



Toronto Deep Lake Water Cooling Project

Location: Toronto, Ontario, Canada

Client: Enwave Energy Corporation

Gryphon Contact: Peter Veldhuizen

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- Associate Firm** Paulo Bronco, Thurber Engineering, Ian Larsen, Zentech Belgium, Corpro Companies Incorporated, Makai Ocean Engineering, Inc.
- Project Summary** The Enwave Deep Lake Water Cooling Project draws approximately 70,000 usgpm of 39°F water from Lake Ontario as a renewable cooling source for many downtown Toronto buildings. Three 63-inch diameter HDPE pipes extend 18,000 ft into the lake to a depth of 280 feet. After cooling the circulating chilled water of Enwave's district cooling system, the lake water is then routed to the city's potable water distribution system. The cold water from deep in the lake eliminated the taste and odor problems of Toronto's summer drinking water.
- Project Services** Gryphon provided the following services:
- Provided the detailed design for the energy transfer loop buried chilled water transmission pipeline, lake water intakes and underground Toronto Island intake pipeline valve chamber.
 - Prepared the bid documents for the HDPE pipe and transmission pipe.
 - Prepared the construction bid documents for the installation of the intake pipelines, chilled water transmission pipelines, and Island intake pipeline valve chamber.
 - Hired and managed subconsultant with world-wide experience to design the HDPE intake pipelines and to assist with the deployment of the pipelines.
 - Hired and managed subconsultant for the corrosion protection of the intake pipeline hardware.



Gryphon International Engineering Services Inc.

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