

NATIONAL WATER REUSE ACTION PLAN



WRAP QUARTERLY UPDATE January–June 2025

A message from Dr. Amy Childress, Dean's Professor and Director of University of Southern California's ReWater Center



Earlier this month, the Water Reuse Consortium, including the University of Southern California [ReWater Center](#), in collaboration with Trussell Technologies, released the sixth issue (issue 3 of series 2) of the [Potable Water Reuse Report](#). Series 2 takes on a critical question: why are some advanced water treatment processes still not given credit for reducing pathogen concentrations, even when evidence shows that they *do* reduce pathogen concentrations? This gap underscores an urgent need to extend crediting frameworks beyond the established protocols for disinfection and membrane filtration processes. Developing new crediting frameworks is essential to enable regulators to confidently approve advanced treatment processes that can increase the availability of safe recycled water supplies.

The Water Reuse Consortium provides national leadership in integrating potable water reuse into military and municipal water supply portfolios to ensure the nation's water supply is secure and resilient. The Consortium's research portfolio is focused on advancing technologies for improved detection and treatment of pathogens and emerging chemical contaminants; developing system strategies to address water supply challenges associated with natural disasters, cyberthreats, and aging infrastructure; and integrating artificial intelligence into water management to predict threats and water system malfunctions. The Consortium is invested in cultivating a skilled technical workforce and compelling public engagement (e.g., through a [Flowing Forward documentary series](#)).

The EPA's Water Reuse Program and Office of Research and Development are taking important steps to help address the water sector's needs, including by publishing microbial treatment targets for water reuse, which set a strong example for including flexibility and adaptability in state regulatory processes.

Although much of the work on pathogen crediting frameworks for potable water reuse will continue to be conducted at the state level, the EPA's engagement is critical for scaling potable water reuse across more states and expanding it to new applications, such as industrial uses including manufacturing, data center cooling and food and beverage applications. The University of Southern California's ReWater Center and the Water Reuse Consortium look forward to continued partnerships with the EPA and states to build public trust and ensure the success of high-quality water reuse across the country.

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

New WRAP Actions

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 actions are now underway. To get involved or provide input, please email the action leaders using contact information from the [Online Platform](#).

IN CASE YOU MISSED IT

WRAP email updates highlight relevant water reuse activities and events.

Monthly updates from the past two quarters are available online:

- [January and February update](#)
- [March update](#)
- [April update](#)
- [May update](#)
- [June update](#)



Policy
Coordination

Advance Permitting of Innovative Water Reuse Technologies for Data Center Cooling ([Action 2.21](#), led by **AWS, Brown and Caldwell, EPA and Loudoun Water**)

Reliance on data centers throughout the United States continues to increase as the demand for the integration of AI into industry operations grows. Data centers are energy- and water-intensive, but there are opportunities to recycle water to cool servers and other electronic equipment that generates heat during data processing. However, disjointed regulatory landscapes can impede widespread implementation of water recycling technologies. To help advance the adoption of these innovative technologies, this action seeks to share success stories and increase clarity related to permitting innovative solutions for reusing water to cool data centers.



Science and
Specifications

Advance the Implementation of Onsite Water Reuse Through the BILD Initiative ([Action 3.9](#), led by the **NBRC for OWS, EPA and CSU**)

Decentralized water systems that collect and treat diverse water sources for reuse within individual buildings and across multiple properties are a promising approach to meeting future water and sanitation challenges. However, to ensure these systems are accessible for all communities and industries, collaborative work is needed to (1) establish public health protective benchmarks, (2) develop innovative technologies, (3) support capacity development and (4) bolster communications for public engagement. This action will advance projects in these four impact areas to expand decentralized reuse for potable and non-potable applications.



Technology
Development
and Validation

Accelerate the U.S. Circular Water Economy and Technology Adoption Through Case Studies and Educational Resources ([Action 4.11](#), led by **WEF**)

The adoption of new water reuse technologies is key to advancing a circular water economy. This action will develop a series of case studies and educational resources to accelerate the deployment of circular water economy technologies and solutions, such as water reuse, nutrient recovery, biosolids-to-energy conversion and decarbonized wastewater treatment. The goal of these case studies and educational materials is to inform federal and state practices and support the growth of new technologies and circular water economy strategies.

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 Actions

Two WRAP actions were completed over the previous two quarters, demonstrating continued progress under the strategic themes of Policy Coordination and Finance Support. The EPA works with action leaders to develop [Completed WRAP Action Summaries](#) that highlight impacts, lessons learned and potential future activities.



Policy
Coordination

[Advance Strategies for Permitting Innovative Wastewater Management Practices and Water Reuse](#) ([Action 2.19](#), led by **Stanford University's Water in the West Program**, EPA, UC Berkeley and WIS)

Effective permitting processes are key to enabling the innovation of treatment technologies and wastewater management strategies. However, traditional permitting processes can hinder the adoption of emerging solutions. This action evaluated NPDES and other relevant permits to develop recommendations for permitting innovative technologies and practices. The action team held a national workshop with experts, regulators and utility leaders to discuss how to accelerate innovation in the wastewater sector while ensuring the integrity of permitting programs. This workshop resulted in a summary report, [A Framework for Permitting Innovation in the Wastewater Sector](#), which creates a foundation of content for future permit writer trainings.



Finance
Support

[Study the Public Benefit of a Potential Water Reuse Tax Credit to Support Private Investment in Water Reuse](#) ([Action 6.6](#), led by **EPA and Denver Water**)

Within the private sector, interest is growing in reusing water to ensure sufficient water supplies for a variety of industrial and business operations. The EPA's EFAB completed an [assessment](#) that investigates the potential public benefits of an industrial reuse investment tax credit, which could encourage privately owned industrial facilities to invest in equipment for onsite reuse and centralized reuse of treated municipal wastewater. This activity prompted the introduction of the *Advancing Water Reuse Act* ([H.R. 2940](#)), which, if passed, will establish an investment tax credit for industrial water reuse.

WRAP Action Outputs and Activities: January Through June 2025

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

Activities and Publications

[The EPA Publishes a Framework for Microbial Treatment Targets for Water Reuse](#)

This publication, "Risk-Based Framework for Developing Microbial Treatment Targets for Water Reuse," provides detailed scientific information that state regulators can use to develop their own risk assessments and microbial treatment targets that support safe potable and non-potable water reuse. The EPA hosted a [webinar](#) to introduce the document. ([Action 3.1: Compile Existing Fit-for-Purpose Specifications](#))

[The EPA Releases Fifth WRAP Annual Update](#)

The 2025 "WRAP Update on Collaborative Progress" highlights recent accomplishments by action leaders and partners and celebrates five years of advancing water reuse. Congratulations to all WRAP collaborators on this milestone! ([Action 10.3: Facilitate Implementation of the WRAP](#))



The WRAP has:

- 74** Action Commitments
- 181** Action Leader & Partner Organizations
- 190+** Developed Resources

[The ReWater Center Publishes Report on Pathogen Reduction Crediting for RO](#)

This issue of the Potable Water Reuse Report analyzes pathogen crediting frameworks for RO. Crediting frameworks ensure that treatment systems effectively remove pathogens, but, as the report explains, current frameworks may under-credit RO as a pathogen barrier. To address this issue, the report highlights research needs and alternative approaches to enhance RO crediting. [Sign up to receive these reports!](#) ([Action 7.10: Implement the DoD-funded Water Reuse Consortium for Water Resiliency at Military and Municipal Facilities](#))

[The BILD Initiative Launched](#)

The BILD initiative, led by the NBRC for OWS, builds cross-sector coalitions to expand decentralized water systems. BILD is a collaborative global community of practice working to uncover opportunities, advance implementation and spread transformative solutions related to decentralized water systems to support the efficient use and reuse of water. BILD held its first kick-off meeting in March 2025, and teams will meet regularly to develop roadmaps to focus on advancing projects across four impact areas: public health, sustainable technology and innovation, capacity development, and communications. Please complete this [interest form](#) to receive more information about how to participate. ([Action 3.4: Develop Research and Tools to Support Onsite Water Systems](#))

[WIFIA 2024 Annual Report Highlights Water Reuse Project in Los Angeles](#)

The WIFIA program's latest annual report spotlights a \$224 million loan to Los Angeles Sanitation and Environment for the Donald C. Tillman AWP Facility Project. This loan advances the city's goal of recycling 100 percent of its wastewater by accelerating investment in critical water infrastructure. Additionally, the report estimates that 500 million gallons per day of water will be recycled, recharged or redirected for beneficial uses as a result of WIFIA-funded activities. ([Action 6.2B: Support and Communicate WIFIA Funding](#))

[WRAP Action Leaders and Collaborators Attend the WaterReuse Symposium](#)

In March, many WRAP collaborators gathered at the WaterReuse Symposium in Tampa to lead and attend technical sessions and workshops. At a special session celebrating the fifth anniversary of the WRAP, the EPA's National Program Leader for Water Reuse, Sharon Nappier, released the [annual progress update](#) and spotlighted action leader achievements. Six other sessions featured the following WRAP Actions: [Action 2.18](#), [Action 3.1](#), [Action 5.5](#), [Action 7.2](#), [Action 7.10](#) and [Action 8.8](#). See the [program](#) for additional details.

[WRAP Collaborators Gather at the 2025 AWWA ACE](#)

AWWA ACE provides a venue for professionals across the water sector to exchange knowledge, sharpen skills and stay up to date on global water challenges and innovations. Under the theme of "elevate," ACE25 explored technologies and trends contributing to the future of water. Workshop sessions covered topics such as infrastructure, water quality and treatment, water utility management, and regulatory and legislative landscapes. Several sessions focused on water reuse, including a presentation from the WRAP [Action 7.10](#) team titled "A Deeper Dive Into the Largest Issues in Potable Reuse: The Potable Water Reuse Report." [Sign up to receive these reports!](#)

State Regulators Gather at the 2025 State Summit on Water Reuse

Held in conjunction with the WaterReuse Symposium, the annual State Summit on Water Reuse provides a forum for state regulators to discuss water recycling challenges, successes and solutions. During the closed-door session, the EPA, ACWA, ASDWA, ASTHO and GWPC convened more than 50 participants representing 20 states to exchange ideas and discuss lessons learned across a variety of water reuse topics.



Infrastructure Funding Announcements

[The EPA Announces \\$110 Million WIFIA Loan to Enhance Drinking Water Reliability in Drought-Prone Region of Utah](#)

This loan will allow the Weber Basin Water Conservancy District of northern Utah to make numerous expansions and upgrades that will ultimately increase water supplies for consumers while advancing water reuse. This loan will help the district provide reliable drinking water to five counties, supporting over 20 percent of Utah's population while creating local jobs to support the projects. ([Action 6.2B: Support and Communicate WIFIA Funding](#))

[The EPA Awards \\$2.4 Million to 24 Small Businesses for the Development of Environmental Technologies, Including Water Reuse Projects](#)

The funding provided through the EPA's SBIR program will assist small businesses developing technologies to address public health and environmental challenges. Several selected projects focus on water quality, which can support water reuse, including an effort to develop a nature-based absorbent technology to remove PFAS, pathogens and other contaminants from water. ([Action 7.5: Coordinate and Promote Water Reuse Technology in Federal SBIR Programs](#))

[Reclamation Awards \\$223 Million to 18 Water Recycling and Desalination Projects](#)

The Title XVI Water Reclamation and Reuse and Desalination Programs support projects that address the impacts of drought in Western states by boosting the development of resilient water resources. The projects selected under these programs aim to produce over 305,000 acre-feet of recycled water annually through upgrades, including a new AWP facility in Phoenix, Arizona. Learn more about the selected projects [here](#). ([Action 6.5: Develop Reclamation's Large-Scale Water Reuse Funding Opportunity](#))

The EPA Publishes New Allotments for the Clean Water and Drinking Water SRFs

The Clean Water and Drinking Water SRFs provide low-cost financing to communities for a wide range of water quality and drinking water infrastructure projects, including water reuse projects. For FY 2025, the EPA is allocating \$8.9 billion in new Clean Water and Drinking Water SRF funding opportunities. Learn more about how SRF funding can support water reuse projects [here](#). (*Action 6.2A: Communicate Eligibility of Water Reuse in SRF Programs*)

Monterey One Water Amends WIFIA Loan Project Activities

In 2023, Monterey One Water received a \$76 million WIFIA loan for the Pure Water Monterey Groundwater Replenishment Project. This project will improve water quality by diverting untreated irrigation water from local waterways and reduce the risk of saltwater intrusion by injecting purified water into the Seaside and Salinas Groundwater Basins. After loan closing, Monterey One Water received additional grant funding, leaving a balance of approximately \$50 million of the WIFIA loan that will now be used to complete two additional projects. These two projects will support a robust energy supply, improve electrical reliability and increase use of domestic energy sources. (*Action 6.2B: Support and Communicate WIFIA Funding*)

The California SWRCB Forecasts Water Recycling Funding Under the Clean Water SRF

For FY 2025–26, the California SWRCB anticipates making \$161.9 million in grant funding available for eligible construction and planning projects under its Water Recycling Funding Program. This opportunity provides up to \$15 million in grant funding for construction projects and up to \$300,000 for planning projects. Large-scale construction projects, which will deliver at least 10,000 acre-feet per year of recycled water when construction is complete, can receive up to \$15 million in funding per project phase. Learn more about the application process [here](#). (*Action 6.2A: Communicate Eligibility of Water Reuse in SRF Programs*)

Regulatory Update

New Bill Proposes the Establishment of an Industrial Water Reuse Tax Credit

The Advancing Water Reuse Act ([H.R. 2940](#)) aims to incentivize investment in industrial water reuse, facilitating the growth of water recycling practices while invigorating economic expansion. The proposed 30 percent investment tax credit would support the development of reliable water supplies for businesses, including manufacturers and data centers, as well as their surrounding communities. (*Action 6.6: Study the Public Benefit of a Potential Water Reuse Tax Credit*)

Abbreviations Used in This Document			
AI	Artificial intelligence	H.R.	House of Representatives
ACE	Annual Conference & Exposition	NBRC for OWS	National Blue Ribbon Commission for Onsite Water Systems
ACWA	Association of Clean Water Administrators	NPDES	National Pollutant Discharge Elimination System
ASDWA	Association of State Drinking Water Administrators	PFAS	Per- and polyfluoroalkyl substances
ASTHO	Association of State and Territorial Health Officials	Reclamation	U.S. Bureau of Reclamation
AWP	Advanced Water Purification	RO	Reverse osmosis
AWS	Amazon Web Services	SBIR	Small Business Innovation Research
AWWA	American Water Works Association	SRF	State Revolving Fund
BILD	Building Infrastructure Locally for Decentralized Water Systems	SWRCB	State Water Resources Control Board
CSU	Colorado State University	UC Berkeley	University of California, Berkeley
DoD	U.S. Department of Defense	WEF	Water Environment Federation
EFAB	Environmental Financial Advisory Board	WIFIA	Water Infrastructure Finance and Innovation Act
EPA	U.S. Environmental Protection Agency	WIS	Water Innovation Services
FY	Fiscal year	WRAP	National Water Reuse Action Plan
GWPC	Ground Water Protection Council		