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

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#### 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



### 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



Consideration #2

### Wetland Forebay Creation



Consideration #3:

# Highly organic soil with substantial colloidal sediment



Consideration #4:

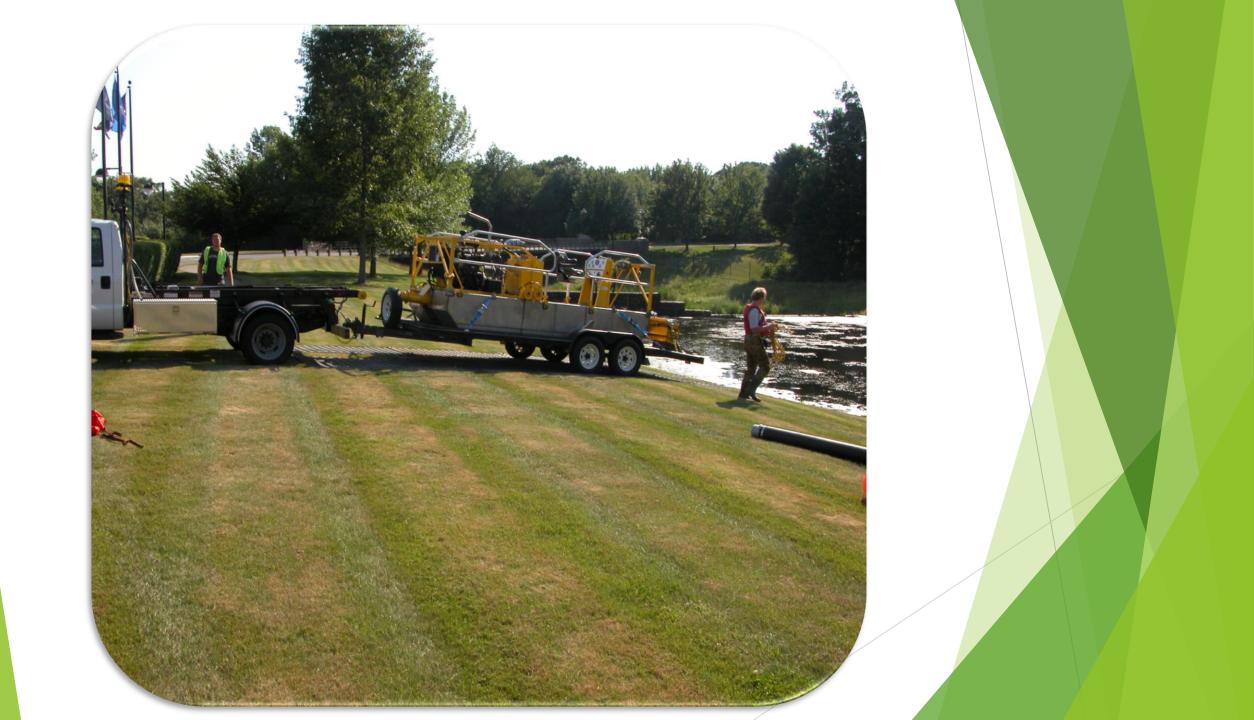
# Geotextile tube dewatering in the pond

### Planning Considerations

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

### Plan in Action

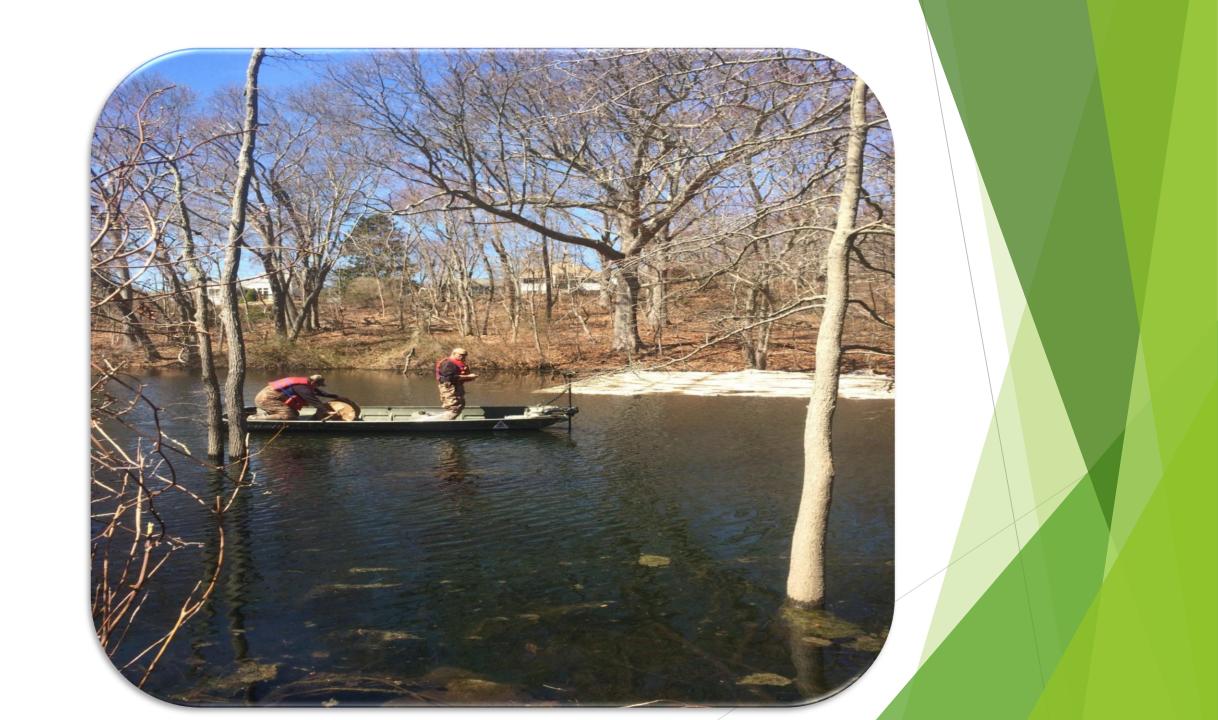
Deploy Dino 6 dredge













### Plan in Action

Set up pipe, polymer, and headers



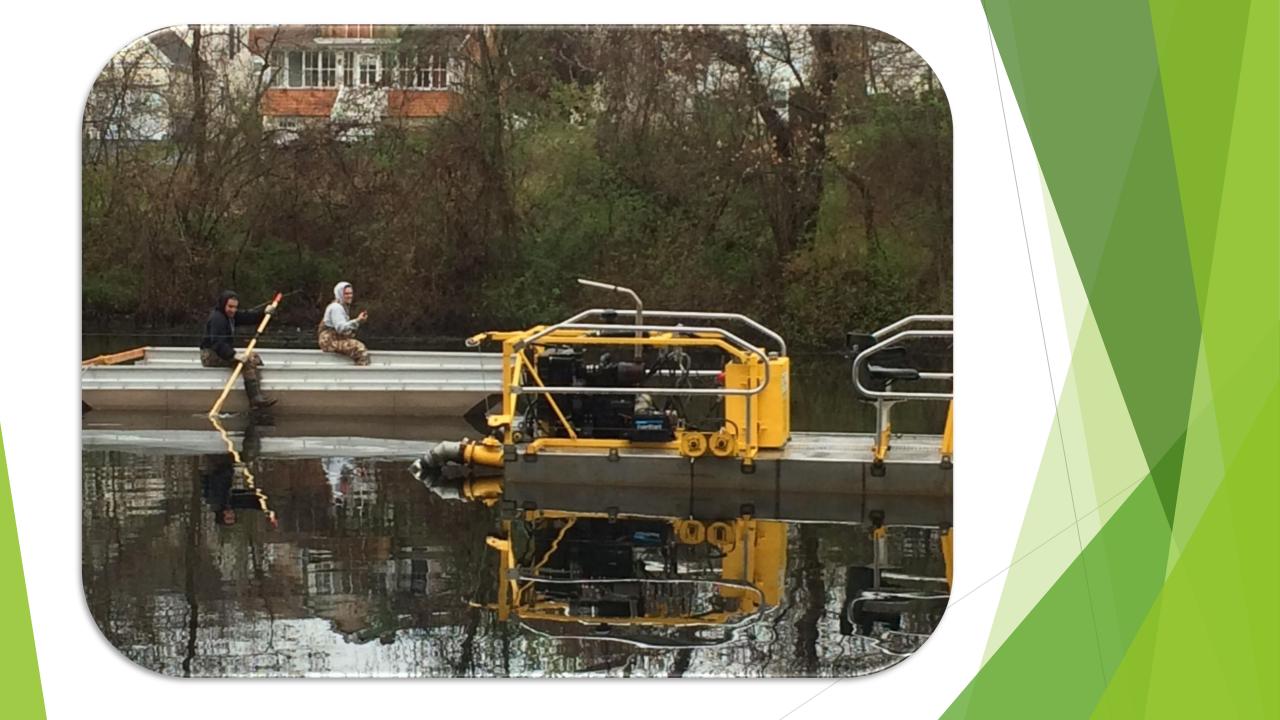


### Plan in Action

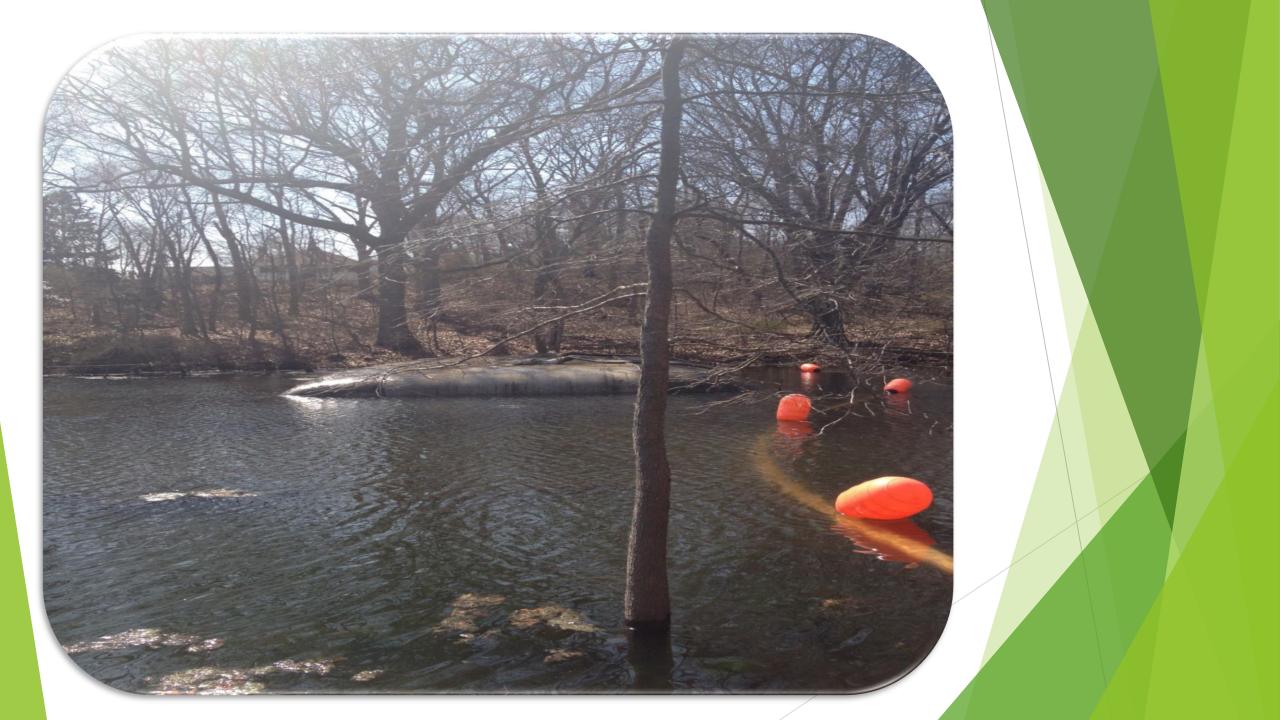
# Deploy and Fill Tubes

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





















## Finished Product









# Questions?