



World Class Lubrication Reliability Program

United Water – Holyoke Massachusetts Facility

The City of Holyoke Massachusetts has used Lubrication Engineers products throughout its wastewater treatment plant for more than 30 years.

A few years ago, the facility was contracted to be operated by United Water, a publicly traded company operating waste water and fresh water facilities for municipalities in all 50 states.

The chief operator of the United Water facility in Holyoke, MA, Michael Burke, was familiar with Lubrication Engineers products having used them for more than 30 years at a facility he previously managed in Palmer, Massachusetts.

Shortly after taking control of the facility, United Water, working with the City of Holyoke, took a major step in protecting and improving the water quality in the Connecticut River. A new Combined Sewer Overflow (CSO) facility was built with the ability to handle up to 103 million gallons per day. This facility, the first of its kind on the Connecticut River, was completed ahead of schedule at a cost for \$18 million. Fourteen additional capital improvements were made to the Holyoke facility at a cost of over \$6 million in equipment and facility upgrades including a new odor control system, a modern wastewater pumping system, more efficient oxygen dissolution and mixing system, and general improvements designed to enhance cost efficiency and increase machine reliability.

Mr. Burke contacted LE lubrication consultant, Dave Piangerelli of Lubrication Technologies, Inc. to upgrade the lubrication survey to reflect the new equipment upgrades. Dave informed Michael Burke of the advantages of a World Class Lubrication Reliability Program. He was interested in the concepts presented by Dave.

Michael Burke was not only interested in the hardware, but he decided to contract with Lubrication Technologies to provide the installation and actual implementation of the program. Jamie Piangerelli of Lubrication Technologies, Inc., revised the lubrication survey to include the new equipment as well as recommend the necessary hardware required to implement the World Class Lubrication Reliability Program.



A major upgrade at the plant was the installation of six new mechanical aerators in the secondary treatment area of the plant. These aerators are located on floating platforms, necessitating vessel entry protocol to service them. The decision was made to focus on the aerator gearboxes, manufactured by Philadelphia Gear Co.

Jamie Piangerelli and another Lube Tech employee installed the following Reliability Partnered Products offered by Lubrication Engineers:

- Des-Case Hydroguard Breather
- Checkfluid Valve
- Esco Oil Sight Glass
- 3/4" QD valve on drain & 1/2" QD valve on fill





The installation of the reliability improvement hardware along with Synolec® Synthetic Gear Lubricant (9822) will be followed up by a periodic oil analysis program administered by Lubrication Technologies, Inc. The program was undertaken with the goal of virtually eliminating future oil changes in these aerator gearboxes. Oil analysis results will be monitored and periodic filtration will occur on an as needed bases. It is fully expected to see oil life measured in tens of years in this application where measures were taken to insure maximum reliability and dependability from these key pieces of equipment.

The World Class Lubrication Reliability Program will continued to be managed by Lubrication Technologies who is being held responsible for further product installations in clarifier drives as well as several pumps and other applications.



Jamie Piangerelli is seen here draining out the LE gear lubricant that the units were initially filled with.



Lubrication Technologies' service vehicle is seen here preparing to install the hardware and lubricant into the Philadelphia gear drives.

Synolec 9822 was filtered through an AMS micro-glass element via a portable filter cart, prior to being installed into the Philadelphia gearboxes.



The City of Holyoke was one of the first planned industrial communities to use the power of the Connecticut River to power several paper and textile mills in the mid 1850s through its unique 3 level canal system, the first of its kind in the U.S.

Thank you to Michael Burke, chief operator, and to Dave Piangerelli, LE lubrication consultant (pictured), for providing the information used in this report.



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Based on actual user experience. Individual results may vary. Not intended to supersede manufacturer specifications.

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