



December 16, 2019

The Honorable David P. Ross
Assistant Administrator, Office of Water
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20460

Re: draft National Water Reuse Action Plan (EPA-HQ-OW-2019-0174)

Dear Assistant Administrator Ross,

The Association of Clean Water Administrators (ACWA) and the Association of State Drinking Water Administrators (ASDWA) appreciate the opportunity to provide comments on draft National Water Reuse Action Plan (WRAP) being facilitated by EPA. ACWA is the national voice of state, interstate, and territorial officials responsible for the daily 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).

As stated in our joint comments dated July 2019, ACWA and ASDWA's state, territorial, and tribal members (**hereinafter "states"**), have significant experience working through the many complexities of water reuse regulation, policy, and practices. ACWA and ASDWA offer the following comments from the perspective of the state Clean Water Act and Safe Drinking Water Act administrators from across the nation that are currently engaged in regulating and approving water reuse projects and approaches, and frequently participate in the development or implementation of long-term water, natural resources, or public health plans; as well as those states that have not yet engaged in developing water reuse policies or regulations but may do so in the future. As such, these comments are intended to broadly address the draft WRAP published by EPA in September 2019, but do not necessarily reflect the specific comments and concerns of individual states. We encourage EPA to consider individual state comments to gather further perspective.

The states cannot understate the value of EPA elevating water reuse discussions, as it has done in the WRAP process; nor the importance of EPA's voice in current and future water reuse discussions. We commend EPA for its outreach to ACWA, ASDWA, and individual states during the WRAP development process. EPA has demonstrated through its approach and activities that it values state expertise and views, the unique the role states play in water reuse, and how states will need to be involved in any potential actions implemented in a WRAP.

As we have stated before, our members support water reuse as one potential tool in the integrated water resources management “toolbox.” As the silos of water management converge, states appreciate coordinated federal leadership as a means of supporting state and local governments’ water-related activities and tools, which align with or are moving towards integrated water management paradigms. Relatedly, we appreciate the messaging in Section 1 of the draft WRAP, which accessibly describes the complicated, interdisciplinary topic. We are thankful for EPA’s acknowledgment of the difficult realities states and local governments must address in ensuring water sustainability, security, and resilience.

States value coordinated federal leadership and focused attention that assists states as they pursue implementing water reuse polices and/or regulations. However, we remind EPA that the governance of water reuse is a state matter and that the WRAP’s strategic objectives are being pursued by some or all states as their laws and resources permit. Likewise, each state makes continued progress on reuse at its own pace, which is informed primarily by state and local drivers. As you know, many Western states face supply issues that force them to consider various types of alternative water supplies, including reuse – and where it is feasibly implemented, it often already is. Diminished flow in historically low-flow or effluent-dominated surface waters as a result of water reuse is of substantial concern in these states, as well as in arid watersheds around the country. Other states, meanwhile, see reuse as an opportunity to enhance resources and resilience – often unrelated to raw water supplies, as in the example of aquifer recharge to buffer against subsidence – before a water-related problem arises. Generally, available resources to address reuse, environmental conditions, supply/demand, and public support dictate the extent a state promulgates on or engages in reuse.

The foremost consideration across varieties of water reuse is public health and environmental protection, which EPA has acknowledged by establishing “protection of public health” as the first principle in the draft WRAP. States agree that any water reuse aspiration or action must be evaluated with risks to public health, which states and EPA are charged to protect, as the central consideration (which will be critical to emerging practices such as scaled-up stormwater recycling or produced water reuse). As the collaborators in the WRAP may include entities beyond states and EPA, we support EPA’s long-term commitment as WRAP facilitator to ensure activities carried out by collaborators align with this paramount principle, as well as with the other principles and objectives in the WRAP.

With this in mind, we applaud Office of Water’s decision to establish a National Program Leader for Water Reuse. This designation begins to address how the WRAP may lead to success and continued effort in the long-term, and who will be responsible for water reuse coordination, science, and advocacy. We think it is important that a WRAP implementation plan also address dedicated federal resources, transparent measures of success, and strategic planning.

Please find our comprehensive comments attached to this letter. We appreciate your consideration of those thoughts and are grateful for the opportunity to provide them to you.

Again, thank you for your strong engagement on water reuse and work to elevate this important topic. We look forward to partnering with you and others as the WRAP heads into implementation. Please contact Julia Anastasio (janastasio@acwa-us.org | 202-756-0600) at ACWA or Alan Roberson (aroberson@asdwa.org | 703-812-9507) at ASDWA if you have any questions or concerns.

Sincerely,



J. Alan Roberson
Executive Director
Association of State Drinking Water Administrators



Julia Anastasio
Executive Director
Association of Clean Water Administrators

I. ACWA/ASDWA as Leaders and Collaborators in the DNWRAP Effort

With our collective capacity, we submit our intent to engage either as leaders or collaborators on the following actions in the “near-term.” We understand that “near-term” indicates “completion within 1-2 years.” Our decisions above are the culmination of outreach to our respective members, evaluation of state priorities, and resource prioritization. The term “co-leaders” in the below comments could mean leading the effort in conjunction with other organizations beyond ACWA, ASDWA, or EPA.

- Action 2.2.1: Compile State Policies and Approaches to Implement Water Reuse Programs – **Leaders or Co-Leaders**
- Action 2.2.2: Enhance State Collaboration on Reuse Programs to Support Water Reuse Opportunities – **Leaders or Co-Leaders**
 - Note about Action 2.2.2: ACWA/ASDWA host topical workshops with state regulators on a frequent basis. We commit to co-hosting State Management of Water Reuse Summit(s) as appropriate to meet the needs articulated by states, as well as integrating modules on water reuse into the topical workshops our organizations regularly host.
- Action 2.3.1: Compile Existing Fit-for-Purpose Specifications – **Co-Leaders or Collaborators**
- Action 2.3.3: Convene Experts to Address Challenges Related to Stormwater Capture and Reuse – **ACWA Collaborator**

ACWA and ASDWA commit to the following actions in the longer-term:

- Action 2.2.4: Enhance Source Water Protection with Local Pretreatment – **Co-Leaders**
- Action 2.2.5: Compile and Develop Overall Source Water Protection Strategies for Different Source Waters for Potential Reuse – **ASDWA Co-Leader, ACWA Collaborator**
- Action 2.2.6: Develop Informational Materials for Enabling Water Reuse in CWA NPDES Permits – **ACWA Lead**
- Action 2.3.2: Develop Frameworks for Public and Environmental Health Risk-based Targets -- **Collaborators**
- Action 2.4.1 – Integrate, Coordinate, and Enhance Technology Demonstration and Validation Programs to Provide Reliable Performance Information to Support Water Reuse -- **Collaborators**
- Action 2.5.2 – Identify Monitoring Best Practices for Various Sources of Water and Reuse Applications – **Co-Leaders**
- Action 2.8.1: Compile and Develop Water Reuse Program Outreach and Communication Materials – **Collaborators**
- Action 2.9.1: Support State(s) Development of a Pilot Operator Certification Program for Water Reuse Applications – **Co-Leaders**

Additionally, ACWA and ASDWA request EPA include the following actions not in the draft WRAP:

- Survey State Water Managers on Water Reuse Programs and Institutional Issues – **Co-leaders with Western States Water Council**
- Work with EPA to Establish a “Water Availability Hierarchy” – **Co-leaders**
 - This refers to development of a heuristic/decision-tree for water users assessing alternative water supplies such as reclaimed water. ACWA/ASDWA recognize this as a critical informer of water reuse best practices, since water reuse is not always the most appropriate solution for a given water user’s needs. For example, the typical waste management hierarchy is “reduce, reuse, recycle”, rather than “recycle, reuse, reduce.” Similarly, thought must be given to water supply solutions as watersheds, water uses, and water needs change into the future.
- Convene Water Stakeholders and WRAP Collaborators to Evaluate and Define Key Terms Related to Water Reuse and the WRAP – **Collaborators** (see comments below)

II. Other Observations and Comments on the Draft WRAP

Actions

For the draft actions and any implementation-related materials, we urge EPA to avoid language that implies binding commitment or mandated activities by potential collaborators, especially since states' circumstances and priorities may shift over time. For example, we request the following language changes to Action 2.2.2: strike "will" and insert "may."

There are many compilation-related actions in the draft WRAP, such as 2.2.1, 2.3.1., and 2.6.1. To ensure the value and utility of these actions, we believe analysis is also prudent and necessary. Exploring why resources, policies, and approaches vary (for example, across states or between federal programs), or how differences in seemingly-similar scenarios came to be (for example, what are the scientific bases of different fit for purpose specifications among similar types of reuse?), provide important contexts for end-users. Conducting analyses will also ensure subject matter experts are involved in each action (for example, risk assessors in 2.3.1). We request that any compilation-related action include explicit language indicating that analysis of the topic would accompany the compiled resources. ACWA and ASDWA would also support the idea that, where it is appropriate, compilations be updated on some frequency as water reuse proliferates and new situations arise or current situations change.

With respect to *Action 2.10.2: Establish Goals for Extent and Types of Water Reuse in the United States*, we have two specific concerns. The first relates to federalism. We remind EPA of our prior comment that the plan should not include or lead to prescriptive federal regulations or policy. We therefore urge that this action should leverage federal facilitation toward a compilation of goals established at the local, state, and watershed scales, not a top-down setting of priorities.

The second relates to unintended consequences, the potential of which strongly influenced our evaluation of the draft WRAP. Unintended consequences can stem from the most noble of pursuits; for example, meeting goals of increased irrigation efficiency in water-scarce areas has actually led to increases total water consumption (see [recent GAO report](#)). Action 2.10.2 specifically may harbor unintended consequences, a notable example being direct or indirect pressure upon community water systems to pursue potable reuse when they are not yet prepared to do so, or when it does not align with their local conditions and needs. We would request, at the least, further thoughtful consideration by collaborators before beginning to implement this action, and that priority be given to Action 2.10.1: Compile National Estimates of Available Water and Water Needs will inform comprehensive understanding ("baseline") of existing water resources, uses, and interactions. This data/architecture will be enabling, and the current lack of it has raised issues in other arenas. Working toward such a baseline is an ongoing effort involving numerous entities and programs at all scales, and we encourage EPA, USGS, and others to maintain their activities there. Its success is a pre-requisite to any goal-formulation exercises, including Action 2.10.2.

Collaborating into the Future

We urge EPA to commit to *regularly and concurrently* informing all collaborators of potential new actions, changes to action items or collaborators, and other developments related to plan implementation. EPA can help states and others efficiently participate in the WRAP by expediting development of a collaborative structure and digital platform to allow for real-time information sharing, consensus building, and progress tracking.

Scope

A strength and potential weakness of the draft WRAP is its broad scope. We anticipate that its scope and magnitude will require federal partners to prioritize some types of reuse and actions, and delay attention and resources to others. The Final WRAP should clarify any such decisions to this effect.

One of the guiding principles of the draft WRAP reads:

“Recognize and address state and local considerations. Many important factors are beyond the scope of this draft Action Plan but should be identified at the national, state, or local scale when evaluating water reuse scenarios. These include affordability, water rights, and environmental justice.”

We contend that each of these factors are within the scope of the plan and warrant federal attention. Water reuse and sound water management generally should enable, not hinder, water affordability and environmental justice – both of which EPA plays a hand in affecting. Water rights, as EPA and partners such as Bureau of Reclamation are aware, are often central to whether a given water supply may be locally reused or not. Though water rights are not within EPA’s jurisdiction to address in a policy context, EPA can focus on developing a clearinghouse and/or analyses of water rights, as part of a compilation of state policies and approaches, to facilitate local water quantity trading and foster market-based actions on reuse (e.g. identifying who has water and who needs it, locally). At minimum EPA should commit to evaluating whether these factors should be considered in each deliverable identified in the Final WRAP.

Addressing EPA’s Targeted Questions:

1. *“Of the proposed actions, which are the most important and would have the greatest positive impact at the local, regional, and national level?”*

ACWA/ASDWA members most widely agree on the importance of these three actions to their organizations:

- 2.3.1 Compile Fit for Purpose Specifications;
- 2.3.2 Develop Frameworks for Public/Environmental Health Risk-Based Targets;
- 2.2.1 Compile State Policies and Approaches to Implement Water Reuse Programs.

However, states recognize the value of each action in the draft; and that as a matter of resource constraints, there are many other potential actions not included in the draft WRAP. Because actions included in the draft are the result of prioritization across stakeholder groups, we suggest that they each be addressed with equal vigor. Please refer to our original comments for further guidance. We also recognize that some actions identified in the WRAP build upon others or are made easier once other actions are completed. Not only are the three actions identified above of high importance to ACWA and ASDWA members, they are also foundational to other actions.

2. *“What are the attributes, characteristics, and steps necessary for success?”*

Simplicity is key. We suggest denoting adjacent to each action when (e.g. timeline) work on the action will be initiated and an estimate using best professional judgement of whether the action will be completed in the near- or long-term (with those terms defined explicitly).

ACWA/ASDWA suggest that EPA do not exert resources in determining leaders/collaborators for each action such that they can be listed the Final WRAP. The timeline for developing the draft was impressively aggressive, and the effort is still rapidly evolving. We suspect leaders/collaborators may ebb and flow well into the implementation phase upon issuance of the Final WRAP. To facilitate this process, we again urge that the Final WRAP include a clear proposed structure for engagement so that prospective collaborators can engage in organizational planning upon the Final Plan’s issuance and, ultimately, choose to engage now or in the future. We feel that this will ensure action accountability while increasing the likelihood of greater inclusion and representation of diverse stakeholders in WRAP implementation.

3. *“What are the key implementation steps and milestones necessary to successfully implement these actions?”*

- i. Federal resources are allocated to each action. Implementation of near- and long-term actions alike will be limited until resource availability becomes clear.

- ii. Prior to implementing actions, EPA builds a collaborative workspace and hosts regular check-ins with all leaders and collaborators at an agreed-upon frequency.
 - iii. Those collaborating on a given action to determine the implementation details, including specific milestones and time frame for completion, that work for them. These deep details do not need to be in the Final Plan, but they should be developed by all collaborators and EPA as action items are taken on.
 - iv. Articulate how, and how often, EPA et al. will report on progress in both the near- and long-term. Many states have published pertinent water plans, inventories, or strategies that involved extensive public outreach and are in various stages of implementation. We suggest EPA review these and their underlying implementation tactics to inform potential approaches.
4. *“Is your organization willing to lead the action and collaborate with others to implement the actions?”*
 See our actions section above. Note that ACWA/ASDWA wish to be involved in an action’s implementation to the extent that it has a nexus with states’ activities and authorities.
5. *“Is your organization willing to contribute to implementation as a partner or collaborator?”*
 See our actions section above. Additionally, no matter the action, we stand ready to advise EPA and other collaborators as they consider their approach and get to work.

III. Reflecting on ACWA and ASDWA’s Comments dated July 1, 2019

ACWA and ASDWA request that EPA reevaluate our original comments, which should guide the Final WRAP and implementation of actions. Below, we reiterate important points from our initial comments.

Criteria for Inclusion: States feel that “new and compelling actions” are often just as important as commonplace applications and minor changes to the regulatory universe and marketplace. Likewise, we also contend that longer-term “aspirational” actions warrant inclusion in the plan, to draw attention to the work among sector stakeholders. Long-term projects specifically benefit from committed, coordinated federal leadership.

Jurisdiction: States especially feel that developing a variety of case studies will be helpful to any state considering a type of reuse for the first time. Please also consider committing to developing more guidance and tools, specifically those addressing the nexus of CWA/SDWA, as we initially outlined in our comments.

Definitions: We are pleased to see that “compiling” definitions is an action, but we wish to see action on defining the term(s) to harmonize language and improve consistency in term usage. We suggest inclusion of an Action that may read: “Convene water stakeholders and WRAP collaborators to evaluate and define key terms related to water reuse and the WRAP.” This is distinct from Action 2.2.1 because (a) while state regulations may denote many definitions, other entities in the water sector do as well; and (b) it would provide a forum for comparison and consensus-building, rather than compiling information. Some terms used in the draft clearly warrant clarification or consensus prior to implementation. Several examples are helpful here:

- “Water security” can reference secure water supplies as the WRAP does, *or* security from intentional threats.
- “Fit for purpose” is mentioned frequently without citation, and EPA has introduced a new term: “fit for purpose specifications.” Historically, fit for purpose has referred to the process of matching a source water with a potential use based on the quality and human health risks posed by said source water. “Fit for purpose specifications,” as well as Figure 1 & 2 in the draft WRAP,

seem to loosely imply that any source can be treated sufficiently (i.e. “to specification”) for any use. However, EPA, states, and practitioners know that this is often unrealistic, uneconomical, and/or potentially carries unacceptable risk, and there is concern that some sources of water identified in the draft WRAP, such as stormwater or produced water, may be even more challenging to treat than municipal effluent, particularly for potable uses. Thus, we appreciate EPA’s intent to facilitate dialogues to workshop and validate terms like these. Since a national research agenda, risk-based frameworks, and state/local actions will be informed by these terms, validating their accurate usage/metadata should come first.

- “Water resource sustainability” in Inset 2 has no citation, likely because the term is frequently used despite lacking a standardized definition. Legislation at various levels of governance, including Congress (a recent example: November 2019’s S.2799 – “A bill to require the Secretary of Energy and the Secretary of the Interior to establish a joint Nexus of Energy and Water Sustainability Office”) have begun using the term in different contexts, without definition.

Definitions also maintain a strong nexus with communications, which EPA rightly included as a priority in the WRAP. While states manage definitions, water rights, and a degree of water data, federal agencies often provide high-level and highly-accessed educational resources for the topics falling within their mission areas. ACWA and ASDWA feel strongly that EPA in particular, but also Reclamation and USGS, maintain important informational resources on water reuse. The content published by these agencies has been and will continue to be first-line references on this complex topic for information-seekers attempting to understand what water reuse entails and how it may apply to their circumstances and communities. ACWA and ASDWA recommend EPA seize this opportunity by ensuring experts in the water space affirm online content (i.e. how water reuse definitions and case studies are presented) and working with communications experts at EPA and elsewhere to ensure the accessibility of water reuse-related information. Additionally, please note that states often maintain online content related to specific definitions pursuant to their unique laws and regulations. We ask that these resources be pointed to in any compilation of state policies and approaches.

Communications: A specific communications material of great interest to states is public notices related to emerging reuse practices and significant events during reuse operations. We would appreciate clarity from EPA relating to how it can assist or be a backstop to states in non-compliance events or during the project formulation phase at the local level.

Liability: The current draft does not address the issue of liability. We remind EPA that a liability analysis pertaining to all varieties of reuse will be important in steering regulatory and marketplace activities. We suggest this be added or embedded into the Final Plan. Please refer to our earlier comment letter for further clarity.

CECs: Currently, addressing CECs in reuse and all other water approaches is a top priority in all states. We are pleased to see mention of CECs in the plan but request more clarity regarding how the federal partners intend to address CEC’s in reuse, as well as how CECs interplay with actions in the final plan. Determining how the United States addresses CECs in an efficient, systematic fashion across jurisdictions is an evolving matter that ACWA and ASDWA are helping to facilitate. ACWA and ASDWA recently released a report, [*Recommendations Report for Contaminants of Emerging Concern*](#), and we suggest EPA consider it in the context of water reuse and CECs. We are prepared to consult the federal partners on these recommendations as they consider how CECs may be addressed in the context of the WRAP. As outlined in our initial comments, for 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 in finished water, especially potable, and what levels are considered acceptable, is critical.

Supervision and Compliance for Reuse Projects: Per our earlier comments here, please provide more specificity in the Final WRAP. We would like to again emphasize the need for updated pathogen removal/inactivation tables. 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 – a step beyond a compilation of specifications – would be useful.

Pilot Testing: Pilot testing is crucial to state regulations and local adoption. Whether the membrane testing supporting San Diego’s DPR project; Pure Water Brew fostering potable reuse (and quality beer) in Oregon; piloting in Arizona helping shape state oversight of the practice; or, mobile demonstration facilities solidifying public support for Colorado’s promulgation of reuse regulations, piloting is clearly linked to increased state reuse activities. It would be beneficial for federal partners to further explore piloting in the Final WRAP; evaluate if an ISO-type standard could be pursued for piloting; clarify whether other potential means, such as the Water Security Grand Challenge or the Desalination Hub, may support piloting; and clarify potential projects under Action 2.5.1 and, potentially, 2.4.1.

Training Needs and Small Systems/Capacity Minimums: Please note the current operator staff gap in some communities, especially in rural areas, for conventional water infrastructure – much less advanced reuse systems. This, and the water access gap, is an ongoing concern and priority. Potential improvements could include closing the gap between wastewater certification and drinking water certification, especially in reuse scenarios that converge these historically separated practices; support for circuit-rider programs; and targeted outreach to increase knowledge of reuse-related analytical methods. ACWA/ASDWA believe that tools or guidance to help communities, water managers, and water users assess whether reuse is an appropriate fit for their particular needs should be a priority. State regulatory programs will also benefit from training tools and guidance on reuse, particularly for staff managing the early phases of a potential rulemaking.

As outlined in our initial comment letter, it’s important to recognize that not all communities will have the expertise and funding to carry through on implementing potable water reuse projects in particular. Again, we recommend EPA 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. This can be made explicit or edited into several existing draft actions. During times of drought, many water systems consider reuse as an option to offset reduced water availability. However, many of those systems are small, rural, and often lacking in technical and financial capacity, which eliminates reuse, particularly potable, as a water availability solution. 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.

In general, we feel that federal partners should encourage communities to first seek the “lowest-hanging fruit” with respect to water availability, reuse, and integrated water resources management. While many communities already have, as supported by state programs and federal partnerships such as WaterSense, work here remains to be done. Developing a “water availability hierarchy” is a step in that direction.
