

## Application Story

**PROJECT** | ALCAN, QUEBEC  
**Product** | Geotube® Marine Structures Technology  
**Application** | Diversion Dikes

**Location** | Alcan, Quebec  
**Installation** | 2008

### The Challenge:

Alcan, Inc., a leading aluminum producer, owns and operates several hydropower facilities in Quebec. The company plays an active role in water resources management and shoreline erosion prevention. A recent effort involved the need to stabilize the banks of Lac Saint-Jean near Metabetchouan-Lac-a-la-Croix in South Central Quebec.

### The Solution:

Geotube® marine containment technology proved a great match for this stabilization project. A series of three diversion dikes would be placed in Lac Saint-Jean to help protect the lake's bank.

The installation occurred during the winter while the lake was frozen solid. The ice was excavated allowing the contractor to install the Geotube® units in the dry [photo 1]. Workers went 300 meters offshore to drill through the ice to reach the water below the frozen lake surface [photo 2]. The water was pumped back to shore where it was used to create the sand slurry mix for filling the Geotube® containers [photo4].

First, a protective Geotube® scour apron was deployed at each work site. Then anchor tubes were placed along both sides of the apron [photo 3]. The project utilized six Geotube® units measuring 5.18 meters circumference and 33 meters long. The installation was completed in less than two weeks. Following the winter thaw, the

Geotube® structures were submerged in Lac Saint-Jean.

### The Results:

The completed series of three Geotube® jetties stretches 200 feet into the lake [photo 4]. These structures have successfully eliminated erosion along the lake's shore.



### Contact Information:

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