



Developing a National Water Reuse Action Plan


May 21, 2019



WaterReuse Webcast Series

A Few Notes Before We Start...

- Today's webcast will be 60 minutes.
- A PDF of today's presentation can be downloaded when you complete the survey at the conclusion of this webcast.
- If you have questions for the presenters please send a message by typing it into the chat box located on the panel on the left side of your screen.

 Ask a Question

Chat with presenter

Send

Today's Presenters



Dr. Sharon Nappier
Senior Microbiologist
U.S. EPA



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Office of Groundwater and Drinking Water
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Agenda



- Introductions
- What is the Water Reuse Action Plan
 - Examples of types of reuse being considered in the plan
 - What to expect from the plan
- What are we doing?
 - EPA 2017 Water Reuse Compendium
- What work is to come
- How to contribute and future engagement opportunities
- Questions and Answers



A dynamic splash of water against a light blue background, with water droplets and bubbles visible. The water is splashing from the bottom right towards the top left.

WHAT IS THE DRAFT NATIONAL WATER REUSE ACTION PLAN

THE “WRAP”

National Water Reuse Action Plan (WRAP)



"The Water Reuse Action Plan will seek to foster water reuse as an important component of integrated water resource management. EPA will facilitate discussions among federal, state, and water sector stakeholders and form new partnerships to develop and deploy the plan. A draft of the plan is scheduled for release and public review in September at the Annual WaterReuse Symposium in San Diego."

– Press Release, February 27, 2019

The Plan Key Points

- EPA is just the facilitator in this effort.
- This will be a water sector plan.
- This is about water reuse as a component of integrated water management in all realms – agriculture and irrigation, industry, national security, environmental restoration, potable and non-potable water sources.
- Should be geographically diverse.

Water Reuse Action Plan – Guiding Principles/Goals



1. Advance consideration of water reuse as part of integrated water resources management to support water resiliency, sustainability, and security.
2. Assure public health and environmental protection.
3. Build on the extensive experience, literature, and research that already exists.
4. Use real-life examples of water reuse to inform and serve as models to replicate.
5. Encourage new levels of integration, coordination, and partnerships.
6. Enable more profound progress on water resources protection at the watershed scale.
7. Identify transformative actions at the federal, state, and watershed/community level.
8. Create momentum for long-term commitments and action.

A dynamic splash of water in shades of blue and white against a light blue background. The water is captured mid-splash, with droplets and bubbles visible. A solid orange horizontal line is positioned below the main text.

WHAT ARE WE DOING?

Water Reuse Action Plan – Our Working Approach



1. Developed a Discussion Framework that Creates the Water Reuse Context
2. Distilling Ideas and Actions from 4 different sources
3. Identifying Unique and Compelling Examples of Water Reuse
4. Generating Federal Reuse Partner Profiles
5. Collecting Public Input and Ideas (through July 1, 2019)
 - For potential use in plan
6. Identify New Actions and Obtain Commitments for Inclusion in Plan
7. Release the Draft Water Reuse Action Plan by September 8, 2019

WRAP Quick Stats To Date



115	Pieces of literature reviewed
16	Federal partner agencies engaged
10	Public forums attended
37	External stakeholder meetings conducted
>500	Action ideas identified: <ul style="list-style-type: none">• >200 from stakeholder meetings• >300 from literature review
8	Docket comments received

Example Outreach and Engagement Forums



February

- Resource Revolution of Water Reuse (Wharton, IGEL, Suez), San Francisco, CA

March

- WaterReuse California Annual Conference, Orange County, CA
- ACWA Mid-Year Meeting, Alexandria, VA
- ASDWA Member Meeting 2019, Alexandria, VA

April

- National Water Week/Water Policy Fly In, Washington, DC
- Santa Clara, Roseville, Las Virgenes, and Monterey CA
- National Tribal Water Council

April (cont'd)

- National Blue Ribbon Commission for Onsite Non-potable Water Systems Meeting
- WaterReuse Association Convening, Los Angeles, CA
- World Water Day – Women on Wall Street, NYC
- Maryland Department of Environment
- Gwinnette County GA
- Watervent 2019, Philadelphia
- State/EPA SRF Committee

May

- 2019 UNC Water Microbiology Conference
- NACWA Pretreatment Workshop
- 2019 Idaho Reuse & Operators Conference

Federal Partners



- DoC - NOAA
- DOD/ACE
- DoE
- DOI-BOR
- DOI-USGS
- USDA-NRCS
- CDC-NCEH
- **CEQ**
- DOI-BLM
- DoS
- FDA
- **GSA**
- NASA
- **NEC**
- **NRC & NASEM**
- NSF
- NSTC SWAQ
- **OSTP**
- **USAID**
- **USDA-ARS**
- **USDA-ERS**
- USDA-NIFA
- OMB
- USFWS

NOTE: agencies in red have not yet been engaged

Some of our State and NGO Partners

- WaterReuse Association
- Association of Clean Water Administrators
- Environmental Council of States
- Association of State Drinking Water Administrators
- National Blue Ribbon Commission on Onsite Non-potable Water Systems
- California, Alaska, Maryland, Idaho, West Virginia and more

A dynamic splash of water in shades of blue and white against a light blue background. The water is captured in mid-air, creating a sense of movement and energy. The splash originates from the left and moves towards the right, with numerous droplets and bubbles visible.

WHAT WORK IS TO COME

What to Expect

- By September 8th we hope to have a 30 page draft document with:
 - Federal Partner Profiles
 - Partner Actions and Commitments
 - Case Studies
- Close engagement with partners such as you!
 - Via Webinars
 - Public Comment
 - Outreach and Engagement Forums

Types of Actions for the WRAP

- 1) Technological improvements
- 2) Regulatory/policy aspects
- 3) Financial initiative
- 4) Performance metrics
- 5) Water information use and availability
- 6) Public outreach

Example Technological Improvements:
Monitoring and Sensors – Collecting timely, robust, quality data to verify that reuse water is safe and meets quality expectations

WRAP Element – Actions and Commitments



- Early Framing of Some Possible Actions:
 - Federal Statement on Integrated Water Resources Management and Water Reuse
 - Compilation of Federal Funding Sources
 - Coordination of Reuse Research
 - Safe Drug Disposal Guidance

Example attributes:

- ✓ *Champion*
- ✓ *Partners/collaborators*
- ✓ *Rationale/Feasible*
- ✓ *Key implications*
- ✓ *Anticipated outcome*
- ✓ *Timeline and milestones*

WRAP Element – Reuse Case Studies



- Showcase a variety of reuse applications (e.g., industrial, agricultural, environmental) at a range of scales
- Key Interests:
 - How did the action happen?
 - Key learnings
- Examples
 - Monterey One Water (CA)
 - Big Spring, TX

Example attributes:

- ✓ *Compelling story*
- ✓ *Successful approaches*
- ✓ *Barriers overcome*
- ✓ *Lessons/best practices*

Notable example of Water Reuse: Monterey One Water

- **Agriculture and Irrigation** – In 1929 the City of Pomona, CA, initiated use of reclaimed water for lawn and garden irrigation. By 2002, nearly half of all reclaimed water produced in California was used for agricultural irrigation.
- Today, Monterey One Water recycles approximately four billion gallons a year for crop irrigation and crop wash-water.

Category	Use Application	Challenges for Implementers
Agriculture & Irrigation	Urban lands/green infrastructure and fixtures	Dual distribution costs and geographic extent limitations; seasonal demand; salinity; cross connection control; state variability in food irrigation water quality standards
	Agriculture (plant/tile drains)	
	Livestock	

What to Expect from the Plan:

- The plan is not a mandate for action and is not associated with new legislation
- It doesn't obligate funds
- It is not exhaustive of all types of reuse applications
- It is forward looking, so will not necessarily catalog existing efforts
- It is not a how-to-guide
- It is a way to see what is going on across sector in all types of industries

EPA's Potable Water Reuse Compendium



- Developed in partnership with CDM Smith, with input from numerous potable water reuse and drinking water stakeholders, the Potable Water Reuse Compendium provides a technical compilation of the current state of potable water reuse in the United States.

EPA's Potable Water Reuse Compendium

- The Compendium discusses:
 - The current state of potable water reuse in the United States and a broader discussion on indirect and direct potable water reuse.
 - Important considerations in the potable reuse development process, including constituents of concern, risks, monitoring, and research.
 - Technical topics, including relevant treatment technologies, treatment configurations to achieve system redundancy, and the costs associated with potable reuse, and
 - Seven case studies about indirect and direct potable reuse facilities in the United States

EPA's Potable Water Reuse Compendium

- “EPA supports water reuse as part of an integrated water resources management approach developed at the state and local level to meet the water needs of multiple sectors including agriculture, industry, drinking water, and ecosystem protection.”
- “EPA acknowledges the importance of potable water reuse and looks forward to working with our stakeholders as the practice continues to be developed and deployed as an important approach to ensure a clean, safe, and sustainable water supply for the nation.”

A dynamic splash of water in shades of blue and white against a light blue background. The water is captured mid-air, creating a sense of movement and freshness. The splash originates from the right side and moves towards the left, with numerous droplets and bubbles visible.

HOW TO CONTRIBUTE AND FUTURE ENGAGEMENT OPPORTUNITIES

WRAP – Second Announcement



EPA Seeks Public Input for Development of National Water Reuse Action Plan

"The EPA is seeking public input on the development of an action plan to accelerate the application of water reuse as a safe, reliable, and sustainable way to meet the country's current and future water demands ."

"To facilitate public input... EPA released a Discussion Framework...which provides helpful background..."

"EPA will accept public input...through July 1, 2019..."

– Press Release, April 18, 2019

Water Reuse Portal – Public Input and Updates



- Website:
<https://www.epa.gov/waterreuse/water-reuse-action-plan>
 - Repository for ongoing public and stakeholder input
 - Relevant updates on WRAP development
 - Forecast external engagement forums
 - Forum to post the draft Action Plan

The screenshot shows the EPA website's 'Water Reuse Action Plan' page. At the top is the EPA logo and navigation links for 'Environmental Topics', 'Laws & Regulations', and 'About EPA'. A search bar is on the right. The main heading is 'Water Reuse Action Plan'. Below it, a paragraph states that on February 27, 2019, the EPA Assistant Administrator for Water announced the development of a National Water Reuse Action Plan. To the right of this text is a small image of a recycling symbol over water bubbles. Below the paragraph is a link to a 'Press Release: EPA Announces Development of Water Reuse Action Plan'. Another paragraph explains that the EPA's actions are part of a larger effort to coordinate water resource concerns with other federal partners. Below this is a link to the 'Water Security Grand Challenge' with an 'EXIT' button. A section titled 'On this page:' lists four links: 'Development of the Draft National Water Reuse Action Plan', 'Providing Input for Development of the Draft National Water Reuse Action Plan', 'About Water Reuse', and 'EPA Resources about Water Reuse'. The final section is titled 'Development of the Draft National Water Reuse Action Plan' and describes the EPA's plan to facilitate discussions and form new partnerships, with a draft scheduled for release in September 2019.

EPA United States Environmental Protection Agency

Environmental Topics Laws & Regulations About EPA Search EPA.gov

Water Reuse Action Plan

On February 27, 2019, EPA Assistant Administrator for Water, announced that the Agency will facilitate the development of a National Water Reuse Action Plan that will better integrate federal policy and leverage the expertise of both industry and government to ensure the effective use of the Nation's water resources. The National Water Reuse Action Plan will seek to foster water reuse as an important component of integrated water resources management.

• [Press Release: EPA Announces Development of Water Reuse Action Plan](#)

The EPA's actions are part of a larger effort by the Administration to better coordinate and focus taxpayer resources on some of the Nation's most challenging water resource concerns, including ensuring water availability and mitigating the risks posed by droughts. This includes working closely with the U.S. Department of the Interior, the U.S. Department of Agriculture, the U.S. Department of Energy, and other federal partners. For example, this work will directly complement the Department of Energy's leadership of the Water Security Grand Challenge announced on October 27, 2018.

• [Water Security Grand Challenge](#) [EXIT](#)

On this page:

- [Development of the Draft National Water Reuse Action Plan](#)
- [Providing Input for Development of the Draft National Water Reuse Action Plan](#)
- [About Water Reuse](#)
- [EPA Resources about Water Reuse](#)

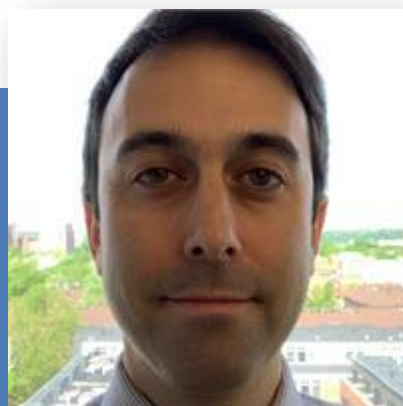
Development of the Draft National Water Reuse Action Plan

The EPA will facilitate discussions among federal, state, tribal, and water sector stakeholders and form new partnerships to develop and deploy the plan. A draft of the National Water Reuse Action Plan is scheduled for release and public review in September 2019 at the Annual WaterReuse Symposium in San Diego.

Some Upcoming Engagements

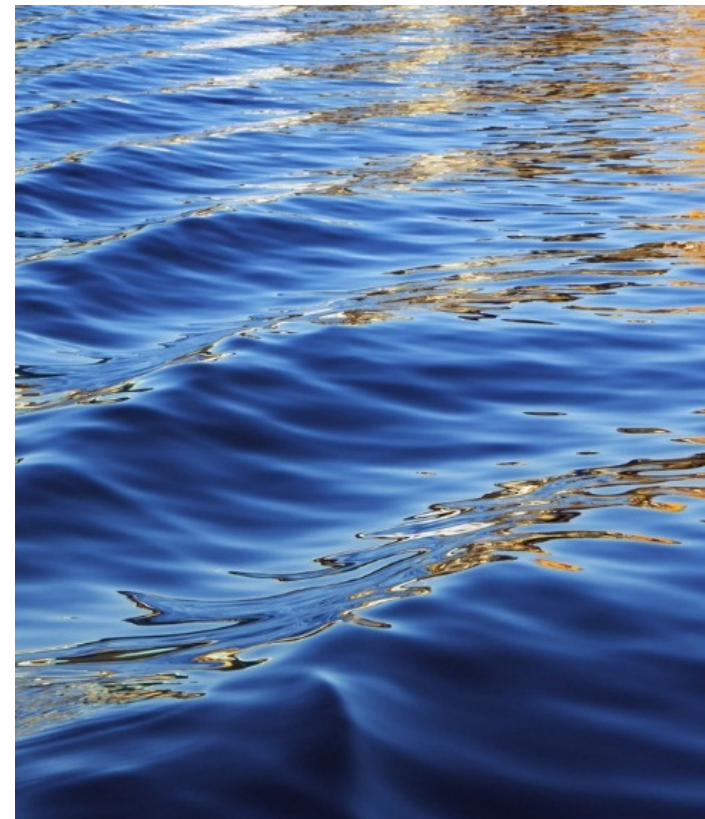
- AWWA Annual Conference & Exposition
- Webinar with ASDWA and ACWA
- Ongoing Federal Partner Meetings





Stakeholder Engagement on Water Reuse Action Plan

Greg Fogel, Policy Director
WaterReuse Association



WaterReuse Association Process for Providing Input to EPA

- Solicited feedback from WaterReuse Association members
- Conversations with WRA Policy Committee beginning in 2018
- WRA Member Survey: <https://watereuse.org/survey-for-epa-national-water-reuse-action-plan/>
- Partnered with AWWA, AMWA, WRF, WEF, and NACWA to hold two convenings
- Workgroups based on use applications
- Final product vetted and delivered to EPA by July 1

Questions?



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REGISTER NOW

September 8 - 11, 2019



WATERREUSE SYMPOSIUM

**Marriott Marquis
San Diego Marina**

In cooperation with
the Water Research
Foundation

COLLABORATE TO INNOVATE



watereuse.org/symposium