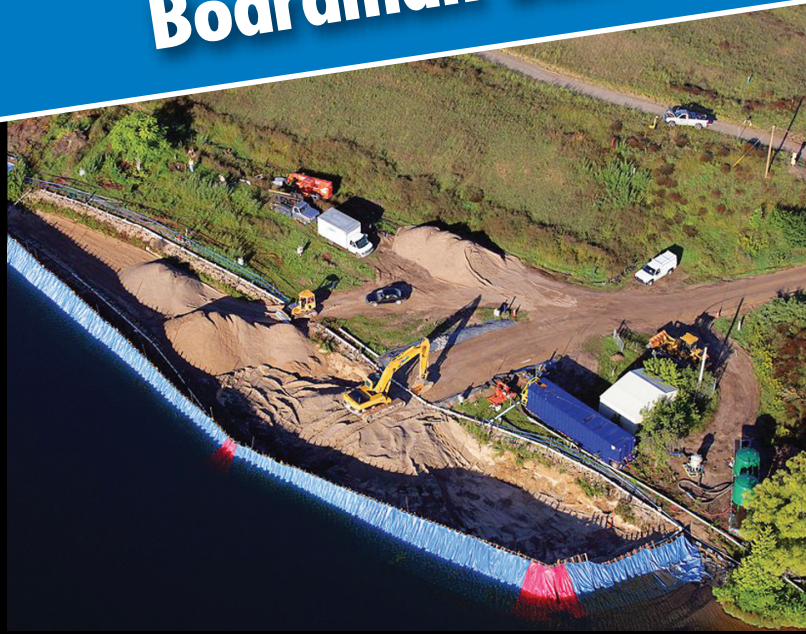


Cleaning up Boardman Lake



PROJECT: Soil Remediation and Abatement
CHALLENGE: Contamination
SOLUTION: Temporary dam and dewatering system

OWNER: Cone Drive Textron
CONTRACT PRICE: \$342,775
DESIGN ENGINEER: Global Remediation Technologies
CONTACT: Adam Segerlind (231) 941-8622
DATE COMPLETED: 6/30/2009
SELF PERFORMED: 95%
PARTNERS: Department of Environmental Quality (DEQ)

There are environmental cleanups... and then there are environmental cleanups.

To address historic impacts to sediments that resulted from the migration of groundwater contamination to Boardman Lake in the late 1970s, a large remediation effort was performed.

After environmental engineers Global Remediation Technologies (GRT) developed the necessary project scope and complete design documents, GRT, in turn, selected Team Elmer's to get the job done.

The ambitious project began with the construction and installation of a temporary dam to remove lake water from the contaminated site. And this wasn't just a wading pool... the dam went 45 feet into the lake and covered 350 feet of shoreline!

Once the dam was in place, water was pumped from inside the dam, discharged into the lake, and 260 dewatering points were installed up to 16 feet deep. The contaminated water was then pumped through a two-stage carbon system to remove contaminants. The crews obtained a permit to allow them to discharge clean filtered water into Boardman Lake.

Next, inspectors from the various parties, including DEQ, worked together to determine which soils should be removed. The water table was lowered to 9 feet below the lake bottom to remove all the impacted soils. All told, Team Elmer's excavated and removed 2,210 tons of contaminated soil from the bottom of the lake.

Clean soil was then placed in the lake and compacted/ back-filled, the water was replaced, and the dam was dismantled by divers with the support of Team Elmer's crews on shore.

The project was a source of pride for Team Elmer's staff, a job well done for GRT, and a sustainable victory for Boardman Lake and the community!

"We selected Team Elmer's because they approached this project in a way that other contractors hadn't considered," said Adam Segerlind, PE of Global Remediation Technologies. "Their innovative strategy of implementing a temporary dam and dewatering system was cost-effective and their local ties meant they were more suited to overcome the inevitable hiccups that happen along the way. My expectations were met and exceeded!"

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Soil Remediation and Abatement

Team Elmer's is poised to excavate and remove soils that may have a detrimental impact on the environment, drinking wells, and waterways via rivers, lakes and streams.

Team Elmer's can remove impacted soils from:

- Underground storage tanks releases
- Surface spills, including fuel tanks, heating oil tanks, vehicle accidents, historic industrial storage locations, factories, and foundries

Working in conjunction with engineers and government agencies as needed, the soils are first tested to define the area of excavation. Once the area of impact is delineated, the soils are analyzed for treatment and/or disposal up to a Type II landfill classification. They are then

excavated and transported for proper disposal.

In certain situations, soils might be removed with the assistance of sheet piling and dewatering with carbon filter treatment for treatment of the impacted waters.

All Team Elmer's personnel are HAZMAT trained for proper safety procedures in handling the material. Staff are also:

- H2S gas trained
- Confined space trained
- Operator safety trained
- HAZWOPER safety trained
- First aid/CPR trained

