



Watkins Glen-Montour Falls WWTP Watkins Glen, NY

UNITED STATES



Figure 1: The existing Watkins Glen WRRF, located on Seneca Lake
NYS GIS Clearinghouse Orthoimagery



Figure 3: Project Seneca Vision for the Watkins Glen/Seneca Lake waterfront
Image courtesy of Laberge Group



Figure 2: The Montour Falls WRRF is located on the Seneca Canal/Catharine Creek.
NYS GIS Clearinghouse Orthoimagery



Figure 4: Project Seneca Vision for the Montour Falls waterfront
Image courtesy of Laberge Group

Owner
Villages of Watkins Glen and Montour Falls

Engineer
Barton & Loguidice, D.P.C.

General contractor
Villager Construction, Inc.

Dates of work
2018/04 2018/04

Main figures

Wick drains
4362 EA.



Description

Village officials in Montour Falls, NY, and Watkins Glen, NY, collaborated on a plan to construct a shared, \$32 million wastewater treatment plant. The facility would increase water capacity from 500,000 gallons per day to 1.2 million in the region. It would also reduce issues created by heavy rains that the previous facilities, which stood for 50 years, could not.

The new plant would include a control building, a headworks and bio-solids building, sequencing batch reactor tanks and an effluent filter and ultraviolet building. Upon completion of the plant, the wastewater facilities that previously served Montour Falls and Watkins Glen would be torn down to free up valuable real estate on Seneca Lake's southern shore.

Due to the compressible nature of the soils at the site, Menard Group USA was contracted to provide ground improvement – the selected technique was wick drains.

Ground conditions

The soils consist of soft clays and silts, which were encountered to depths of up to 45 ft from the existing grade. Wick drains were installed to accelerate consolidation settlement of the soft silt and clay by facilitating dissipation of excess pore water pressure caused by the placement of the structural fill and surcharge fill.

Solution

Menard's ground improvement solution to support the new wastewater plant included the installation of 4,362 wick drains for a total of 191,945 LF. The drains were installed in a 7 ft triangular grid, from a 12-inch thick granular working platform to an average depth of 44 ft. The area of wick drain installation covered approximately 220,000 sf. All work was completed in one continuous phase and met the client's requirements for quality, safety and schedule.