

Collaborative Implementation (Version 1)

NATIONAL WATER REUSE ACTION PLAN QUARTERLY UPDATE #2 July-September 2020

A Message from EPA Assistant Administrator for Water David Ross

The National Water Reuse Action Plan (WRAP) is a collaborative effort that represents the first initiative of its magnitude to be coordinated across the water user community. With 37 actions and 270 implementation milestones, the WRAP adopts a proactive approach to enhance and strengthen the security, sustainability, and resilience of our nation's water resources. Recently, the Executive Order on "Modernizing America's Water Resource Management and Water Infrastructure" formally established the Water Subcabinet to ensure that future U.S. water policy is supported through enhanced Federal coordination. The Executive Order specifically calls on Federal agencies to support actions that accelerate progress on water reuse under the WRAP. EPA is proud to co-chair the Water Subcabinet and recognizes that collaboration among federal, state, tribal, and local leaders across the water sector was essential to developing the WRAP and will be needed to further its success. I am pleased to report that 115 implementation milestones have been completed since the Action Plan's release in February, demonstrating the remarkable efforts of the 29 unique action leaders and 80 partnering organizations. To stay relevant, however, the WRAP needs to grow and adopt new actions that address challenges and barriers and fulfill needs related to water reuse. Therefore, with this update, we are introducing four new proposed actions under a quarterly action onboarding process. To remain transparent and inclusive in the consideration of new WRAP actions, we welcome your input on these proposals.

New Proposed WRAP Actions

The Action Plan (Version 1) emphasizes collaborative implementation of actions that advance water reuse, and the <u>WRAP Online Platform</u> reflects progress, accomplishments, and outputs. The WRAP encourages partnerships and coordination between leaders and will continue to develop through robust collaboration. To harness momentum in the water sector, we are introducing new actions once a quarter.

The following new proposed actions were developed by potential action leaders. The WRAP team will compile and share feedback received on these proposed actions with the potential action leaders before confirming them as active WRAP actions. Through November 30, feedback on these proposed actions can be sent to <u>waterreuse@epa.gov</u>. Feedback will help the WRAP team and action leaders:

- Identify potential co-leaders or partners to support scoping and implementation of the proposed action.
- Contribute perspective and commentary to inform action development.
- Identify specific implementation milestones.

For more information on each proposed action (available from the WRAP Online Platform), click the linked action titles in the table below.

NEW PROPOSED WRAP ACTIONS				
Action Title	Action Leader(s)	Brief Description		
Engagement with Disadvantaged and Small Communities on Water Reuse (Action 2.2.18)		Engage with disadvantaged and small communities to evaluate needs and opportunities to improve water security, sustainability, and resilience through water reuse. Develop and deliver initial training tailored to the unique challenges of disadvantaged and small communities. Based on the initial outreach and training, consider the need for additional opportunities for engagement with individual communities.		
Viral Pathogen and Surrogate Approaches for Assessing Treatment Performance in Water Reuse (<u>Action 2.3.6</u>)	EPA Sarah Ludwig- Monty	Fund research through the Science to Achieve Results (STAR) program to support safe and sustainable water resources. Research will focus on viral pathogen and surrogate approaches for assessing and improving risk-based treatment performance in water reuse applications.		
Implement and Manage the National Alliance for Water Innovation (NAWI) Energy-Water Desalination Hub (Action 2.4.6)	DOE Melissa Klembara NAWI Peter Fiske; Meagan Mauter	Focus on early-stage research on desalination and reuse-associated water-treatment technologies to secure affordable and energy-efficient water supplies for the United States from nontraditional water sources, which include brackish groundwater, municipal wastewater, produced water, agricultural drainage, and seawater. The program will be guided by an annual road mapping process designed to engage stakeholders from the water-treatment and water-use ecosystem, and by an annual request-for-proposal process to solicit research ideas through a competitive, peer-reviewed evaluation and selection process.		
Identify Monitoring Practices for Reuse Applications (<u>Action</u> <u>2.5.2</u>)	WRF Erin Partlan	Leverage research to share specific and actionable information on monitoring practices with the water reuse community. Focus on current and novel monitoring practices and techniques related to finished water quality and treatment process performance in water reuse systems. Compile and disseminate findings to enable utilities to deliver a reliable supply of potable and non-potable recycled water that is protective of public health and the environment.		

WateReuse Symposium Highlights

The 35th Annual WateReuse Virtual Symposium, held September 14 to 16, highlighted the activities and accomplishments of many WRAP action leaders and partners.

- A <u>live charrette</u> on envisioning the future of water reuse featured remarks from EPA Assistant Administrator for Water **David Ross**, who outlined a vision for reuse where communities, agriculture, and businesses in both waterscarce and water-rich regions increasingly turn to reuse to diversity their supply portfolios and address other water quality issues.
- EPA's National Program Leader for Water Reuse, Sharon Nappier, led a WRAP update during a live technical session. A panel discussion, moderated by WateReuse President Gilbert Trejo, featured Jake Adler (Association of Clean Water Administrators), Allie Davis (U.S. State



Screenshots from the WateReuse Virtual Symposium: WRAP technical session panelists (top), introductory charrette remarks and scenario breakout rooms (bottom).

Department), **Greg Fogel** (WateReuse), **Paula Kehoe** (San Francisco Public Utilities Commission), **Julie Minton** (The Water Research Foundation), and **Dave Smith** (EPA Region 9), who spoke about their actions' notable activities and outputs and what it means to be a WRAP action leader.

• A total of 10 technical sessions featured WRAP-related content, action team members, and updates.

• Jeff Lape (former National Program Leader for Water Reuse) accepted the WateReuse Association's 2020 President's Award on behalf of all WRAP contributors and action teams, attributing success to the collective energy and collaboration of federal, state, tribal, and local partners.

Action Highlights

Action 2.2.2—Enhance State Collaboration on Water Reuse: The 2020 State Summit on Water Reuse occurred virtually as a series of interactive discussions held each Thursday in September in conjunction with the WateReuse Symposium. The Association of Clean Water Administrators, Association of State Drinking Water Administrators, Association of State and Territorial Health Officials, Environmental Council of the States, and Groundwater Protection Council, in collaboration with EPA and WateReuse, hosted the 2020 State Summit. The Summit—attended by about 150 regulators across 35 states—was a forum for state regulators to share information and learn about a range of potable and non-potable water reuse approaches and issues. Sessions featured perspectives from several states, providing opportunities for participants to identify drivers and constraints in their states and pose key questions to colleagues from around the nation. Session topics included terminology, unregulated contaminants, public health communications, fit-for-purpose and risk-based standards, permitting, and related topics like produced water, stormwater, and aquifer recharge. A forthcoming summary report will summarize these discussions.

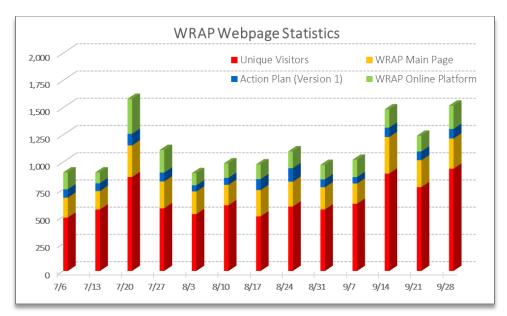
Action 2.2.12—Leverage Existing USDA Programs to Encourage Consideration and Integration of Agricultural Water Reuse: Senior leadership from USDA's Natural Resources Conservation Service (NRCS) is currently reviewing funding recommendations for this year's Conservation and Innovation Grant, which includes water reuse as a priority for the first time. USDA expects to release a funding announcement in October. USDA NRCS has also added four new milestones addressing conservation practice standards and is reviewing <u>WaterSMART</u> applicants to fund high-priority water delivery agencies and on-farm irrigation improvements for managing limited water resources under varying conditions.

<u>Action 2.3.4</u>—Develop Research and Tools to Support Onsite Non-Potable Water Systems: The San Francisco Public Utilities Commission and the San Francisco Department of Public Health are hosting a <u>Water Reuse</u> <u>Wednesdays webinar series</u> this fall to share key updates and technical guidance on implementing an onsite water reuse system in San Francisco. October topics include a session on lessons learned. For more information, contact Taylor Chang (<u>tachang@sfwater.org</u>).

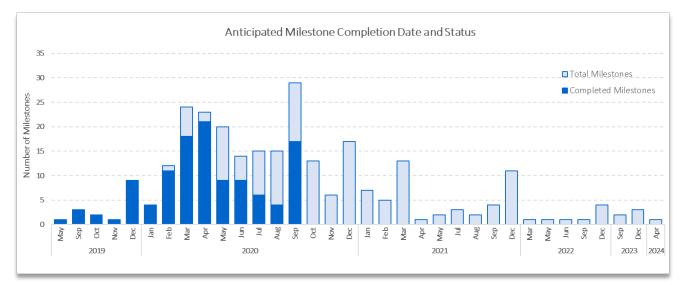
<u>Action 2.4.3</u>—Support Water Reuse Through DOE's Water Security Grand Challenge: The U.S. Department of Energy (DOE), in collaboration with The White House Office of American Innovation, the Office of Science and Technology Policy, and the Council on Environmental Quality, will be hosting a <u>virtual summit</u> October 27 and 28. Discussions will focus on the future of water infrastructure and innovation in the United States, and on the role of DOE and other federal agencies in supporting research and innovation to achieve a more secure water future. For more information, contact Iam Gaieck (william.gaieck@ee.doe.gov).

Action 2.6.2B—Continue to Actively Support and Communicate the Eligibility for WIFIA Funding for Water <u>Reuse</u>: The Water Infrastructure and Finance Innovation Act (WIFIA) program accelerates investment in our nation's water and wastewater infrastructure by providing long-term, low-cost, supplemental credit assistance under customized terms to creditworthy water and wastewater projects of national and regional significance. Water recycling projects are explicitly listed as eligible for financing under the WIFIA statute. Under Action 2.6.2B, **EPA** developed a list of <u>water reuse projects that have applied for WIFIA funding</u> and a list of <u>WIFIA</u> <u>materials explaining water reuse eligibility</u>. To date, EPA has funded over \$1 billion in water reuse investments through WIFIA. Visit the links below for recent WIFIA announcements on reuse:

- In Suffolk, Administrator Wheeler Announces \$225 Million Loan for Water Reuse Project in Virginia
- EPA Announces \$69 Million WIFIA Loan for Innovative Water Recycling Project in Oceanside, CA
- EPA Updates WIFIA Loan, Saving More Money for San Diego Ratepayers
- EPA Announces \$6 Billion in New Funding for Water Infrastructure Projects



Weekly traffic to EPA's water reuse site <u>https://www.epa.gov/waterreuse</u>, including the WRAP page, Action Plan, and Online Platform.



115 out of 270 action implementation milestones have been completed as of September 30, 2020.

Status Update on WRAP Actions

- * The number of updates made to each action on the <u>Online Platform</u> is cumulative (February–September 2020).
- ** For the implementation progress charts in the table below, the blue area indicates the completed milestones, while the white area reflects pending milestones.

Action Number and Shortened Title	Action Leader(s) Brief Update		# of Updates to Online Platform*	Implementation Progress**		
Strategic Theme Area: Integrated Watershed Action						
Action 2.1.1: Develop Federal Policy Statement to Support Consideration of Water Reuse	Sharon Nappier (EPA)	The partnering federal agencies issued a statement of policy supporting the consideration of water reuse within the <u>National Water Reuse Action Plan</u> : <u>Collaborative Implementation (Version 1)</u> .	3			
Action 2.1.2: Prepare Case Studies of Successful Water Reuse Applications	Greg Fogel (WateReuse)	The WateReuse Association initiated action team planning conversations with partners NGWA, ACWA, AWWA, and the New York City Department of Environmental Protection to identify roles, responsibilities, funding sources, and an approach for hosting case study information.	7	5		
Action 2.1.4: Leverage EPA's Water Partnership Programs	Bob Benson (EPA)	EPA is choosing locations to develop Water Equity Task Force programs that address water supply and infrastructure issues; a document inventorying existing water reuse and integrated water resource management activities within the Urban Waters Program and the National Estuary Program has been created as of August 2020 and is now undergoing review.	21	25		
Strategic Theme Area: Policy	/ Coordination					
Action 2.2.1: Compile Existing State Policies and Approaches to Water Reuse	Sharon Nappier (EPA), Greg Fogel (WateReuse), Jake Adler (ACWA), Wendi Wilkes (ASDWA)	EPA secured contractor support to initiate state reuse policy scoping and design conversations with action leaders WateReuse, ACWA, and ASDWA and partners ASTHO, ECOS, WSWC, and GWPC.	13	5		
Action 2.2.2: Enhance State Collaboration on Water Reuse	Sharon Nappier (EPA), Jake Adler (ACWA), Wendi Wilkes (ASDWA)	ACWA, ASDWA, ASTHO, ECOS, and GWPC, in collaboration with EPA and WateReuse, hosted the second annual State Summit as a series of interactive discussions held each Thursday in September. About 150 participants registered, representing more than 35 states.	27	3 5		
Action 2.2.3: Complete the EPA Study of Oil and Gas Extraction Wastewater Management	Jesse Pritts (EPA)	EPA finalized the <u>Summary of Input on Oil and Gas Extraction Wastewater</u> <u>Management Practices Under the Clean Water Act</u> on May 11, 2020, and published the final report on the <u>EPA Effluent Guidelines</u> web page.	6	2		
Action 2.2.4: Enhance Wastewater Source Control through Local Pretreatment Programs	Cynthia Finley (NACWA), Claudio Ternieden (WEF)	NACWA hosted a <u>National Pretreatment Virtual Event</u> on May 12–13, 2020, which had over 1,000 attendees and included a session on pretreatment and water reuse.	6	2 2		

Action Number and Shortened Title	Action Leader(s)	Brief Update	# of Updates to Online Platform*	Implementation Progress**
Action 2.2.6: Develop Materials on How CWA NPDES Permits Can Facilitate Water Reuse	David Smith (EPA), Kevin Weiss (EPA), Sean Rolland (ACWA)	The workgroup, consisting of EPA, state, permittee, and other stakeholder volunteers, prepared the first draft of key permitting questions and initial answers in August 2020. The permitting questions and answers will inform the draft action output document to be completed later this year.	26	3 4
Action 2.2.7: Utilize Existing Working Groups to Coordinate Federal Engagement	Sharon Nappier (EPA)	The Inter-Sustainability Working Group and Interagency Water Working Group continue to convene with their partners. The WRAP Federal Partners Workgroup will meet in early October. The National Drought Resilience Workgroup is planning to meet in November 2020.	17	4
Action 2.2.9: Align Tools to Promote Best Management of Unused/Expired Pharmaceuticals	Sharon Green (LACSD)			
Action 2.2.12: Leverage Existing USDA Programs for Consideration of Agricultural Water Reuse	Alan Gillespie (USDA)	USDA) USDA NRCS developed four additional milestones focusing on conservation practice standards and a WaterSMART landscape initiative.		37
Action 2.2.15: Conduct Outreach and Training with Tribes to Build Water Reuse Capacity	nd Training with training webinar in July, titled <u>Keys to Success: Water Recycling in Tribal</u>		39	3 5
Action 2.2.16: Support Local and Regional Reuse Projects	Eric Rosenblum, Greg Fogel (WateReuse), David Smith (EPA)	The action team designed a project implementation approach: a strategy to assess interagency governance issues/models, develop the project report, and carry out post-report outreach and education.	9	8
Action 2.2.17: Propose Nationwide Permit Addressing Reuse	Jennifer Moyer (USACE)	USACE published its proposed nationwide permit for water reuse in the <u>Federal Register</u> on September 15, 2020, for public comment.		42
Strategic Theme Area: Scien	ce and Specifications			
Action 2.3.1: Compile Existing Fit-for-Purpose Specifications	Sharon Nappier (EPA)	EPA and contractors convene weekly, have ongoing meetings with action partners, and welcomed new CDPHE partners Brandi Honeycutt and Emily Wong. To date, 145 documents have been compiled with fit-for-purpose data.	11	6
Action 2.3.3: Convene Experts on Urban Stormwater Capture and Use	David Smith (EPA), Chris Kloss (EPA), Danielle Johnson (JFW), Seth Brown (NMSA), Richard Luthy (ReNUWIt), Greg Fogel (WateReuse), Claudio Ternieden (WEF)	The action team finished framing the meeting concept and approach in May 2020 and is considering hosting a series of webinars before the rescheduled in-person convening.	32	11

Action Number and Shortened Title	Action Leader(s)	Brief Update	# of Updates to Online Platform*	Implementation Progress**
Action 2.3.4: Develop Research and Tools to Support ONWS	Paula Kehoe (NBRC for ONWS)	The San Francisco Public Utilities Commission is currently hosting a series of <u>webinars</u> on how to implement an onsite non-potable water reuse system in San Francisco. NBRC is developing a national operator certificate/certification program for onsite non-potable water systems.	17	6
Action 2.3.5: Assess Specifications of Wastewater in Food Animal Protein Processing Facilities	Jay Garland (EPA)	EPA established a Cooperative Research and Development Agreement to enable collaboration with action partner Tyson Foods.	4	3
Strategic Theme Area: Techr	nology Development and Validati	ion		
Action 2.4.2: Implement Rebecca Roose (NMED) New Mexico Produced a Water Research Consortium a		New Mexico's PWRC Directors focused on convening experts from industry, academia, state/federal governments, and NGOs during year 1 (November 2019–October2020) in a Technical Steering Committee and Government Advisory Board. Year 2 plans include implementing research plans in accordance with priorities and protocols established in year 1.	14	5 10
Action 2.4.3: Support Water Reuse Through DOE's Water Security Grand Challenge	Diana Bauer (DOE)	DOE will be hosting a <u>virtual summit</u> on the future of water innovation and infrastructure on October 27 and 28, 2020.	42	2
Action 2.4.5: Support Air- Cooling Condensate Water Reuse in Large Buildings	Thomas Lawrence (ASHRAE), Bob Boulware (Design Aire), Pete DeMarco (IAPMO), Greg Eades (EPA), John Wammes (WW), Fred Betz (ASHRAE), Jay Garland (EPA), Gaby Schubert (WTA)	WTA convened partners ASHRAE, EPA, WEF, and NBRC in initial conference calls and is assessing opportunities to promote public awareness of condensate reuse at virtual events.	23	27
Strategic Theme Area: Wate	r Information Availability	·		
Action 2.5.1: Foster USDA Watershed-Scale Pilot Projects to Share Water Information	Alan Gillespie (USDA)	USDA NRCS released a <u>press announcement</u> identifying water reuse as a priority for its Conservation Innovation Grant.	10	2
Action 2.5.4: Develop National Integrated Water Availability Assessments	Mindi Dalton (USGS)	USGS plans to deploy a mapper that incorporates supply and demand in accordance with milestone 1 by December 2020.	1	
Strategic Theme Area: Finan	ce Support		·	
Action 2.6.1: Compile Federal Funding Sources and Develop Interagency Decision Tool	Sonia Brubaker (EPA), Stephanie Santell (EPA), David Smith (EPA)	The WRAP federal partners group and individual agencies (USDA, BOR) have discussed this action in preparation for a workshop that will identify the highest priority funding or financial programs to include in the tool.	10	6

Action Number and Shortened Title	Action Leader(s)	Action Leader(s) Brief Update		
Action 2.6.2A: Communicate Eligibility of Water Reuse in SRF Programs	Justin Mattingly (EPA), Kiri Anderer (EPA)	EPA developed and published a <u>document</u> detailing water reuse projects supported by the Clean Water State Revolving Fund on the WRAP Online Platform. The June 2020 issue of the <i>Water Finance Newsletter</i> , including information on SRF eligibilities for water reuse, was distributed to all subscribers.	23	5 4
Action 2.6.2B: Support and Communicate WIFIA Funding	Karen Fligger (EPA)	EPA has developed and published a <u>list of water reuse projects</u> funded through WIFIA on the Online Platform.	27	4
Action 2.6.4: Compile and Promote Existing USDA Resources for Rural Communities	Edna Primrose (USDA)	USDA has compiled a list of 53 reuse projects funded by the water and waste program and plans to develop a short document detailing these projects.		2
Strategic Theme Area: Integ	rated Research			
Action 2.7.2: Develop a Coordinated National Research Strategy	Julie Minton (WRF)	WRF facilitated a session at the WateReuse Symposium and announced a survey about a coordinated national research strategy on water reuse that received over 100 responses.	4	5
Action 2.7.4: Increase Understanding of Current Aquifer Storage and Recovery Practices	urrent Mattingly (EPA), Kara focused on aquifer storage and recovery and aquifer recharge wells in		19	4
Action 2.7.5: Coordinate and Promote Water Reuse Technology in Federal SBIR Programs	April Richards (EPA)	EPA closed the SBIR solicitation in September and begun the proposal review process for proposals submitted under Phase 1 topic areas 1A and 1B: monitoring and treatment technologies for water reuse. There was a strong response to the water reuse solicitation topics with 39 proposals submitted in this category.	24	4 8
Action 2.7.6: Develop USBR's Advanced Water Treatment Research Roadmap	Yuliana Porras-Mendoza (Reclamation)	USBR has drafted an advanced water treatment research roadmap and intends to provide updates on the document.	0	

Action Number and Shortened Title	Action Leader(s)	Brief Update	# of Updates to Online Platform*	Implementation Progress**			
Strategic Theme Area: Outreach and Communications							
Action 2.8.1: Compile and Develop Outreach and Communication Materials	Pat Sinicropi (WateReuse), Greg Fogel (WateReuse)	WateReuse anticipates commencing action implementation with an assessment of existing communication assets in October 2020 in accordance with milestone 1.	0	6			
Action 2.8.4: Establish a Water Reuse Champion Award Program	Pete May (GreenBiz), Greg Fogel (WateReuse), Jon Freedman (Suez)	The action team welcomed Jon Freedman as a third co-leader.	6	6			
Strategic Theme Area: Work	force Development						
Action 2.9.2: Support and Promote Opportunities for Creating a Skilled Workforce	Jim Horne (EPA), Greg Fogel (WateReuse), Barb Martin (AWWA), Claudio Ternieden (WEF)	EPA's Office of Wastewater Management and the WateReuse Association hosted a workshop on September 15, 2020, titled <i>New Skills and New</i> <i>Opportunities—The Water Reuse Workforce of the Future</i> during the 35 th WateReuse Symposium. Part 1 of the workshop was a pre-recorded session in which panelists from state organizations, local utilities, and technology providers presented their unique workforce perspectives. Part 2 was a live session in which about 80 participants engaged in small group discussions to identify challenges and reuse workforce needs.	3	4			
Strategic Theme Area: Metri							
Action 2.10.3: Facilitate Implementation of the National Water Reuse Action Plan	Sharon Nappier (EPA)	On July 23, 2020, EPA announced that Dr. Sharon Nappier would succeed Jeff Lape as the new National Program Leader for Water Reuse, beginning August 3, 2020. The <i>Implementation of the National Water Reuse Action Plan</i> session at the 35 th Annual WateReuse Symposium provided a forum in which a panel of seven action leaders summarized WRAP action implementation to about 400 participants. Furthermore, the scope and development of the next version of the WRAP was discussed during a live session at the 35 th Annual WateReuse Symposium.	24	59			
Strategic Theme Area: Intern	national Collaboration						
Action 2.11.1: Facilitate U.SIsrael Collaboration on Water Reuse	Sharon Nappier (EPA), Adam Schalimtzek (MoEP)	EPA, MoEP, and the Israel Water Authority presented a session titled "Israel's Unique Experience with Water Reuse: Policy, Regulation, and Financing" at the 35 th WateReuse Symposium.	25	5 4			
Action 2.11.2: Raise Global Water Reuse Awareness and Preparedness	Allie Davis (DOS)	DOS organized a <u>recorded</u> virtual panel discussion for Stockholm World Water Week at Home that featured partners EPA and DOE, titled " <u>Water</u> <u>Reuse: An Integrated Approach to Building Water Resilience</u> ."	39	12 10			
37 Developed Actions	29 Unique Action Leaders		563 Updates to Online Platform	115 Milestones Completed			

Abbreviations Used in This Table					
ACWA	Association of Clean Water Administrators	JFW	Johnson Foundation at Wingspread	SBIR	Small Business Innovation Research
ASDWA	Association of State Drinking Water Administrators	LACSD	Sanitation Districts of Los Angeles County	USACE	U.S. Army Corps of Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers	ΜοΕΡ	Ministry of Environmental Protection (Israel)	USBR	U.S. Bureau of Reclamation
ASTHO	Association of State and Territorial Health Officials	NACWA	National Association of Clean Water Agencies	USDA	U.S. Department of Agriculture
AWWA	American Water Works Association	NGO	nongovernmental organization	USGS	U.S. Geological Survey
CDPHE	Colorado Department of Public Health and Environment	NGWA	National Ground Water Association	WEF	Water Environment Federation
DOE	U.S. Department of Energy	NMED	New Mexico Environment Department	WIFIA	Water Infrastructure and Finance Innovation Act
DOS	U.S. Department of State	NMSA	National Municipal Stormwater Alliance	WRF	Water Research Foundation
ECOS	Environmental Council of the States	NPDES	National Pollutant Discharge Elimination System	WSWC	Western States Water Council
EPA	U.S. Environmental Protection Agency	NRCS	Natural Resources Conservation Service	WTA	Water Tech Alliance
GWPC	Groundwater Protection Council	ONWS	onsite non-potable water reuse system	WW	Water Works, Inc.
ΙΑΡΜΟ	International Association of Plumbing and Mechanical Officials	PWRC	Produced Water Research Consortium		