

# NATIONAL WATER REUSE ACTION PLAN



## WRAP QUARTERLY UPDATE January–March 2024

### A Message from Shellie Chard, Water Quality Division Director at the Oklahoma Department of Environmental Quality

The National Water Reuse Action Plan (WRAP) is a great example of what true partnership can bring. With so many organizations signing on to advance water sustainability and champion individual actions, much greater progress can be made in a shorter period.



At the recent State Summit on Water Reuse held at the WaterReuse Symposium on March 11 in Denver, over 70 state regulators and federal experts met to discuss important water reuse approaches. With over 20 states and five federal agencies present, there was a robust discussion of the opportunities, challenges and successes that the WRAP collaborative has achieved since its launch in 2020. The State Summit on Water Reuse has become the primary event to bring together state drinking water, wastewater, groundwater, public health officials and federal agencies. These organizations are learning from one another and helping each other advance water reuse and improve water security.

The early state summits primarily involved states from drought-stricken areas of the United States. However, at the summit this year, there were many representatives from states that are considered “water rich.” These states are seeking to become more water sustainable and continue thriving with increased economic development. Participants talked about the importance of comprehensive water resource planning and expanding water reuse in various industries, like the oil and gas industry and at data centers. Additionally, participants discussed safely expanding water reuse for potable purposes.

This WRAP activity has not only expanded water reuse capacity across states, but also made connections between collaborators. As these connections continue to grow, ideas are exchanged, and the United States improves its long-term water security. This improved water security will protect public health, the environment and economic prosperity.

Thank you to all WRAP supporters!

*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 this past quarter are available online:

- [December and January update](#)
- [February update](#)
- [March update](#)



Water  
Information  
Availability

### Identify Opportunities and Address Barriers to Nonresidential Onsite Rainwater and Stormwater Catchment Systems ([Action 5.9](#), led by ARCSA)

This action will focus on advancing nonresidential stormwater and rainwater catchment systems for potable and non-potable water reuse applications. Compared with residential systems, nonresidential systems involve a higher standard of water quality and monitoring. These more sophisticated systems can supplement a traditional water supply and be deployed to meet critical water needs during disaster scenarios. Action leaders plan to develop a white paper and provide information to assist in safely implementing nonresidential stormwater and rainwater catchment systems.



Integrated  
Research

### Research De Facto Water Reuse: Grant Award ([Action 7.12](#), led by the EPA)

This action aims to fund research through EPA's National Priorities Grant program to support safe and sustainable water resources. Research should focus on better understanding de facto water reuse. This funding opportunity should solicit research on drinking water supplies where there is a significant fraction of wastewater effluent from upstream discharges. The goal is to better understand the potential impacts that de facto, or unplanned, water reuse may pose on drinking water quality.

*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](mailto: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 Integrated Watershed Action. [Completed WRAP action summaries](#) are developed with action leaders and highlight impacts, lessons learned and potential future activities.



Integrated  
Watershed  
Action

### [Address Barriers to Water Reuse in Agriculture Through Improved Communication and Partnerships](#) ([Action 1.6](#), led by the USDA, EPA, FDA, University of Arizona and Volcani Institute)

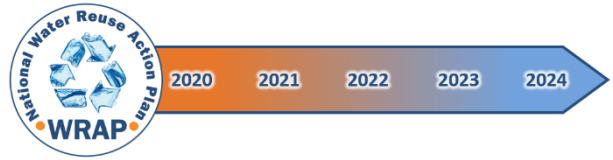
- Institutions that are responsible for advancing agricultural water reuse are not typically aligned to facilitate its implementation. To help address this challenge, action leaders leveraged multiple convenings and research efforts to support regulators and stakeholders interested in advancing agricultural water reuse. During the 2022 TreWAG conference in Israel, action leaders focused on understanding risks for agricultural reuse and identified opportunities for its expansion. The conference dialogues resulted in a publication [Mitigating Risk and Maximizing Sustainability of Treated Wastewater Reuse for Irrigation](#), which presents a multidisciplinary discussion on maximizing the benefits of reusing treated wastewater for irrigation. Separately, several action leaders released a report titled [Addressing Impediments and Incentives for Agricultural Reuse](#), which serves as a guide for policymakers and the agricultural sector to overcome barriers to implementing agricultural water reuse.

## 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 Fourth WRAP Annual Update](#). The Year 4 WRAP Update on Collaborative Progress summarizes some of the incredible accomplishments of WRAP action leaders and partners in 2023. The 2024 WaterReuse Symposium was an excellent venue to share the annual update, forge new collaborations and learn more from WRAP partners about their recent accomplishments. [This newsletter](#) features WRAP sessions at the WaterReuse Symposium, including a message from EPA's National Program Leader for Water Reuse, Sharon Nappier. ([Action 10.3: Facilitate Implementation of the WRAP](#))
- [Pacific Institute Releases Report—Untapped Potential: An Assessment of Urban Stormwater Runoff Potential in the United States](#). In this report, the authors quantify the potential volume of urban stormwater runoff across the United States, provide case studies to demonstrate uses of stormwater capture and offer recommendations for helping communities understand the potential for stormwater capture and use. ([Action 5.5: Quantify the National Potential for Reuse](#))
- [White Paper: Advancing Water Reuse Within the Beverage Industry](#). In this white paper, the authors explore stakeholder engagement, the regulatory environment, and treatment and technology issues related to water reuse within the beverage industry, and with key hurdles along with near-, medium- and long-term solutions to advance water reuse practices at beverage manufacturing plants. The paper is the result of a collaboration among federal and local regulators, major international beverage manufacturers, nonprofit organizations, consulting engineers and water professionals. ([Action 5.7: Identify Opportunities to Implement Water Reuse within the Beverage Industry](#))
- [ReWater Center and Trussell Technologies Release Potable Water Reuse Report](#). The first issue of the Potable Water Reuse Report focuses on direct potable reuse regulations in California. The publication connects the water industry, regulators and academia while reflecting on the rapid development and evolution of potable reuse. Sign up to receive this report [here](#). ([Action 7.10: Implement the DoD-funded Water Reuse Consortium for Water Resiliency at Military and Municipal Facilities](#))
- [REUSExplorer Tool Updated to Include International Content](#). The REUSExplorer tool now includes water reuse regulation or guideline summaries for Australia, Singapore and the World Health Organization. ([Action 3.1: Compile Existing Fit-for-Purpose Specifications](#))
- [Research Article: Evaluating Endogenous Viral Targets as Potential Treatment Monitoring Surrogates for Onsite Non-Potable Water Reuse](#). This article quantifies eight candidate polymerase chain reaction (PCR) targets that represent potential monitoring surrogates from different viral classes to determine whether they could be used to verify the efficacy of treatment in onsite non-potable water reuse systems. ([Action 5.2: Identify Water Quality Monitoring Practices for Reuse Applications](#))
- [WRF Publishes Guidebook: Addressing Impediments and Incentives for Agricultural Reuse](#). Agricultural reuse offers various benefits, such as enhancing irrigation, managing nutrients and helping comply with water quality permits. However, water managers, regulators and the agricultural sector face barriers that hinder the scaling of agricultural reuse and realization of its benefits. This guidebook supports stakeholders in identifying and overcoming barriers to agricultural water reuse across diverse geographic and agricultural contexts. ([Action 1.6: Address Barriers to Water Reuse in Agriculture Through Improved Communication and Partnerships](#))



**The WRAP has:**

- 71** Action Commitments
- 161** Action Leader & Partner Organizations
- 170+** Developed Resources

- [The EPA Launches Website on Household Medication Disposal](#). This website provides information to households on how to properly disposal of leftover medications, including various pharmaceutical take-back programs. This new web area will help the public understand why proper disposal of household medication is necessary and what households should and should not do with their unwanted medications. For example, the webpage notes you can protect the environment by not flushing household medicines, which prevents their release into groundwater and surface water. ([Action 2.9: Align Tools to Promote Best Management of Unused/Expired Pharmaceuticals](#))

**Infrastructure Funding and Award Announcements**

- [The EPA’s WIFIA Program Loans \\$74 Million to Pajaro Valley Water Management Agency in Santa Cruz, California](#). The Pajaro Valley Water Management Agency’s Water Sustainability Project will provide alternative surface water supplies and reduce demand on the existing groundwater supply by nearly 25 percent by 2040. They will achieve this goal by modifying a naturally occurring lake to create a new seasonal surface water source that will be treated and distributed to customers to offset groundwater demand. This project will divert water from nearby shallow lake systems through recharge basins into shallow aquifers. The recharged water will be provided to agricultural customers for irrigation purposes. ([Action 6.2B: Support and Communicate WIFIA Funding](#))
- [2024 Industrial Water Reuse Champions Award Nominations—Now Live](#). This award recognizes global Fortune 1000 companies that prioritize reusing water in manufacturing and production processes. Nominations are due on August 31, 2024, and the award will be presented at the International Desalination and Reuse Association World Summit in December 2024. ([Action 8.4: Establish a Water Reuse Champion Award Program for Private Sector Companies](#))
- [WIFIA Program’s Project-Bundling Flexibilities Accelerate Water Infrastructure Projects in California](#). This article details the flexibilities that the EPA’s WIFIA program can provide to borrowers, such as the master agreement that was used by the Upper Santa Ana River Watershed Infrastructure Financing Authority, where members of the Authority benefited from a common negotiated structure. ([Action 6.2B: Support and Communicate WIFIA Funding](#))
- [Learn More About Federal Funding Programs Available for Water Reuse](#). Various federal infrastructure funding programs exist to support community and state water management and infrastructure funding needs, including water reuse. In this June 26 webinar, representatives from across the federal government will discuss their funding programs, application requirements and examples of previous water reuse projects funded under those programs. ([Action 6.1: Compile Federal Funding Sources and Develop Interagency Decision Tool](#))

Abbreviations Used in This Document			
ARCSA	American Rainwater Catchment Systems Association	USDA	U.S. Department of Agriculture
DoD	U.S. Department of Defense	WaterReuse	WaterReuse Association
EPA	U.S. Environmental Protection Agency	WIFIA	Water Infrastructure Finance and Innovation Act
FDA	U.S. Food and Drug Administration	WRF	Water Research Foundation
REUSExplorer	Regulations and End-Use Specifications Explorer		