

LIFT STATION UPGRADE PUMPS UP FACILITY



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CUSTOMER

City of Traverse City

PROJECT

Wastewater Treatment Facility Upgrade

VALUE

\$130,000

LOCATION

Traverse City, MI

START DATE

February 2018

COMPLETE DATE

February 2019



OVERVIEW

The City of Traverse City relies on several sewer lift stations to pump wastewater and sewage from areas of low elevation to higher elevation. One of those lift stations is situated in a building very close to the heart of Traverse City's downtown area. Recently, the city decided to update an antiquated control system in this station. This particular system is responsible for controlling the pumps at the lift station and communicating their status back to Traverse City's main wastewater treatment facility.

When Windemuller was hired for this project, most of the system was well over 20 years old, with PLCs that had been in place since the late 1980s or the early 1990s. Parts and pieces for these controllers and other key components were difficult to come by, making the system a challenge to maintain or repair. Put simply, the lift station was long overdue for an upgrade.

CHALLENGES

The big challenge with this project was the necessity for the lift station to continue operating at all times. The inflow of wastewater to the facility can overwhelm it in a matter of minutes



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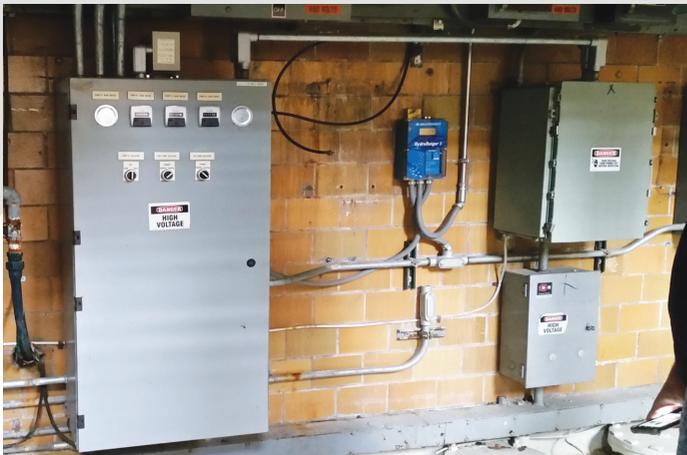
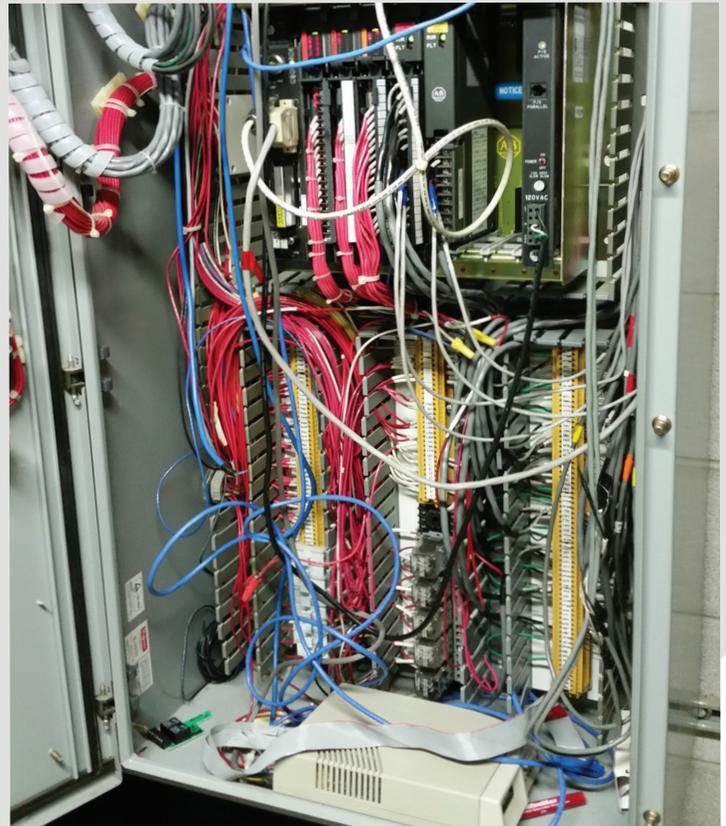


if the pumps don't run. Especially in the busy summertime, if the pump systems shut down for more than approximately 10 minutes, the lift station is almost certain to overflow. As a result, Windemuller had to determine a method to execute changeovers without shutting off the pumps.

The other hurdle was configuring the new PLC equipment to work with the original SCADA software for the lift station. The software system for the plant stayed the same after the system upgrade, which meant our team needed to execute a slew of changes and updates to make sure the equipment and the software could talk to one another.

SOLUTIONS

The only option for keeping the flowrate steady during our changeover to new PLCs was to run the pumps manually. The process demanded a slightly larger crew than is typical for a changeover in a facility of this size. However, by having all hands on deck involved in several aspects of the changeover, we were able to maintain the detailed oversight of water flow levels and the consistent manual pumping necessary to implement the new equipment and avoid a catastrophic overflow.



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