

# The Use of Geotextile Tubes to Create an Emergent Wetland Forebay

Randy Pit  
Geo-Synthetics, LLC

## **What is a sediment forebay:**

A sediment forebay is a small pool located near the inlet of a storm basin or other stormwater management facility. These devices are designed as initial storage areas to trap and settle out sediment and heavy pollutants before they reach the main basin. Installing an earth berm, gabion wall, or other barrier near the inlet to cause stormwater to pool temporarily can form the pool area. Sediment forebays act as a pretreatment feature on a stormwater pond and can greatly reduce the overall pond maintenance requirements.

# Project Synopsys

- ▶ There is an upper pond and a lower pond
- ▶ The upper pond manages the nutrients for the lower pond.
- ▶ Upper pond was at capacity and sediment was migrating to the lower pond
- ▶ Dredge approximately 3,000CY from upper pond





© 2015 Google

Google earth

Imagery Date: 4/7/2013 41°18'00.03" N 72°13'46.98" W elev 42 ft eye alt 1785 ft

1991



# Proposed Plan

- ▶ The use of a 6" horizontal auger type cable driven dredge
- ▶ Sediment to be conditioned with polymer
- ▶ After conditioning the material would go into geotextile tubes for dewatering

# Planning Considerations

- ▶ Virtually no suitable staging area
- ▶ Wetland forebay creation
- ▶ Highly organic sediment with substantial colloidal silt
- ▶ Geotextile tube dewatering in the pond



Consideration #1:

Staging area



Google earth



Consideration #2

# Wetland Forebay Creation





Consideration # 3:

Highly organic soil with  
substantial colloidal sediment







Consideration # 4:

# Geotextile tube dewatering in the pond

# Planning Considerations

- ▶ Deploy Dino 6 dredge
- ▶ Set up pipe, polymer and headers
- ▶ Deploy and fill

Plan in Action

Deploy Dino 6 dredge



























## Plan in Action

Set up pipe, polymer, and headers









## Plan in Action

# Deploy and Fill Tubes

- ▶ (2) 60' x 50' geotextile tubes and (1) 30' x 30' geotextile tube









































The background features abstract, overlapping geometric shapes in various shades of green, ranging from light lime to dark forest green. These shapes are primarily located on the left and right sides of the frame, creating a modern, layered effect. The central area is a plain white background where the text is located.

# Finished Product









GELITE  
1-800-444-5523











The background features abstract, overlapping geometric shapes in various shades of green, primarily on the left and right sides, leaving a large white central area.

Questions?