

TONKA WATER, A U.S. WATER BRAND PROJECT PROFILE



LONG BEACH TOWNSHIP, NEW JERSEY

Groundwater Treatment Plant

Project

The small resort town of Beach Haven Terrace is located on a barrier island in New Jersey. After Hurricane Sandy (known by the locals as “Super Storm Sandy”) left the town underwater, all structures were required to be raised to protect against future storm damage. This included their water treatment plant.

The town first became acquainted with the Tonka Water Brand back in 2005, when they were required to pay for all discharge waste through the regional water authority, therefore looking for ways to reduce backwash waste on their existing system. The town upgraded their system by purchasing a new Tonka Water filter, and retrofitting an existing filter with Tonka Water’s Simul-Wash™ backwash system. The Simul-Wash™ system successfully reduced the backwash waste, saving the Island millions of gallons of wastewater discharge.

Pleased with the cost-savings and performance of the upgraded 2005 plant, the Island once again selected the Tonka Water Brand to assist with the replacement water treatment plant needed after the storm.

Process

The new system includes three, 12’ diameter by 31’ single-cell OptaCell™ pressure filters. Each filter vessel operates independently of one another and is constructed with a false bottom underdrain, a media filter bed of Greensand Plus™ and anthracite. Treatment begins with a chlorine feed for oxidation and to preserve a charge on the Greensand Plus™. A chlorine feed is also used in the final stage of treatment, with finished water discharging to a clearwell. This system also incorporates Tonka Water’s Simul-Wash™ backwash system for minimizing backwash waste which allows the city to maintain their cost savings.

APPLICATION

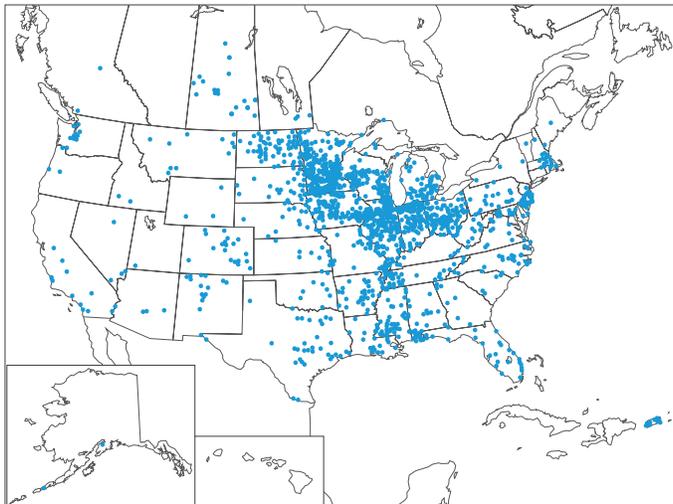
Iron and manganese removal

TREATMENT SYSTEM

Three OptaCell™ pressure filters

FEATURES

- Tonka Water’s Simul-Wash™ backwash system
- Cost effective
- Easy to maintain
- 50% wastewater reduction



Tonka Water Brand Guarantee

Tonka Water, a U.S. Water Brand provides the best custom manufactured water treatment systems in the industry. Our people will deliver excellent service and support for your project from conceptual and cost-effective design, to construction and commissioning; and throughout the system warranty and operational life of the project.

Thousands of quality water treatment installations since 1956.

Performance

Commissioning in 2017, the treatment plant has been meeting expectations since start up. The treatment process has been highly efficient in delivering high quality water as indicated below.

Iron

Raw Water	0.86 mg/L
Finished Water	0.02 mg/L

Simul-Wash™ Backwash System

The treatment plant also includes Tonka Water's value-added Simul-Wash™ backwash system. This unique backwash system uses air and water simultaneously, at sub-fluidized rates, to provide the most effective means of backwashing granular filter media¹. Tonka Water's media rejecting Simul-Wash™ trough enables the air and water backwash cycle to continue indefinitely without media loss. This results in optimal filter cleaning efficiency and prolonged filter runs, while saving approximately 50 percent of backwash wastewater compared to conventional methods.

¹Amirtharajah, Appiah, et al. Optimum backwash of dual media filters and GAC filter-adsorbers with air scour, AWWA Research Foundation and American Water Works Association, 1991.

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