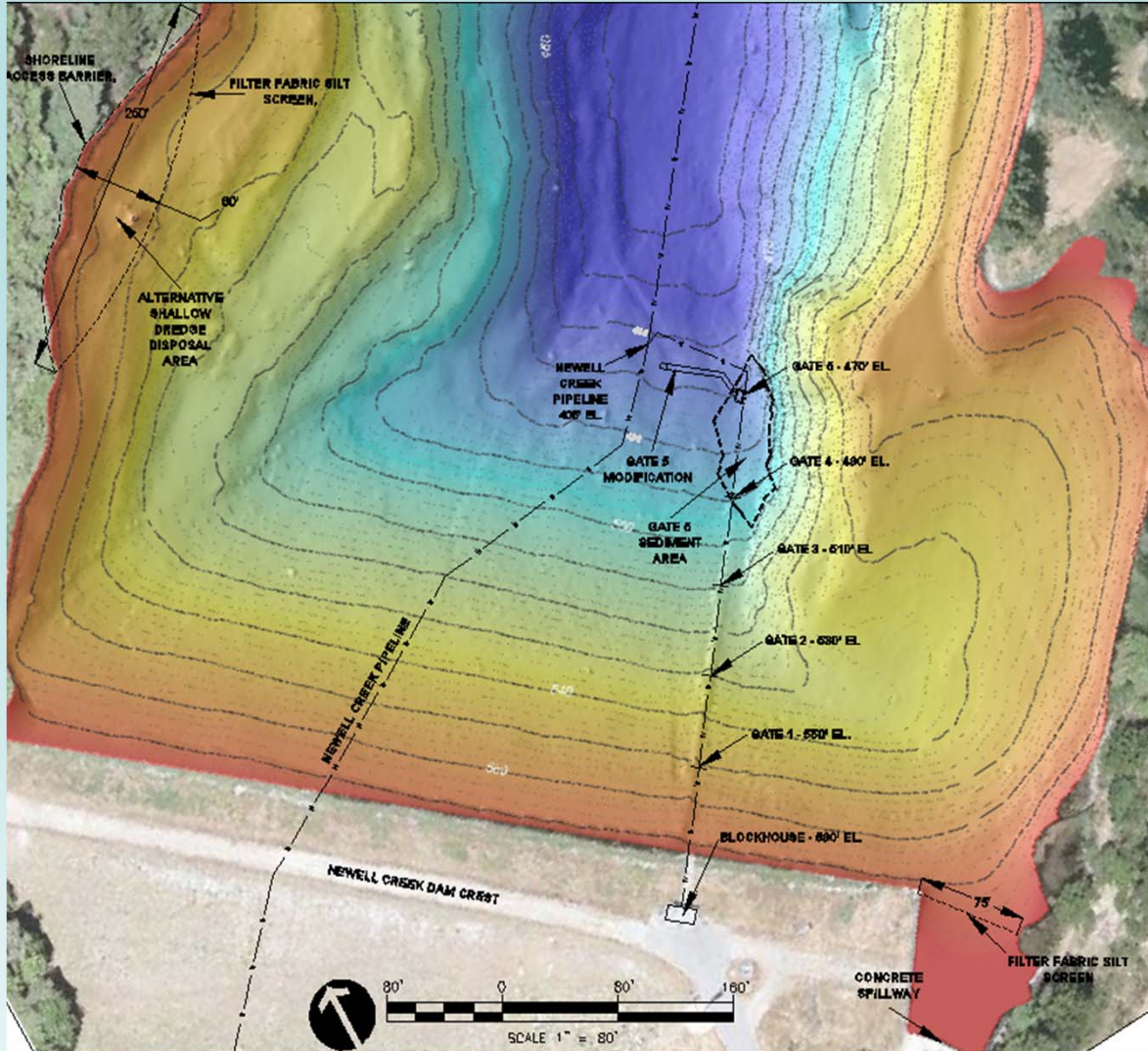
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Aerial photograph from Google Earth 2009

Newell Creek Dam – Loch Lomond Reservoir

- ◆ Location : 9 miles north of Santa Cruz near Ben Lomond & Lompico
- ◆ ~ 2.5 miles long
- ◆ ~ 2.8 billion gallons
- ◆ Santa Cruz average consumption = 670 million gallons per year (top 12' of Reservoir)
- ◆ Primary source of water during periods of low rainfall (drought) and during periods of high natural turbidity (rain storms) in the San Lorenzo River and other surface water sources

Construction Plan & Environmental Protection



- ◆ Dredge to expose for repairs
- ◆ Silt curtains & turbidity monitoring to protect environment
- ◆ Reliable Fish Release discharge setup with automatic backup and continuous remote flow monitoring
- ◆ Repair 5 inlet / outlet gates spaced 20 feet vertically
- ◆ Gate 5 modification includes an inlet extension out of high sedimentation zone

Newell Creek Dam Inlet / Outlet Gate Repair Project Summary

- ◆ Dredge to expose structures for repairs and minimize turbidity for environmental protection and construction safety
- ◆ Replace five intake gate assemblies including knife gates and hydraulic and control systems
- ◆ Replace five intake trash rack screen assemblies
- ◆ Modify Gate 5 to extend inlet approximately sixty feet to the northwest outside of high sedimentation zone



Sunset from Loch Lomond Recreation Area