Santa Cruz Integrated Regional Water Management

Project:	Davenport Water Tank Project
Grantee:	Regional Water Management Foundation
Lead:	Davenport County Sanitation District (District)
Location:	Davenport
Funders:	California Department of Water Resources (Prop. 1 Integrated Regional Water Management Implementation Grant Program); Santa Cruz County
Amount:	$457,000 (DWR Grant); DAC project, no match required
Year:	2021-2025
Status:	Prop. 1 Round 1 Implementation Grant Awarded June 27, 2020

Purpose:

This project will improve the water system infrastructure and the operation and reliability of the Davenport Water Treatment Plant (Plant) by rehabilitating a deteriorating water storage tank and making related water system improvements.

Issues Addressed:

This project provides a more reliable domestic water source for the residents of Davenport, increase treatment plant/energy efficiency, complete needed upgrades to the deteriorating water storage tank, and serve to reduce the need to purchase and truck in water from the City of Santa Cruz when winter storms make the source surface water too turbid to treat.

Summary:

Currently, the secondary water tank at the District treatment plant contains backwash water from the plant's treatment process. This water can be reintroduced into the treatment plant for treatment at a rate of 10% of the total inflow to be treated. This process is not efficient and results in a tank full of filter backwash that can't be readily treated.

This project will improve the current operation of the plant by allowing water to be pulled from the existing San Vicente Creek intake during non-turbid periods, storing the raw but clear water in the secondary tank, and providing pumps with instrumentation and controls to pump the water from the secondary tank into the plant. The water stored in the tank could supply the town for 3-days, thus reducing or eliminating the need to purchase water from the City of Santa Cruz during winter storms when the source water is too turbid to use. In addition to providing clear raw water during turbid times, the secondary tank could supply water to the town during dry periods.

The grant will fund the construction and related instrumentation to distribute water to and within the treatment plant. Infrastructure improvements include: interior and exterior coating of the existing deteriorating secondary storage tank, new pipes from the storage tank to the plant, new pump(s), and new instrumentation and controls.

Results:

The project provides 135,000 gallons of raw water storage, which will provide Davenport with a safer and more reliable source of domestic water. The project will reduce carbon emissions by an estimate of 2.66 metric-tons of carbon dioxide because the rehabilitated system (to supply water) would require less energy than to truck water to Davenport.