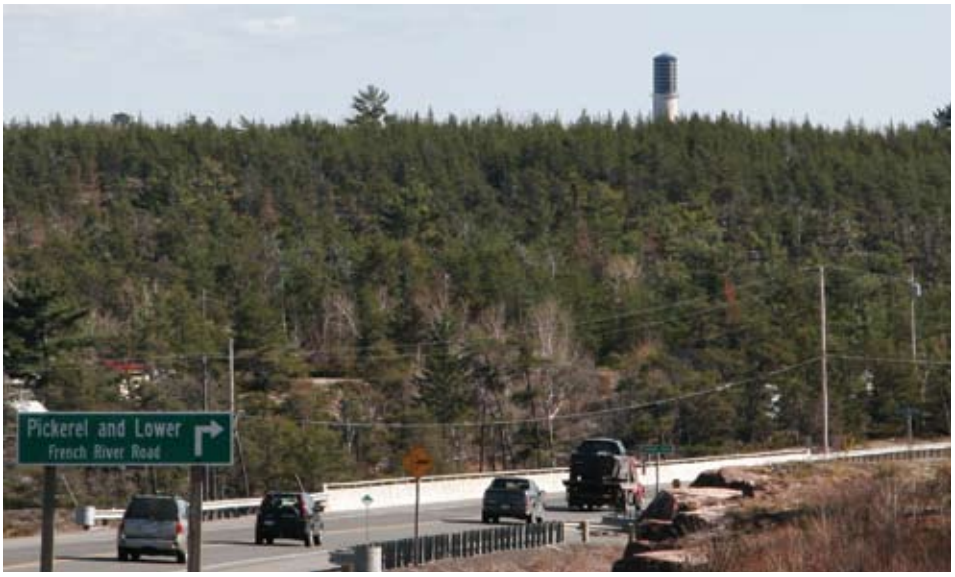
AQUASTORE Tanks & Domes

Glass Tanks with a Heart of Steel

Confidence in Containment

CANADA'S FIRST COMPOSITE ELEVATED AQUASTORE RISES ABOVE HENVEY INLET FIRST NATION



HENVEY INLET FIRST NATION, Ontario – Motorists on Highway 69, the major roadway passing between Sudbury and Parry Sound not far from the shores of Georgian Bay, can now see Canada's first composite elevated Aquastore atop a wooded hill, adorned with the logo of the Henvey Inlet First Nation.

The 25-foot (7.62m) diameter, 38-foot (11.58m) high Aquastore containment tank atop a 96-foot (29.26m) high reinforced concrete pedestal holds 136,000 U.S. gallons (515m3) of water for use by the Henvey Inlet Community. A high-tech structure, its pedestal houses two rooms of offices, control panels, pumps, alarms, and other sophisticated mechanicals within its base.

The Aquastore was insulated with three inches of mineral wool insulation and wrapped in blue cladding to prevent freezing due to the cold climate location of Henvey Inlet, where minimum daily temperatures for January are approximately 7ºF (-14ºC). Although water pumped from the ground is warmer than the crisp air of Ontario's winters, the very cold water temperatures and relatively low water use -- versus the large volume of water in the tank for fire flows -- could have resulted in significant ice build up in the water storage facility.

Greatario Engineered Storage Systems, Innerkip, Ontario, was general contractor on the first-of-its-kind installation.

Greatario's Jeff Rodger, Director of Sales, says this may well be the world's first composite elevated, bolted Aquastore tank that is insulated and cladded.

"We are very proud to have been the general contractor on the project," Rodger says. "The Henvey Inlet First Nation was great to work with. They now have a very low maintenance Aquastore water containment system they can have confidence in, no matter what the weather is."

Engineering Firm Recommended Aquastore™

The project's birth is credited to Ross Slaughter, P.Eng., of Henderson Paddon & Associates Limited of Owen Sound, whose agricultural and engineering background first led him to appreciate the strength, durability, ease of maintenance and lifetime value of glass-fused-to-steel.

"I worked six summers on my step grandfather's farm north of Toronto," says Slaughter, who has a B.Sc. (Eng) degree in Agricultural Engineering from the University of Guelph. "I saw Harvestores built in the 1970s that don't have any noticeable rust even today. So I've known about glass-fused-to-steel for some time. I also saw that Greatario had put up numerous Aquastore structures without a problem, so I have always had great confidence in Greatario as a company."

Henderson Paddon & Associates also had

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experience with Greatario, erecting Owen Sounds' 580,000 U.S. gallon (2,200m3) glass-fused-to-steel Aquastore with an aluminum geodesic dome for sewage sludge containment. It has been low maintenance since it was built in 1995, Slaughter notes.

In 2003, the firm was asked by the Ontario Clean Water Agency in Toronto to do engineering studies and reports on water systems at three First Nation locations, including Henvey Inlet.

As a result of a water feasibility study done for Henvey Inlet, Slaughter and crew recommended the elevated, composite glass-fused-to-steel Aquastore structure that now stands in place.

Low Maintenance, No Painting

"We told the First Nation that the low maintenance of the installation would more than offset the slightly higher cost of building it," says Slaughter.

"The biggest point is you don't have to paint it every 15 years like you do welded steel tanks," Slaughter adds.

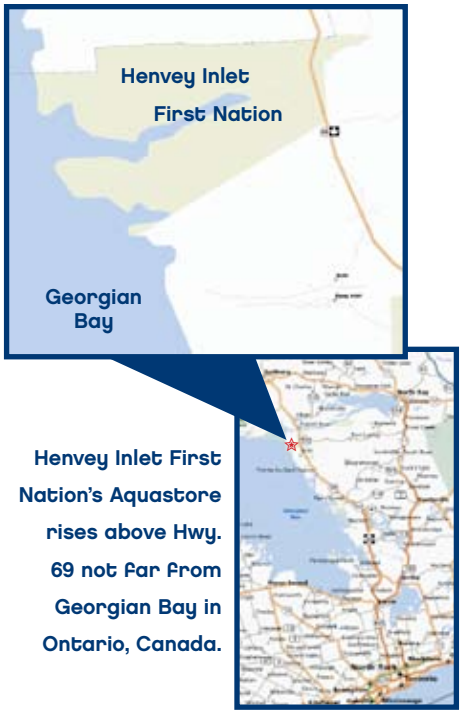
Repainting a steel structure can cost $120,000 to $150,000, Slaughter says. Rodger knows of one bid of $1.3 million to repaint and renovate an elevated welded tank.

The community must pay for providing other temporary water storage, sand blasting the steel to a shiny finish, painting it inside and out, and other miscellaneous costs, Slaughter adds. There is also the risk of a fire during that time to consider, he says.

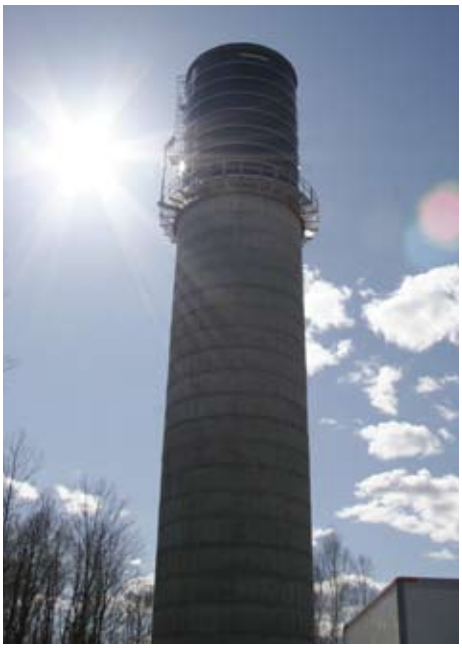
Capacity Enough to Fight Fires

Lionel Fox, Band Councillor for Henvey Inlet First Nation, has been part of the project for the First Nation from its inception. He says there was no question that the quality of glass-fused-to-steel impressed him.

"We looked at cement and steel, too, but once we saw a sample of glass-fused-to-steel we said 'We like this'," says Fox. "Not having to paint every 10 to 15 years is what we wanted. The cost savings are big."



Henvey Inlet First Nation's Aquastore rises above Hwy. 69 not far from Georgian Bay in Ontario, Canada.



Fox, who runs the Henvey Inlet First Nation's fire department and emergency ambulance service, said about 30 homes are served by the new Aquastore – the 136,000 gallon (515m3) capacity is fed by two connected wells and delivers a minimum of 40 psi pressure, enough to supply pressure for fire hoses attached to any of the 23 hydrants in the community. The tower on the hill sits near the First Nation's helipad for air ambulatory service. The capacity, greater than what is needed by the community, was determined with fire fighting in mind.

This Spring, the First Nation plans on surrounding the tank with spotlights to illuminate the logo on its side.

"We want to be able to see it great at night," Fox adds. "And we want others to see it, too. We're proud of it."