

Using Data from Municipal Water/Wastewater SCADA Systems (and Other Sources) to Make Smarter Operational, Maintenance, and Infrastructure Investment Decisions

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FORMAT

45 minute presentation

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Smarter Water, Analytics, Data Visualization, SCADA

ABSTRACT

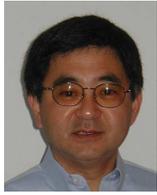
Fresh water, a fundamental requirement for life on the planet, is becoming a scarce resource as the world's population grows and competition increases for available water. It's estimated that by 2050 70 percent of the world's population will live in cities, stressing an already fragile infrastructure that provides basic city services like transportation, water, power, wastewater collection and treatment.

Against this backdrop, the world's cities will require new and innovative approaches to address these significant challenges. Business-as-usual and traditional engineering solutions won't be enough.

Water supply and distribution systems and wastewater collection and treatment systems generate and rely on significant amounts of data, from supervisory, control and data acquisition (SCADA) systems to computerized maintenance management systems (CMMS) and enterprise asset management systems (EAMS), to geographic information systems (GIS), to web-based data, like that from the U.S. Geological Survey. This data typically resides in separate systems and data repositories both within and outside an organization. Finding needed data for analysis, study, and planning may be difficult and time consuming, first identifying that it exists, determining where it is and what format it is in, requesting and receiving it, and then validating that it is correct. The result is a common complaint in the water/wastewater industry, "We have *lots* of data; we just don't have any *information!*"

The keynote introduces the concept of Smarter Water Management and uses examples to illustrate how innovative application of data analysis and visualization can play a pivotal role in addressing industry challenges. It leverages existing and new data sources and applies analysis / visualization / optimization tools, aggregating siloed data and creating situational awareness and insights to make better and timelier decisions. Better decision making, whether in treating/conveying water or in repairing/replacing infrastructure prior to catastrophic failure, ultimately improves water/wastewater operations and efficiencies. Smarter Water Management also facilitates planning processes and maintenance and repair operations to better manage and forecast future water/wastewater needs and requirements. Smarter Water Management, in combination with the discovery of new sources of fresh water, can help address the impending water challenges facing the planet.

About the Speaker:



Carey is a member of IBM Software Group and a subject matter expert in Smarter Water Management solutions and business development. He has over 29 years of information technology experience and nine years practicing as a consulting engineer and PE focused on water resource planning and water and wastewater treatment plant designs and implementations for public and industrial sector clients.

Carey is a certified IBM consultant and has a Master of Business Administration degree with finance specialization from the University of Chicago, a Master of Science degree in Environmental Engineering from the University of Illinois at Urbana-Champaign, and a Bachelor of Science degree, with honors, in Civil Engineering from the University of Colorado at Boulder. He has published work in the *Journal American Water Works Association*, *IBM Journal of Research and Development*, *Water Practice and Technology*, and *World Water*.