
Dear Mr. Ross:

Thank you for the opportunity to participate in the development of the National Water Reuse Action Plan (WRAP) and review and comment on the September draft. The New Mexico Environment Department (NMED) is committed to sustainable water resources through efforts that include reuse of water from various sources, including municipal and industrial sources.

We come to the water reuse conversation with a number of interests. As an arid state that is already feeling the effects of climate change, we are eager to explore all opportunities to increase water security for our communities and local economies. New Mexico currently leads the nation in researching the uses of produced water and NMED values EPA’s recognition and support of our current efforts in the Draft Water Reuse Action Plan (WRAP). There are several aquifer storage and recharge projects underway in the state along with non-potable reuse of wastewater by many communities. Implementation of many of the actions in the Draft National WRAP will help support future projects. Additionally, there is one New Mexico community looking to be the first in the state to install a facility for direct potable reuse of treated municipal wastewater.

In our comments NMED places a high priority on WRAP actions that demonstrate a commitment by EPA and other federal partners to advance research, knowledge transfer, technical support, outreach, capacity-building and financial assistance. These priorities are informed by NMED’s water reuse policy objective, which we developed to guide our efforts in developing effective and relevant reuse policies for New Mexico through implementation of our voluntary and regulatory programs:
To encourage responsible water reuse in all its forms, as appropriate, to protect and maximize our limited water resources and enhance the environment of New Mexico for present and future generations through the following:

- **Science** – Use the best available science to ensure water reuse is protective and environmentally beneficial.
- **Innovation** – Encourage development of emerging technologies to advance affordable water reuse options and infrastructure.
- **Collaboration** – Engage interested parties and the general public through outreach and incentives to reuse water in mutually beneficial ways while participating in local, regional, and national reuse strategies.
- **Compliance** – Develop guidance, standards, and regulation where needed to ensure the protection of public health and natural resources.

NMED appreciates the efforts of EPA managers and staff to actively engage with states and other key stakeholders throughout development of the Draft WRAP and during the comment period. NMED experienced a collaborative process that fostered more productive investment of our time, and hopefully EPA’s as well, in bringing the WRAP development to this important milestone. Through focused EPA-NMED discussions, facilitated discussions with all Region 6 states and a full-day state summit on water reuse, we have found many avenues and opportunities to learn about EPA’s vision for the WRAP and contribute substantively to its development. We look forward to continuing this collaboration as EPA finalizes the WRAP and on through implementation. Given the number and weight of challenges we face in the NMED Water Protection Division, coordination by EPA and other federal agencies with the Environmental Council of States, the Association of State Drinking Water Administrators and the Association of Clean Water Administrators is critical.

I am pleased to submit the NMED’s comments on the Draft WRAP. Please feel free to contact me at Rebecca.Roose@state.nm.us if you have any questions or to further discuss our feedback on the Draft WRAP.

Sincerely,

Rebecca Roose, Director
Water Protection Division

CC:
James C. Kenney, Cabinet Secretary, New Mexico Environment Department
John D’Antonio, New Mexico State Engineer
Courtney Kerster, Director of Federal Affairs, Office of Governor Michelle Lujan Grisham
Jeff Lape, National Program Leader for Water Reuse, U.S. Environmental Protection Agency
Charles Maguire, Water Division Director, U.S. Environmental Protection Agency, Region 6
General Comments

The New Mexico Environment Department supports EPA's collaboration with other federal agencies, states, tribes and other entities to develop a National Water Reuse Action Plan (WRAP). The September Draft reflects a broad and directed effort by the federal government to advance water reuse. The Draft WRAP is ambitious in scope, volume and the requisite level of collaboration by many players. In our comments, NMED conveys our view of relative importance of various actions to the water reuse challenges and opportunities common across New Mexico. We also share our areas of current or desired future investment. In reviewing the WRAP and preparing these comments, we were guided by our four tenants, Science, Innovation, Collaboration and Compliance, which lend well to evaluation of the cross-cutting, multi-faceted topic of water reuse.

It is a critical time for federal agencies, states, tribes, local governments, non-governmental organizations, academic institutions and the private sector to tackle water reuse opportunities with new energy, targeted solutions and dedicated resources. Climate change impacts are already being experienced around the globe, including in the arid southwest region of the U.S. The New Mexico Climate Strategy: Initial Recommendations and Progress Report points to many connections between a changing climate and water management, such as strain on water infrastructure, stormwater management, threats to water quality and water availability for prosperous communities.1

New Mexico has faced severe droughts over the last several decades where communities have experienced water shortages and outages, agriculture was strained, and industry and tourism were negatively impacted. Climate science predicts that droughts will continue, possibly becoming more severe and frequent as the climate changes, which will affect water availability and quality.2 Furthermore, withdrawals from many aquifers, including the Ogallala, are greater than natural replenishment even during periods of normal precipitation. Current water practices are not sustainable.

Working together, we have more opportunities than ever before to leverage ground-breaking science and technological advancements. The Draft WRAP brings these opportunities to the foreground through the Business Case in Section 1 and the Proposed Actions in Section 2. It is evident that EPA tapped into many plentiful reserves of water sector experts and innovators when crafting the Draft WRAP. It challenges each of us in the water policy and management sector to reimagine the way we tackle 20th century water quantity and water quality challenges, relying on integrated water resources management principles to steer our collective and individual efforts towards a more sustainable future.

Based on our review of the Draft WRAP, following is NMED's feedback on priority actions with additional comments about the scope and content of many proposed actions.

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High Priority Near-Term Actions

Action 2.1.2: Prepare Case Studies of Successful Applications of Water Reuse Within an Integrated Water Resources Management (IWRM) Framework

The concept of IWRM can be hard to grasp by those without hands-on experience. Applying IWRM to the varied challenges and applications of water reuse adds further complexity. A collection of diverse and well-crafted case studies would support states and other policymakers and water planners in applying an IWRM framework to water reuse. A collection of case studies should convey a strong foundation of IWRM principles before demonstrating how each case applied those principles to water reuse projects, programs or plans. To emphasize the integrated part of IWRM, New Mexico would benefit from case studies from other western states with similar legal constructs for managing water rights, such as collaborative integrated planning by a state water quantity agency and a state water quality agency. Furthermore, New Mexico is interested in seeing case studies that demonstrate how others have overcome silos between state and local agencies involved in everything from water management and pollution control to transportation infrastructure and economic development plans. As part of case study development, NMED suggests federal agencies consider a review of existing state, regional and/or local planning requirements have that a connection to water management to consider potential incentives for those plans to integrate water reuse and/or to identify options to streamline or consolidate related planning programs across different federal agencies.

NMED supports an outcome of Action 2.1.2 that points readers to funding sources that have supported successful applications of water reuse in an IWRM framework.

This action would be much more impactful if, after case studies are developed, EPA or another entity convenes state, tribal, local and regional water managers and policymakers for a workshop to learn about the case studies from those involved.

Action 2.2.1: Compile State Policies and Approaches to Implement Water Reuse Programs

States have so much to learn from each other, however, competing priorities and resource shortages make state-to-state communication and collaboration extremely difficult. An effort by EPA and/or national non-governmental organizations, such as the U.S. Water Alliance or the WateReuse Association, to compile state policies and approaches for water reuse in one centralized location would save states valuable time and open them up to new ideas for advancing their own state objectives for water reuse.

We recommend a compendium that highlights examples of mature water reuse programs next to examples of burgeoning programs. It should also establish a key of several factors that vary from state to state but have a substantial impact on challenges and opportunities. For example, factors could include rural vs. urban make-up, fresh water availability, reliable state funding sources, etc. The key could include a scale for each factor that would be easy for the reader to recognize when searching for the most applicable case studies. Consider the dollar sign scale that is commonly used to convey how expensive it is to eat at a particular restaurant. We imagine an on-line compendium that allows the user to quickly search across various factors for case studies that the user can most directly draw from in their state. The compendium should be managed by EPA or another entity as a living repository, with the ability for users to quickly identify new case studies added since their last visit. Of course, case
studies should include helpful links, references and contact information to enable a user to take a deeper dive beyond the compendium summary.

**Action 2.2.2: Enhance State Collaboration on Water Reuse**

Regional and national conferences and workgroups would be helpful, though current NMED resource constraints limit our ability to take advantage of any and all opportunities. As NMED continues to pursue additional resources and financial assistance flexibility, we would like to see new and ongoing venues for state collaboration. Recently, EPA has created room for this dialogue, as have the Association of Clean Water Administrators and the Association of State Drinking Water Administrators. New Mexico participated in the first state water reuse summit in September 2019 and support this event as an annual or biannual offering. EPA, ACWA, ASDWA and other national entities that bring states together for collaboration on water reuse should target state water resource management agencies (i.e., Office of the State Engineer) as well as environmental agencies.

**Action 2.2.3: Complete the EPA Study of Oil and Gas Extraction Wastewater Management**

New Mexico is currently the third largest oil and gas producing state. New Mexico and other states with a large oil and gas industry presence are tracking EPA's research and policy positions on safe and responsible management of oil and gas produced water as we continue to move ahead in our own state research and policymaking efforts. EPA's final study will be a resource for the newly-formed New Mexico Produced Water Research Consortium to identify and fill science and technology gaps before NMED develops regulations for off-field use of treated produced water.

For additional comments about the importance of the study, please see NMED's comments to EPA on the draft oil and gas wastewater study, submitted to Docket No. EPA–HQ–OW–2018–0618 on July 1, 2019.

See comments for Action 2.4.2 below for additional information on New Mexico's current efforts to manage treated produced water for off-field uses.

**Action 2.2.5: Compile and Develop Protection Strategies for Different Sources of Waters for Potential Reuse**

We recommend EPA consider combining this action as a section of the compilation to be developed under Action 2.2.1.

**Action 2.2.7: Create a Federal Multi-Agency Working Group to Serve as a Forum for Coordinated Engagement on Water Reuse**

We view this action as an important building block to provide for sustained federal leadership on water reuse. We recommend this action item be expanded to include formation of a federal water reuse technical support team to directly assist states, tribes and municipalities in development and implementation of reuse plans, policies and projects.

**Action 2.2.8: Advance Alternative Water Use in Federal Operations through the Federal Energy Management Program; Action 2.2.10: Incorporate Water Reuse Considerations in the Development of**
Civil Works Projects through the U.S. Army Corps of Engineers Civil Works Program; Action 2.2.14: Promote Water Reuse through the Federal Emergency Management Agency's Hazard Mitigation Programs; Action 2.4.4: Provide Case Examples and Identify Candidates for Water Reuse System Implementation in Federally Owned Facilities

These actions must be implemented at the federal level. Separately and collectively, they provide an excellent opportunity for federal agencies to lead by example to further water reuse across the U.S.

New Mexico is home to numerous federal facilities, Corps projects and FEMA actions. Any water reused at these facilities and in carrying out federal programs in New Mexico would benefit all residents of the state. In addition, advances in alternative water use at federal facilities in the near-term could render more best practices and lessons learned to share with states, tribes and local governments across other WRAP action items.

Action 2.2.12: Leverage U.S. Department of Agriculture Programs to Encourage Consideration and Integration of Agricultural Reuse; Action 2.6.4: Compile and Promote Existing U.S. Department of Agriculture Funding and Resources for Rural Communities

Agriculture is a key economic driver and integral to New Mexico's deep cultural heritage. Programs that assist rural areas are a high priority for New Mexico, which has only a few metropolitan areas. Given that over 80% of fresh water in New Mexico is used by agriculture, this Action is of key concern to NMED. Agricultural reuse could free up fresh water for other uses, in particular for nearby rural communities. Support from federal programs is critical for cash-strapped rural communities to take advantage of innovations in water management associated with growing crops and raising livestock. Efforts to compile and promote USDA funding sources is crucial to implementing reuse in many communities across New Mexico.

Action 2.2.15: Work with Tribes to Support Water Reuse Solutions to Drought Challenge

New Mexico is home to 23 federally recognized tribes, pueblos and nations. When drought hits non-tribal lands, it also hits tribal lands. Aquifers and surface water features do not stop at jurisdictional boundaries. It is imperative that solutions for water reuse support tribal communities, many of which are located in some of the most drought-prone regions of New Mexico.

Action 2.3.1: Compile Existing Fit-for-Purpose Specifications

This is one of the highest priorities for New Mexico. Over the next year, NMED will begin evaluating our existing reuse guidelines for groundwater discharge permits, administered under the state Water Quality Act, to consider needed revisions and enhancements. In keeping with NMED's focus on science-based decision-making, our efforts to update our guidelines could be limited by available fit-for-purpose specifications rooted in strong environmental and public health data. A compilation of fit-for-purpose specifications that includes the underlying basis for those specifications would be a very helpful resource to New Mexico and other states. Similar to our comment on 2.2.1, we recommend an online tool that is regularly updated with new information as it becomes available. The compilation should include an outline of performance expectations based on the fit-for-purpose specifications.
We note that any compilation of fit-for-purpose specifications will beg the question of how those specifications are incorporated into federal Clean Water Act and Safe Drinking Water Act program requirements, or if not, how EPA plans to fill those gaps. States will look to EPA for federal regulatory baseline water quality requirements for direct and indirect reuse, including provisions to address emerging contaminants and traditional pollutants of concern. The Discussion Framework for the Draft Wrap (Appendix A) suggests exploring public health benchmarks and guidelines and risk-based baselines, and a reliance on local decision-making in this regard (see page 5, item 2.a). Consistent national requirements based on sound science to ensure reuse water is fit for purpose would allow states to focus limited state resources on adapting the federal requirements to local conditions. Federal action on fit-for-purpose specifications would also help reduce the risks associated with each locality making independent decisions.

We also support pursuit of federal approval of rapid analytical/assessment methods that can be utilized to monitor the quality of reuse water. This would enhance state and local efforts to assure the protection of public health and lessen the burden on state and local governments (see Discussion Framework, Appendix A, page 5, item 1.b).

**Action 2.3.2: Develop Frameworks for Public and Environmental Health Risk-Based Targets**

As with Action 2.3.1, NMED believe this is an important action that should occur at the national level with federal leadership.

**Action 2.4.1: Integrate, Coordinate, and Enhance Technology Demonstration and Validation Programs to Provide Reliable Performance Information to Support Water Reuse**

Section 2.4 of the Draft WRAP highlights the tremendous work in research and development that remains for communities and companies around the world to fully bring many reuse options to fruition. Action 2.4.1 charts a critical path forward. It is potentially one of the most demanding actions in the Draft WRAP, but this integrated, coordinated effort to validate technology for reuse should begin in earnest, building on many efforts already underway in the U.S. and abroad. It is only through demonstration and validation that reuse policies and regulations will be viable and garner broad public support.

**Action 2.4.2: Identify and Fill Science and Technology Gaps and Needs Inhibiting Greater Consideration of Off-Field Use of Treated Produced Water**

The name of this action should be revised to specify that it specifically involves the work of the New Mexico Produced Water Research Consortium (https://nmpwrc.nmsu.edu/). New Mexico’s demonstrated leadership around research for off-field use of treated produced water is a reflection of our commitment to technology development, demonstration, and validation before developing public health and environmental regulations. The Consortium is a trans-disciplinary public-private partnership comprised of academia, state and federal agencies, environmental NGOs, and the private sector. NMED partnered with New Mexico State University, a land-grant institution, to fill the science and technology gaps associated with implementation of House Bill 546, the Produced Water Act, which went into effect on July 1, 2019.

NMED appreciates EPA’s cooperation in development of section 2.4 and the opportunity to
highlight this New Mexico effort in the National WRAP.

**Action 2.4.3: Leverage the U.S. Department of Energy's Water Security Grand Challenge**

New Mexico sees great value in this funding competition for a range or reuse scenarios, including support for developing new desalination treatment technologies that will directly support future reuse in the southwest.

**Action 2.5.2: Identify Monitoring Best Practices for Various Sources of Water and Reuse Applications**

Monitoring is key to ensuring safe water for all types of uses. The development of cost-effective monitoring approaches is critical for confirming fit-for-purpose water quality. New Mexico is particularly interested in this item in order to assist smaller communities with limited resources. In addition, the New Mexico Produced Water Research Consortium will tackle research relating to sampling and monitoring techniques for produced water.

**Action 2.7.2: Develop a Coordinated National Research Strategy on Water Reuse; Action 2.7.3: Coordinate Federal Water Reuse Research to Address Action Plan Priorities; Action 2.7.4: Coordinate Research and Compile Best Practices for Enhanced Aquifer Recharge**

A coordinated national research strategy will help ensure efficiency of projects and funding across all the jurisdictions and across all the protection applications for water reuse. EPA's facilitation role, with input from key stakeholders, lends credibility and independence to the research and can move priority efforts forward.

There are currently three active aquifer storage and recovery projects in the state; others are in the planning stages. A compilation of best practices will be a useful resource for NMED in supporting current and future projects for water sustainability while also ensuring precious fresh water sources are fully protected.

**Action 2.9.1: Support State(s) Development of a Pilot Operator Certification Program for Water Reuse Applications; Action 2.9.2: Support Opportunities to Promote a Skilled Workforce of Practitioners Across Various Water Reuse Sectors; Action 2.9.3: Support Water Reuse Training Network**

We are very glad that workforce challenges are addressed in the Draft WRAP. New Mexico desperately needs more qualified and experienced water and wastewater operators and managers. Any support at the federal level will help fill this gap, to include more opportunities at the college level. In addition, as more communities across the state look to water reuse applications, NMED will be exploring necessary updates to our operator certification program. Pilot program support and a national or regional training network for operators, regulators, and engineers would be very helpful.

**Action 2.6.2: Promote Eligibility of Existing SRF and WIFIA Funding for Water Reuse**

NMED is always exploring new and innovative ways to better support New Mexico communities with available infrastructure funding. Efforts at the federal level, or coordinated efforts across other states, to develop mechanism and best practices to further promote SRF and WIFIA funding for water reuse projects will be well-received at NMED. We view this as potential low-hanging fruit that could take communities with the will to expand local water reuse applications
into the essential planning phase and on to construction and implementation.

**High Priority Long-Term Actions**

**Action 2.1.3: Incorporate Water Reuse and Capture Concepts into Integrated Planning Efforts at the Local Level**

Our interpretation of the description, that it would include “consideration of financial capacity to implement integrated solutions addressing combined sewer system, wastewater, stormwater and drinking water management needs,” is heavy on EPA national policy direction and leadership. To the extent that local governments have the authority and flexibility today to consider financial capacity for integrated solutions, EPA guidance is critical to ensure clarity and consistency. Direction included through this Action should emphasize the role of existing, new or modified regulatory controls and overall coordination at the state level. This would help assure consistency and timeliness of decision making on reuse, as well as protection of public health in coordination with other required state and local actions associated with stormwater, wastewater, and drinking water management.

Any action at the federal level to support integration of water reuse with other local level decision-making should include specific mechanisms to incentivize and support local governments, such as opportunities for regional or national recognition and additional funding sources for local communities that move toward integrated planning. One example that integrates reuse into water infrastructure funding for communities is RUS Bulletin 1780-2, “Preliminary Engineering Reports for Water and Waste Disposal Program,” issued by USDA Rural Utility Service in April of 2013. Reuse is discussed in the sustainability section of a Bulletin that is used by many states as the guidance for consulting engineers to prepare preliminary engineering reports for water and wastewater projects funded by the SRF programs as well as other funding sources. New Mexico requires that this guidance be used by engineers in the preparation of all preliminary engineering reports in the state.

National policy and guidance that promotes incorporation of water reuse in integrated planning at the local level will further the concept of overall water management and allow municipalities to better manage their financial resources and prioritize work based on future local needs.

**Action 2.2.4: Enhance Wastewater Source Control through Local Pretreatment Programs to Support Water Reuse Opportunities for Municipal Wastewater**

We fully appreciate the value and importance of collecting and sharing best practices for how strong local pretreatment programs can contribute to new local opportunities for water reuse. In New Mexico, many municipal wastewater treatment facilities (WWTFs) already incorporate reuse applications. Also, given New Mexico’s landscape, many municipal WWTFs are not subject to the National Pollutant Discharge Elimination System (NPDES) because they do not discharge to surface waters.

To ensure that treated effluent from WWTFs protects future reuse application from all industrial pollutants, NMED supports greater efforts by EPA and others to enhance pretreatment program controls within and beyond the NPDES program. EPA should work with states and approved pretreatment programs to review and revise the national pretreatment program requirements to identify and remove barriers to full implementation and oversight of local pretreatment
programs. Pretreatment program development and review must be emphasized as part of this effort and approved programs should comply with enhanced NPDES permit requirements to ensure the safety of water intended for reuse.

**Action 2.2.9:** Revise Guidance on "Disposal of Unused Medicines" to Better Reflect Source Control Benefits that Support Water Reuse and Recycling

This action is identified as a long-term priority in part due to its narrow scope. Also, it could be combined with Action 2.2.4 and/or 2.2.5, as part of a larger effort to take action that controls pollutants in water considered for reuse before or after treatment. As with Action 2.2.4, New Mexico believes enhanced source control can contribute significantly to reducing the discharge of emerging contaminants (such as Per- and polyfluoroalkyl substances) and pharmaceuticals. In the absence of water quality standards to address these contaminants, and considering the cost of treatment, reducing the inputs into the wastewater stream is a prudent strategy for large and small systems.

**Action 2.5.1:** Foster Watershed-Scale Pilot Projects to Share Water Information to Support Water Reuse Actions; **Action 2.5.3:** Use National Oceanic and Atmospheric Administration/U.S. Geological Survey Water Forecast and Prediction Network to Target Watersheds with Reuse Potential; **Action 2.10.1:** Compile National Estimates of Available Water and Water Needs

These actions complement New Mexico’s ongoing efforts to implement the Water Data Act, passed during the 2019 legislative session. The Water Data Act recognizes the power of reliable data to drive critical decision-making and meet 21st century water management challenges. We further support the emphasis in Actions 2.5.1 and 2.5.3 on the watershed-scale. Pilots could render results for water data management that inform future federal, state and local water reuse policies and amplify water reuse plans. Using data to target watersheds with reuse potential could provide for more efficient use of state resources.

**Action 2.7.1:** Develop and Maintain a Comprehensive, Accessible and Searchable Inventory of Water Reuse Research

Actions like this will save many hours of duplicated effort by hundreds, if not thousands, of entities across the country who are and will be engaged in water reuse. While a fully comprehensive inventory may be hard for any single agency or NGO to achieve, any effort in this direction would likely render a strong return on investment by the broader reuse community. This action should be a living, federal on-line repository of technologies employed for treatment of reuse water (fit-for-purpose treatment technologies) and research underway on emerging technologies.

**Action 2.6.1:** Compile Existing Federal Funding Sources for Water Reuse; **Action 2.6.3:** Compile Resources Concerning Non-Traditional Funding Mechanisms

As most major projects require funding, a current list of all funding sources that is regularly maintained and updated, is crucial to implementing reuse. To streamline the final WRAP and its implementation, consider incorporating this action into Action 2.1.2 and/or 2.2.1. For a model, consider the "Tribal Resource Directory Matrix of Federal Assistance for Water and Wastewater Treatment Systems," developed through the Infrastructure Task Force and available at https://www.epa.gov/sites/production/files/2019-
Action 2.8.1: Compile and Develop Water Reuse Program Outreach and Communication Materials

New Mexico has found that outreach is essential to the acceptance of reuse projects. Work in this area at the federal level will support these efforts but this is also critical at the local and state level. Educating the public and elected officials will be crucial in this effort. We envision that this action could be a good fit for an NGO, such as U.S. Water Alliance, WateReuse Association, ACWA or ASDWA.

Lower Priority Actions

Action 2.1.1: Develop a Federal Policy Statement to Support and Encourage Consideration of Water Reuse in a Watershed-Scale Planning Context

This is a lower priority in our view, but we support the concept in that it could provide for institutionalization of key water reuse policy priorities across multiple federal agencies.

Action 2.2.6: Develop Informational Materials to Better Enable Water Reuse in CWA NPDES Permits

Although this is not a high priority for New Mexico, this action, if implemented, should include the development of nationally consistent requirements for each category of water reuse that could be included in NPDES permits. Depending on the format, information materials may not translate into action on the ground if they are not practical and accessible. EPA Office of Water and Office of Compliance should coordinate on a new online training module that covers both permit-writing and compliance inspections of NPDES permits with reuse components.

Action 2.10.2: Establish Goals for Extent and Types of Water Reuse in the United States

After reviewing the Draft WRAP, NMED is not convinced national goals are needed. Given the diversity of states, in landscape, water availability, economics, politics, etc., national water reuse goals run the risk of stalling or slowing water reuse expansion in particular states.