



PROJECT:

ARCO-WELLSVILLE

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LOCATION

Wellsville, New York

PROJECT TYPE

Remediation

WASTE TYPE

Contaminated Groundwater

DESIGN FLOW

280,000 gpd

TREATMENT

Sedimentation Pond, Surface Flow Wetland, Oxidic Limestone Drains



NEED

The Sinclair Oil Company once operated a refinery on land currently home to The State University of New York's Wellsville campus. As a result of the refinery's practices, the groundwater is now contaminated with hydrocarbons, metals, and chlorinated solvents. This land adjacent to the Genesee River which continuously receives contaminated water. Atlantic Richfield (ARCO), who currently owns the property, needed a treatment system that could operate for at least 100 years with minimal maintenance requirements. ARCO also wanted a treatment system that could benefit and be part of the Wellsville community.

SOLUTION

JW NAWE designed a passive wetland system as a long-term solution to treat 280,000 gallons per day of contaminated groundwater. The treatment system consists of a cascade aerator, sedimentation pond, parallel surface flow wetlands, parallel vertical flow limestone drains, and sand drying beds for iron precipitate dewatering. The design also incorporates an upgrade of the adjacent rails to trails path, restoration of the adjacent river swale, and a 20-acre site plan using entirely native plants (trees, shrubs, wildflowers, grasses and wetland plants). The site plan also incorporates a trail system with elevated boardwalks through the wetlands for observation.

BENEFIT

This engineered wetland system provides an ecologically based, low maintenance, long term solution to treat the groundwater contamination in Wellsville. The treatment system will require minimal energy input and become part of the landscape as it matures, turning a challenging problem into a community amenity.



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