LAYFIELD

Geotube®

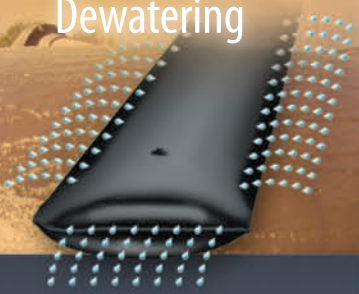
The Low Cost, High Volume Sludge Dewatering Technology

Geotube is one of the most versatile and effective dewatering technologies available. Geotube® can help you achieve volume reductions of up to 90%, with high solid levels that facilitate removal and disposal. The Geotube® containers are available in a variety of sizes, depending on volume and space requirements.

Filling

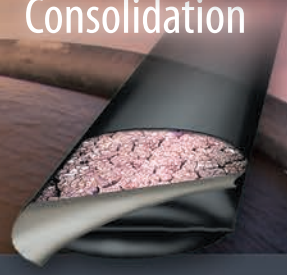
The sludge is conditioned with a flocculant or coagulant and it is subsequently pumped into the Geotube®

Dewatering



The liquid escapes from the tube, solid particles are trapped inside

Consolidation



The solids can be cost effectively handled as dry materials

Features

- Custom fabricated with a circumferential seaming method to withstand pressure
- Specially-engineered textile designed for dewatering
- Geoport™ Injection Port System - allows the container to be safely pumped to greater heights
- "Flat" End Technology - eliminates the unwanted depression associated with installing tubes end to end

Advantages

- Cost effective compared to traditional dewatering methods
- Huge hydraulic capacity – up to 10,000 gpm (38,000 l/m)
- Custom sized to specific applications
- High retention of contaminants
- No special equipment required

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Geotube® - the Low Cost, High Volume Dewatering Solution

Geotube® dewatering technology has become the dewatering method of choice for organizations around the world. Geotube® dewatering technology is used for projects large and small, and there's good reason - simplicity and low cost.

There are no belts or gears. Geotube® containers are available in a variety of sizes, depending on your volume and space requirements. Geotube® systems can even be mounted in mobile roll-off containers that can be transported around your property as necessary. It is one of the most versatile dewatering technologies available. And one of the most effective. Volume reduction can be as much as 90%, with high solid levels that make removal and disposal easy.

Chemical Conditioning

Chemical use is encouraged to enhance the dewatering process in most applications. Chemicals include Flocculants and Coagulants. The right chemical conditioning improves:

- The rate of dewatering
- Retention of suspended solids and contaminants
- Clarity of effluent
- Percentage of dry solids
- Overall utility of Geotube® unit

Sludge before (left) and after (right) treatment with Geotube®dewatering technology

Geotube® Fill Heights & Dewatering Volume

Metric System

Geotube® Circumference (meters)	Estimated Dewatering Volume (Cubic meters per linear meter)	
	Silt and Organics	Sand and Minerals
4.57	1.35	1.25
6.86	3.16	2.8
9.14	5.19	4.4
13.72	9.53	8
18.29	14.55	12.1
22.86	19.82	16.9
27.43	26.09	20.9
36.6	36.62	30.8

US System

Geotube® Circumference (feet)	Estimated Dewatering Volume (Cubic Yards per linear Foot)	
	Silt and Organics	Sand and Minerals
15	0.54	0.50
22.5	1.26	1.12
30	2.07	1.77
45	3.78	3.19
60	5.76	4.83
75	7.92	6.72
90	10.39	8.32
120	14.60	12.3

LAYFIELD

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Mining and Oilsands

Flexible Enough for Available Space

Mine tailings, coal sludge and other materials can be managed and handled cost-effectively with Geotube® dewatering technology. Geotube® is also a popular option for Oil Sands extraction and refining processes. Both of these generally require a large concentration of lagoons onsite that accumulate sludge. Due to the fact that Geotube® containers can be custom sized to your specific application, they can be placed in the available space between structures, and then removed once dewatering is complete.

Gold mine tailings from barren and pregnant ponds dewatering in Geotube® containers

Water and Wastewater Treatment

For Applications Large and Small

Geotube® dewatering technology has been used in water and wastewater treatment applications including lagoon, tank, and digester cleanouts. It can provide dewatering and containment in one operation, with 85% to 90% reduction of Biochemical Oxygen Demand (BOD) in the effluent.

Geotube® unit in municipal wastewater treatment drying beds

Environmental Remediation

Rivers, bays, harbors, marinas, ports and dock facilities have been collecting contaminated sediments from industrial runoff for many years. In many cases, these sediments pose significant environmental hazards, and remediation is a difficult and expensive task.

Dewatered sludge being removed from a Geotube® container with a backhoe

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Pulp and Paper

Multiple Uses

Geotube® dewatering technology is used for a variety of applications within pulp and paper mills, including:

- Primary and secondary lagoon cleanout
- Fly ash and alum sludge
- Contaminated sediments
- Continuous systems clarifier, sentrate, process waste stream
- Process rejects
- Separation dikes
- Emergency uses, such as cleanouts, spills, dumps, or exceeding discharge limits

Geotube® containers in activated sludge basin at paper plant

Food Processors and Agriculture

Food processors have benefited from Geotube® technology for water processing and effluent water lagoon clean outs. In Agriculture, Geotube® dewatering technology is an effective way for managing waste from Confined Animal Feeding Operations (CAFO's). Geotube® works for lagoon cleanouts and closures, and manages nutrients very effectively while producing irrigation quality effluent water.

In agriculture, Geotube® is ideal for swine, dairy, poultry, and many other uses

Design Support, Testing and Installation

Layfield provides chemical testing, design support, and installation services for Geotube® throughout the US and Canada. Our Geotube® Dewatering Test (GDT) uses an actual sample of the material you need dewatered. Some of the services that we provide include:

- Dewatering pad preparation
- Earthworks
- Liner placement
- Geotube set-up and pumping
- Solid sludge removal and disposal

Our skilled installation crews provide fast and efficient installation services

Visit our website today!

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