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ENVIRONMENTAL WATER TREATMENT SOLUTIONS

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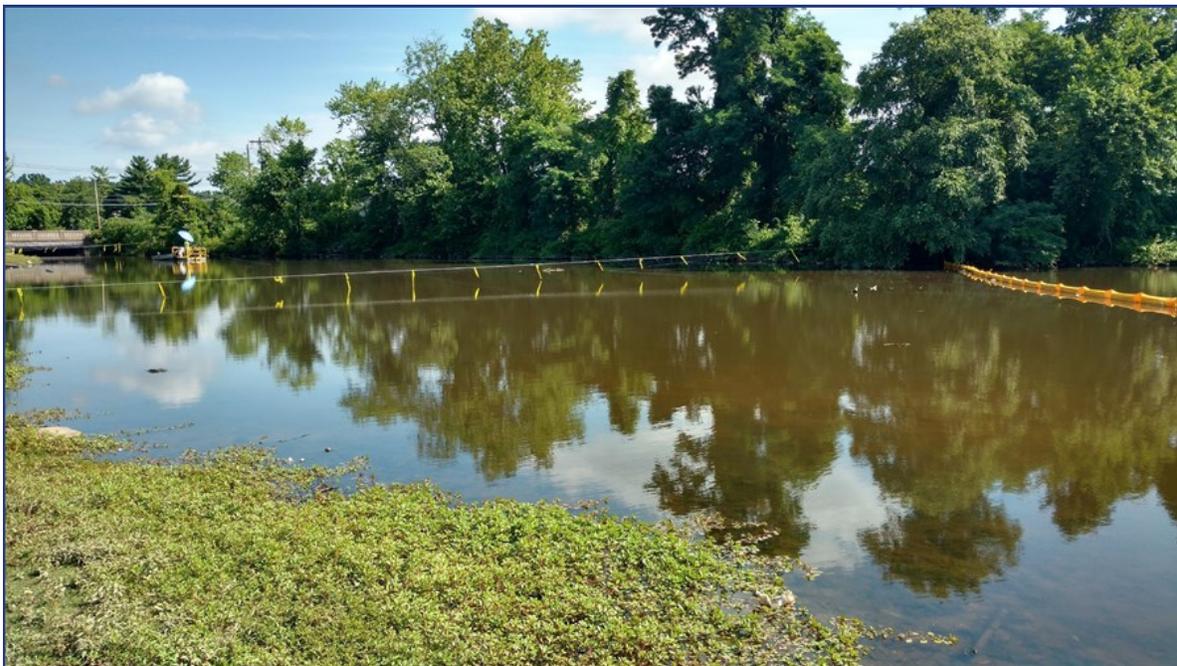
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Maintenance Dredging using Geotube® Containers

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A section of the lake was filled with sediment that needed to be dredged and dewatered.

Objective

Approximately 1,200 cubic yards of lake sediment was needed to be removed from a section of a small lake in New Jersey. Hydraulically dredging into Geotube® containers was chosen as a cost effective and proven method to dewater and contain the lake sediment.

Chemical Conditioning

A representative sample of the lake sediment was tested by a WaterSolve technician in the facilities laboratory. 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 customer during this phase of the program. Solve 137 was selected as the best performing polymer on this sample.

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. Using two Geotube® containers 60' circumference x 100' length and an 80' circumference x 100' length would contain the 1,200-cy of lake sediment.



Two Geotube® containers were deployed and filled with lake sediment.



The polymer make-down unit and 6" manifold was set up near the lay-down area. A sample port was installed after the polymer injection to monitor the polymer treatment.

The Result

A WaterSolve technician traveled to the site in New Jersey to install the polymer make-down unit and deploy the Geotube® containers on the lined and graded lay-down area. A 6" diameter Dredge would dredge the lake sediment to the Geotube® containers. During dredging operations, the technician would monitor Geotube® fill heights, adjust polymer dosage, and communicate with the dredge crew as necessary. After roughly a week of dredging, the project was complete and the WaterSolve equipment and technician were demobilized from the site. The Geotube® containers were left on site to further consolidate before being excavated.