

Santa Cruz Integrated Regional Water Management

Project:	Wastewater System Equalization Tank Replacement
Grantee:	Regional Water Management Foundation
Lead:	County of Santa Cruz, County Service Area 7 - Boulder Creek Sanitation
Location:	Boulder Creek
Funders:	California Department of Water Resources (Prop. 1 Integrated Regional Water Management Implementation Grant Program); Santa Cruz County
Amount:	\$405,312 (DWR Grant); \$405,312 (local matching funds)
Year:	2023-2026
Status:	Proposition 1 Round 2 Implementation Grant Awarded May 2023

Purpose: The project will improve wastewater system operations by replacing aging system infrastructure, specifically an equalization tank, which is part of the County of Santa Cruz's County Service Area (CSA) 7 Boulder Creek sanitation system. The new, larger replacement tank will double the capacity of the existing tank. The increased storage will benefit operations by enabling the optimization of the wastewater treatment plant processes during variations of flows.

Summary: The CSA 7 Boulder Creek consists of a collection, conveyance and treatment system for 263 sewer connections. The Boulder Creek Wastewater Treatment Plant treats an average daily flow of 30,144 gallons per day from the Boulder Creek Country Club and surrounding housing suburbs. The equalization tank currently operating in the CSA 7 sanitation system has reached the end of its life cycle and needs replacement. The equalization tank is used as a holding basin for sewer influent leaving the grinder. It allows for optimization of the wastewater treatment plant processes during variations of flows. During periods of high levels of influent (occurring during wet weather events), wastewater is diverted to the equalization tank and is held there before treatment. If the leach fields are overwhelmed or there is a failure in the treatment plant system, wastewater is held in the equalization tank until it can be hauled away. The current tank holds 50,000 gallons but is only used to half capacity due to structural concerns. The new tank will hold approximately 110,000 gallons, which would be an increase of 85,000 gallons from the current usable capacity. The additional tank capacity could eliminate the need for offsite hauling, assuming a typical storm season.

Climate change creates unpredictable weather patterns that include heavy rainfall. The Santa Cruz Mountains receive high precipitation in excess of 55 inches per year in some areas. The Boulder Creek CSA 7 watershed, located in the Santa Cruz Mountains, is known to experience periodic heavy rains. These heavy rains add to the wastewater flow volume. The equalization tank used in CSA 7 is a critical piece of infrastructure and if it fails, untreated wastewater/harmful pollutants will spill into the environment.

Results: The project benefits include improved operational efficiency as the project is anticipated to result in decreased emergency hauling during seasonal rain events due to the larger and structurally sound equalization tank being capable of containing peak wastewater flows. The project will also help to protect the San Lorenzo River watershed from untreated spills into the environment and will aid in more consistent treatment parameters and a higher quality effluent discharged into the leach fields, ultimately benefiting the groundwater.