



## Dewatering Lake Sediment from New York Park

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### Objective

The objective of the project was to use Geotube® dewatering technology to filter and collect the solids from the dredged material before it was to be recycled back into the lake. A WaterSolve technician would get the project up and running and also train the workers on site to take over operations for the remainder of the project.



Geotube® dewatering containers being deployed.

### WaterSolve's Chemical Conditioning

A representative sample of lake sediment was tested by a technician in the WaterSolve lab. Dewatering polymers were evaluated based on water release rate, water clarity, and flocculent appearance. In addition, dosing rate(s) were determined during bench-top dewatering experiments and recommendations provided to the facility during this phase of the program. Solve 9211 was the recommended polymer for dewatering this residual in a Geotube® containers. The results of this testing indicated the sediment would successfully dewater in Geotube® containers. This data was used to help estimate the cost of the project.

Bench top testing done in WaterSolve's lab with excellent separation from sediment. The testing indicated Solve 9211 to be the most effective in treating the sediment from the lake.



### Geotube® Container Sizing

Geotube® containers are manufactured from high strength polypropylene fabric and designed to allow effluent water to escape through the pores of the fabric while retaining the chemically-conditioned solids. A Geotube® estimator indicated that nine 90' circumference by 200' long Geotube® containers would be sufficient in dewatering the desired amount of material. The Geotube® containers would be stacked; the first layer consisting of five Geotube® containers, and the remaining four on the second layer.



On left feeding polymer into the header system with the 6" pinch valves.  
On right, the 6" pinch valve.



### The Result

Prior to the arrival of WaterSolve on site, the liner was placed, Geotube® containers were deployed, the header system was constructed and in place, and the 6" hoses going into the bags with the 6" S-curve stingers placed inside the Geotube® containers. During the week the WaterSolve technician was on site, four of the five Geotube® containers were pumped to with only minor work stoppage. Chemical conditioning varied due to the high volume of sand being dredged, but was adjusted accordingly. The on-site personnel who reviewed the operation of the chemical feed system were further trained on running the unit during this start-up period. The on-site personnel would continue the operations of the chemical feed system for the duration of the project.



Multiple Geotube® containers dewatering after 3 days of operation.