



July 1, 2019

Mr. Jeff Lape, Deputy Director
Office of Science and Technology
U.S. Environmental Protection Agency
1200 Pennsylvania Ave. NW
Washington, DC 20004

Re: EPA's Development of a Draft Water Reuse Action Plan – [Docket No. EPA-HQ-OW-2019-0174]

Dear Mr. Lape,

The Association of Clean Water Administrators (ACWA) and the Association of State Drinking Water Administrators (ASDWA) appreciate the opportunity to provide comments on the Environmental Protection Agency's (EPA's) development of the Water Reuse Action Plan (WRAP). ACWA is the national voice of state, interstate, and territorial officials responsible for the implementation of programs that protect surface waters across the nation. ASDWA represents the drinking water program administrators in the 50 states, five territories, the Navajo Nation, and the District of Columbia, who's programs regulate and provide technical assistance and funding for the nation's 150,000 public water systems (PWS).

Several of ACWA and ASDWA's members have significant experience working through many of the complex issues surrounding water reuse regulation and policy. ACWA and ASDWA offer comments from the perspective of the state water administrators from across the nation that are currently engaged in regulating and approving water reuse projects, as well as states that will likely see the need to consider water reuse as an integral part of their integrated water planning processes in the future. The following comments are intended to broadly address the WRAP, but they do not necessarily reflect the comments and concerns of individual states and we encourage the agency to consider individual state comments to gather further perspective. The comments expand on ACWA's and ASDWA's early input submitted to the agency in January 2019.

Water reuse is cross-jurisdictional, and we continue to encourage EPA to work across federal and state agencies and industry stakeholders to incorporate multiple perspectives into the WRAP. ACWA and ASDWA appreciate EPA's efforts to reach out to the states for comments. States strongly encourage EPA to focus on long-term coordination with their regulatory partners, the state water programs, to focus efforts on how EPA can provide the needed tools and resources for states to continue their efforts on water reuse.

Although EPA has repeatedly stated that the WRAP plans to incorporate actions that are “unique and compelling,” we encourage you to not forget the more commonplace applications that could benefit from national coordination and attention. EPA has also indicated a desire for new and transformative actions rather than existing actions, but ACWA and ASDWA assert that many of the current actions are new and transformative for those states that have not moved forward with water reuse policies and regulations. Several states have developed new and robust water reuse plans out of necessity in response to water supply pressures. The WRAP must acknowledge that states’ individual water supply issues may vary considerably, states are at different stages of water reuse planning, and water reuse may take on different aspects from state to state. EPA should not impede the progress that states have made and should support states in pursuing reuse as they see fit. EPA should continue to encourage water reuse, but ACWA and ASDWA firmly believe that the WRAP should not include or lead to prescriptive federal regulations or policy.

For comprehensive thoughts from both organizations please see the attached comments.

ACWA and ASDWA thank you for the opportunity to comment to this important issue and look forward to working with you as the WRAP is developed and implemented. If you have any questions regarding this correspondence or if we can be of assistance in some other way, please contact Wendi Wilkes with ASDWA at wwilkes@asdwa.org or Frances Bothfeld with ACWA at fbothfeld@acwa-us.org.

Best Regards,



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Executive Director
Association of State Drinking Water Administrators



Julia Anastasio
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Attachment 1 – Comments from the Association of Clean Water Administrators and the Association of State Drinking Water Administrators on EPA’s Water Reuse Action Plan

1. Jurisdictional Issues Between SDWA and CWA, Bridging Disciplines Between Agencies or Departments, and Definitions

Jurisdiction

Potable reuse and integrated water management bridge historic divides in water management. Much like EPA’s organization, many state water programs are divided between drinking water and clean water with programs often following the jurisdictions under the Clean Water Act (CWA) and the Safe Drinking Water Act (SDWA). Some states have CWA and SDWA programs in the office, while others may be in the same agency but operate in parallel, while still others operate in a completely different agency. As water utilities move towards wholistic water management and water reuse becomes more common, it will be important for state programs to have the mechanisms to work across these departments to properly regulate these activities. This is simple in some states but will require significant effort in other states. Additionally, many reuse projects blur the boundary between CWA and SDWA jurisdictions and states are left to determine the responsibilities of the different units within the state. The distinction between program responsibilities is important for plan and specification approvals and enforcement and compliance activities. While it may be an iterative process to determine the best fit within individual states, having a starting place, such as guidance on jurisdictions, best practices for bridging disciplines between different state governance structures, and/or examples of MOUs or other arrangements, could be helpful for states that are beginning to navigate how to structure programs to best address water reuse and integrated water management.

Definitions

Another issue that has come up repeatedly in national conversations on reuse is the need to have a common set of agreed upon, precise definitions for reuse. Definitions will allow for more effective and meaningful conversations and are particularly important because reuse crosses so many sectors and agencies. The definitions should also be applicable for compliance and enforcement efforts.

ACWA and ASDWA members would like assistance in defining and providing guidance on “fit for purpose” and matching treatment to use. Compiling thresholds for fit for purpose can be a resource intensive roadblock for many states. States could benefit from a compilation of evidence-based information so that states can match use and source. As with all guidance that affects the states, the states should be a partner when developing this guidance to ensure broad acceptance.

2. Communication and Public Perception

ACWA and ASDWA feel that communication, coordination, and collaboration should be strongly represented in the draft framework. Effective public outreach and communication is crucial to the success of a reuse project, particular for potable water. EPA should consider

developing resources for states and industry on reuse communications plans and effective public outreach, such as webinars with water systems and states that have already implemented reuse projects, case studies with repeatable actions and communications plans, sample or template plans, and other resources.

3. Responsibility and Liability

A discussion and guidance on liability is necessary and should outline issues such as ownership, spill and remediation requirements, water rights, and other legal elements of a reuse project. The discussion should include known and potential legal challenges with water reuse projects and cite example situations and provide potential resolutions.

4. Developing More Opportunities for State-EPA Collaboration on Reuse

EPA should partner with the states through ACWA and ASDWA to continue in-depth discussions on how to further build on what the states have already started on water reuse. EPA has the opportunity to partner with the states to build the necessary capacity in the industry, states, and regions to continue implementing water reuse.

5. Addressing Emerging Contaminants in Reuse

With all source waters there is a concern about the potential for contaminants of emerging concern (CEC). The sources, fates, and potential side effects are unknown for many contaminants of emerging concern during water reuse. Many issues and possible solutions are laid out in [ACWA and ASDWA's CEC recommendations report](#). Overall, ACWA and ASDWA suggest that the EPA improve the prevention, identification, assessment, and management intervention actions of CECs to assist states and water resource managers address CECs when they arise.

For direct potable reuse (DPR) systems particular consideration should be given to the effects of CECs that may occur in recycled water. Developing a list of pathogens and currently unregulated contaminants that need to be monitored in the finished water drinking water, and what levels are acceptable, is critical. Though many current and past DPR systems have used treatment techniques that are known to remove unregulated contaminants, a nationwide standard would be helpful.

6. Supervision and Compliance for Reuse Projects

Plan and Specification Review and Approval

One of the key factors for ensuring public safety for a potable reuse project is successful pathogen removal/inactivation. The tools EPA has developed assume the use of traditional surface water sources, not the use of wastewater effluent as in DPR projects. EPA should update pathogen removal and inactivation tables and guidance to reflect how the existing information can be applied to potable reuse projects. The contact-time (CT) tables and other tools used to determine log treatment values for addressing viruses need to be expanded to include wastewater as a source in the case of DPR projects. Developing a common starting place for specifications and minimum requirements for programs would be useful.

There is a need to define ‘environmental buffers’ and determining the demarcation between direct potable reuse and indirect potable reuse, as well as determining important aspects like minimum retention time, dilution factors and physical attributes if counting on aquifers for treatment. These are important issues that could use a standard national understanding.

Pilot Testing

Pilot testing for treatment and subsequent full-scale verification are critical to the design and approval of water reuse projects. There are no national standards for pilot testing and states have varying requirements for approving reuse projects. EPA should work through ACWA and ASDWA to develop recommendations for pilot testing parameters, sharing lessons learned from states who have existing reuse projects, and key things to look for in the pilot testing results for validation.

Innovation and Technology Approvals

Water reuse projects, by nature, are innovative. The water industry has been incredibly creative and boundary pushing when it comes to developing and designing water reuse projects. States do not want to stand in the way of innovation and, in fact, want to encourage innovation. However, when considering public health, states must feel confident that a new technology or a new application of an existing technology is appropriate and protective of the customers consuming the water.

In DPR project designs, drinking water systems have proposed using wastewater treatment units or a new technology for treatment that EPA has not provided pathogen treatment credits for. States would welcome guidance on how to efficiently study and approve pathogen treatment credits or log removal values. Because different states may require different studies and/or approve and assign various pathogen treatment credits this could cause confusion and further complicate the implementation of DPR across the nation. EPA should work with states to coordinate and baseline efforts for innovative technology approvals for water reuse.

Monitoring and Sampling

States need EPA’s help to determine the appropriate requirements on a variety of issues around monitoring. If monitoring and sampling goes above and beyond standard PWS sampling, additional operational and sampling training will be needed for operators in addition to the development of methods for data integrity and reporting. States will also need databases to store and work with the data generated by these activities. Determining sampling frequency and best practices and additional resources for states when they are conducting the monitoring for reuse systems will also be necessary. ASDWA and ACWA members would appreciate guidance from EPA on different sampling requirements based on type of reuse (i.e. direct vs. indirect), type of source water (i.e. municipal wastewater vs. industrial) and intended use of water (i.e. drinking water vs. agriculture). Guidance regarding how to determine compliance for the various parameters needed to ensure the safety of DPR, for example, weekly average, monthly average, running annual average, instantaneous, less than a certain percentage (1%, 2%, 3%, etc.) of off-spec water, etc. would be helpful. Additionally, there should be a recognition that while testing requirements are generally determined by contaminant risk, supplementary testing may be needed initially for public acceptance and regulator assurance.

Public notification, Off-spec/Return to Compliance, and Disaster Management

To date there has been very little discussion regarding public notification, procedures for returning to compliance, and planning for major disruptions to the water supply if the multi-barrier approach fails and how these practices may be different from traditional water system supervision. ACWA and ASDWA encourage EPA to engage with the states to develop resources for states and water systems on these issues.

7. Environmental Flow

The WRAP must acknowledge that some streams rely entirely on wastewater for flow. The WRAP needs to acknowledge and account for the potential reduction of environmental flow with the adoption of water reuse like onsite non potable water reuse or reuse within a wastewater treatment plant. ACWA members would like to incorporate reuse for ecological enhancement as a component of integrated water resource management at a basin scale. ACWA members would like more flexible ecological criteria methods to quantify wetland restoration as a benefit. This flexibility could encourage restorative water reuse.

8. Produced Water Issues

ACWA members are interested in updating the current Effluent Limitation Guidelines (ELGs) for oil and gas extraction wastewater management. Water scarce states would benefit from more cost-effective treatment so that they can utilize produced water. ACWA appreciates the recently released “[*Study of Oil and Gas Extraction Wastewater Management Under the Clean Water Act*](#)” and would like to provide input as an ELG is developed.

9. Aquifer Storage

ACWA and ASDWA encourage EPA to work with states and industry stakeholders to further develop conversations on aquifer storage and recovery which is different from managed aquifer recharge. There are water quantity, water quality, chemical reactions, and hydrogeologic concerns that must be further discussed and researched.

10. Training Needs

Although some states are leaders in the space of water reuse, continued training and opportunities for state to state transfer of knowledge is necessary as water reuse proliferates across the country. Specific training needs include approving treatment technologies for reuse with a particular focus on innovative technologies or existing technologies that are being used in a new way.

Additionally, EPA should encourage and assist in developing worker training programs for:

1. Operator certification for wastewater and drinking water plant operators
2. State and federal permit writers and inspectors

It's important to recognize that there must be funding for agency staff at the federal and state level to implement these programs.

11. Small Systems and Capacity Minimums

As water reuse projects proliferate, it's important to recognize that not all communities will have the expertise and funding to carry through on implementing potable water reuse projects. EPA should work with states, utilities, and consultants to develop a white paper outlining the minimum prerequisites a system should satisfy before implementing a water reuse project.

During the multi-year drought of the aughts and early tens in the western U.S. some drinking water systems began to implement potable water reuse projects. Many others were considering reuse as an option as water resource dwindled, however many of those systems were small, rural, and often lacking in technical and financial capacity, eliminating reuse as an option for extending their water supplies. Having a document that outlines baseline knowledge needed by the water system, approximate implementation timelines, and cost estimates for different reuse projects would not only help deter water systems that are unqualified for implementing a reuse project in the short term, but it would help them understand and plan for possible reuse projects in the future.

12. Operator Certification

With increasingly complex systems, particularly in the case of direct potable reuse, there are skills, knowledge, and abilities that go above and beyond traditional operator certification requirements. ACWA and ASDWA recognize and respect the states' autonomy in implementing their operator certification programs, however water reuse represents a unique opportunity for EPA to partner with states to identify key knowledge and skills needed by water system operators who are presiding over water reuse projects.

13. Research Needs and Additional Considerations

Although there is a significant amount of ongoing research in the water reuse space, there is a strong need for additional research on water reuse. Specific needs identified by ASDWA members include:

- Research into the characteristics of raw produced water, effective treatment, data collection and data sharing are key and need to be highlighted and spelled out in greater detail.
- Risk assessment for industrial water reuse
- Further development and verification of online monitoring technology

ACWA and ASDWA's members also see a need for EPA to coordinate, organize, and synthesize the ongoing research on water reuse and speak to the research results and conclusions. There is a need for coordination on water reuse research between the Bureau of Reclamation, the Department of Agriculture, and EPA to reduce duplication of efforts and leverage federal resources.

Additional considerations for the WRAP and beyond:

- EPA should continue to explore and help develop reuse beyond municipal wastewater treatment plant effluent, particularly for stormwater reuse. Capturing flood water, treating it and injecting it into an aquifer, like in Wichita, Kansas is a great example of the potential for stormwater capture and reuse through aquifer storage and recovery.

- EPA should encourage states and utilities that are new to water reuse to explore and implement the "low hanging fruit" before moving to potable reuse, which is typically much more complex. Simpler reuse projects, through irrigation and industrial uses, can lead to efficiencies and a greater uptake of water use. For example, by increasing non-potable water reuse, systems can help preserve the fresh water available for treatment for potable purposes.
- For indirect potable reuse, there may need to be changes to Water Quality Standards under the CWA to protect "public and private water supply" designated beneficial uses.
- EPA should clarify that water reuse projects are eligible expenses for State Revolving Funds (SRF) and which SRF, clean water or drinking water, should fund which pieces of a project.