

For Municipal Wastewater and Water Treatment, Geotube® Dewatering Technology Works

Geotube® dewatering technology can solve dilemmas such as space, efficiency, and cost.

For municipal wastewater or water treatment facilities, efficient dewatering can be a challenge. Space issues, personnel, and cost are all considerations, and an operation may experiment with a number of techniques before finding one that works.

But dewatering technology from TenCate Geotube is proving to be a simple, cost-effective solution. Geotube® dewatering technology has been used for a variety of water treatment applications, including lagoon cleanout, temporary dewatering, and even improving the capabilities of drying beds.

TenCate develops and produces materials that function to increase performance, reduce cost, and deliver measurable results by working with our customers to provide advanced solutions. Geotube® dewatering technology provides high volume containment and rapid dewatering. There is an 85% to 90% reduction of BOD in the effluent, and the system requires no capital expenditure and no special equipment. Geotube® dewatering technology can be used without adding employees or requiring extensive training.

Two Geotube® dewatering technology systems are particularly suited for municipal wastewater applications. The Geotube® MT is designed to fit in existing drying beds. It is much more efficient than a drying bed, and dewatering continues even during rainy periods. The Geotube® MDS (Mobile Dewatering System) places a Geotube® dewatering container into a roll-off box that can be easily moved once it is full or once the need for dewatering ends.

The Geotube® MDS system requires only the footprint of a long dumpster. It operates like a larger Geotube® dewatering container, and provides the same filtering efficiency.



In Jekyll Island, GA, Geotube® dewatering containers were used to provide a fast way to remove more than 400,000 gallons of sludge from digesters. The Geotube® containers fit into the facility's existing drying beds and made the process simple.

There are numerous examples of how effective Geotube® dewatering technology can be in municipal applications. In Grants Pass, OR, Geotube® dewatering technology was used at a water treatment facility to remove alum sludge from a 2-acre lagoon and a sediment basin. For this project, Geotube® containers were set up in several locations on the facility to take advantage of available space (in one area, the containers were even curved around a bend).

By using Geotube® dewatering technology, the facility was able to manage the dewatering process at its own pace, using its existing staff.

The process allowed the facility to dry its alum sludge to 28% TS, which allowed easy removal to a landfill.

In Jekyll Island, GA, 400,000 gallons of anaerobically digested sludge had to be removed from the primary and secondary digesters for digester modifications. The sand drying beds available at the facility would not provide the capacity to do this in the time allowed.

(More)



Dewatered alum sludge in Grants Pass, OR shows the efficiency of Geotube® dewatering technology.

Geotube® MT containers were used in six of the facility's seven drying beds to increase capacity and dewatering efficiency. By doing this, the operator was able to empty the digesters in the shortest amount of time, while staying well within budgets allotted for the project.

Dewatering was so efficient, in fact, that the operator had to install a sump pump in the drying beds to remove the excess water draining from the Geotube® containers.

"We have done projects ranging from small roll-off applications to Geotube® containers hundreds of feet long," said Tom Stephens, Vice President of Business Development for TenCate, manufacturer of Geotube® dewatering technology. "Municipal water treatment and wastewater treatment facilities are particularly

good applications for this technology, because of its flexibility, simple operation, and low cost.

Stephens said that TenCate Geotube has a presentation that explains the entire dewatering process with Geotube® dewatering technology, along with specific examples of how successful it has been. The presentation can be made by a TenCate Geotube representative to interested groups.



Geotube® GT 500 dewatering fabric

A simple test can be used to determine how well the dewatering technology will work with a particular material. A TenCate Geotube representative can provide suggestions as to the best dewatering approaches.

To learn more, call 1-888-795-0808 or visit www.geotube.com.



Geotube® MDS containers fit into a roll-off box for easy removal once dewatering is complete.

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How Geotube® Dewatering Technology Works

Dewatering with Geotube® technology is a three-step process.

In the **confinement** stage, the Geotube® container is filled with dredged waste materials. The Geotube® container's unique fabric confines the fine grains of the material.

In the **dewatering** phase, excess water simply drains from the Geotube® container. The decanted water is often of a quality that can be reused or returned for processing or to native waterways without additional treatment.

In the final phase, **consolidation**, the solids continue to densify due to desiccation as residual water vapor escapes through the fabric. Volume reduction can be as high as 90 percent.



Step 1: Filling



Step 2: Dewatering



Step 3: Consolidation

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