O R E N C O

CASE STUDY

Warren, Vermont:

AdvanTex® System Provides Superior Treatment in a Small Footprint

The Warren Elementary School playground sits less than ten feet from a row of AdvanTex® AX10 pods. Orenco's highly efficient AdvanTex Treatment System allows children at the school to play without fear of health or safety hazards.

"We live in a cold environment, but I've had no wintertime problems with this system. Just really good smokin' numbers. AdvanTex gets BOD and TSS down to five [mg/L]. You can't beat that!"

Mike Mayo
Sewage Officer
Town of Warren

In the fall of 1999, the town of Warren, Vermont discovered problems in the elementary school's water supply. The culprit was the school's failing leach field, which was ponding and causing a public health hazard.

Clearly, the septic system had to be replaced. However, there was not enough land — far enough away from the well — for a conventional leach field. The town's consulting engineers recognized that they needed a compact but high-performing wastewater treatment and dispersal system . . . at a price the town could afford. After an intensive lifecycle cost analysis of several systems, they chose Orenco's AdvanTex® Treatment System with a pressurized, shallow, narrow drainfield.

Fitting into less than half the area of conventional systems, the AdvanTex system became fully operational by the end of the school's winter break. Within two days of installation (supervised by Orenco distributor Dave Cotton of WTI), effluent testing showed considerable reduction in biochemical oxygen demand. Warmer weather brought increased biological activity in the system and BOD/TSS reductions of up to 90%, with BOD_5 at 7.5 mg/L and TSS at 5.9 mg/L.

Recognizing the system's superior design and performance, the American Consulting Engineers Council awarded its Vermont Engineering Grand Award for Water Resource Projects to the system's design engineers, the town's environmental consulting firm, and the regional planning commission.

Since the system has been operational, there have been no problems. An advanced remote telemetry control system sends information on treatment system functions via modem to a computer in the town offices. If a problem occurs, the control panel pages the town's sewage officer. School staff no longer need to worry about another septic system failure.

Warren Elementary School is an EPA National Demonstration System — a model approach to solving onsite wastewater treatment and dispersal problems faced across the country.

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SUMMARY OF SPECIFICATIONS

Warren, Vermont Effluent Sewer and AdvanTex® Treatment System
Using Orenco Systems Equipment

Installation Date
January 2001

Total Project Cost
$150,000

Environmental Consultant
Stone Environmental, Inc.

System Engineer
Forcier Aldrich & Associates

Contractor
New England Water Systems

Distributor
Wastewater Technologies, Inc.

Design Flow
4,600 gpd

Treatment System
Existing 4,000-gallon septic tank
Existing 3,000-gallon dosing pump station
New 3,000-gallon septic tank with effluent filter
New 5,000-gallon recirc/blend tank with pumps
12 AdvanTex-AX10 textile filters

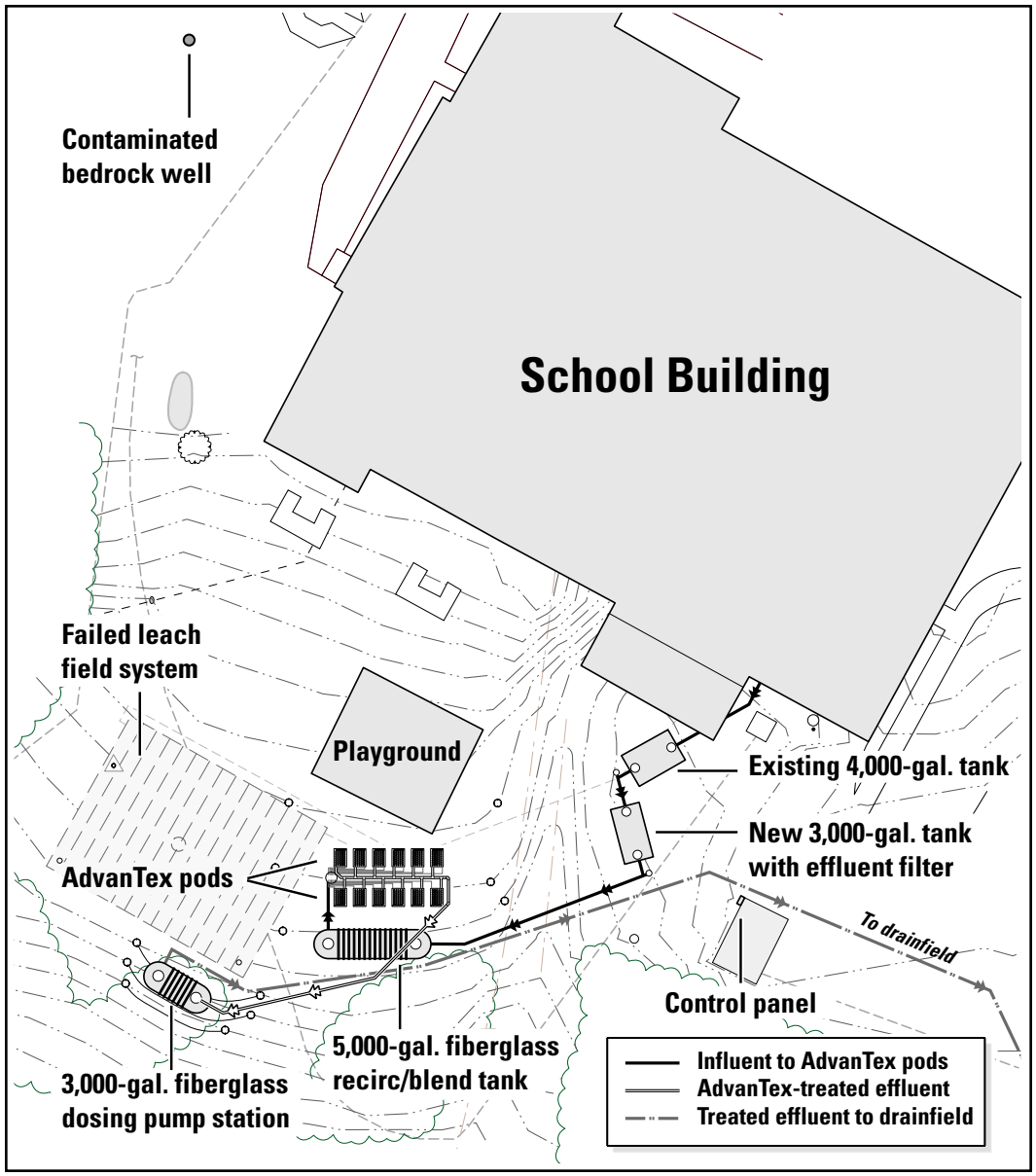
Effluent Quality
Effluent BOD averages are 7.5 mg/L; TSS averages are 5.9 mg/L.

Dispersal
Pressurized, shallow, narrow drainfield

Operation/Maintenance Costs (Annual)
Onsite facilities

Septic tank pumping	$800
Electrical	$80
Engineering inspection	$500
Operator labor	$1,000
Telemetry/paging (telephone charges)	$650
Annual cost	$3,030

Per EPA/DEM, monthly influent/effluent quality testing to be performed the first two years of operation.



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