

NATIONAL WATER REUSE ACTION PLAN



WRAP QUARTERLY UPDATE April–June 2024

A Message from Bruno Pigott, Acting Assistant Administrator of the EPA's Office of Water



I have worked at the cross-section of public service and water policy for more than 30 years, and one of my objectives is to share my appreciation for water. We need water to achieve economic goals, meet green energy needs and keep up with population demands. But our nation's water supplies are at risk, and the complex water challenges that each community faces require creative solutions. Water reuse is helping us reimagine our water future. Although water reuse is a well-established practice, states are paving the way for innovative water reuse practices as they pursue a path for secure, affordable and clean water supplies.

I take pride in the EPA's efforts to face emerging and dynamic water-related issues through collaborations with states, federal agencies and water sector partners. I am particularly proud of the Water Reuse Program's leadership in the Federal Water Reuse Interagency Working Group and the National Water Reuse Action Plan. Together, these efforts have created a novel and successful platform for the identification of funding opportunities and the development of transformational tools and resources that advance reuse practices and support their safe implementation. In 2023, more than \$1 billion in federal funding was made available for water reuse-related infrastructure projects, and over \$120 million has been allocated for research since the start of the Water Reuse Action Plan. Part of the EPA's mission is to provide states with the latest science to help protect public health. Thus, in the coming year, the EPA plans to release a *State of the Science* report that provides state regulators with information for developing reuse-specific treatment targets.

I'm optimistic about the future of the water industry. I recently had the pleasure of attending the [Onsite Water Reuse Summit](#), hosted at EPA headquarters, where I was energized by discussions related to leveraging onsite water reuse to lessen local water scarcity challenges and combined sewer overflow events. We all play an important role in supporting communities as they develop safe and resilient water supplies, and it is a joy to lead the EPA's Office of Water in this endeavor. As an industry, we are more prepared than ever before to tackle complex challenges because we understand the importance of water and the collaboration and creativity required to reuse it consciously. Thank you, water sector partners, for your dedication to advancing water reuse practices with us!

Abbreviations are defined at the end of this document. See the [Online Platform](#) for more information about each action.

New WRAP Action

WRAP actions seek to advance water reuse planning and implementation across the country. Actions are organized by strategic theme to help focus efforts and inspire future action. We are pleased to announce that the following new action is now underway. To get involved or provide input, please email the action leaders using contact information from the [Online Platform](#).



Water
Information
Availability

Identify On-Field Water Reuse Opportunities for Water Produced in Colorado During Oil and Gas Operations ([Action 5.10](#), led by the **Colorado Produced Water Consortium**)

The Colorado Produced Water Consortium was established by the Colorado General Assembly to reduce the use of fresh water and increase the recycling of water produced during oil and gas operations. Consortium action leaders aim to provide information on how to best use produced water within, and potentially outside of, the oilfields in Colorado and in other states with oil and gas operations. As part of the action, leaders plan to compile regulatory, geological, legal and health data from state and federal agencies and create a visualization tool to support public outreach to and policy recommendations for other relevant consortiums, state agencies and federal agencies.

We welcome federal, state, tribal, local and water-sector partners to propose actions to advance water reuse. Ideas for new actions may be sent to waterreuse@epa.gov. For information about how to propose, lead or collaborate on a WRAP action, visit [this webpage](#).

Completed WRAP Action

One WRAP action was completed this quarter, demonstrating productivity and progress under the strategic theme of Policy Coordination. [Completed WRAP action summaries](#) are developed with action leaders and highlight impacts, lessons learned and potential future activities.



Policy
Coordination

[Incorporate Water Quality and Onsite Reuse Research into Codes and Standards for Premise Plumbing](#) ([Action 2.18](#)), led by **NBRC for ONWS** and **EPA**)

- There is a need to incorporate the latest science as well as risk-based framework treatment targets into codes and standards to safely advance ONWS. This action team engaged with NSF International to incorporate log reduction targets and credits into the latest version of the [NSF/ANSI 350 standard](#), worked with IAPMO and ICC to update building code documents for their next code cycle and developed proposed updates for the onsite water reuse codes with ICC. The team also engaged with GSA to update the [P100 standard](#) to better identify onsite water reuse standards in public buildings and engaged with ARCSA to update rainwater catchment standards to include log reduction targets, which will be incorporated into ARCSA/ASPE/ANSI [Standard 63](#): Rainwater Catchment Systems Plumbing Engineering. Action team members also led the *Onsite Water Reuse Summit: Integration of Science, Policy, and Operation for Safe and Effective Implementation*, where 200 attendees learned about new research, ways to finance onsite systems and lessons from treatment operators. See the onsite summit [summary notes](#) and [presentation slides](#) for more information.

IN CASE YOU MISSED IT

WRAP email updates highlight relevant water reuse activities and events. Monthly updates from this past quarter are available online:

- [April update](#)
- [May update](#)
- [June update](#)

This Quarter's WRAP Action Outputs and Activities

Visit the [Water Reuse Information Library](#) for a robust set of WRAP outputs and other water reuse resources.

Publications and Presentations

[The EPA Releases Onsite Water Reuse Summit Notes.](#)

This summary provides an overview of sessions from the Onsite Water Reuse Summit and compiles key points presenters and participants made related to experiences, research, goals and success stories. Presentation slides are available [here](#). Thank you to the NBRC for ONWS and WaterReuse for partnering with the EPA to host this event! ([Action 2.18: Incorporate Onsite Reuse Research into Codes and Standards for Premise Plumbing](#) and [Action 3.4: Develop Research and Tools to Support ONWS](#))

[The ReWater Center Publishes Second Potable Water Reuse Report—The Factors Shaping DPR Regulations in the United States.](#)

This report shares results from interviews with stakeholders across seven states—Arizona, California, Colorado, Florida, Oklahoma, Texas and Utah—to capture their perspectives on the development of state direct potable reuse regulations. Authors sought to understand location-specific factors that may contribute to regulation development in hopes of helping others undergo the process. ([Action 7.10: Implement the DoD-funded Water Reuse Consortium for Water Resiliency at Military and Municipal Facilities](#))

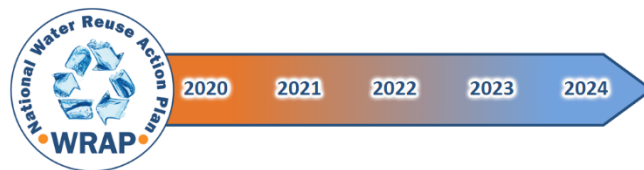
[Water Environment & Technology Features Article—Better Ways to Fill the Bottle.](#) The WRAP Action 5.7 team recently published a [white paper](#) that explores water reuse in the beverage industry, including issues related to stakeholder engagement, regulations, treatment and technology, along with solutions to advance water reuse practices at beverage manufacturing plants. This article highlights the white paper and calls for increased attention to water reuse in the beverage industry. ([Action 5.7: Identify Opportunities to Implement Water Reuse within the Beverage Industry](#))

Infrastructure Funding and Research Announcements

[The EPA Announces 2024 National Priority Funding Opportunity: Occurrence and Implications of De Facto Water Reuse on Drinking Water Supplies.](#)

Throughout the nation, many communities' drinking water supplies are directly influenced by the presence of treated municipal wastewater through the process of "de facto water reuse," where a drinking water supply contains a significant fraction of wastewater effluent, typically from upstream wastewater discharges. De facto reuse is a common practice, but additional research is needed to better understand potential human health risks and the interventions needed to mitigate those risks. This funding opportunity solicits innovative research to address the knowledge gaps on the impact, risk and mitigation of de facto reuse in drinking water sources across the United States. ([Action 7.12: Research De Facto Water Reuse: Grant Award](#))

[Reclamation Awards \\$179 Million for Large-Scale Water Recycling Projects.](#) Five recipients received a total of \$179 million through Reclamation's Large-Scale Water Recycling Projects Competitive Grants Program. The recipients, Metropolitan Water District of Southern California, city of Ventura, Los Angeles Department of Water and Power, Los Angeles Sanitation and Washington County Water Conservancy District, are the first to ever receive this award. ([Action 6.5: Develop Reclamation's Large-Scale Water Reuse Funding Opportunity](#))



The WRAP has:

- 72** Action Commitments
- 162** Action Leader & Partner Organizations
- 170+** Developed Resources

[DOE Announces \\$75 Million for NAWI](#). DOE's Deputy Secretary David M. Turk announced that the NAWI energy innovation hub will continue to convene industry and academic partners to examine the research needed to lower the cost and energy of desalination and water reuse technologies, as well as the technical barriers involved. This second five-year phase of NAWI will emphasize the reuse of a variety of wastewaters, increase focus on piloting integrated energy-efficient and decarbonized water systems and convene partners to optimize water supply management. ([Action 4.6: Implement and Manage the NAWI Energy-Water Desalination Hub](#))

[The EPA Publishes 2023 WIFIA Annual Report](#). In 2023, the EPA closed \$3 billion in WIFIA loans supporting water infrastructure in 10 states. Through these loans, communities and water systems are saving approximately \$1 billion, while project construction and operation are creating nearly 20,000 jobs. The WIFIA program selected more than 30 water infrastructure projects for future funding, five of which support water reuse. These projects result in 400 million gallons per day in water recycled, recharged or redirected for beneficial uses. Congratulations to the 2023 WIFIA recipients! ([Action 6.2B: Support and Communicate WIFIA Funding](#))

- [Monterey One Water, California](#) (\$76 million)
- [San Bernardino, California](#) (\$70 million)
- [Santa Cruz, California](#) (\$128 million)
- [Ventura, California](#) (\$63 million)
- [Yucaipa Valley Water District, California](#) (\$81 million)

[The Federal Water Reuse Interagency Working Group Hosts Webinar on Federal Funding Programs Available for Water Reuse](#). Various federal infrastructure funding programs support community and state water management and infrastructure funding needs, including water reuse. In this June 2024 webinar, representatives from across the federal government discussed their funding programs, application requirements and examples of previous water reuse projects funded under those programs. Watch the recording [here](#) and view the slide deck [here](#). A second webinar will be held later this year. ([Action 6.1: Compile Federal Funding Sources and Develop Interagency Decision Tool](#))

[The EPA Announces \\$39 Million to Modernize Infrastructure in Illinois with the Bipartisan Infrastructure Law from the Biden-Harris Administration](#). The EPA announced a \$39 million WIFIA loan to Bloomington and Normal Water Reclamation District in central Illinois. This WIFIA loan will help finance the district's Wastewater System Modernization and Rehabilitation Program, which will provide essential public health and environmental protections while supporting economic growth. With this loan, the district expects to save \$10 million and create about 250 jobs. It is the first WIFIA loan under a WIFIA master agreement that will commit \$157 million to accelerate rehabilitating the district's wastewater system. ([Action 6.2B: Support and Communicate WIFIA Funding](#))

[The EPA Releases SBIR Funding Topics](#). The EPA is accepting proposals from small businesses for Phase I SBIR awards of up to \$100,000 to demonstrate proof of concept for specific topics, including nature-based solutions for water reuse. This opportunity closes on August 21, 2024. More information is available in the informational webinar slides and question and answer document, which are available [here](#). ([Action 7.5: Coordinate and Promote Water Reuse Technology in Federal SBIR Programs](#))

Abbreviations Used in This Document

ANSI	American National Standards Institute	NBRC	National Blue Ribbon Commission
ARCSA	American Rainwater Catchment Systems Association	NSF	National Science Foundation
ASPE	American Society of Plumbing Engineers	ONWS	Onsite Non-potable Water Systems
DOE	U.S. Department of Energy	Reclamation	Bureau of Reclamation
EPA	U.S. Environmental Protection Agency	SBIR	Small Business Innovation Research
GSA	U.S. General Services Administration	WateReuse	WateReuse Association
IAPMO	International Association of Plumbing and Mechanical Officials	WIFIA	Water Infrastructure Finance and Innovation Act
ICC	International Code Council	WRF	Water Research Foundation
NAWI	National Alliance for Water Innovation		