



Contact:

Carlo Cavallaro
Director, Business Development

Carlo.Cavallaro@exeloncorp.com
630-669-3068

exelonaquify.com

How Elk Grove Village is Now Detecting the Previously Undetectable

OVERVIEW

Large surfacing leaks become very obvious, very quickly. A street floods. A pond appears in a field. Crews mobilize quickly to make repairs.

We measure water leaks in gallons-per-minute (GPM). But the more critical companion variable is “run time.” Reducing water loss is as much about finding the more minor leaks that go unnoticed for weeks, months, or even years as it is about rushing to fix “big leaks.” A large leak of 10,000 gallons per minute fixed in 4 hours totals 2.4 million gallons of water loss. But a minor leak, shedding roughly 50 gallons per minute, creates the same 2.4 million gallons of water loss in 33 days.



Had the leak gone undetected for three months, it would total 20 million gallons of wasted purchased, pumped, and treated water, costing the Village \$168,000.

CHALLENGE

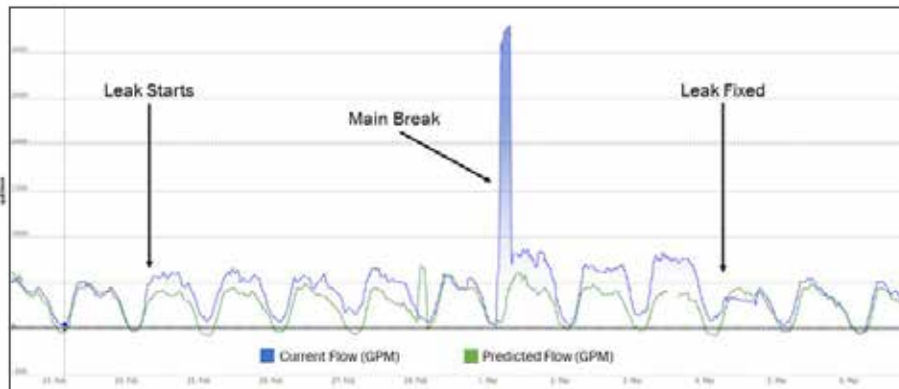
Elk Grove, a village northwest of Chicago, long understood smaller, undetected leaks produce significant lost water. Like most water utilities, hidden leaks, those not called in by the public or otherwise easily discoverable, offer enormous cost savings if utility crews could only find and fix them.

SOLUTION

Aquify installed fourteen Trimble electromagnetic flow and pressure sensors at strategic locations throughout their network, creating four manageable virtual zones, known as District Metered Areas (DMAs).

SOLUTION (continued)

On March 1, crews detected and repaired a reasonably large break in the east-central DMA. Four days later, analysts at the Aquify 24/7 network operations control center, using TaKaDu CEM software, noticed that the minimum night flow readings in that zone had not returned to predicted levels. The Aquify team notified the utility's superintendent, Bryan Grippo, that there was likely a second leak. By triangulating the flow and pressure readings from the sensors, Aquify could localize the leak to a narrow search area.



Teams from the utility found and repaired the leak within a few hours. Due to its location under a storm sewer, the host 6" waterline pipe sustained damage. The resulting leak could have easily gone undetected for months or longer. The only visible sign of the leak was a small trickle that emerged from the ground just a foot from a storm drain. Further, the storm sewer would have continued to degrade the pipe turning a small leak into an eventual failure.

RESULTS

At 150 GPM, the leak was considered modest compared to significant main breaks. But "modest" is a relative term when considering the leaks 216,000 gallons per day yields. That is the same volume of water used by 700 typical households each day. That's five percent of all households in Elk Grove Village. Also, leaks from minor pipe fractures will grow worse over time, compounding the water loss and often leading to other problems.

“ This was the third time in the last month that Aquify was able to identify a leak and direct us to the local search area so we could quickly repair it,” said Colby Basham, Elk Grove Village's Public Works Director. “We love having an 'eye in the sky' watching our system to support our team. In just a few months, the system has paid for itself.”

Had the leak gone undetected for three months, it would total 20 million gallons of wasted purchased, pumped, and treated water, costing the Village \$168,000. In addition to leaks discovered and mitigated since the system's deployment, these savings validate Elk Grove's investment in Aquify's intelligent sensor technology and analytics. A proactive approach to water leak detection and mitigation conserves water and budgets.