

C A S E S T U D Y

A Sustainable Wastewater Treatment Solution for Commercial Properties

AUDUBON EDUCATION CENTER, CALIFORNIA

Problem

The Audubon Society wished to build an environmental education center in Debs Park, Los Angeles, that would be a model of green architecture and the first LEED Platinum-rated facility in the world. To do that, they needed a wastewater re-use option.

Solution

Audubon won city approval to go "off-the-sewer-grid," so it could capture, treat, and re-use wastewater with an Orenco-manufactured AdvanTex® Textile Treatment System. Treated effluent is of such high quality that it is re-used for irrigation and will ultimately be used, when officially permitted, for toilet-flushing. In 2004, the Audubon Center earned a Platinum rating with the highest score in LEED history.



Photo courtesy of Gary Leonard

The LEED Platinum Audubon Center at Debs Park in Los Angeles uses several compact AdvanTex® AX20 Wastewater Treatment Systems (inside circle drive) to produce re-usable effluent.

In January of 2004, the Audubon Society's newly-constructed environmental education center in Los Angeles was awarded the first Platinum Rating in the history of the U.S. Green Building Council's LEED program. According to the Society's Jan. 13, 2004 news release, "The Audubon Center at Debs Park earned 53 LEED points, garnering

particularly high marks for its efficient water system and renewable energy sources." That efficient water system is an AdvanTex wastewater treatment system, manufactured by Orenco®.

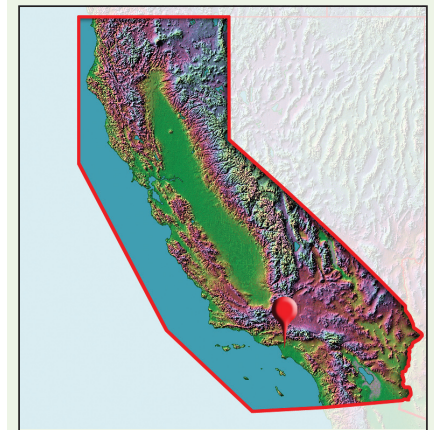
According to the Green Building Council, "The <Audubon> Center is designed to use 70% less water than a comparable conventional building, and to treat all wastewater on site." The Center is completely off-the-sewer-grid, getting all its electricity from solar panels, and has no connection to the city's sewer.

The wastewater from the 5,020-ft² (467-m²) building flows to a processing tank for settling and initial filtration, then to several AdvanTex pods filled with an engineered textile material for secondary

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Project Overview

AUDUBON CENTER, L.A., CALIFORNIA



Institutional Facility

- Environmental Nature Center with Visitor Center and Office
- 1,200-gpd (4542-L/day) design peak flows

Start-up Date

- September 2003

Primary Treatment

- One 5,000-gal. (18,927-L) two-chambered septic tank
- Solar-powered pumps

Secondary Treatment

- Three AdvanTex AX20 Textile Filters
- VeriComm® Control Panel & Monitoring System

Tertiary Treatment

- One 5,000-gal. (18,927-L) stabilization tank
- Ultraviolet disinfection
- Subsurface irrigation system

Operation

- Contracted service provider; quarterly visits/sampling

AdvanTex Effluent Quality

- 5 mg/L BOD and TSS

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treatment to very high standards. Next, the effluent is disinfected and used for subsurface irrigation. Once the city provides a permit, the effluent will also be used for toilet-flushing. A remote telemetry control panel monitors the system around-the-clock.

According to Randy Jenkins of Sierra Commercial Plumbing, which has the service contract for the system, the treated wastewater is so clear that, when he checks the storage tank, “I can see right to the bottom.” Because the system is equipped with an Orenco VeriComm® Control Panel and Monitoring System, Jenkins can check on the system from his



The Audubon Center's AdvanTex Treatment System produces such clear, odorless effluent that it is re-used for irrigation, and, when permitted, will also be re-used for toilet flushing.

office computer and receive alarm notifications via e-mail. “One time, out of nowhere, the VeriComm system sent a high-water alarm,” said Jenkins. “We were able to check it out, find the problem (a leaking toilet), and fix it.”

BioSolutions, Orenco’s local distributor, helped with system design, supplied

the equipment, and trained Jenkins’ company to install and service it. According to Steve Braband, co-owner, “The water quality is so incredible that the docents include the wastewater system on their tours. We gave them a vial of sample effluent, and the tour guides show it ... show that it is as clear as drinking water.”

Situated 10 miles (16 kilometers) northeast of L.A., in the 282-acre (114-hectare) Ernest E. Debs Regional Park, the Audubon Center was built to provide environmental education programs for the city’s young people. But Jenkins also helps give tours to local architects, and Braband gives trainings and tours for regulators, utilities, public officials, and others working on LEED projects. Among them were representatives of the Goleta Water District, north of Santa Barbara, which also purchased an AdvanTex system and earned a LEED Silver rating.

Clearly, the Audubon Center is teaching visitors that there is a much better way of dealing with wastewater than to thoughtlessly, wastefully “flush and forget.” In an arid region that has recently had its water supply drastically reduced, that’s a vitally important lesson.

For more information about Orenco Effluent Sewers and AdvanTex® Treatment Systems, contact Orenco Systems®, Inc., at 800-348-9843.



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