The Great Lakes Legacy Act
Project Information
for
Ashtabula River Cleanup
Ashtabula, Ohio

12/06/2005

PROJECT HISTORY

- **1985** Designated "**Area of Concern**" by International Joint Commission ("IJC")
- **1988** Ashtabula River Remedial Action Plan ("RAP") Advisory Council is formed;
- **1991** IJC approves Stage I report from the Ashtabula River RAP;
- **1993** Ashtabula River Investigation Study completed;
- **1994** USEPA & Congressional Representatives introduce the "**Partnership**" concept as alternative to CERCLA;

PROJECT HISTORY

- **1994 Ashtabula River Partnership is formed**…over 50 partners/stakeholders including USEPA, OEPA USFWS, USACE, Local Governments, Ashtabula City Port Authority and the Ashtabula River Cooperation Group II.

- **2001 Final Comprehensive Management Plan ("CMP")** is issued and documents the investigation and feasibility study including risk analyses, alternative evaluations, environmental impact statement, value engineering, community support and remedy selection.


ASHTABULA RIVER PARTNERSHIP

Part of the Solution
Ashtabula River & Harbor • Ashtabula, Ohio
Final
Comprehensive Management Plan
Volume 1 of 2 • Main Report
and Environmental Impact Statement
June 2001
Remedial Actions for Environmental Enhancement and General Navigation, Dredging & Disposal of Contaminated Sediments

STATEMENT OF COMMITMENT

- The Ashtabula City Port Authority (in cooperation with the Ashtabula River Cooperation Group II) is prepared to **fund** the 50% local share and accept **complete responsibility** for the long-term operation, maintenance and monitoring of the disposal facility.
- Investigations, feasibility and pre-design studies are **complete**. Project alternatives have been **evaluated and compared**. The remedy has been selected by **consensus for entire Area of Concern and approved by regulators**.
- **The implementation of the comprehensive cleanup plan presented today underway.**

II. PROJECT BACKGROUND

PROJECT AREA

The Ashtabula River **Project Area** has been delineated into 2 segments:

- **Upstream (or south) of the 5th Street Bridge**: The portion of the Ashtabula River Project Area extending from the 5th Street Bridge southward past the Upper Turning Basin;

- **Downstream (or north) of the 5th Street Bridge**: The portion of the Ashtabula River Project Area extending northward approximately 1,000 feet from the 5th Street Bridge.

PROJECT AREA
- GLLA Segment -

PROJECT AREA
- USACE/WRDA Segment -

- General Considerations -

Elimination of major sources of chemical contamination – Fields Brook, shipbuilding, municipal discharges, etc.

Sediment removal using environmental dredging techniques

Dewatering/disposal of contaminated sediments

- Project Components -

- Environmental Dredging;
- Transportation;
- Dewatering;
- Upland disposal facility;
- Monitoring during operations; and
- Operation and Maintenance of an upland disposal facility.

- Guidelines for Dredging Scenarios -

- Cross sections every 100 ft;
- Interpolation of PCB data;
- Isoconcentration lines plotted;
- Cross sections evaluated; and
- Dredging scenarios (cutlines) developed using:
  - USACE Waterways Experiment Station's 3 dimensional model…

- Primary Alternatives Considered -

1. No Action
2. In-River Engineered Cap
3. Dredging Technology, Natural Re-Sedimentation and Upland Disposal facility
   - 3-A Shallow Dredging Scenario
   - 3-B Deep Dredging Scenario
   - 3-C Bank to Bank to Bedrock Dredging Scenario

Remedy selection process was conducted in accordance with NEPA standards.

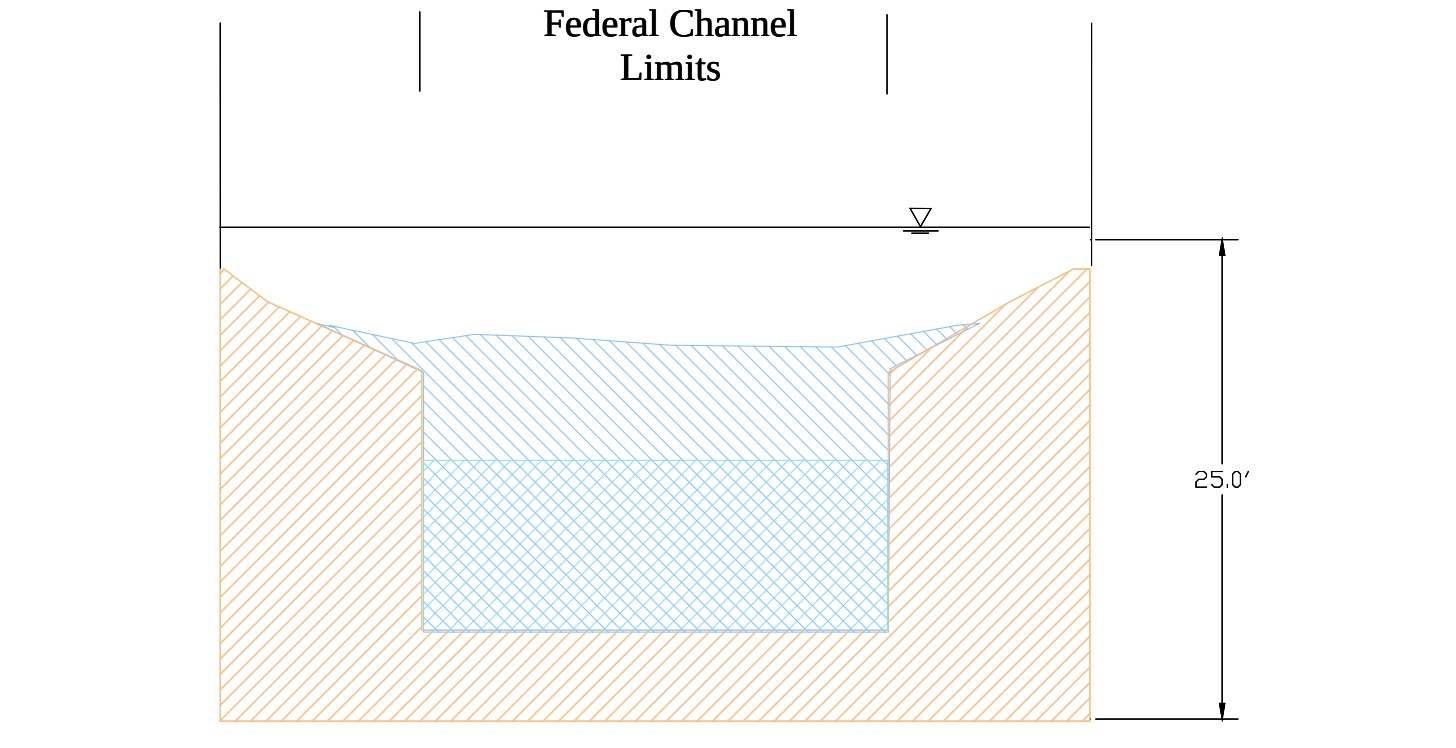
- Alternate Assessment Considerations -

- Short- and long- term effects on human health and environment;
- Quantities of sediment dredged;
- PCB mass removed;
- Risk reduction;
- Bulkhead stability;
- Implementability;
- Scour and deposition potential;
- Beneficial uses;
- Costs; and
- Disposal facility siting.

ALTERNATIVES EVALUATION
- Deep Dredge Scenario -

- 581,000 cubic yards removed;
- 82% of PCB mass removed;
- No 50 ppm + PCBs left behind;
- 7,500 linear feet of bulkheads potentially impacted; and

ALTERNATIVES EVALUATION
- Natural Re-Sedimentation -



Future Dredging

VALUE ENGINEERING CONSIDERATIONS

As part of the NEPA Process, public comment and Value Engineering evaluations were performed.

- Hydraulic dredging in addition to mechanical dredging;
- Pumping the sediments to the landfill instead of transporting via truck;
- Dewatering sediment at the landfill instead of at the River; and
- Constructing *one* TSCA permitted landfill instead of two (TSCA and Non-TSCA).

VALUE ENGINEERING CHANGES

CMP 2001

1. <u>Contaminated Sediment Removal</u>
   - Deep Dredging Scenario;
   - Mechanical technique; and
   - Natural Re-Sedimentation.

2. <u>Transfer/Dewatering</u>
   - Barge transfer of dredged spoils to dewatering site;
   - River shoreline transfer/dewatering facility;
   - Passive sediment dewatering;
   - Multi-media carbon filtration treatment; and
   - Truck transport of dewatered sediment to disposal facility.

3. <u>Disposal</u>
   - Upland TSCA and non-TSCA landfills.

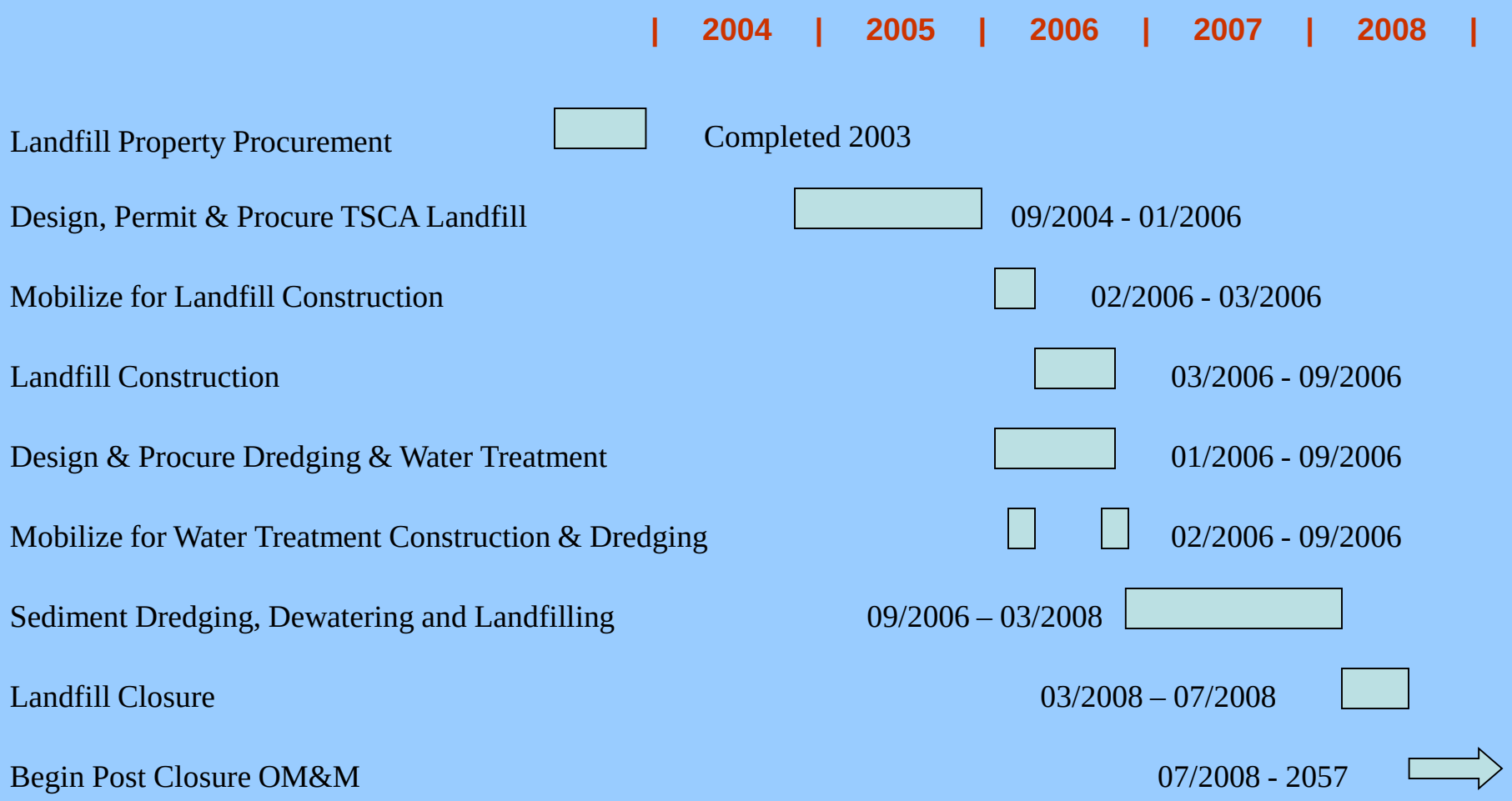
GLLA 2004

1. <u>Contaminated Sediment Removal</u>
   - Deep Dredging Scenario;
   - Mechanical/**Hydraulic** techniques; and
   - Natural Re-Sedimentation.

2. <u>Transfer/Dewatering</u>
   - Barge and direct transfer of spoils;
   - River shoreline transfer facility **(booster pump)**;
   - **Upland landfill** dewatering facility;
   - "**Innovative**" dewatering technique;
   - Multi-media carbon filtration treatment; and
   - **Pumping** of sediment to disposal facility.

3. <u>Disposal</u>
   - **Single Upland** TSCA landfill.

PROJECT ELEMENTS & SCHEDULE

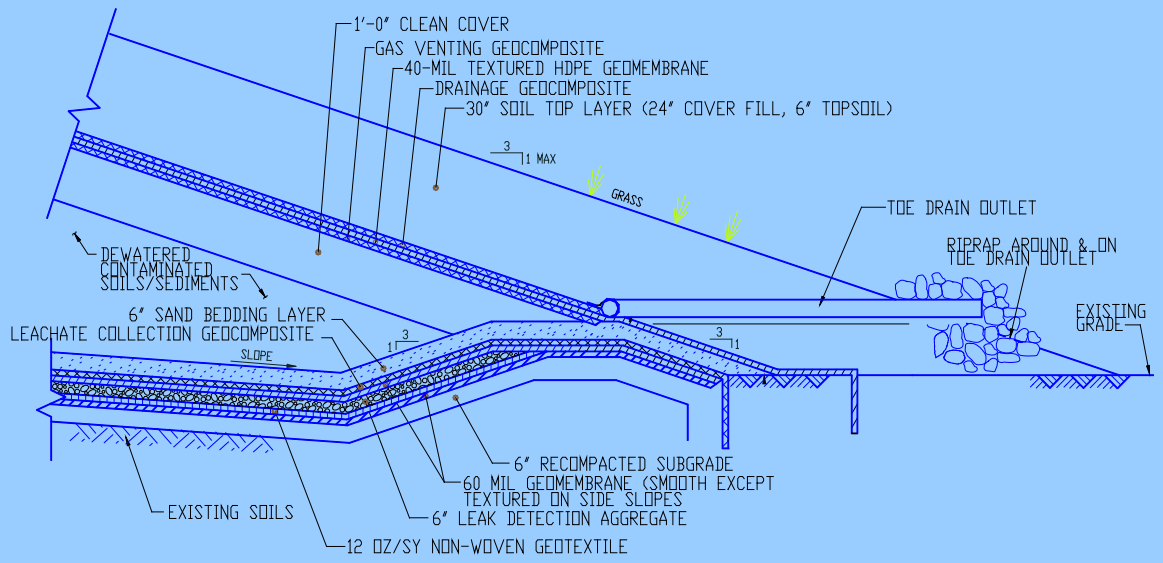


PROJECT IMPLEMENTATION AND CONSTRUCTION SEQUENCE

Construction activities stretching across 4 construction seasons

YEAR 1

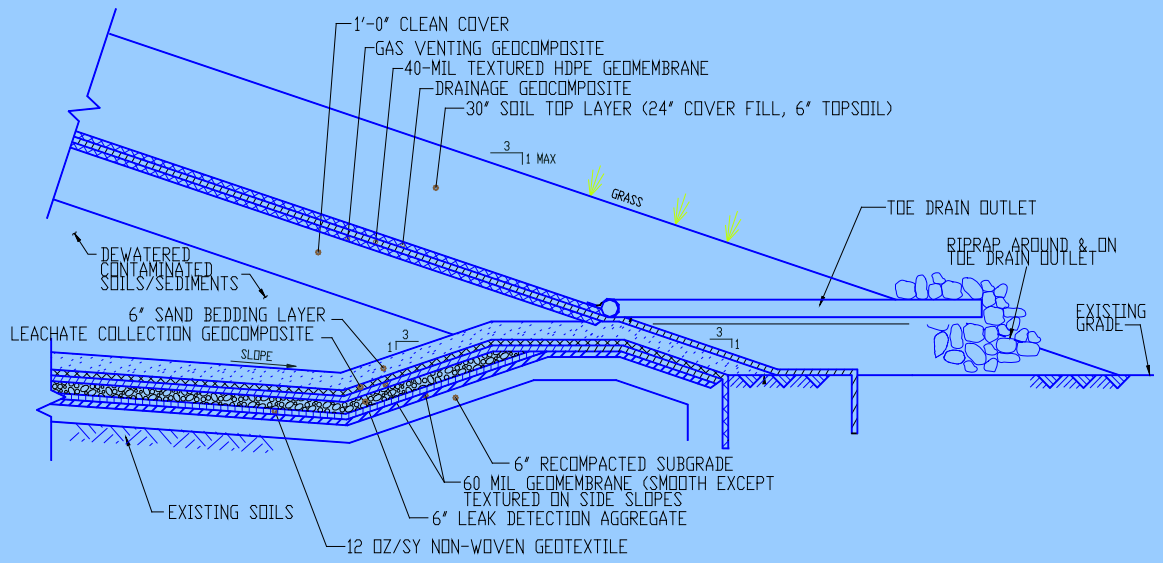
- Finalize landfill Design;



- TSCA Permitted / RCRA Equivalent
- Leachate Collection
- Leak Detection
- 13.5 Acre Footprint
- Multi-Layered Cap

PROJECT IMPLEMENTATION AND CONSTRUCTION SEQUENCE

Construction activities stretching across 4 construction seasons



YEAR 1

- Finalize landfill Design;
- TSCA Permit Approval;
- Mobilize;
- Begin Landfill Construction; and
- Begin Transfer Station/Piping Design;

- TSCA Permitted / RCRA Equivalent
- Leachate Collection
- Leak Detection
- 13.5 Acre Footprint
- Multi-Layered Cap

PROJECT IMPLEMENTATION AND CONSTRUCTION SEQUENCE

Construction activities stretching across 4 construction seasons

YEAR 2

- Complete Landfill Construction;

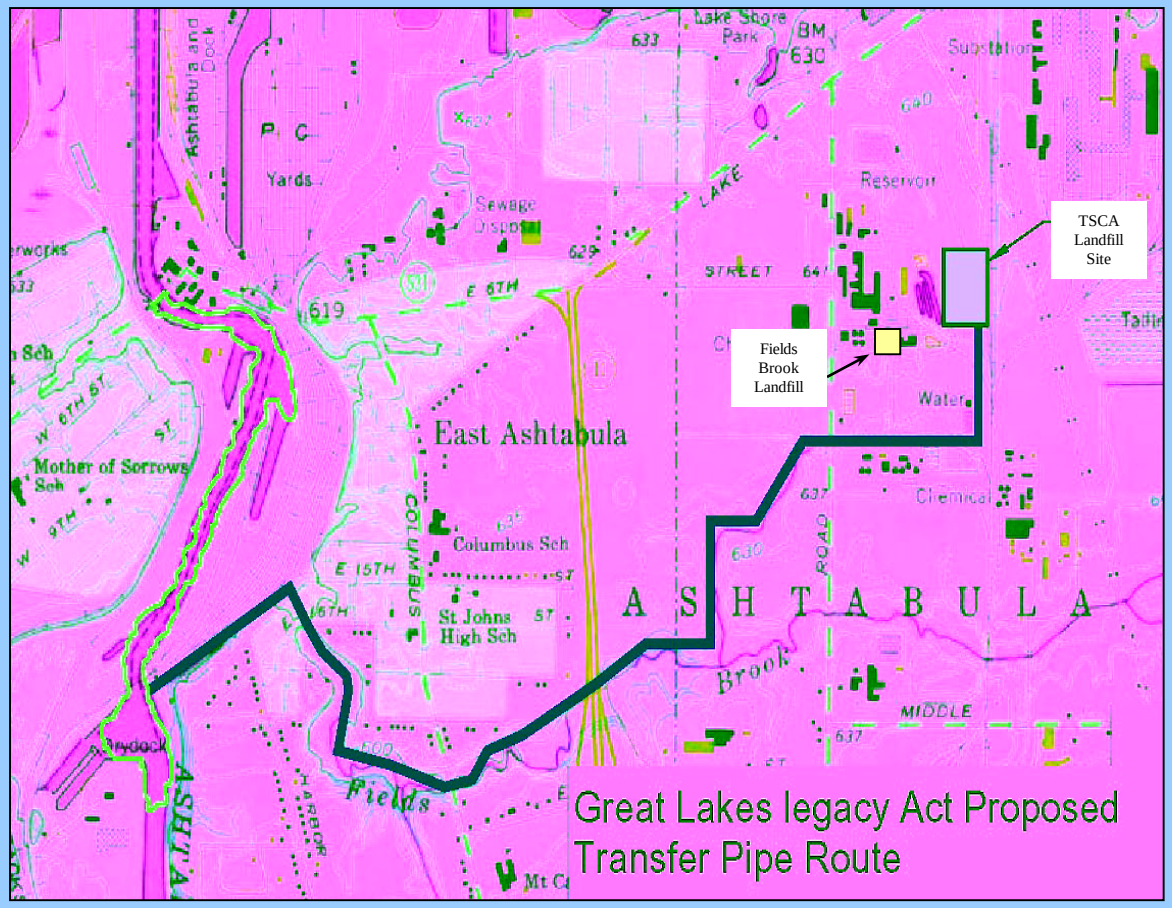
PROJECT IMPLEMENTATION AND CONSTRUCTION SEQUENCE

Construction activities stretching across 4 construction seasons

YEAR 2

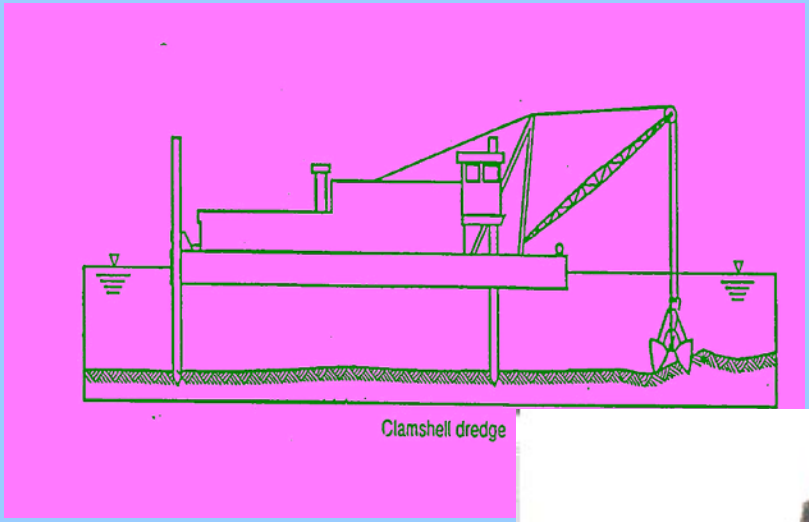
- Complete Landfill Construction;
- Finalize Transfer Station/Piping Design;

Note: Environmental Site Assessment for Pipeline completed – **Finding of No Significant Impact**



PROJECT IMPLEMENTATION AND CONSTRUCTION SEQUENCE

Construction activities stretching across 4 construction seasons



YEAR 2

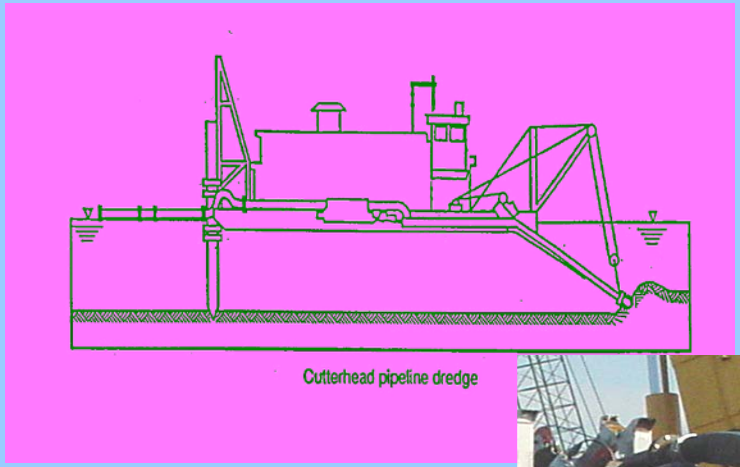
- Complete Landfill Construction;
- Finalize Transfer Station/Piping Design;
- Mobilize Dredging/Dewatering Equipment;

PROJECT IMPLEMENTATION AND CONSTRUCTION SEQUENCE

Construction activities stretching across 4 construction seasons

YEAR 2

- Complete Landfill Construction;
- Finalize Transfer Station/Piping Design;
- Mobilize Dredging/Dewatering Equipment;

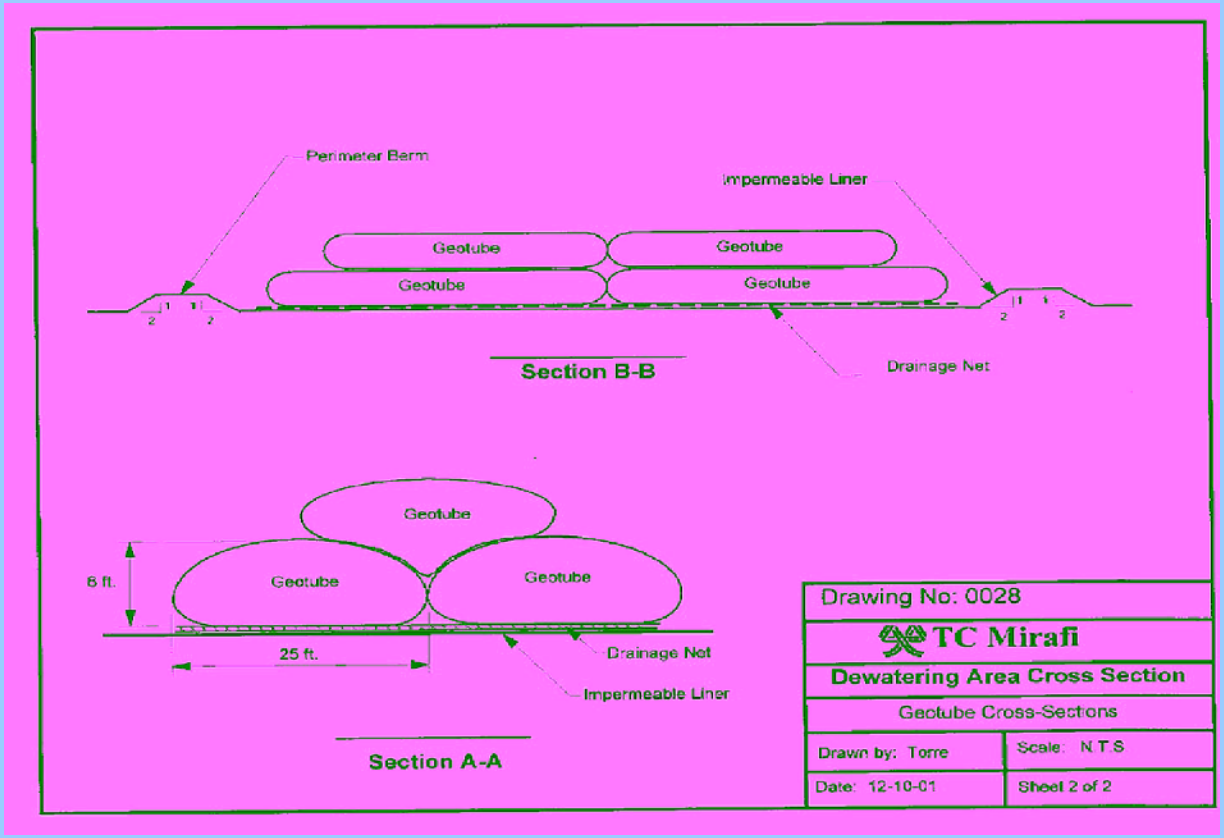


PROJECT IMPLEMENTATION AND CONSTRUCTION SEQUENCE

Construction activities stretching across 4 construction seasons

YEAR 2

- Finalize Transfer Station/Piping Design;
- Complete Landfill Construction;
- Mobilize Dredging/Dewatering Equipment;
- Begin Dredging;
- Begin Water Treatment; and
- Begin Placement of Sediments into Landfill.



PROJECT IMPLEMENTATION AND CONSTRUCTION SEQUENCE

Construction activities stretching across 4 construction seasons

YEAR 3

- Continue Dredging;
- Continue Water Treatment; and
- Continue Placement of Sediments into Landfill.

PROJECT IMPLEMENTATION AND CONSTRUCTION SEQUENCE

Construction activities stretching across 4 construction seasons

YEAR 4

- Complete Dredging;
- Complete Water Treatment;
- Complete Placement of Sediments into Landfill;
- Begin and Complete Landfill Closure; and
- Begin Long term OM&M.