Wellspring

Presented by

pureblue

Smart Water - Smart Solutions

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Peer to Peer Table Discussions Summaries

Discussion Overview

Table	Topic	Problem Overview
1	Intelligent digital solutions for stormwater and wastewater management	• Increasing inspection costs • Ensuring proper AMI implementation • Lack of city-wide digital network planning
2	Innovative solutions in stormwater, green infrastructure, and wastewater considering longer-term operation and maintenance	• Green Stormwater Infrastructure (GSI) effectiveness is unknown • Uncertainties around O&M of GSI • Aging workforce and infrastructure
3	Stormwater and wastewater as a resource, and associated market and policy challenges	• Clean water pricing and actual costs are not aligned • Mismatch in demand and delivery due to seasonal variability and geography
4	One Water: systems thinking, watershed-scale approaches, and opportunities for trading, cost optimization, and innovation	• Lack of leadership to transition agendas to actions in integrated water management • Regulatory variations between jurisdictions • Overly centralized systems

Topics were defined in consultation with table leads in advance of the conference, and participants selected which specific topics they would contribute to on the day. Four final topics were addressed across six working groups, presented in this report.

TABLE 3: Stormwater and wastewater as a resource, and associated market and policy challenges

Description: A paradigm shift is underway to manage wastewater as a resource to benefit from, rather than a problem to avoid. This requires innovation at the site level through to state and national policy change. Discussion points for this group might include the engineering and technologies to recover energy and materials without impacting treatment efficiency, the economics of resource recovery, and/or regulatory barriers to marketing recovered materials, etc.

Lead: Dustin Atchison

Priority needs (problem) and opportunities (solutions) identified:

Problem 1 - Clean water pricing and actual costs are not aligned: There is a discrepancy between "the price of water versus the actual cost of using that water as a resource", and then ensuring that this is affordable and equitable. While there is a demand for water and market mechanism for payment, pricing is not commensurate with all costs over the long-term. This results in some of the following problems:

A) While in the past federally funding was available to address these issues, this is not as commonplace today. As a result, there are issues with the affordability and equity of access to water. A solution discussed included getting more state level funding. Another suggestion was to address pricing and costs, to ensure true cost-recovery over the longer-term.

B) There is a common "misunderstanding among the public about the value of water" and many people do not realize that the price of water "is more than just the cost [they pay in] their bill." A solution discussed included targeted advertising campaigns to change this perception of water to a "community resource" with understanding of its true value and associated costs. A second consideration was to make the resource more profitable and get greater public understanding and support for the "value-tie" to necessary investments.

Problem 2 - Mismatch in demand and delivery due to seasonal variability and geography: There are technical and geographic challenges that come along with water treatment and distribution. These include the timing of water flow, water rights, and geographic location. This results in some of the following problems:

A) Since there isn't always a consistent and reliable demand for water, there can be a lack of supply during drier times and a lack of storage during wetter times. A solution discussed included:
   - Integrated technologies and infrastructure to allow for better management of storage and use of water at the times when needed (e.g. storing excess water during wet winters for later use during dry summers).

B) One of the easiest and most cost-effective ways to treat water is at the downstream end. However, in order to use this water, it must then be distributed upstream which requires additional work. A solution discussed included:
   - Increase decentralization so that water does not have to be moved as far, lowering costs.

Other challenges/areas of opportunity:

- The cost of water legal pricing limits;
- The need for a dependable demand for products, and
- Resolving issues with water rights.

What – Opportunities 6 months, 2 years, 5 years, and beyond:

The group identified actions that together can address a number of key challenges. Actions where identified over the 6 months to 5 year timeframe addressing challenges around pricing and policy change rather than those around the need for greater decentralization of infrastructure (respectively, A and B above).

6 Months:

- Explore more public/private partnerships. Use this potential partnership and project collaboration initiative defined in this group as a way to see "how you possibly try out some of these examples" of the various mentioned solutions. A list of potential identified partnerships is listed following.
- An ongoing Innovation Challenge to support piloting and adoption of new approaches and generate case studies and trust in the community (e.g. a system that is "sub-centralized").
- Collect case studies of stormwater reuse in the northwestern United States as "there are a lot of good examples throughout the country, but the northwest becomes a little bit of question mark about where that demand actually is…collecting those best examples could generate a lot of better ideas."

2 Years:

- Conduct new case studies, and use existing studies, to better understand water rights, especially in regards to "the ability to reuse water that lands on your site or that generates from your site." Propose new policies in the next legislative cycle in 2 years.

6 months - 5+ years:

- Explore better water pricing options and understand the limitations there are on water pricing. This could be done through 6-month studies that look at "our options for pricing water, what are the limitations on actually calculating the cost of water, and what the true cost of water is." This could then lead to "a policy change in the 2- to 5-year window."

Who, how and when - Key collaborators and venues:

Identified potential collaborators (specifically in regards to exploring public-private partnerships):

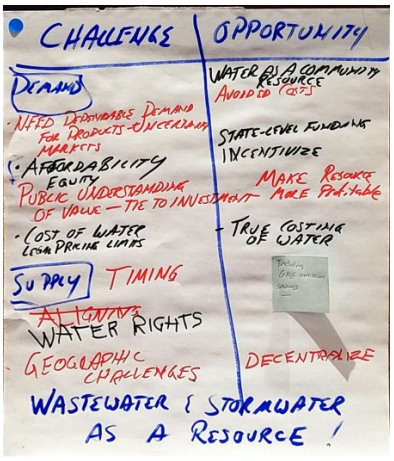
- Department of Defense;
- Publicly traded corps;
- Impact investors;
- NGOs;
- Utilities;
- Regulatory agencies;
- Entrepreneurs;
- Tribes, and
- Legislators.

Table 3 participants, led by Dustin Atchison, discussed wastewater and stormwater as a resource, with special emphasis on market and policy challenges.

Annex 1. Roundtable notes presented in plenary

TABLE 3: Stormwater and wastewater as a resource, and associated market and policy challenge

Round 1



Round 2