

Phosphorus Removal Using Geotube® and BioCord™ Technology

The Challenge

Globally, the supply of phosphorus has been diminishing. However research has shown that up to 35% of yearly global consumption can be recovered from wastewater. The technical challenge has been how to capture that source of phosphorus.

Geotube® Technology

Bishop Water Technologies has developed a system that efficiently dewateres and retains phosphorus and other nutrients by utilizing Geotube® containers and custom chemistry. Our lower cost, non mechanical, and simple to operate low tech system captures a vast majority (+84%) of the phosphorus, in biosolids, septage and manure waste. Geotube® units are also an effective storage system so nutrients can be applied when required.

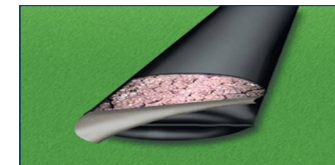
Waste Stream	Raw waste (mg/L TP)	Geotube Filtrate (mg/L TP)	% Capture
Biosolids	778	1.44	99.8%
Manure	119	18	84.8%
Septage	635	168	73%



Step 1: Filling



Step 2: Dewatering

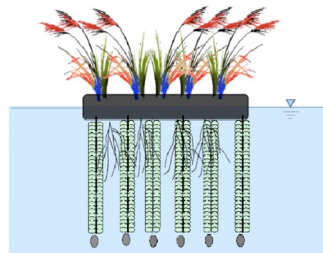


Step 3: Consolidation



BioCord™ Technology

A liquid waste stream can be treated with BioCord™ /Biofilm Technology to capture and remove nutrients. This system can be applied to Geotube Filtrate, wastewater treatment, rivers and streams. A collection system will capture the solids generated for reuse.



Liquid Stream	Raw waste (mg/L TP)	Post BioCord™ (mg/L TP)	% Reduction
Industrial Wastewater	9.5	1.3	86%
River Water	0.1	0.03	70%
Landfill Leachate	7	1	86%