ABSTRACT for the 2013 ISA WWAC Symposium

Smart Water Networks for Operational Efficiency Gains

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FORMAT

6-12 page paper plus 30-minute presentation

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ABSTRACT

Water is a limited resource and requires effort and cost to source, treat, and distribute. Different drivers exist for water utilities to make their distribution systems more efficient: water quantity limitations, water quality limitations, need to be green, state and federal regulations, energy reduction, total operating cost reduction, high water losses and need to improve productivity with smaller staff levels.

Since the goals are to provide water of a safe quality on a reliable basis, it is important for many utilities to be pro-active in monitoring their distribution system leaks & bursts, meter malfunctions, pressure gradient deviation, failed production assets, and other significant changes to the normal network behavior.

Many people (Lord Kelvin, Edward Deming, Jack Welch) have been credited with "You can't manage it, unless you measure it." To be able to monitor and measure the water network, it is appropriate to have a minimum set of tools: zones or district metered areas (DMAs) set up with appropriate flow meters and pressure gauges on mains to capture data, telemetry to transmit data, a GIS to identify locations, and an automation system to accumulate, process and report results. In addition software as a service (SaaS) is available with sophisticated algorithms to cleanse, interpret, compare to historical results, and to prioritize the data into actionable business decisions. The presentation covers the elements of a monitoring system.

About the Authors:

Brian Heimbigner has over 25 years of projects and applications experience in the water sector in municipal water and wastewater, electrical power generation, pulp & paper, chemical production, and mining. Mr. Heimbigner has a BSChE and a MBA, both from the University of Washington. Contact: brian.e.heimbigner@us.abb.com, Tel: 770-625-6704

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