



National Blue Ribbon Commission  
for Onsite Non-potable Water Systems



## Highlights and Accomplishments

### March 2016–April 2019

In March 2016, the US Water Alliance and the San Francisco Public Utilities Commission (SFPUC) made a joint commitment at the White House Water Summit to accelerate onsite water reuse projects across the country. By August, the two organizations launched the **National Blue Ribbon Commission for Onsite Non-potable Water Systems**. Shortly thereafter, The Water Research Foundation (WRF) joined the effort as a national funding, convening, and research partner. The Commission is comprised of 32 members from public health agencies and water/wastewater utilities representing 11 states and the District of Columbia. The Commission is chaired by the SFPUC.

The National Blue Ribbon Commission was inspired by key recommendations from the Innovation in Urban Water Systems meeting, hosted by the SFPUC in May 2014 with support from The Water Research Foundation (WRF). This meeting was the first national convening of public health and water leaders to share knowledge on onsite non-potable water systems (ONWS) and discuss ways to help communities overcome policy barriers to implementation. In 2016, the Commission was then established to advance best management practices to support the use of ONWS for individual buildings or neighborhoods/districts at the local scale through four main goals:

- Serve as a forum for collaboration and knowledge exchange;
- Craft guidance and frameworks for ONWS regulation;
- Develop case making resources for water utilities based on best practices and lessons learned in the design, development, integration, and operation of ONWS; and
- Identify additional research needs in the field.

**This document provides an overview of the Commission's accomplishments to date, and in fulfillment of the White House Water Summit commitment.**

## Peer-to-Peer Exchange Highlights

From 2016 to 2019, the Commission convened five in-person working group meetings:

- San Francisco, CA: December 13–14, 2016
- Portland, OR: April 25–26, 2017
- Santa Monica, CA: September 6–8, 2017
- Seattle, WA: June 6–7, 2018
- Denver, CO: April 11–12, 2019

These meetings were an important peer-to-peer exchange opportunity for Commissioners on the status and progress of ONWS implementation. The in-person exchanges allowed for valuable learning from peers, as well as opportunity to openly discuss some of the challenges of developing an effective ONWS program. Commissioners used meetings to review existing work and products being developed by the group (see publications below). Meetings also included presentations by other key experts in the field (such as the US EPA, the US Army Corps of Engineers, etc.), as well as field site visits to expand working knowledge of ONWS and see projects on the ground in different communities.

[National Blue Ribbon Commission visits rainwater harvesting on the Gates Foundation rooftop in Seattle, WA \(2018\).](#)



## Publications

The National Blue Ribbon Commission researched and developed five reports and documents. Each of these were discussed, reviewed, and vetted during the peer-to-peer exchange meetings. All were funded by The Water Research Foundation, and managed and published by the US Water Alliance and the SFPUC.



### ***Making the Utility Case for Onsite Non-potable Water Systems*** (2018)

A report to help utilities and other stakeholder understand the benefits and drivers behind onsite reuse, how other utilities have addressed potential challenges, and best practices for the ongoing operation of these systems.

### ***A Guidebook for Developing and Implementing Regulations for Onsite Non-potable Water Systems*** (2017)

To help develop water quality criteria and standards for ONWS and present pathways for implementation and management of these systems at the local and/or state level.

### ***Model State Regulation for Onsite Non-potable Water Programs*** (2017)

Provides template state legislation for establishing regulatory programs for ONWS. To be used with the *Guidebook*.

### ***Model Local Ordinance for Onsite Non-Potable Water Programs*** (2017)

Provides template local ordinance for establishing regulatory programs for ONWS. To be used with the *Guidebook*.

### ***Model Program Rules for Onsite Non-potable Water Systems*** (2017)

Provides specific details on implementation of an ONWS, including system design criteria, permitting, cross-connection control, reporting, notification, and enforcement. To be used with the *Guidebook*.

## Research Accomplishments

The National Blue Ribbon Commission has made significant research contributions and advanced policies and regulations for onsite non-potable water reuse over the years. Leveraging two years of funding from The Water Research Foundation (WRF), the Commissioners participated in the development of the following research:

### ***Guidance Manual and Training Materials for Onsite Non-potable Water Systems*** (2019, *anticipated*)

Develops a design and permitting training for onsite non-potable water systems to identify the skills and knowledge required to design and permit treatment systems that meet the risk-based water quality standards. This project is managed by WRF.

### ***Research Agenda for Onsite Non-Potable Water Systems*** (2017, *unpublished*)

Articulates a research agenda to identify research needs to advance the field of onsite reuse and identify future project opportunities for the Commission.

### ***Risk-based Framework for the Development of Public Health Guidance for Decentralized Non-potable Water Systems*** (2017)

This landmark report establishes scale-appropriate water quality criteria and monitoring for ONWS. Many Commissioners participated on the Stakeholder Committee in the development of this research study. The research was funded by WRF and led by the National Water Research Institute (NWRI). WRF project number [SIMW10C15](#).

### ***Blueprint for Onsite Systems: A Step-by-Step Guide for Developing a Local Program to Manage Onsite Water Systems*** (2014)

Describes ten key steps for considering and implementing an ONWS program. Several Commissioners participated in the development of this guide, which pre-dates the National Blue Ribbon Commission, and have since leveraged the research effort for future work. Published by SFPUC and WRF.

It should be noted that although the National Blue Ribbon Commission operated within a two-year formal partnership between the US Water Alliance and WRF, it leveraged over four years of investment from the research foundations, as well as built upon many more previous years of research (including the robust [Decentralized Water Resources Collaborative](#) and findings from the SFPUC's May 2014 [Innovation in Urban Water Systems](#) meeting).

## Policy Impacts

As a result of the peer exchange, joint policy development, and rigorous research, there has been a shift in the perspective of many participating public health regulators who now have the appropriate framework and tools to develop regulations. California, Colorado, Minnesota, Oregon, Washington, and Hawaii are advancing regulations or policies supporting onsite reuse, while others including Texas and Alaska are considering similar steps forward.

- **San Francisco:** Following the publication of the *Risk-Based Framework for the Development of Public Health Guidance for Decentralized Non-potable Water Systems*, San Francisco updated its [Non-potable Water Program standards](#) to align with the risk-based water quality standards recommended from the report.
- **Minnesota:** Minnesota Department of Public Health has moved forward with guidance for onsite non-potable water systems. A report was published in March 2018 [Advancing Safe and Sustainable Water Reuse in Minnesota](#). Recommendations from Minnesota's report include adopting the risk-based water quality approach.
- **Colorado:** In August 2018, Colorado Department of Public Health and Environment updated [Regulation #84](#), which regulates reclaimed water use, to allow localized non-potable water systems to treat onsite wastewater for toilet flushing and irrigation. Colorado adopted a risk-based water quality approach for localized water reuse systems.
- **California:** In September 2018, California signed into law [Senate Bill 966](#), which directs the State Water Resources Control Board to establish risk-based water quality standards for onsite non-potable water systems. The SFPUC collaborated with Senator Scott Wiener to develop the legislation. The work that's been accomplished to

National Blue Ribbon Commission inspects the Hasslo & 8th Ecodistrict's onsite water recycling in Portland, OR (2016).



date by the National Blue Ribbon Commission will support the state's development of the risk-based water quality standards.

- **Washington:** Washington State is moving forward with introducing legislation, based on California's SB 966. The proposed legislation directs the state to develop risk-based water quality standards for onsite non-potable water systems.
- **Oregon:** Oregon is moving forward with introducing legislation, based on California's SB 966. The proposed legislation directs the state to develop risk-based water quality standards for onsite non-potable water systems.
- **Hawaii:** Hawaii is moving forward with introducing legislation directing the state to develop rules for onsite non-potable water systems based on the research completed to date by the National Blue Ribbon Commission.
- **Texas and Alaska:** These states have expressed conceptual interest in adopting standards for onsite non-potable systems that align with the risk-based public health guidance.

## Education and Outreach

While the National Blue Ribbon Commission has operated as a tight-knit collaborative of public health agencies and water/wastewater utilities, the influence and outreach has been much broader. The Commission has served as an example and inspiration, shifting the conversation on non-potable water reuse nationwide. The Commission's work has been featured on numerous occasions and reached a wide audience. Some examples include:

## Webinars

- "Using Onsite Water Recycling Systems to Transform Water Management" (2018), *Water Reuse Association*
- "Making the Utility Case for Onsite Non-potable Water Systems" (2018), *US Water Alliance*
- "An Introduction to Onsite Water Reuse" (2017), *US Green Building Council*, Best in the West webinar series
- "Developing Policy & Programs to Regulate Onsite Non-potable Water Systems (OWNS)" (2017), *US Water Alliance*
- "Recent Findings on Developing Public Health Guidance for Decentralized Non-Potable Water Systems" (2017), *Water Reuse Association*

## Conferences/Presentations

- “Expanding Your Supply: The Onsite Resource Revolution is Here,” at *WaterNow Alliance*, in Austin, TX (2019)
- “Making the Case for Decentralized, Non-potable Water Reuse,” at *One Water Summit* in Minneapolis, MN (2018)
- “Integrated Assessment of Decentralized Non-potable Water Systems,” at *WRF’s Research Conference* in Atlanta, GA (2018)
- “The Shift to One Water: Where Research Affects Policy,” at *Carnegie Institute for Peace, Environmental Movements Lecture* in Washington, D.C. (2018)
- “About the National Blue Ribbon Commission,” “Proposed Regulatory Approaches,” and “Making the Utility Case for Onsite Systems” at *WRF’s Non-Potable Onsite Water Systems Workshop* in Beverley Hills, CA (2017)
- “One Water: Coordination Efforts for Sustainable Communities,” at *American Planning Association (APA) Tuesdays* in Washington, D.C. (2017)
- “The Future of Designing with Water” at *Greenbuild* in Los Angeles, CA (2016)
- “10 Steps to Developing a Program for Water Reuse,” *CWEA and WRF’s Onsite Wastewater Reuse Workshop* in Dublin, CA (2016)

Paula Kehoe (SFPUC) and Danielle Mayorga (US Water Alliance) present on model regulations and making the utility case at WRF’s Onsite Workshop in Beverly Hills, CA (2017).



## Other Publications

- “Decentralized Water Reuse: Implementing and Regulating Onsite Non-potable Water Systems” (2019), *American Society of Civil Engineers’ (ASCE) Journal of Sustainable Water in the Built Environment: Special Collection on Onsite and Decentralized Wastewater Management Systems*.
- *Design Professional’s Practice Guide for Integrating Onsite Water Use & Reuse* (2018), William Worthen J. Foundation.
- “Onsite Non-potable Water Systems Are Taking the Country by Storm, But What Are They?” (2017), *Forbes Magazine Online*.

**For more information, visit:**

<http://uswateralliance.org/initiatives/commission>

<http://www.sfwater.org/iuws>

**The National Blue Ribbon Commission includes representatives from the following institutions:**

- San Francisco Public Utilities Commission (Chair)
- Alaska Department of Environmental Conservation, Division of Water
- Arizona Department of Environmental Quality
- Austin Water Utility
- California State Water Resources Control Board
- City of Eagan, Minnesota
- City of Santa Monica, California
- Colorado Department of Public Health and Environment
- County of Los Angeles Department of Public Health
- Denver Water
- District of Columbia Department of Energy & Environment
- Florida Department of Health, Miami-Dade County
- Hawaii State Department of Public Health
- Honolulu Board of Water Supply
- LA Sanitation, City of Los Angeles
- Los Angeles Department of Water and Power
- Metropolitan Council Environmental Services
- Metropolitan Water Reclamation District of Greater Chicago
- Miami Dade Water and Sewer Department
- Minnesota Department of Health
- New York City Department of Environmental Protection
- Oregon Department of Environmental Quality
- Portland Water Bureau
- San Francisco Department of Public Health
- Seattle Public Utilities
- The Water Research Foundation
- US Army Corps of Engineers, Engineering Research and Development Center
- US Environmental Protection Agency, Office of Research and Development
- US Environmental Protection Agency, Office of Science and Technology, Office of Water
- US Water Alliance
- Washington State Department of Health