



CORNING

Corning® Everon™
Network Solutions



Municipality



Network Needs:
Distance, Harsh
Environment
Applications,
Right of Ways

City of Elmhurst, Illinois

Fiber Cabling Community Connection

The Customer

The new Bipartisan Infrastructure Law provides over \$50 billion to the Environmental Protection Agency for investments to improve water and wastewater infrastructure. This provides an opportunity to strengthen and rebuild America's water infrastructure with smart technology to monitor and optimize operations through fiber optic systems. Elmhurst, Illinois, provides a great example of how a city leveraged fiber optic cabling to enhance not only its water treatment facility, but also other municipal services to benefit an entire ecosystem and deliver better services to its citizens.

The Challenge

Reliability, Security, and Expansion

A key challenge for the City of Elmhurst was reliable communication between water sites. Although they had invested previously in a proprietary wireless system, it was no longer meeting the city's needs. The wireless system, using licensed spectrum, was struggling to support the increased bandwidth needs of monitoring equipment between sites. The high bandwidth wireless networks the city was pursuing were unpopular among residents due to the antenna heights required for maintaining a line of sight throughout the community. There was a fiber optic network upgrade already underway at the wastewater treatment plant. So the teams involved decided to explore the possibility of expanding the existing infrastructure upgrade project to pull in additional public works networks.

20

MGD active sludge
treatment

18-acre
facility

17

buildings

Products
deployed:

ALTOS® Loose Tube Cable

CCH Hardware

Pigtailed Cassettes

EDC Housing

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The Solution

Enhance Smart Water Technology: Fiber is an integral enabler of smart water infrastructure as it helps optimize operations and reduce expenses while ensuring the critical network remains safe and secure. The addition of single-mode fiber is highly valuable for smart water infrastructure as it has virtually unlimited bandwidth and is resistant to electromagnetic interference, moisture and temperatures, making it highly reliable and secure over longer distances and requires much lower maintenance.

Elmhurst's Water Treatment Plant: Based on other public works projects for road and piping improvements, conduits for fiber cable were an easy solution. Corning's ALTOS® loose tube cable (48 fiber, single-mode) provided connectivity for the plant's Supervisory Control and Data Acquisition (SCADA)/OT Network, Cameras and Security, and the IT network for tablet connection at sites.

Working with Ecosystem Partners: By bringing SCADA specialists, industrial water consultants, contractors and Elmhurst's own city Public Works department together with city leaders, Corning and Concentric, the construction contractor, helped to craft the strategy for design and implementation of the solution. With Concentric involved early in the planning, the hand-off from concept to reality was seamless with far fewer design changes needed during construction.

“The extent of the project grew organically once the city decided to pursue fiber optic installation between public works sites. The use of fiber optic cable opened possibilities for multiple city entities to use infrastructure installed under this project. With the direction set, we worked with our channel partners to find quality equipment, locally stocked. The city will now have the capability to quickly source equipment that will last.”

Mike Gryn

Electrical & Automotive Engineering Director
Concentric



The Impact

Benefiting an Entire City: What started as a simple project to improve a wastewater treatment plant turned into an initiative to improve the fiber optic infrastructure in the City of Elmhurst. In talking to other public works leaders in Elmhurst, it was clear that designing and building an enhanced fiber optic system could be expanded to other public works sites including water sites, lift stations, storm water sites, as well as fire and police stations.



“It's been a great pleasure to work with a group that brings ideas to the table and then follows through in developing them as a team.”

Paul Burris
Utility Operations Manager
City of Elmhurst, Public Works