



## Case Study



# FACILITY UPGRADE Ontario, Canada

Simcoe is the largest town in the Norfolk County, located in the Southwestern part of Ontario, Canada. Having determined that upgrades to the existing facility were required, one of Canada's leading design engineering firms in the wastewater treatment field, RV Anderson & Associates Ltd, was contracted to perform the design of this maximum flow, 13 million gallons per day (51,000 m<sup>3</sup>/d), plant.

In 2008, H2O Ontario was selected as the contractor for the project. The upgrades included the complete refurbishment of the preliminary treatment section of the plant. The design entailed the supply and installation of a new mechanical screen with bar spacing of 0.5 inch (13mm) that had to meet difficult and unique challenges at this application.

Headworks Inc., represented in Ontario by Vector Process Equipment, was one of two specified screen manufacturers and was ultimately selected for this project. The selection of Headworks was made based on a competitive offer and excellent references from other wastewater treatment plants in Ontario, such as the Greenway facility in the City of London where Headworks screens have been successfully operating since 2007.

Several significant factors made the Simcoe project unusual. First, the plant experienced high levels of fat and grease which were adversely affecting the biological processes. Additionally, the space available for the mechanical screen was extremely limited given the fact that this was originally not an open channel but a 3-foot (900 mm) diameter pipe located 25 feet (7.40m) below the operating floor. In order to accommodate the screen, it was necessary for the contractor to install a special steel box connected to the existing pipe, to which the bottom of the screen would then be attached.

The second factor was the limited space available in, around and above the new screen room. These constrictions made it necessary for the one-piece 31-foot (9.50m) long screen to be designed to rest at a 90-degree angle and installed through a specially designed hatch in the room's rooftop.

As a result of the excellent collaboration between all of the various parties involved, the screen was successfully installed and commissioned in July 2009.

*"Working with Headworks went really well," stated Nathaniel Andres, Contract Administrator for RV Anderson. "The Headworks team was flexible and informative throughout the shop drawing phase and we worked together to ensure a successful installation. Since its commissioning in July 2009, the screen has operated as hoped. One of the biggest challenges faced by the plant is the high amounts of grease in the influent. In the past, a grinder was used to manage solids, which exacerbated the grease problem. The installation of the Headworks screen has helped to reduce the amount of grease that had previously overloaded the biological system".*



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