

ERIE WATER WORKS (EWW)

SPOTLIGHT ON 2021 CAPITAL IMPROVEMENT PROJECTS

WATER STORAGE PROJECTS

EAST LAKE HYDROPILLAR INTERIOR & EXTERIOR RENOVATIONS

It is necessary to maintain and to repair tank coatings in order to prevent corrosion of the steel underneath. Failure of the steel could cause significant disruption to our customers' water service. Keeping EWW tanks in a reliable operational state is critical to our business. The East Lake Hydropillar, located along Iroquois Avenue in Harborcreek, provides stored water to portions of Lawrence Park Township, Wesleyville Borough, and Harborcreek Township (north of Iroquois). The hydropillar has a maximum capacity of 1,500,000 gallons of water and was constructed in 2004. The interior and exterior were recoated in 2021, and a new, continuously operated, mechanical mixing system was installed in order to promote uniform water quality and to help control disinfection byproducts. Circulating water within storage facilities helps to keep chlorine levels uniform, to reduce water age in the distribution system, and to prevent thermal stratification year round.



JOHNSON RESERVOIR INTERIOR & EXTERIOR RESTORATION

The 10 million gallon Johnson Reservoir was constructed in 1968. The reinforced concrete reservoir is mostly underground. The overall height is 33 feet and the diameter is 238 feet. After many years in operation, concrete restoration became necessary. Interior repairs included grouting and sealing cracks and replacing seals at expansion joints. Exterior repairs included repairing cracks and applying a protective coating on the flat roof. With a 30 foot operating range, each foot within the tank represents 333,333 gallons of water. Work included installing a disinfection byproduct removal system (mechanical mixing, aeration, ventilation) similar to the East Lake Hydropillar system.



CONTINUITY OF SERVICE PROJECTS

PORTABLE, EMERGENCY POWER GENERATOR PROCUREMENT

EWW utilizes onsite emergency power generators to help meet its mission to deliver a continuous, uninterrupted supply of high quality water to its customers. Many remote facilities (such as pumping stations) have permanent generators that supply power during electric outages, but those without one rely on one of three portable, trailer mounted units that allow for operational flexibility. The new 200 kW generator was publicly bid and procured from Cummins Sales & Service.



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TRANSMISSION & DISTRIBUTION PROJECTS

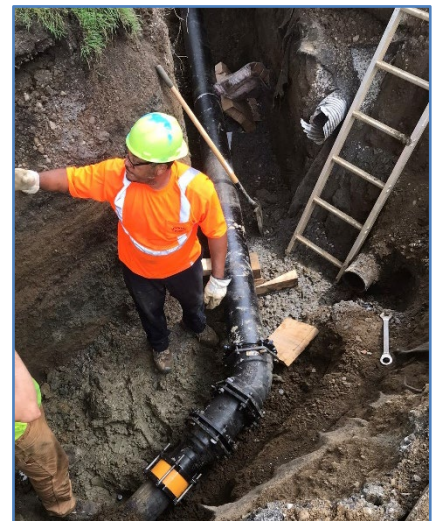
AMHERST, ABERDEEN AND LANCASTER WATER MAIN REPLACEMENT PROJECT

The water mains in these areas of the EWW distribution system had become increasingly failure prone over time. In fact, there have been over 50+ water main breaks in the past 20 years. This critical infrastructure investment funded the replacement of 5,500 feet of water main with new 8-inch ductile iron pipe. 3 fire hydrants were replaced, and 3 more were added for increased public fire protection. An example of a fire hydrant installation is illustrated to the right. As part of the work, 116 new water service connections were installed to serve existing EWW customers in the project area. The project was awarded to and constructed by Klingensmith Enterprises based on their lowest qualified bid of \$938,210.



WILSHIRE & CHERRY WATER MAIN REPLACEMENT PROJECT

This recent project involved replacing 2,000 feet of 6-inch water main originally installed in 1952. Repair records have pointed to an acceleration of failures in the past 10 years, which have accounted for 30+ water main breaks. The project extents are on Wilshire Road from Cherry Street to Glenwood Park Avenue and on Cherry Street Extension from Wilshire Road to Ruth Avenue. The project was both designed and constructed by EWW personnel from the Engineering and Distribution Departments. EWW appreciated the patience and cooperation of customers and motorists during construction. Renewing infrastructure is an important challenge facing utilities across the U.S., but also one that must be addressed strategically and methodically.



MARSHALL, FOREST & ARGYLE WATER MAIN REPLACEMENT

This \$700,000 investment funded the replacement of 3,500 feet of 1930's problematic, undersized 2 and 3-inch water line along Marshall Drive, Forest Drive, and Argyle Avenue in Millcreek Township. New, 8-inch ductile iron water main was installed to provide enhanced water service and fire protection. This project renewed infrastructure where it was needed. New service lines were provided to 85 customers. There were also 13 isolation valves and 4 fire hydrants renewed or added as part of the work. Konzel Construction of Erie constructed the project, which was designed by KLH Engineers. Local contractors help to keep project costs competitive and in the process, employ a homegrown and a highly skilled workforce. The work completed by the entire team helped to improve the public water system.