Hyrdocarbon Removal Projects

Geo-dredging and Dewatering Solutions Inc. has now been involved with two separate contaminated site clean-ups involving train derailments, and the release of crude oil into the environment. In the summer of 2014, contaminated sediment was removed from a Quebec river. Again, in the summer of 2015, Geodredging was tasked with removing contaminated sediment from the bottom of a river in northern Ontario. Sediment contaminated with hydrocarbons was removed using Geotube® dewatering technology -- an efficient solution that combines onsite containment and dewatering of the sediment in a single process. Geotube dewatering can remove more than 99.5% of the sediment from the water, dramatically reducing the volume of material and the cost to haul and dispose of it. In this case, material was pumped from the river at 1% solids, but attained 65% solids over a very short period of Geotube dewatering.

The Geotube Solution...

The northern Ontario project lasted six weeks and was an emergency response project operating 7 days a week. The Quebec project lasted four weeks and used services from Geo-Dredging Solutions to pump over 2000 cubic metres of sediment from the river into four onsite Geotube® containers. In both projects, the sediment was first treated with polymer to form clumps of the fine sediment before being pumped into the Geotube®. This process ensures that fine grain materials remain in the Geotube® and improve the quality of the filtrate that is released through the pores of the fabric.

Geotube dewatering provided excellent pretreatment of the water, reducing TSS from 10 000 mg/L to less than 7 mg/L. The filtrate was then passed through a carbon treatment system that reduced hydrocarbons to less than 100 µg/L. Material from the Geotubes will be hauled away and disposed at a landfill for hazardous materials.

This approach dramatically reduced the time and cost of the cleanup - enabling the project teams to perform all remediation steps onsite and immediately discharge high quality filtrate back into the river following treatment.