



August 29, 2022

Stacy Murphy  
Budget and Administration Division  
Office of Science and Technology Policy  
Executive Office of the President

Via email

Dear Stacy Murphy,

The Association of Metropolitan Water Agencies (AMWA) is pleased to have the opportunity to provide comments on identifying critical data gaps and needs for informing federal strategic plans for PFAS research and development. AMWA is an organization of the largest publicly owned drinking water systems in the United States. Members serve over 100,000 customers and collectively provide clean drinking water to over 160 million people. The association believes continuing federally sponsored, health-based research is necessary to address PFAS contamination. Specifically, AMWA emphasizes the need for a robust PFAS research plan that addresses the highest priority human health concerns.

PFAS chemicals have drawn extensive scrutiny due to their persistent nature and potential health concerns, and it is imperative that federal agencies be prepared to address the growing concerns they bring, particularly to drinking water utilities. Any PFAS action plan should include research into understanding the health risks and developing risk assessments; developing improved analytical techniques to measure the level of PFAS chemicals more accurately in drinking water; protecting drinking water supplies from PFAS contamination; and identifying the most reliable and efficient methods for removing PFAS from drinking water. All research should be performed by qualified, reputable research organizations and should, to the extent possible, be oriented to provide information of direct benefit to water supply utilities and regulators. AMWA also supports OSTP's recent guidance making the results of all taxpayer-supported research immediately available to the public at no additional cost.

*1. Should the USG consider identifying priority PFAS when developing a strategic plan for PFAS research and development? If so, what criteria should be used to identify priority PFAS for research and development (e.g., tonnage used per year; releases to the environment per year; toxicology or other human or environmental health concerns; national security or critical infrastructure uses)?*

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PFAS are a group of thousands of chemicals that include many compounds we know little to nothing about. Some may not pose an immediate threat, but others are capable of severely affecting environmental and human health. When considering what criteria should be evaluated to identify priority PFAS for research and development, agencies should not confine themselves to one criterion. Relying simply on tonnage per year or releases to environment per year will not always identify PFAS doing significant harm. Agencies should approach this issue holistically, considering quantity, but also toxicity to wildlife and humans, the extent it is a national problem vs. a state or regional issue, proximity to public water systems, and intended use.

*3. Based on the definition of PFAS in this RFI, what are the scientific, technological, and human challenges that must be addressed to understand and to significantly reduce the environmental and human impacts of PFAS and to identify cost-effective:*

- a. Alternatives to PFAS that are designed to be safer and more environmentally friendly;*
- b. Methods for removal of PFAS from the environment; and*
- c. Methods to safely destroy or degrade PFAS?*

PFAS pose many challenges for public water systems who are tasked with providing safe, clean drinking water to the public. Any costs associated with treatment of PFAS in drinking water is typically passed down to consumers, resulting in higher cost of water for individuals who had no hand in the PFAS pollution. Federal agencies should be working toward more cost-effective treatment techniques that work for all sizes of water utilities. This ensures all members of the public are receiving similar quality water, further addressing environmental justice issues while protecting public health.

Current methods for destroying or degrading PFAS (incineration, pyrolysis, etc.) are not very feasible for public water systems due to high costs and energy use. Utilities need a reliable and cost-effective way of disposing and eliminating PFAS. AMWA strongly encourages federal agencies to work towards improved destructive technologies that can be utilized by a wide variety of PFAS users and handlers.

*5. What are alternatives to the definition of PFAS provided in this RFI? What are the implications of these alternative definitions on possible remediation strategies?*

The definition of PFAS varies even among federal agencies, but for research purposes it's important that the definition cover a wider array of compounds rather than be narrowly focused. This ensures research can capture a larger amount of potentially dangerous chemicals and their byproducts. Currently, there is not a consistent definition of PFAS within the federal government, leading to confusion when it comes to risk management and remediation decisions.

*6. What should be the research and development priorities for accelerating progress, improving efficiency, and reducing the cost of: analytical methods, detection limits, non-targeted detection?*

Detection capabilities have outpaced our knowledge on how to treat and/or remove PFAS from drinking water sources, as well as our knowledge for what exposure to these chemicals means for public health. The ability to detect to near zero concentrations is impractical if the technology to reduce concentrations to those levels is not easily available. This has created a difficult scenario where public health agencies and utilities may have to inform the public that these chemicals exist in their water but will have little information on what that means for their customers' health.

AMWA strongly supports research into new analytical methods to detect PFAS in drinking water and other media. As EPA works towards proposing National Primary Drinking Water Regulations for PFOA, PFOS, and potentially other PFAS, there must be adequate and cost-effective methodology for detection. Having a choice in analytical methods assists in reducing monitoring burdens and costs while preserving the protection of public health.

*7. What studies would yield the most useful information and address the current gaps in understanding PFAS health effects in humans (e.g., in vitro, animal toxicological, and epidemiological studies)? Which health effects should be prioritized? What additional impacts beyond health should be prioritized? Social scientific approaches are welcome in addressing this question and any others, as appropriate.*

The health effects of PFAS have been widely debated and are constantly evolving based on new research. Federal agencies must continue to use a variety of reputable methods to work towards a more robust and complete picture of how PFAS mobilizes from source to the human body. This includes research into sources of PFAS, mobility of PFAS in the environment, and human exposures beyond ingestion from drinking water. PFAS are used in a wide variety of everyday products, so to address PFAS exposures, research must be done to create a targeted approach beyond drinking water regulation.

Research should prioritize characterizing the serious health effects of PFAS chemicals. Specifically, research priorities should focus on carcinogenetic properties and developmental effects of ingestion of a variety of PFAS. Studies are needed that reflect the diverse population in the US to gather an accurate representation of the population. While epidemiological studies can be challenging, they offer up important data and information useful for understanding hazard identification in a population.

Specifically, more research is needed to characterize the role of PFAS in the air on human exposure and its environmental effects. In addition to inhalation of PFAS, research into how drinking water treatment of PFAS will affect greenhouse gas (GHG) emissions, how those GHG emissions will impact localized and regional human health, and how facilities such as public water systems can best focus their resources towards reducing these GHG emissions, and therefore, public health risks.

9. *What goals, priorities, and performance metrics would be valuable in measuring the success of National, federally funded PFAS research and development initiatives relating to:*

- a. The removal of PFAS from the environment;*
- b. Safely destroying or degrading PFAS; and*
- c. Developing safer and more environmentally-friendly alternatives to PFAS?*
- d. Mitigating negative human effects of PFAS, whether related to health or additional domains?*

The major priority when it comes to PFAS contamination should be implementing measures to prevent it from happening in the first place. In the unfortunate event where this is not possible, more research is needed into the sources and pathways of PFAS contamination. Knowing where these chemicals originate helps defer costs away from the public and hold those who are creating, using, and benefitting from PFAS financially accountable for environmental discharges.

#### *Conclusion*

Thank you for the opportunity to comment on potential gaps in PFAS research to help federal agencies create and implement PFAS action plans. The association looks forward to working across the federal government to address PFAS issues and protect public health. If you have any questions, please reach out to Brian Redder ([Redder@amwa.net](mailto:Redder@amwa.net)), AMWA's Manager of Regulatory and Scientific Affairs.

Sincerely,



Tom Dobbins  
Chief Executive Officer

cc: Melanie Buser, OSTP  
Jennifer McLain, OGWDW