



Rio Alto Water District: A Small District Creatively Solves a Big Regulatory Challenge

The Problem

Several years ago the Rio Alto Water District, a small water district serving the community of Lake California in Cottonwood, California, found itself faced with a big regulatory challenge.

When its National Pollutant Discharge Elimination System (NPDES) permit came up for renewal in 2010, Rio Alto WD discovered that under its current operating conditions it would not be able to meet strict new effluent limits for zinc and disinfection byproducts. After initial efforts to remove the pollutants from the district's effluent prior to discharge proved unsuccessful, the district knew it would need an entirely new approach.

Faced with a cease and desist order from the Central Valley Regional Water Quality Control Board, the district immediately went to work to find the best long-term solution to come into compliance with the new regulations.

The Approach

After reviewing eight alternatives, Rio Alto decided to move forward with its Wastewater Treatment Plant Improvements & Constructed Wetlands project. The project made necessary improvements to its wastewater treatment plant and changed the way the district discharged effluent – from direct river discharge to land discharge.

While the multi-million dollar project didn't have the smallest overall price tag of the options considered, the Rio Alto Board of Directors considered it the best long-term solution for meeting the district's regulatory requirements.

"NPDES permits must be renewed every five years and the regulations for river discharge are increasing with each permit," said Rio Alto General Manager Martha Slack. "By changing to land discharge, we now have a permit that is reviewed after 10 years and not subject to as many changing regulations. We view this alternative as a longer term and eventually less costly solution for our customers."

But despite having a clear course of action, securing funding for the multi-million project



presented its challenges.

Although Rio Alto WD ultimately funded the project through a combination of low-interest loans from the State Revolving Fund, a rural development grant from the U.S. Department of Agriculture and a Proposition 84 grant from the California Department of Water Resources, initially the district was not qualified to receive any grants. It was not until 2014 — after the project was already well underway — that the district discovered that updated census data related to the district's median household income would allow them to pursue grant funding after all.

The district also faced strict requirements under Proposition 218, which required the \$7 million project to be funded by the district's 1,400 sewer customers. To address this challenge, Rio Alto decided to form a Community Facilities District to issue bonds for the project and pay down its debt by levying a special tax. But assessing the special tax required two-thirds voter approval – a daunting task of its own. Nevertheless, the district embarked on a targeted outreach campaign, holding special town hall meetings that in the end proved successful in demonstrating the value of the project and helping the district gain voter approval.

With the voters' go-ahead, project construction began in June 2014.

As part of the improvements to its wastewater treatment plant, the district installed a second

Above: New sludge drying beds were among the many improvements made to Rio Alto WD's Wastewater Treatment Plant during its project.

Opposite page

Left: Rio Alto WD's new Return Activated Sludge (RAS) pumping station returns activated sludge back to the Wastewater Treatment Plant's head works for further treatment.

Top Right: Ducks enjoy a swim in one of the four ponds constructed as part of Rio Alto's wetlands project. *Photo credit Mary Mitchell*

Bottom Right: Located near the Sacramento River and within the Pacific Flyway, Rio Alto's new wetlands facility provides habitat for birds and waterfowl. *Photo credit Mary Mitchell*

larger clarifier, new sludge drying beds, new return activated sludge (RAS) and effluent pumps, an all-new electrical system, an upgraded chlorine system, a generator large enough to run the treatment plant in the event of a power outage, and a two-mile pipeline.

The district also purchased 78 acres of land to create a new wetlands facility. However, constructing the wetlands was seemingly easier said than done. Funding from a Proposition 84 grant came just in time as the district watched its environmental budget balloon from an estimated \$60,000 to nearly \$500,000 due to the discovery of culturally sensitive materials. The district also had to contend with a sit-in protest over the moving of an osprey nest, and two flooding events that caused significant erosion to the levees in the wetlands, requiring them to be reinforced with rock. Thankfully, the district was able to secure a USDA Rural Development grant to cover the unexpected levee expenses.

Despite all of the challenges Rio Alto WD faced during this project, it has been well worth the effort, officials say.

After nearly two years of work, in March 2016

the project was completed and the wetlands facility officially opened to the public in May 2016. In addition to housing treatment ponds that serve to filter effluent before it returns to the groundwater, the wetlands also provide habitat for birds and wildlife and walking trails and picnic areas for community residents.

Since completing the wetlands, the district has held four tours of the wetlands and wastewater treatment plant, and plans to offer additional tours to local schools when the rainy season ends.

According to Slack, residents also are making good use of the wetlands' walking trails.

"In fact, one resident claimed she should be the poster child for our project because by walking the wetlands every day she has lost 30 pounds," said Slack.

And it's not just the local *human* residents that are enjoying the benefits of the wetlands.

"You'll be happy to know that the osprey have their own dedicated nest now within the wetlands facility and are successfully multiplying in great numbers," she added. ♦

DISTRICT FACTS

Location

Cottonwood, CA in Tehama County

Service District

The district provides water services to 1,284 homes and sewer services to 824 homes within the Lake California subdivision.

Water Sources

100% groundwater

Notable Projects

Wastewater Treatment Plant Improvements & Constructed Wetlands

Website

www.rawd.org

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