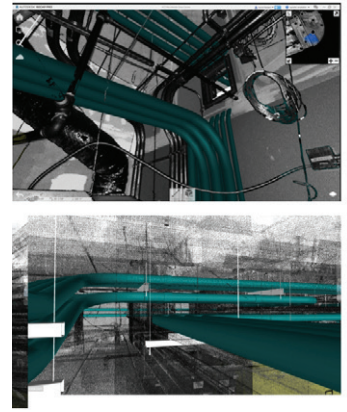# CWEA Webinar: Smart Utilities Start with Asset Management

June 13, 2019 • 12-1 p.m.

General Topic and Opening Abstract

Smart Utilities increasingly rely on emerging asset management tools to collect, compile, and leverage large volumes of digital information about water infrastructure. This webinar will explore the ways in which utilities are collecting data using technology, as well as tools for using data efficiently and effectively to address infrastructure management needs.

Planning and engineering design is increasingly being conducted in 3D. New surveying methods such as Lidar scanning, unmanned aerial systems, and ground penetrating sensors are capable of providing previously unheard of capabilities to capture below-ground, indoor, and above ground assets in three dimensions. This presentation will demonstrate how resulting building information models (BIM), from both planned and built sites, can serve as foundational datasets supporting multiple objectives within an agency's asset management program.

This presentation will provide a case study of the integration of a 3D BIM model with a Computerized Maintenance Management System (CMMS) and electronic O&M manual. Benefits include the integrating planning, creation, and operations and maintenance portions of the asset lifecycle. Features of the project include creation of a BIM model from a point-cloud dataset, populating an eOM system with electronic O&M manuals, and creating bi-directional links as portals between the three systems.

Finally, we will look at a few of the data integration challenges and considerations related to asset management software for linear assets. As utilities compile data from CCTV inspections, GIS, and CMMS systems for use in decision support for O&M and capital project planning, a variety of data compatibility issues can arise. In order to unlock the power of these tools, utilities must consider how to efficiently use legacy data and gather new data. We will present case studies from DC Water's recent experience integrating sewer system data into their asset management database.

General Bio

Gage Muckleroy, PE, BCEE has more than 25 years of engineering and management consulting experience focused on water, wastewater and stormwater infrastructure. Gage is a Principal with GHD's North America Asset Advisory Group and serves as the technical lead for GHD's utility asset management engagements. Gage is also the Chair of the Chesapeake Water Environment Association's (CWEA) Asset Management Committee.

Jim Somerville is an enterprise systems architect with KCI, focusing on infrastructure asset management and emergency management for local and state organizations in the mid-Atlantic region. He is recognized for incorporating new paradigms in cloud computing, internet of things, and agile project management into traditional enterprise systems and processes.

Len Sekuler, PE is a project manager and technical leader with Arcadis, delivering asset management solutions to water and wastewater utilities throughout the country. He is a professional engineer and has an IAM certificate from the Institute of Asset Management.

Alireza Parhami, PE leads the Systems Assessment team for linear assets at DC Water, with responsibility for an $8M/year pipeline assessment program. In this role he works to advance DC Water's GIS and asset management database tools, and to leverage a wide variety of pipe condition assessment technologies to efficiently meet DC Water's O&M and asset renewal planning needs.

Nathan Boyd is a civil/environmental engineer with OBG (part of Ramboll). He currently works on DC Water's Sewer Program and is engaged in a variety of asset management, GIS, condition assessment, and sewer rehabilitation projects. He graduated from Southern Polytechnic State University with high honors in 2015.

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Chesapeake Water Environment Association

Register online:
www.ChesapeakeWEA.org

Questions? Please contact:
Marlou@ChesapeakeWEA.org

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