

CASE STUDY

Chambers Facilitate Groundwater Recharge in Community System

Los Osos, CA

SYSTEM SPECIFICATIONS

1.6 MGD Collection, Conveyance, Treatment, and Water Reuse

INSTALLATION DATE

Summer 2013

PRODUCTS

Infiltrator Chambers

OWNER

San Luis Obispo County, California

ENGINEER

CDM Smith, Walnut Creek, CA

INSTALLER

WA Rasic Construction, Long Beach, CA

DESCRIPTION

The coastal community of Los Osos, CA, had for generations met their wastewater needs with onsite wastewater treatment systems that were now outdated. As urban density increased, code-compliant systems could not be designed to fit the small lots. Additionally, the coastal, agricultural community was experiencing saltwater intrusion as groundwater was pumped to meet demand and hence saltwater began to intrude further inland. The Regional Water Quality Control Board declared a prohibition zone and a building moratorium.

Initial studies revealed that the discharge for a centralized wastewater treatment system would have to be an ocean outfall and raised concerns that saltwater intrusion would be increased. A decentralized solution that includes final discharge to a community drainfield, recharge the groundwater supplies, minimize saltwater intrusion, and serve the community for the future was ultimately selected.



The completed large community treatment system has a capacity of 1.6 MGD and includes collection, conveyance, treatment, and recycled water reuse. The system's conventional gravity collection system includes pump stations that deliver effluent to the wastewater treatment plant, which uses membrane treatment technology to remove the nitrogen. Treated effluent is pumped up a hillside where the large subsurface disposal and recharge system is located under a five-acre field that will remain an open space.



The disposal and recharge system utilizes approximately 20,000 linear feet of Infiltrator chambers installed in a series of trenches that offer enhanced infiltrative surface area to return the treated effluent back into the soil to replenish groundwater supplies.

Specifying Infiltrator chambers resulted in cost efficiencies including installation and labor cost savings due to the ease of the lightweight chamber installation as compared to stone and pipe trenches.

