

The Challenge of Growth

OCWA explains how hard work and a smart team have made this water utility a force to be reckoned with in Central New York.

According to Michael Hooker, the Onondaga County Water Authority doesn't initiate contact regarding consolidating the smaller water systems in the central New York. But since Hooker joined OCWA in 1993, the organization has absorbed 17 other local water utilities, growing 50% in the last 16 years from about 60,000 connections to more than 91,000 connections. And only one-third of that growth, Hooker said, has come from new construction.

There are a number of factors contributing to this, Hooker explained. First, some of these smaller systems were already wholesale customers of OCWA, which treats water from Otisco Lake at its Marcellus Water Treatment Plant. Second, some were previously on well systems and wanted to switch to the lower cost option of contracting OCWA for the management of a public system. The third and, according to Hooker, most common reason for smaller systems to approach OCWA about supplying and managing their water in the last few years has been new regulations.

He explained some of the ground-water supplies a number of small, local systems use were recently determined to be under the influence of surface water, so they would either have to build a treatment facility or find a new source. Given their close proximity to OCWA, many have signed leases with it for the operation and management of their systems.

Hooker and his team have taken a number of measures over the last decade to improve OCWA's operations and

be able to handle this growth, but they don't include expanding the organization's staff.

"In 1990, with less than 60,000 connections, 1,086 miles of main pipeline, and no planned maintenance program, we operated with 132 employees. Today, with more than 91,000 connections, nearly double the miles of main pipeline, and a comprehensive and proactive maintenance program, we operate with only 127 employees," said Hooker proudly.

Strong resources

There are three main reasons OCWA has been able to handle steady growth while decreasing its staff over time: automation, investment in equipment, and investment in employee training.

And OCWA's success in those efforts means it can continue to grow. Hooker said the organization is able to treat and distribute up to 20 million gallons per day from Lake Otisco, but it also buys 52% of its water supply from the Metropolitan Water Board (MWB), giving it access to another 50 million gallons for a total of 70 million gallons per day.

"Our demand right now only hovers around 36



million gallons per day, so we know we have the resources to handle more connections. As long as we maintain our infrastructure, we can keep up," he said.

In the last 10 years, Hooker has outsourced some of the work the organization was doing that wasn't related to water, like plowing snow or repairing paving in roads after working on the mains underneath, meaning all OCWA employees are focused on one thing: keeping the water flowing to their customers. Creating a regular maintenance schedule for infrastructure and vehicles has been instrumental in that effort, Hooker said, since in the 1980s and early 1990s, the organization was generally reactionary. Now, OCWA replaces a few million dollars worth of pipeline every year and replaces its fleet of vehicles on a regular schedule. Tank painting, meter replacements, and pump station checks are also scheduled annually to spread out related expenses evenly over the lifetime of the equipment.

Organizing that system has been easier since 2002, when OCWA started a two-year process, called Conquest, to update and integrate all of its software systems.

"We started researching what solutions were best in class, narrowed down our options, and chose the system that fit our organization the best, but then instead of adjusting the system to fit our operations, we changed the way we did business to fit the system," said Hooker.

He explained that although this process took a lot of work and overtime hours upfront, it makes system upgrades easy and ensures a seamless workflow through the organization. "By avoiding customization, not only was the project completed on time and on budget, all subsequent upgrades have gone relatively smoothly and without great additional cost."

OCWA choose a completely integrated software solution that went live in 2004, and one of the team consultants that helped the OCWA team implement the Conquest project submitted the project to the American Public Works Association (APWA). It won the APWA National Management Innovation Award in 2005.

Current projects

Currently, OCWA is working on three new projects. The first is an upgrade to its Marcellus Water Treatment Plant that



Hooker estimates will be completed by the end of April. The \$14.5 million project includes the replacement of gas chlorine at the intake point and within the plant with sodium hypochlorite and the implementation of a new process that will reduce the formation of disinfection by-products in the system.

The project will deepen the plant's filter profile with a thicker top layer of carbon on each filter and add two new filters to the existing four. The changes will allow the filter load to be better distributed and each filter to be more efficient.

OCWA is also currently working on the construction of two covered concrete water tanks that will replace open reservoirs currently owned and operated by MWB. The 20 million

gallon Western tank is scheduled for completion in June; the 30 million gallon Eastern tank will be finished in late spring 2011.

For Hooker, one of the most important features of these projects is their price tag. The predicted cost for the treatment plant upgrade was \$18 million. The tank projects, which will be completed for \$33 million, were initially estimated to be closer to \$55 million. Hooker attributed much of the savings to the expertise of Tony Geiss, deputy executive director, and Geoff Miller, executive engineer.

"Both are outstanding PEs and have worked on these kind of projects before as consultants for local engineering firms. Their experience was invaluable as we worked with our consultants and contractors to develop a plan that wouldn't drive rates through the roof for our customers," he said.

OCWA was also able to keep rates low by pursuing every option for funding these projects. It obtained revolving fund money through cooperation with the state's Environmental Facilities Corporation, saving customers \$2 million over the 20-year life of the bonds for the plant project via a one-third interest rate subsidy. And by rolling its bonds for the tank construction into a larger pool held by the EFC, OCWA was able to save its customers another \$4 million during the 30-year life of those bonds through reduced interest rates.

"Our customers can be confident in their water utility," Hooker said. "The team here is seasoned and hard-working, ready to do whatever is necessary to provide high quality service at a fair rate." ✪

—Meghan Flynn