

## Odour Under Cover

# ALUMINUM FLAT PANEL COVERS

Greatario installation of flat cover panels for various wastewater plants across Ontario have proven to be great for heat retention and odour.



### **Municipality of Thames Centre - Dorchester and Thorndale Install Aluminum Flat Covers to Prevent Freezing**

Thames Centre is a modern thriving municipality situated on the eastern boundary of the city of London, Ontario. Its proximity to highways 401, 402 and 403, explains their growing communities of Dorchester and Thorndale.

The Municipality of Thames Centre owns and operates two municipal wastewater systems in the villages of Dorchester and Thorndale. The Dorchester WWTP, built in 2001, services approximately 400 homes and is currently operating at 91% capacity. Plant expansions are necessary to accommodate the future growth in the village.

The new Thorndale wastewater system (built 2013) was designed to accommodate a Phase 1 rated Capacity of 674 m<sup>3</sup>/day and a Peak Flow Rate of 2,436 m<sup>3</sup>/day. Included is an aerated sludge holding tank providing 480 m<sup>3</sup> storage capacity, approximately 9.9m wide x 10.5 m long x 5.5m SWD.



**Thorndale WWTP Flat Covers.**

The sludge storage tanks at each WWTP required some type of insulation to keep the tanks from freezing through the cold winter months. Jarrod Craven, superintendent of Environmental Services for Thames Centre, analyzed alternatives for insulating the tanks. Because the sides of the concrete tanks were exposed, there was a possibility to add fill to the sides to help insulate the tanks. Alternatively, adding a cover to the top of the tank would prevent heat from escaping and prevent the tank from freezing. Considering costs, safety, environmental issues and efficiencies, the municipality in conjunction with Stantec Consulting, London determined that the installation of extruded aluminum flat covers was the better alternative. The flat covers would allow for more consistent temperatures by keeping the heat enclosed in the tanks. Although odours have not been an issue at either WWTP, the flat covers would also prevent any potential odour issues from arising.

Stantec Consulting was hired by the municipality to manage the project from design to completion. Stonetown Construction was awarded the project which included the extruded flat covers offered by Greatario Engineered Storage Systems. The project included flat covers for the existing WWTP in Dorchester as well as the new WWTP in Thorndale. Both covers were for aeration sludge holding tanks: Dorchester - 687.8 sq. ft and Thorndale - 322.8 sq. ft.

Excellent project planning by the general contractor, Stonetown and Greatario ensured the project was completed within the allotted time frame. "Although there were specific penetrations and cutouts required, the great design of the product made it easy for us to customize the covers, install and complete the project within the time schedule" comments Scott Burn, Greatario president.

**"Aluminum covers are environmentally favourable, structurally robust and operator friendly, and they require little or no maintenance. The innovative clear span aluminum flat cover roof systems can help wastewater and other facilities control odors, reduce freezing and provide a safe working environment for operators," comments Burn.**



**2003 - Flat Covers installed for Caledonia, Haldimand County.**

**Flat aluminum covers offer many benefits:**

1. Provide insulation within the sludge tank by keeping the temperatures contained.
2. Covers can be designed to fit any application. They can be manufactured in a wide variety of shapes and sizes without compromising fit and appearance.
3. The flat design reduces the foul air volume being processed, versus a dome design, in which the encapsulated air volume is much greater.
4. The aluminum flat cover design is durable and corrosion resistant, maximizing product life cycle.
5. The covers are weight bearing allowing facility operators walkable access to various locations on the tank, without the need for an access bridge. Also, the covers feature a non-skid surface for safe, resistant access. The addition of hatch covers ensures that the facility operators will have easy access for routine inspections.
6. Offer better aesthetics and overall appearance.
7. The flat covers are light weight and can be installed within a short time schedule.



**2000 - Flat Covers installed at the London WWTP**

The flat covers have served their purpose for both Dorchester and Thorndale. Craven has worked with Greatario on a number of projects throughout Thames Centre, including the design build of 2 - 64' x 28' Aquastore wastewater tanks in 2003. He appreciates the quality of their products and their skilled workmanship.

Greatario has design - built flat covers for other municipalities including London, Caledonia, and Port Hood, NS. They are currently working on the design build of flat covers at Delhi's WWTP.

For further information on Greatario Flat Covers, see: [www.greatario.com](http://www.greatario.com)

