

NATIONAL WATER REUSE ACTION PLAN



WRAP QUARTERLY UPDATE April–June 2023

A Message from Shannon Spurlock, Senior Researcher—Public Policy and Practice Uptake at the Pacific Institute

Water reuse is a strategy that has relevant applications across all geographies and communities, regardless of their size and access to resources. To me, both the wide applicability and co-benefits of water reuse are part of the great appeal of working in this field, and the ability to collaborate with inspiring water sector leaders as part of the WRAP has resulted in creative problem-solving. This creativity is most apparent in action implementation, as each WRAP action poses an opportunity to accelerate water reuse adoption, and subsequently, a more water-secure and resilient future for all.

At the Pacific Institute, we seek to develop innovative solutions to the world’s most pressing water challenges, and we actively promote water reuse strategies to achieve this goal. In Colorado, where I live, these challenges are acutely felt through water supply shortages, and state leaders are looking to understand opportunities to decrease the ongoing water supply and demand gap. For example, through [Action 5.8](#), the Pacific Institute is currently assessing the volumetric and economic potential of urban stormwater capture and use to help support Colorado as the state identifies potential tools to address stressed water supplies.

The Pacific Institute has also partnered with a community of dedicated practitioners to scale the adoption of water reuse by supporting the development of research, policy, and technical documents through WRAP actions [1.6](#), [2.16](#), [5.5](#), [5.8](#), and [8.5](#). These actions represent work within the agricultural sector and at the national, state, and regional scales (including small and underserved communities). Additionally, I am so pleased to announce the release of a paper I co-authored, [Lessons for Optimizing the Adoption of Water Reuse in Underserved Communities](#), which describes effective technical assistance approaches to help small and underserved communities identify opportunities to improve their water infrastructure and augment their water supplies. It is an honor to be a WRAP collaborator—to work alongside action teams to advance the nationwide adoption of water reuse and assist in the stewardship of our planet’s most valuable resource: water.

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](#).

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](#)



Outreach and Communication

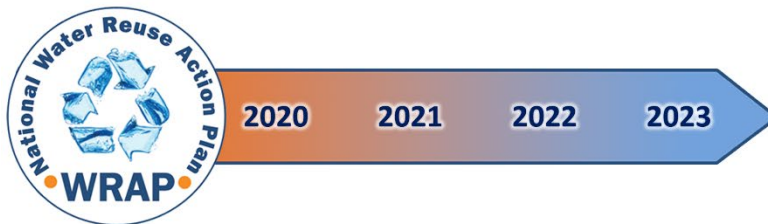
Engage the Medical Community to Inform the Public About the Risks and Benefits of Water Reuse (Action 8.8, led by SCCMA, Valley Water, Eric Rosenblum PE, WaterReuse, and EPA)

Brief description and strategic theme tie-in: Members of the public may consult their doctors and other members of the medical community about public health issues, but physicians, nurses, and others may lack the necessary background to respond to concerns about the safety of recycled water. The products from this action are designed to help the medical community better understand the need for recycled water and the available treatment technologies to remove pathogens, chemicals, and constituents of emerging concern. Medical professionals—individually and through their professional associations—will then be empowered to share their informed opinion with their patients and the general public. This action will also strengthen relationships between water and wastewater utilities and medical professionals.

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](#).

WRAP Metrics

WRAP collaborators continue to advance water reuse capacity in communities of all sizes through new action commitments and the creation of accessible resources that support water reuse adoption.

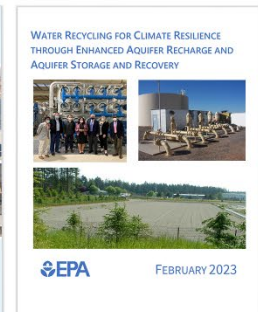
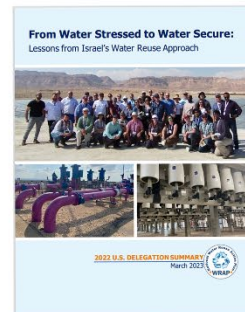
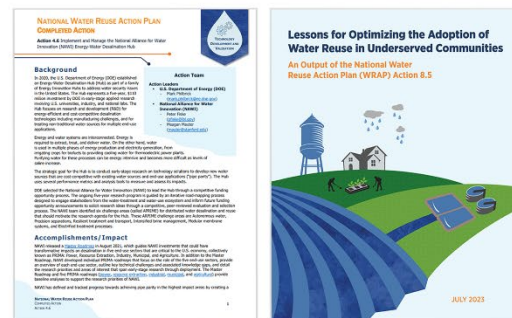


The WRAP has:

64 Action Commitments

146 Action Leader & Partner Organizations

150+ Developed Resources



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.

Reports and Publications

[New Report: Lessons for Optimizing the Adoption of Water Reuse in Underserved Communities](#). Effective technical assistance approaches can support small and underserved communities as they work to improve their water infrastructure and implement strategies such as water reuse to augment their water supplies. This report showcases three communities and documents their engagement with technical assistance providers and regulators. The report describes the process of piloting direct technical assistance to self-nominated small, underserved communities in Idaho, California, and Kansas; relays lessons learned from the pilot; and documents ongoing technical assistance efforts and support opportunities. ([Action 8.5: Engagement with Disadvantaged and Rural Communities on Water Reuse](#))

[New State Guidelines and Regulations Added to EPA's REUSExplorer Tool](#). The Regulations and End-Use Specifications Explorer tool summarizes state water reuse laws and policies across different sources and end-use applications. EPA recently added new state summaries for industrial water reuse applications to the tool. ([Action 3.1: Compile Existing Fit-for-Purpose Specifications](#))

[WRF Report: Assessing the State of Knowledge and Research Needs for Stormwater Harvesting](#). This report highlights findings from a study conducted on community stormwater management—specifically, the drivers and benefits of improved stormwater management at local, regional, and statewide scales. The report also includes recommendations for stormwater harvesting planning and implementation. The full text article is accessible with WRF Public Plus or Subscriber accounts. ([Action 7.2: Develop a Coordinated National Research Strategy on Water Reuse](#))

[Journal AWWA Article: Learning from Water Reuse in Israel](#). In this report, members of the U.S. delegation to Israel, which was held in October 2022, provide key takeaways from their five-day, interactive experience with Israel's water policy and reuse practices. ([Action 11.1: Facilitate U.S.-Israel Collaboration on Water Reuse](#))

[Blog Post: A Decade of Unraveling the Effects of Regulation on Water Innovation](#). In this blog post, WRAP action leaders and partners look at the history of permitting and its impact on innovative projects, including water reuse. ([Action 2.19: Advance Strategies for Permitting Innovative Wastewater Management Practices and Water Reuse](#))

Funding

[EPA Releases 2023–2024 SBIR Grant Topics, Including Reuse](#). The EPA SBIR team announced the 2023–2024 research topics, including the reuse-related topic of zero-liquid discharge and brine concentrate minimization. The team hosted an [informational webinar](#) to discuss the Phase I solicitation, which awards up to \$100,000 for projects that demonstrate proof of concept in the following areas: clean and safe water, air quality and climate, land, homeland security, circular economy/sustainable materials, and safer chemicals. **The proposal due date is August 23, 2023.** ([Action 7.5: Coordinate and Promote Water Reuse Technology in Federal SBIR Programs](#))

NEW Water Reuse Case Studies

The first of several water reuse case studies are now available as outputs of [Action 11.3: Develop and Highlight Case Studies Relevant to the WICER Framework](#). The case studies, housed in the [Resource Hub](#), are directly accessible from the links below:

- [The “Living Machine®” at Corkscrew Swamp Sanctuary: Treats Wastewater for Onsite Non-Potable Reuse \(Southwest Florida\)](#) (authored by the World Bank)
- [A Technology Development Challenge for Onsite Non-Potable Reuse to Address Rural Alaska Water Needs: The Alaska Water and Sewer Challenge](#) (authored by Jacobs)
- [City Uses a Lagoon Treatment System to Reclaim Municipal Wastewater for Golf Course Irrigation \(Oswego, Kansas\)](#) (authored by EPA)

[\\$9.5 Million National Priorities Grant on Antimicrobial Resistance in Wastewater and Sewage Sludge \(Request for Applications\)](#)

In recent years, concern has increased about the occurrence of antibiotic resistant bacteria and antibiotic resistant genes that could make it more difficult to treat certain infections in animals and people. Wastewater treatment facilities are believed to be potential receptors and sources for antibiotic resistant bacteria and antibiotic resistant genes and can act as a bridge to the environment. This request for applications seeks research that will address knowledge gaps in the occurrence, fate and transport, and persistence of antimicrobial resistant organisms and genes found in municipal wastewater effluent and biosolids. **Applications close on August 16, 2023.** (*[Action 7.9: Evaluate Antimicrobial Resistance in Wastewater and Sewage Sludge and Its Impact on Surface Waters: Research Grant](#)*)

[USACE Funds New Academic Consortium to Advance Water Reuse](#). USACE has awarded a \$12.3 million cooperative agreement for phase one of a three-phase \$38 million program to a research collaboration between the University of Southern California, the University of Arizona, and the University of Nevada, Reno. This Water Reuse Consortium aims to tackle pressing water challenges through innovative research; education; communication; and unprecedented collaborative efforts between government, local communities, industry, and academia. The consortium seeks to revolutionize water reuse practices and promote sustainable solutions for the benefit of communities, industries, and the environment. Products will include workshops, seminars, and training programs to support education and knowledge expansion that empowers water professionals and the public to understand water reuse.

Abbreviations Used in This Document			
AWWA	American Water Works Association	USACE	U.S. Army Corps of Engineers
EPA	U.S. Environmental Protection Agency	WateReuse	WateReuse Association
REUSExplorer	Regulations and End-Use Specifications Explorer	WICER	Water in Circular Economy and Resilience
SBIR	Small Business Innovation Research	WRF	Water Research Foundation
SCCMA	Santa Clara County Medical Association		