



Riverton Redevelopment

Sayreville, New Jersey, USA

Keller received the 2024 Groundwater Treatment Project of the Year award from The Dewatering Institute after successfully treating over 65 million gallons of water for a master-planned community.



The project

After decades of industrial activity across a 400+ acre waterfront site, the area claimed a new purpose of a 6.5 million sq. ft. master-planned community. Stretching along the Raritan River, the site will include retail and entertainment space and over 2000 residential units. Left with contaminated groundwater after years of industrial use, a groundwater treatment solution was required throughout construction.

The challenge

Since the influent water was derived from holding ponds, the water chemistry constantly changed due to environmental factors, including temperature, precipitation, and water depth. Therefore, constant modifications were required to the treatment system's chemical dosages and operational details.

The solution

Keller installed and operated a temporary water treatment system to process and treat water from the holding ponds with a max flow rate of 1000 gallons per minute (GPM).

The system included transfer pumps, pH adjustment systems, polymer injection systems, a clarifier unit for settling, and sand and bag filtration.

The system was designed to raise the water's pH with sodium hydroxide to precipitate dissolved metals and then coagulate metals with an anionic polymer. The coagulated metals and suspended solids were settled with an inclined plate clarifier. Then, the water's pH was lowered within discharge parameters by adding sulfuric acid before filtration and discharge.

The treated water was discharged into a culvert, draining into the adjacent river.

During four phases of treatment, over 65 million gallons of water were processed, treated successfully, and discharged per permit and contract requirements.

Project facts

Owner(s)

Sayreville Seaport Associates Urban Renewal, L.P.

Keller business unit(s)

Keller

Main contractor(s)

The Whiting-Turner Contracting Company

Engineer(s)

Keller

Solutions

Groundwater control and dewatering

Markets

Residential
Commercial

Techniques

Groundwater treatment

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