

# **ERIE COUNTY WATER AUTHORITY 2018 DEPARTMENT ACCOMPLISHMENTS**

## **DISTRIBUTION**

- In 2018, Line maintenance continued to expand and refine the implementation of the Cityworks work asset management system. Moving beyond obtaining basic work order information, our crews have begun using the system to log key condition assessment data that will help guide future asset maintenance and replacement decisions. As the depth and breadth of available system process data continues to grow and evolve, ECWA Management will be armed with the information necessary to make informed improvements with increased cost efficiencies.
- In response to the increased requirements for the repair and/or replacement of Asbestos Containing Pipe Materials, Supervisory staff received the needed training and certifications to move towards managing the work in-house rather than relying on outside contractors. The department will continue to develop the additional specifications and work-flow certifications to fully complete the process in 2019.
- The department was faced with multiple long-term staffing absences due to personal-medical or work-injury reasons. The reduced available workforce occurred mainly during the peak-summer leak season and continued into the early winter months. Even with the severe staffing challenges, the hard work and efforts of our dedicated supervisors and crews enabled the department to attend to over 1300 leak repairs, including one on a 48" transmission main, without any major disruptions in service to our rate-paying customers. In addition, both the Summer and Winter hydrant service programs were completed ahead of schedule.

## **ENGINEERING DEPARTMENT**

- Watermain replacement projects were completed in Cheektowaga, Lackawanna, Blasdell, Hamburg, West Seneca, Amherst, Tonawanda and Clarence. Approximately 37,000 linear feet of watermain was installed under four separate contracts. The pipe diameters installed ranged from 8" up to 16". The total cost of the watermain replacement work was \$11,000,000, which is two to three times more than what has been invested in watermain replacement over the last several years. This work involved replacing old and

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failing cast iron water mains with new cement lined ductile iron water mains that will perform well for years to come.

- The ECWA has consistently worked with the Town of Cheektowaga to partner on roadway reconstruction projects. This year the Authority and the Town of Cheektowaga had a cooperative agreement for Woodbine Pl. and Evergreen Pl. The Authority was able to replace approximately 3,000 linear feet of watermain and the Town completed a full depth reconstruction of the roadway. The ECWA also had a cooperative agreement with the Town of Orchard Park for watermain replacement work on Burmon Dr. Under the Burmon Dr project, the Authority was able to replace approximately 3,700 linear feet of watermain. These types of projects allow the Authority to save on restoration costs and prevents the Authority from excavating in a newly reconstructed roadway.
- Every year the ECWA rehabilitates water storage tanks, both leased managed and direct service. In 2018 the ECWA working collaboratively with the Town of Aurora and the Town of Orchard Park to rehabilitate several water storage tanks in both towns, which results in efficiencies for both entities and ensures that tanks are being properly maintained. In addition to the tank coating rehabilitation, there are improvements made to the tanks to make them safer for ECWA personnel to access and perform maintenance.
- Every year the Authority restores areas that were disturbed during emergency watermain breaks and emergency service repairs. In 2018 the Authority restored approximately 1,400 locations throughout the distribution system for a cost of approximately \$2,400,000. The leak sites are inspected by two ECWA Construction Inspectors, the information is compiled internally by the Restoration Coordinator and the work is performed by contractors. The restoration department has moved towards releasing work orders electronically and including photos to help the contractor plan their work more efficiently. The sharing of digital photos has also allowed Authority staff and the field crews to be able to communicate more effectively without being at the jobsite. This has allowed restorations to be completed in a timely manner which leads to better customer service.
- Rehabilitation of Ball Pump Station Electrical Substation was started in 2018. The rehabilitation project includes building a new electrical substation to replace the existing substation which has been prone to settlement over the years. The new substation will be replacing a substation that is approximately

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50 years old. The overall project cost is approximately \$5,500,000. The project will improve the overall reliability of the pump station which provides most of the water in the Authority's northern service area.

## FINANCE DEPARTMENT

- In October of 2018, the national Government Finance Officers Association awarded the Authority the Certificate of Achievement for Excellence in Financial Reporting for its 2017 Comprehensive Annual Financial Report.
- On July 25, 2018 the Authority issued \$24,900,000 in revenue bonds with a true interest cost of 3.67%. Proceeds will be used in a variety of capital projects throughout our service area. Projects include the completion of a new electrical substation at the Ball Pump Station; six (6) distribution and transmission main replacements projects; the design and eventual replacement of the North Ball Tank; and replacement of large valves in various communities.
- The Customer Service staff answered 79,620 calls from customers in 2018, a 5.6% reduction from 2017. The Authority adopted a new rate structure in 2017 resulting in a higher than average number of customer calls.

## HUMAN RESOURCES

### ➤ Union Contracts:

In 2018 the Human Resources Department coordinated the efforts of an ECWA Management team which successfully negotiated a new, seven-year, collective bargaining agreement with our employees who are represented by the Brotherhood of WNY Water Workers. Under the terms of this new agreement the Seasonal Line Maintenance Crew is scheduled to work from 11pm to 7am during the winter months and is available to work for more weeks. Also, this crew may be reconstituted and brought in later in the year if deemed necessary by Authority management. This change in scheduling offers greater coverage for our Line Maintenance Department and should make better use of Authority equipment.

This new agreement also recognizes the changing forms of American families and provides updated recognitions for bereavement leave. Under this new agreement represented members will see no changes to the formulas used for calculating insurance premiums, however, qualifying dates for Authority paid premiums were move for parity with the CSEA CBA. This new contract also provides reasonable, annual wage increases and contains an agreement which will allow the Authority the ability to more effectively deploy Water Utility

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Workers and Control Operators for maintenance purposes.

### ➤ **Security**

Recognizing the possible threats that the ECWA, and every workplace, may face from a variety of sources, the Human Resources Department has worked with the ECWA Security Officer to coordinate and integrate security measures and training into our facilities and workforce. The Security Officer has made it a priority to reach out to law enforcement agencies and first responders to coordinate response efforts should there be an emergency at one of our facilities.

Over the course of 2018 the Security Officer has worked with Homeland Security to complete an Infrastructure Visualization Platform which will support facility security and enhance coordination with law enforcement. Security has also been improved with the installation of redundant locking doors at priority sites, additional security cameras and monitors, and limiting access to critical Authority infrastructure such as computer facilities.

2018 even saw a program coordinated with the NYS Police Counterterrorism Unit which used under cover officers to test access to some of our facilities.

### ➤ **Training**

For 2018 the ECWA conducted approximately 8349 hours of employee training in diverse topics such as Ergonomics, Hydraulics, Asbestos, Confined Space Safety, Chlorine handling, Bacteria Sampling and First Aid.

## INFORMATION TECHNOLOGIES

### ➤ **ECWA - Wide Area Network (WAN):**

As part of the ECWA Advance project a high speed, high availability communications backbone between major ECWA facilities was designed and implemented. This communication network is comprised of 6 links that utilize near Gigabit AVIAT microwave radios to connect 5 locations. These links carry business data, SCADA traffic, security video and voice communications. In the case of a failure of one of these links the system automatically switches over to our Spectrum Business fiber Point to Point circuits ensuring we will always have data and voice communications between our major facilities.

This was a collaborative effort involving outside consultants and contractors from EMA, Hi-Tech Services, Ferguson Electric, Transwave Communications

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Systems Inc. and Aviat US Inc., along with ECWA staff from the IT, Instrumentation, and Maintenance Departments.

➤ **Business System Hardware Upgrade:**

An additional part of the ECWA Advance project was the upgrading of our 9-year-old business computer hardware platform. ECWA upgraded both primary and backup systems to a state-of-the-art IBM Power system which utilizes a 12-core power 8 chip capable of handling 96 threads simultaneously. An added benefit of this upgrade was the elimination of hardware maintenance charges for a 3 year warranty period.

This upgrade was performed by Hi-Tech Service Inc and the ECWA IT staff.

➤ **Improved Collection of Water Service Connection Information:**

To better track ECWA field assets, a major upgrade was implemented in our asset management system for water service connection information. Data tables were created to better track and store current and historical information on materials used to connect customers to ECWA's distribution system. New data elements include the material used at the water main connection, water service connection valve (Curb Box) and customer water line connection at valve and meter. These data elements are being updated through ECWA's Cityworks work order system and our IBM Power system. These new data elements have been fully integrated with the Authority's current Customer Information System and are being stored in ECWA's geographic Information System.

➤ **Networking SCADA Pump Stations and Tanks:**

Starting at the tail end of 2017 and wrapping up 2018, the wide area network infrastructure was extended to include the distribution pump and tank stations. IT managed routers on premises at each site enables secure network access through Verizon Private Network 4G LTE, as primary communication, and Orbit radios for secondary communications. All 50 plus stations and tanks are now upgraded.

Network configuration, testing, and implementation was performed by Hi-Tech Services and IT staff. Network specifications were delivered to Kaman for the configuration of SCADA related hardware. Secondary Radio configuration and testing was performed by Instrumentation, EMA, and Hi-Tech Services.

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### LEGAL DEPARTMENT

In 2018, the Legal Department provided the Board of Commissioners and its Governance Committee with legal guidance and technical assistance with:

- Revising and adopting the Amended and Restated By-Laws;
- Adopting a comprehensive Open Meetings Law policy;
- Adopting a comprehensive Freedom of Information Law policy;
- Revising and adopting an Equal Employment Opportunity Hiring policy;
- Revising and adopting a Code of Ethics and Conflict of Interest policy;
- Drafting and adopting an in-house financial disclosure statement to be used by Board members, officers and designated employees;
- Establishing an Independent Ethics Panel to oversee compliance with the Authority's Code of Conduct and Conflict of Interest policy;
- Drafting and revising the ECWA Tariff;
- Revising and adopting a new Sexual Harassment policy;
- Implementing an apprenticeship program;
- Reviewing and recommending changes to its Procurement Guidelines and Procedures;
- Auditing compliance with the provisions of the Freedom of Information Law;
- Monitoring and overseeing bidding and other procurement practices; and
- Monitoring contracts, including the use of change orders and the terms and conditions of bonds.

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The Legal Department has also assisted the Board of Commissioners with management oversight by providing weekly updates on assignments given to the legal staff. The Legal Department has created “Legal Log,” which tracks legal assignments and FOIL requests.

NOTE: Legal Department would like to use hyperlinks in this list once the Authority’s website has been updated.

## PRODUCTION ENGINEERING DEPARTMENT

- Electrical Engineering & Instrumentation
  - Pump and Diesel Mechanics
  - Control Operators – Distribution System
- The Sturgeon Point 48” Transmission Line near 2467 Pleasant Ave. Hamburg, NY 14075 and nine associated distribution lines ruptured on June 18, 2018. The event initiated an Emergency Repair/Replacement Project. The entire ECWA organization responded to this major event along with a key sub-contractor. All involved worked as a team for three days straight. They worked long hours in difficult conditions to maintain the water supply to our customers while completing the repair. This project demonstrated the skill and dedication of the ECWA; line maintenance, control operations, pump mechanics and water treatment plant operators and their ability to coordinate and work as a team.
- The ECWA wide area network (WAN) project was completed in 2018. The electrical engineering/instrumentation department worked with the ECWA IT department to manage and oversee the installation of a WAN using microwave radios at seven sites linking the Van deWater and Sturgeon Point Plants. The sites are:
- a. Van deWater
  - b. Subcarrier Communications (Tower Lease)
  - c. Wehrle Tank
  - d. Vukelic (Service Center)
  - e. Windom
  - f. Crown Castle (Tower Lease)
  - g. Sturgeon Point (HS Tower)
- The Distribution SCADA Transition Project was completed in 2018. The project replaced the local RTUs at 59 sites with PLCs and cellular radios that are controlled by an iFix 5.9 Supervisory Control & Data Acquisition System

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(SCADA). The new SCADA allows time based tank level control, and discharge pressure control options for each station. The new system includes PLC peer to peer communications between pumping stations and tanks that will continue to function with a loss in communications with the SCADA.

- Instrumentation and Control Operations also supported multiple capital projects and tank inspections at the VDW and STP plants, and at various tanks and stations throughout the distribution system.
- The pump mechanics and Instrumentation personnel conducted major pump repairs and plant systems repairs at the Sturgeon Point plant while also supporting the distribution system.

## WATER QUALITY

The following are 2018 major accomplishments or projects of the Water Quality Department:

- Promotion of Sabrina A. Figler to Director of Water Quality following 25 years of experience and service to the Water Quality Department.
- Participation in EPA's Unregulated Contaminant Monitoring Rule 4 (UCMR4).
- The UCMR 4 monitoring occurred from early 2018 to the current time and includes monitoring for a total of 30 chemical contaminants: 10 cyanotoxins (nine cyanotoxins and one cyanotoxin group) and 20 additional contaminants (two metals, eight pesticides plus one pesticide manufacturing byproduct, three brominated haloacetic acid [HAA] disinfection byproducts groups, three alcohols, and three semivolatle organic chemicals [SVOCs]). Samples sites represented included distribution sites, entry points to the distribution system and source water influents from each of the WTP's. Results were and continue to be uploaded to the EPA's Central Data Exchange for review by ECWA and the NYSDOH.
- Progress was made in expansion of the Water Quality Department's personnel. Four prospective applicants were interviewed, two of whom are in the process of review by Civil Service. These two applicants come highly qualified in the fields of environmental chemistry, microbiology and algology and will expand the department's future capabilities and knowledge base.
- Collaborated with the Engineering Department on the Corrosion Control Project by preparing and shipping LSL sections harvested for scale analysis.

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- Kicked off the 2019 Lead and Copper Study! ~ A collaborative effort between Water Quality, Distribution, Customer Service, GIS, & IT departments and the Meter Shop. Initial efforts have been to pool data from all available resources within the Water Authority, including historical data, in order to identify Tier One sites, and solicit as many of those as possible (with a cap of 100) to participate in the 2019 study.