PRODUCTS IN ACTION

By Richard Blais

SOFTWARE
Keeps Beaches Beautiful

AN EARLY WARNING SYSTEM HELPS KEEP BEACHES OPEN FOR BUSINESS

On the north shore of Massachusetts, it is the mission of the Lynn Water and Sewer Commission to "protect the public health and environment of Lynn by providing clean, safe, superior-quality drinking water and by creating a cleaner ocean environment." The commission accomplishes this objective through effective operation and maintenance of its wastewater collection system.

For the past 13 years, the commission has remotely monitored its combined sewer overflows (CSOs) with state-of-the-art flow metering equipment. More than one year ago, the commission took the next step and upgraded its water quality alarming and monitoring system with the IntelliServe system provided by ADS Environmental Services. Now the commission has instant access to critical public health information that assists in maintaining access to the beautiful north shore beaches.

Protect and Monitor

The Lynn Water and Sewer Commission is a service organization that delivers clean water to homes and businesses and then removes and treats the resulting wastewater. It made a commitment to residents and visitors of Lynn and the surrounding areas that the beaches would be safe for swimming and has supported that commitment with this water quality program. The commission installed computerized sewer flow monitors and a hosted software program, IntelliServe, in April 2006 to protect and monitor coastal Massachusetts, Nahant Bay and the beaches that serve metro Boston tourists and residents.

IntelliServe is an early warning system that assists in the improvement of water quality through a series of alarms that notify both the Water and Sewer Commission and the analytical laboratory when a CSO occurs in a combined sewer outfall. Environmental Sampling Technologies, Inc. is contracted by ADS Environmental Services, the developer of the IntelliServe alarming system, to test the water quality of the ocean water within 24 hours of the overflow. Tests are conducted for Enterococci bacteria. If the bacteria levels are found to be above state-approved levels, the commission must notify the city of Lynn Department of Health and the Massachusetts Department of Conservation and Recreation for the appropriate action.

The commission operates the flow monitors and the IntelliServe software 12 months per year and samples water quality at the Sanderson Avenue overflow only during the months of May through September. This keeps costs to a minimum and provides the commission with environmental information necessary during those summer months to be assured that the beach is safe for swimmers and waders at all times.

Management and Confidence

"IntelliServe and ADS were the ideal solution for the commission," said Daniel O'Neill, executive director of Lynn Water and Sewer Commission. "We have been using flow monitoring technology for many years and this latest upgrade has provided instant notification, real-time awareness and facilitates a timely response by our operations crew. This gives the municipal management and residents of Lynn the confidence that we have a program in place to ensure clean water for all our visitors."

24/7 Monitoring

IntelliServe is a Web-based information management system designed for wastewater collection system operators and managers. Working with a network of ADS flow monitors, IntelliServe combines database, communications, graphing and Web applications to bring knowledge of current and past collection system conditions to any desktop or laptop via the Internet. Using IntelliServe, operators and managers can view, in near real time, collection system depth, flow and velocity conditions in a variety of graphical formats. They can be made aware via telephone, text messaging or e-mail of unusual flow conditions as soon as they occur and can have instant access to flow data to quickly make the right response decisions. Because the software can store years of data, users can also generate trend reports to spot developing collection system problems before they result in overflows. All hosting and system maintenance is performed by ADS, so customers can simply log on to their IntelliServe website to put it to work for them. No customer IT setup is required.

For the city of Lynn, IntelliServe works with an ADS flow monitoring network installed in CSO outfalls that discharge near several public swimming areas. The flow monitor sensors are configured to differentiate between tidal activity and actual discharges from the CSO outfalls. When the sensors detect a CSO event, a signal is instantly sent to IntelliServe that initiates an immediate notification of Lynn Water and Sewer staff. From May through September, the analytical lab is also immediately notified of the event via text messaging and e-mail. A sampling team is then dispatched to collect water quality samples along the beaches nearest the outfalls for quick turnaround analysis. This 24/7 monitoring provides Lynn officials with the knowledge they need to ensure protection of the public health. WWD

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ARTICLE SUMMARY

Challenge: The Lynn Water and Sewer Commission needed to better protect and monitor nearby beaches to ensure safe swimming and good water quality after CSOs.

Solution: The commission started employing IntelliServe, an early warning system that would notify the commission and a nearby laboratory if a CSO was imminent and if unsafe levels of bacteria were detected in ocean water.

Conclusion: The new system has ensured 24/7 monitoring, fast response by operation crews and overall better protection of public health in this area.

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