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The Water Resources Utility of the Future

I recently attended the National Association of Clean Water Agencies (NACWA) 2013 winter conference, which was held February 3-6 in Miami. The theme of the conference was "Tomorrow's Clean Water Utility: Is the Future Already Here?"

At the conference, which was attended by over 250 wastewater utility professionals from across the United States, NACWA, the Water Environment Research Foundation (WERF), and the Water Environment Federation (WEF) released their latest publication, *Water Resources Utility of the Future: Blueprint for Action*.

Work on this document began in September 2012 and was overseen by a joint steering committee made up of three representatives from each of the three organizations and by a task force of 49 experts representing a broad cross-section of their members. The steering committee ensured that the report remained both targeted and comprehensive, while the task force provided data, input, editing, and insight throughout the drafting process. The document was placed on a fast track to ensure that "utility of the future" (UOTF) issues are front and center as the 113th Congress and incoming Administration develop their environmental priorities.

The audience for this document, however, is broader than just federal policy makers and includes local utility managers, private sector interests, state and local governments, and many others within the clean water, drinking water, energy, and agricultural communities.

It was noted that the report is a living document and that new ideas under the UOTF umbrella will continue to be added. The document represents a diverse realm of resource recovery activities and innovative approaches, many of which were never contemplated and likely could never have been foreseen when the Clean Water Act was enacted 40 years ago.

This report underscores the need for all water sectors to work together to shape the future landscape of clean water. It also highlights the type of collaboration that is needed to ensure a sustainable future that minimizes waste, maximizes resources, pro-

protects the ratepayer, improves the community, and embraces innovation in an unprecedented manner.

The water resources aspect of UOTF will transform the way traditional wastewater utilities view themselves and manage their operations. They will also transform the relationships with their communities and their contributions to local economies. The report presents the clean water industry's vision for the future, as well as a series of actions that will help deliver that vision.

Today's utilities have evolved and matured over the last several decades. Originally technical engineering entities, their leaders now embrace sophisticated management approaches and have developed innovative finance capabilities. These utilities have accomplished many of their goals—they are operationally efficient collectors and managers of household and industrial wastewaters and protectors of the quality of the nation's waterways.

In recognition of these achievements, utilities are increasingly renaming themselves "water resources recovery facilities" or "clean water agencies." The most progressive of today's water agencies are defining the UOTF. Instead of solely collecting and transporting wastewater as far downstream as possible to central treatment plants where wastes are cleansed to meet permit limits prior to discharge to waterways, the UOTF transforms itself into a manager of valuable resources, a partner in local economic development, and a member of the watershed community seeking to deliver maximum environmental benefits at the least cost to society. It does this by:

- ◆ Reclaiming and reusing water (for cooling, groundwater recharge, irrigation, etc.).
- ◆ Extracting and finding commercial uses for nutrients in biosolids and other constituents (nitrogen, ammonia, phosphorus, metals, etc.).
- ◆ Capturing waste heat and latent energy in biosolids and liquid streams.
- ◆ Generating renewable energy by using its land and other horizontal assets (photovoltaic and wind turbine installation).
- ◆ Using green infrastructure to manage wet weather flows, but also to improve the urban quality of life more broadly.

These actions benefit the utility in the form of reduced costs and increased revenues. They also deliver environmental, economic, and social benefits, both locally and nationally. There are signs that the market for innovation in the clean water sector is beginning to bear fruit after many years of trial and error. But, resistance to change is strong, reinforced by regulatory pressures, strained utility budgets, political reluctance to raise rates, customer confusion about the benefits of innovation, skyrocketing demands for capital competing for every dollar, risk and regret associated with technology failure, and venture capital looking elsewhere for faster and safer returns.

This new document examines these barriers, suggests incentives for innovation, and compiles a series of actions that could change the dynamics of our industry. It asks the U.S. Congress to take a major legislative role to assure that the Clean Water Act and other authorizing statutes fully support public and private enterprises across the clean water industry as they make the transition to a UOTF. Some actions call for legislative or regulatory changes to sanction watershed-based solutions to the nation's biggest water quality challenges. These would enable all entities with water quality contaminants to work together. Other actions call for modest changes to encourage water reuse and water conservation where it is feasible, needed, and cost-effective, and for similarly incremental changes to enable clean water agencies to fully recover waste heat and energy, and to produce clean, renewable energy at their facilities.

Other actions call for stronger support for green infrastructure from within the sector that could help go beyond cost-effective stormwater control to frame a broader conversation about fundamental urban design. New models for integrated watershed planning would engage the public, civic leadership, drinking water utilities, and infrastructure professionals to make better decisions.

Finally, the report makes a strong case that clean water agencies must continue to strengthen their institutions through productivity improvement processes and decision

support tools, and sustainability-driven environmental management systems. The UOTF will increasingly use social media and smart technology to interact with customers and deliver services more efficiently. It will standardize operator certification to create a better-trained and more mobile workforce.

These approaches will help to ensure that all sectors perform at peak levels so that external resources will have the greatest impact.

If you would like more information on this topic please visit www.nacwa.org, www.wef.org, or www.werf.org.

Pallansch to Speak at April Conference



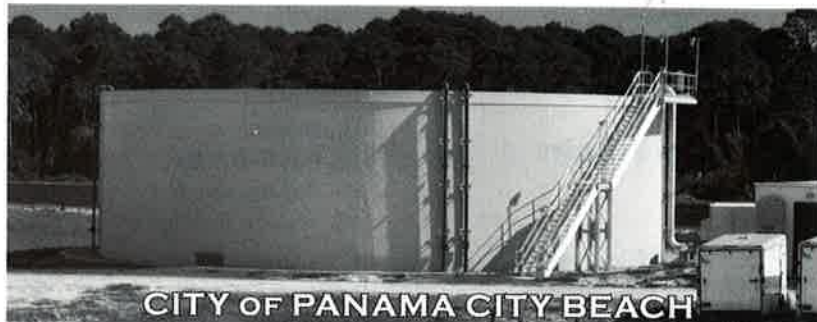
Karen Pallansch, a member of the WEF 2012-2013 board of trustees, will address FWEA members at the Association's 2013 annual meeting and awards ceremony at the Florida Water Resources Conference in Orlando on April 30.

Karen is the chief executive officer of Alexandria Renew Enterprises in Alexandria, Va., (formerly known as the Alexandria Sanitation Authority). Her agency provides wastewater treatment services to approximately 119,000 city customers and wholesale services to portions of Fairfax County. She is responsible for the overall accountability of the operations, maintenance, fiscal, regulatory, and personnel functions of the public utility. She will bring greetings from the WEF board and will brief FWEA members on a number of Federation initiatives. ◇

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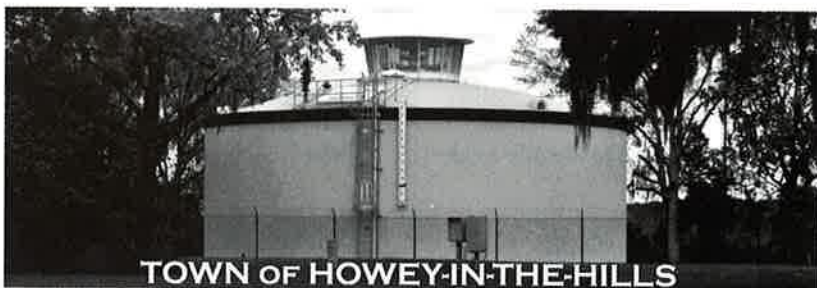
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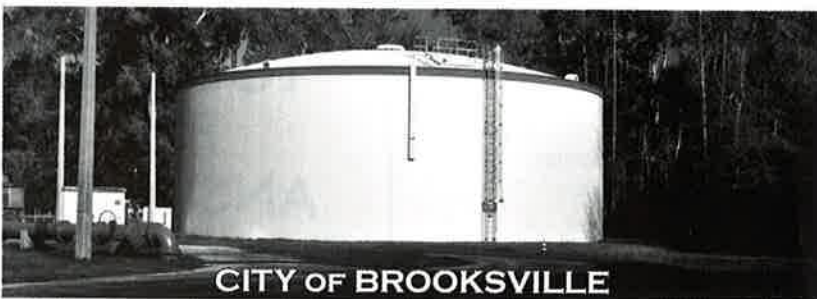
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