Opportunities and Challenges in Water Infrastructure

Radhika Fox
CEO, US Water Alliance
December 14, 2017
About the Alliance

Educate

Accelerate

Celebrate

www.uswateralliance.org
# Water is a Growing Global Risk

## Global Risks Report 2017

<table>
<thead>
<tr>
<th>Top 10 risks in terms of Likelihood</th>
<th>Top 10 risks in terms of Impact</th>
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<tbody>
<tr>
<td>1. Extreme weather events</td>
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<tr>
<td>3. Natural disasters</td>
<td>3. Water crises</td>
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<td>4. Terrorist attacks</td>
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<td>5. Data fraud or theft:</td>
<td>5. Failure of climate-change mitigation and adaptation</td>
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<td>6. Cyberattacks</td>
<td>6. Large-scale involuntary migration</td>
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<td>7. Illicit trade</td>
<td>7. Food crises</td>
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<td>8. Man-made environmental disasters</td>
<td>8. Terrorist attacks</td>
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<td>10. Failure of national governance</td>
<td>10. Unemployment or underemployment</td>
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Domestic Water Challenges

Source: Columbia Water Center
The Challenge

Food Grows Where Water Flows
The Challenge
The Challenge
The Challenge
The Challenge
The Challenge

About 1 million Americans without running water. 3 million without power. This is life one month after Hurricane Maria.

Costs for Rural Towns Surge after Hurricane Harvey Hits Water Systems

In Patton Village, some residents went weeks without access to clean drinking water, and now their sewer system is running on a “Band-aid.”
One Water for America
Listening Sessions
# Seven Big Ideas

1. **Advance regional collaboration on water management**

2. **Accelerate agriculture-utility partnerships to improve water quality**

3. **Sustain adequate funding for water infrastructure**

4. **Blend public and private expertise and investment to address water infrastructure needs**

5. **Redefine affordability for the 21st century**

6. **Reduce lead risks, and embrace the mission of protecting public health**

7. **Accelerate technology adoption to build efficiency and improve water service**

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U.S. Water Utilities

WATER COOPERATIVE, INC.

Source:
EPA SDWIS Federal Reports Search
https://www.epa.gov/epawater/sdwis
Cartography by:
Bill Carr & Steven Oliver
Created: 10/28/2017

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Idea in Action:

California State Water Resources Board

- Authority to incentivize or even mandate physical or managerial consolidation
- Example: unincorporated area in Tulare County
- Droughts dried up wells in majority Latino community; state funded project to connect residents to water system
Big Idea #2
Accelerate Agriculture-Utility Partnerships to Improve Water Quality:

**Total Phosphorus**
- Forests and wetlands: 3%
- Deeply-weathered loess: 14%
- Instream channels: 13%
- Manure (total): 5%
- Fertilizers (farm): 16%
- Urban areas: 27%
- Wastewater treatment plants: 22%

**Total Nitrogen**
- Atmospheric deposition: 7%
- Fixation and other legume sources: 7%
- Manure (confined): 26%
- Fertilizers (farm): 41%
- Urban areas: 10%
- Wastewater treatment plants: 9%
Idea in Action:
State of Wisconsin

- Adopted watershed scale adaptive management rules
- Enables utilities and farmers to work together on land management solutions to meet nutrient reduction goals
- Flexibility to show results over a multi-year time horizon
Big Idea #3
Sustain Adequate Funding for Water Infrastructure

Figure 3
Federal Contribution to Total Infrastructure Spending

Source: CBO 2015.
Idea in Action:
State of Texas

- Created State Water Implementation Fund for Texas to provide assistance for projects in the state water plan
- Uses low-interest loans, extended repayment, payment deferral, and incremental repurchase terms
Big Idea #4
Blend Public and Private Expertise and Investment to Address Water Infrastructure Needs
Idea in Action:
West Coast Infrastructure Exchange

- Partnership between California, Oregon, Washington, British Columbia
- Performance-based public-private partnership infrastructure model
- Unbiased source of information
Big Idea #5
Redefine Affordability for the 21st Century

- Coastal lands: Gulf Coast
- Disinvested urban areas: Great Lakes region
- Rural areas: Appalachia region and the South
- Unincorporated areas: Central Valley of California
- Native American lands: parts of Alaska
- Appalachian region and the South

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Idea in Action:

North Carolina Department of Environmental Quality

- Program targets grant dollars to communities that need it the most
- Developed a definition of affordability that is more precise than EPA, and benchmark communities
- More with less: target limited funds based where need is greatest
Big Idea #2
Reduce Lead Risks, and Embrace the Mission of Protecting Public Health
Idea in Action:
Wisconsin Department of Natural Resources

- Program offers funds to municipalities working to remove lead service lines
- Uses Principal Forgiveness Funds from the Drinking Water SRF to pay for LSL removal in homes and schools
- Cities can add their own criteria on top of state factors
Big Idea #7
Accelerate Technology Adoption to Build Efficiency and Improve Water Quality
Idea in Action:
Blue Ribbon Commission for Onsite Reuse

- A Guidebook for Developing and Implementing Regulations for ONWS
- Model State Regulation
- Model Local Ordinance
- Model Program Rules
- Technical Appendix

Available for download at: www.uswateralliance.org/initiatives/commission
## Seven Big Ideas

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Save the Date!

One Water Summit 2018
July 10–12, 2018
Hyatt Regency Minneapolis

Presented by the US Water Alliance
With local host partner the Metropolitan Council
Thank you!

For more information:

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