



MEMORANDUM

TO: Water Resources Utility of the Future Task Force

FROM: Water Resources Utility of the Future Steering Committee Staff Liaisons:

- Adam Krantz, National Association of Clean Water Agencies (NACWA)
- Matt Ries, Water Environment Federation (WEF)
- Lauren Fillmore, Water Environment Research Foundation (WERF)

DATE: March 20, 2014

RE: WATER RESOURCES UTILITY OF THE FUTURE: UPDATES, ACTION ITEMS AND NEXT STEPS

Overview

The National Association of Clean Water Agencies (NACWA), the Water Environment Research Foundation (WERF) and the Water Environment Federation (WEF) have continued to make significant progress on priorities set out in the [Water Resources Utility of the Future . . . Blueprint for Action](#) through research, advocacy, communications and new initiatives. The Staff Liaisons to the Steering Committee are pleased to present you with an update of collaborative UOTF efforts as well as efforts that each of the organizations is undertaking.

Additionally, NACWA, WEF and WERF, along with many other key water national and regional water sector organizations, are collaborating to host [Water Week 2014](#). There are a number of events planned for *Water Week 2014* that will highlight the organizations' UOTF efforts including the NACWA-WEF-WERF *National Water Policy Forum & Fly-In* (April 7-9), the *Water Infrastructure & Innovation Expo* (April 9), the kick-off briefing of the *Congressional Clean Water Caucus* (April 8), and the *Water Resilience Summit* (April 9-10).

Updates on UOTF Activities

NACWA

- **Congressional Clean Water Caucus:** NACWA's Congressional Clean Water Caucus was officially established in the 113th Congress in November by Representatives John Duncan (R-TN) and Timothy Bishop (D-NY). Rep. Duncan is a former chair of the House Water Resources & Environment Subcommittee and Rep. Bishop is the Subcommittee's current Ranking Member. As called for in NACWA's [Water Resources Utility of the Future . . . A Call for Federal Action](#), the bipartisan *Caucus* will bring focus to UOTF priority issues and advance cutting-edge technologies and innovative techniques and approaches in the water sector.

NACWA has started to work through its membership and UOTF partners to ensure that a broad array of Members of Congress join the *Caucus*. We encourage you to also reach out to your Member(s) of Congress asking them to join this Clean Water Caucus. NACWA has developed a [draft letter](#) that you can use to send along to your Representatives for this request.

The Caucus also plans to hold a series of Congressional Briefings to spotlight UOTF case studies, with the first to be held April 8 during *Water Week 2014*.

- **Energy Recovery:** NACWA will be collaborating on a study led by WERF on energy recovery from the incineration of biosolids.
- **Utility of the Future Legislation:** NACWA is formulating two legislative proposals to support and promote the UOTF. The Association is working to expand and rebrand the Green Project Reserve in the Clean Water State Revolving Fund (CWSRF) as the Technology Innovation & Resource Recovery Fund (TIRRF) to encourage the adoption of more environmentally effective and economically efficient technologies. American Rivers has agreed to support this proposal, and NACWA has met with Senator Sheldon Whitehouse (D-RI) to discuss championing this proposal in the Senate.

Additionally, NACWA has developed legislative language to amend existing, and establish new, federal tax incentive programs to attract private capital to clean water agencies who are undertaking innovative approaches and projects. A legislative proposal for tax incentives is anticipated to be completed by the end of the calendar year.

- **Water Resilience Summit:** Following a number of discussions with key officials at EPA, including a meeting in October 2013 with Administrator Gina McCarthy, NACWA and the Association of Metropolitan Water Agencies (AMWA) will be collaborating to co-host a *Water Resilience Summit* during *Water Week 2014*, April 9-10. The invitation-only *Summit* will bring together a select number of key municipal, state, federal, and industry leaders to explore the climate resilience challenges that water and wastewater utilities face and develop viable collaborative approaches and solutions.
- **Media Coverage and Additional Outreach:** In addition to the efforts of NACWA, WERF and WEF, media outlets are picking up on the UOTF concept. A complete archive of UOTF media coverage can be found on NACWA's [website](#) and NACWA, WEF and WERF are working to expand additional outreach to increase awareness of, and support for the UOTF concepts.

WEF

- **Nutrient Roadmap:** WEF, in conjunction with the Johnson Foundation at Wingspread and the Environmental Defense Fund, convened an expert meeting in October 2013 to gather input and inform the format of the Nutrient Roadmap, a follow-up to the Energy Roadmap released in 2013. The group consisted of utility representatives, academics, NGOs, and participants from NACWA and WERF to provide input on a path towards smarter nutrient management. The Nutrient Roadmap Matrix draft is being reviewed and will be released in the next few months with a guidance document to be published in early 2015.

- **Utility of the Future for Collection Systems:** WEF staff will present “The Water Resources Utility of the Future How it will Affect the Collection System Managers of the 21st Century” on an invited panel at the 2014 WEF Collection Systems Conference in Baltimore March 14.
- **Automation for the Utility of the Future:** The WEF Automation and Information Technology Committee is working with the ISA Water/Wastewater and Automation Controls Symposium to jointly develop programming for the ISA conference in August and WEFTEC in September/October on “Automation Needs for the Utility of the Future” and “Big Data Needs for the Utility of the Future.” Tom Sigmund from NEW Water and the UOTF Task Force will be keynoting the August conference.
- **Biogas for Fuel Cell Applications:** In March, WEF members will participate in the Argonne National labs workshop on gas cleanup for fuel cell applications. A workshop report for public review will be produced and distributed afterwards.
- **Operator of the Future:** Last year a Workgroup was formed to *develop an overarching and forward-looking WEF strategy for supporting the professional development of trained and credentialed operators so that they have the necessary skills to meet current and anticipated future utility needs*. The Workgroup presented draft findings to the WEF Board of Trustees in January and is proceeding towards the strategy finalization. Part of the strategy will entail a focus on building the skills needed to operate the UOTF and further prioritization of efforts via input from utility managers.
- **Creating the Space to Innovate:** As part of the Leaders Innovation Forum for Technology (LIFT) effort with WERF, WEF is leading an effort to address regulatory/policy mechanisms specifically in the context of driving innovation. We will be convening an Advisory Group and a series of Focus Groups over the next year with key stakeholder groups (e.g. utilities; local, state, and federal regulators; technology providers) and a final Expert Stakeholder Workshop resulting in an action plan by early 2015.
- **Public Private Partnerships:** WEF collaborated with EPA on their “Faster Greener Cheaper” webcast series in December to deliver a 2-hour webcast, “Building Green Infrastructure, Jobs, and Wealth: The Prince George’s County, Maryland Stormwater Retrofit Public Private Partnership (P3) Model.” The webcast was delivered to 45 states and over 1300 sites.

WERF

- **Energy Recovery:** The WERF-led, WEF and NACWA co-funded, analysis of the potential for energy recovery (both as heat and power) based on the existing work with Black & Veatch on net-zero energy solutions for water resource recovery facilities is complete. The analysis provides data on the potential for energy production and conservation for clean water agencies through various technology pathways, estimates the capital needs for associated infrastructure improvements to produce renewable energy, and identifies where the wastewater sector is cost competitive with other forms of clean energy, such as solar and wind.

This spring 2014, WERF, WEF and NACWA will be discussing these results with DOE and EPA in an effort to provide input into the DOE Program Plan and to ensure that energy-water nexus issues are a core part of DOE and EPA collaborative efforts going forward.

- **Advancing Innovation:** To move innovation into practice, WERF and WEF's Leaders Innovation Forum for Technology (LIFT) is expanding their role by holding Technology Scans which involve identification and evaluation of innovative technologies for their readiness level and review of inventor's claims. Selected vendors/inventors will be invited to present their ideas to LIFT audiences which are appropriate to their technology readiness level, to garner interest in early adoption of the technology. Early focus areas under the LIFT program include energy recovery from wastewater and biosolids, enhancing anaerobic digestion, advancing phosphorous recovery technologies and developing short-cut nitrogen removal process advances to enable energy efficient nutrient removal.